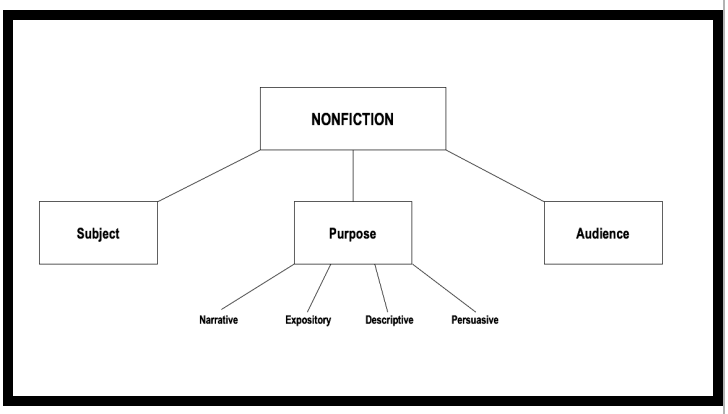
Nonfiction for English I (Second Edition)

Table of Contents

What Is Nonfiction?

There are two main categories of prose[1] writing: fiction and nonfiction. Fiction is writing that is not true-it is made up. Fairy tales, short stories, and novels are examples of fiction.



Nonfiction is all prose writing that is not "made up" or imaginary. There are many different genres of nonfiction writing. A few of the more common genres are biography, news articles, history, essays, and speeches.

Writers of nonfiction write for a variety of purposes. They write to give information, to explain, or to express an opinion or argument. However, all nonfiction writers are guided by three things as they write: their subject, their purpose, and their audience. The subject is the specific topic about which the author is writing. The purpose might be, for example, to entertain, inform, or persuade. The audience is the type of reader for whom the work is intended. Many nonfiction works are written for experts, while others are meant for casual readers. Authors select information and write in a way that will suit their subjects, achieve their purposes, and be understood by their audiences.

The four most common reasons for writing nonfiction are narrative, expository, descriptive, and persuasive. Narration tells true stories. Description creates a picture of its subject in words. Exposition presents facts or explains ideas. And persuasion tries to convince readers to accept an opinion or take action.At its best, a truly literary work of nonfiction creates a total effect that enlightens, entertains, and inspires. As you read the selections in this textbook, decide how effectively each piece is able to achieve these lofty goals.

Literary Focus: Strategies for Reading Nonfiction

There are a number of things you can do to increase your enjoyment and comprehension of nonfiction.

1. Preview the selection. Look at the title, pictures, diagrams, subtitles, and any words or terms in boldfaced or italic type. All of these will give you an idea of what the selection is about.
2. Figure out the organization – If the work is a biography or autobiography, the organization is probably chronological (in the order in which things happen). Other selections might be organized differently, such as by topic.
3. Separate facts and opinions.
4. Question as you read. Ask yourself, “Why did things happen the way they did? How did the people in the selection feel? What is the writer’s opinion? Do I share the writer’s opinion, or do I have different ideas on the subject?” Some questions are provided in the “Study Questions” section after each selection.
5. During your reading, stop now and then and try to predict what will come next.
6. As you read, build on your understanding. Add new information to what you have already learned and see if your ideas and opinions change.
7. Continually evaluate what you read. Evaluation should be an ongoing process. Remember that evaluation means more than saying a selection is good or bad. Form opinions about people, events, and ideas that are presented. Decide whether or not you like the way the information is presented.
8. Determine if the writer is showing any bias (prejudice in favor of or against the subject, usually in a way considered to be unfair). Decide if the writer can be trusted to provide you with reliable information.
9. Determine the author’s purpose in writing the selection. What is his or her overall aim or objective? What is his or her thesis statement?

[1] written or spoken language in its ordinary form, without metrical structure; in other words, writing that isn’t poetry

Shame

by Dick Gregory

Dick Gregory was a comedian, civil rights leader, entrepreneur, and health activist who was raised in poverty in St. Louis. He became popular in the southern United States with his "no-holds-barred" comedy sets, poking fun at bigotry and racism in the United States. writings were best sellers. The essay "Shame" shows the role that shame plays in shaping the lives of the people. He illustrates through his childhood experiences what shame causes as a result of poverty and social differences. (First published 1964)

I never learned hate at home, or shame. I had to go to school for that. I was about seven years old when I got my first big lesson. I was in love with a little girl named Helene Tucker, a light-complexioned little girl with pigtails and nice manners. She was always clean and she was smart in school. I think I went to school then mostly to look at her. I brushed my hair and even got me a little old handkerchief. It was a lady's handkerchief, but I didn't want Helene to see me wipe my nose on my hand.

The pipes were frozen again, there was no water in the house, but I washed my socks and shirt every night. I'd get a pot, and go over to Mister Ben's grocery store, and stick my pot down into his soda machine and scoop out some chopped ice. By evening the ice melted to water for washing. I got sick a lot that winter because the fire would go out at night before the clothes were dry. In the morning I'd put them on, wet or dry, because they were the only clothes I had.

Everybody's got a Helene Tucker, a symbol of everything you want. I loved her for her goodness, her cleanness, her popularity. She'd walk down my street and my brothers and sisters would yell, "Here comes Helene," and I'd rub my tennis sneakers on the back of my pants and wish my hair wasn't so nappy[2] and the white folks' shirt fit me better. I'd run out on the street. If I knew my place and didn't come too close, she'd wink at me and say hello. That was a good feeling. Sometimes I'd follow her all the way home, and shovel the snow off her walk and try to make friends with her momma and her aunts. I'd drop money on her stoop late at night on my way back from shining shoes in the taverns. And she had a daddy, and he had a good job. He was a paperhanger[3].

I guess I would have gotten over Helene by summertime, but something happened in that classroom that made her face hang in front of me for the next twenty-two years. When I played the drums in high school, it was for Helene, and when I broke track records in college, it was for Helene, and when I started standing behind microphones and heard applause, I wished Helene could hear it too. It wasn't until I was twenty-nine years old and married and making money that I finally got her out of my system. Helene was sitting in that classroom when I learned to be ashamed of myself.

It was on a Thursday. I was sitting in the back of the room, in a seat with a chalk circle drawn around it. The idiot's seat, the troublemaker's seat.

The teacher thought I was stupid. Couldn't spell, couldn't read, couldn't do arithmetic. Just stupid. Teachers were never interested in finding out that you couldn't concentrate because you were so hungry, because you hadn't had any breakfast. All you could think about was noontime; would it ever come? Maybe you could sneak into the cloakroom and steal a bite of some kid's lunch out of a coat pocket. A bite of something. Paste. You can't really make a meal of paste, or put it on bread for a sandwich, but sometimes I'd scoop a few spoonfuls out of the big paste jar in the back of the room. Pregnant people get strange tastes. I was pregnant with poverty. Pregnant with dirt and pregnant with smells that made people turn away. Pregnant with cold and pregnant with shoes that were never bought for me. Pregnant with five other people in my bed and no daddy in the next room, and pregnant with hunger. Paste doesn't taste too bad when you're hungry.

The teacher thought I was a troublemaker. All she saw from the front of the room was a little black boy who squirmed in his idiot's seat and made noises and poked the kids around him. I guess she couldn't see a kid who made noises because he wanted someone to know he was there.

It was on a Thursday, the day before the Negro payday. The eagle always flew on Friday. The teacher was asking each student how much his father would give to the Community Chest. On Friday night, each kid would get the money from his father, and on Monday he would bring it to the school. I decided I was going to buy a daddy right then.

[2] frizzy

[3] someone who puts up wallpaper

I had money in my pocket from shining shoes and selling papers, and whatever Helene Tucker pledged for her daddy I was going to top it. And I'd hand the money right in. I wasn't going to wait until Monday to buy me a daddy.

I was shaking, scared to death. The teacher opened her book and started calling out names alphabetically: "Helene Tucker?"

"My Daddy said he'd give two dollars and fifty cents."

"That's very nice, Helene. Very, very nice indeed."

That made me feel pretty good. It wouldn't take too much to top that. I had almost three dollars in dimes and quarters in my pocket. I stuck my hand in my pocket and held on to the money, waiting for her to call my name. But the teacher closed her book after she called everybody else in the class.

I stood up and raised my hand. "What is it now?"

"You forgot me."

She turned toward the blackboard. "I don't have time to be playing with you, Richard."

"My daddy said he'd..."

"Sit down, Richard, you're disturbing the class."

"My daddy said he'd give … fifteen dollars."

She turned around and looked mad. "We are collecting this money for you and your kind, Richard Gregory. If your daddy can give fifteen dollars you have no business being on relief[4]."

"I got it right now, I got it right now, my Daddy gave it to me to turn in today, my daddy said. .."

"And furthermore," she said, looking right at me, her nostrils getting big and her lips getting thin and her eyes opening wide, "We know you don't have a daddy."

Helene Tucker turned around, her eyes full of tears. She felt sorry for me. Then I couldn't see her too well because I was crying, too.

"Sit down, Richard." And I always thought the teacher kind of liked me. She always picked me to wash the blackboard on Friday, after school. That was a big thrill; it made me feel important. If I didn't wash it, come Monday the school might not function right.

"Where are you going, Richard!"

I walked out of school that day, and for a long time I didn't go back very often. There was shame there.

Now there was shame everywhere. It seemed like the whole world had been inside that classroom, everyone had heard what the teacher had said, everyone had turned around and felt sorry for me. There was shame in going to the Worthy Boys Annual Christmas Dinner for you and your kind, because everybody knew what a worthy boy was. Why couldn't they just call it the Boys Annual Dinner — why'd they have to give it a name? There was shame in wearing the brown and orange and white plaid mackinaw[5] the welfare gave to three thousand boys. Why'd it have to be the same for everybody so when you walked down the street the people could see you were on relief? It was a nice warm mackinaw and it had a hood, and my momma beat me and called me a little rat when she found out I stuffed it in the bottom of a pail full of garbage way over on Cottage Street. There was shame in running over to Mister Ben's at the end of the day and asking for his rotten peaches, there was shame in asking Mrs. Simmons for a spoonful of sugar, there was shame in running out to meet the relief truck. I hated that truck, full of food for you and your kind. I ran into the house and hid when it came. And then I started to sneak through alleys, to take the long way home so the people going into White's Eat Shop wouldn't see me. Yeah, the whole world heard the teacher that day – we all know you don't have a Daddy.

It lasted for a while, this kind of numbness. I spent a lot of time feeling sorry for myself. And then one day I met this wino[6] in a restaurant. I'd been out hustling all day, shining shoes, selling newspapers, and I had googobs of money in my pocket. Bought me a bowl of chili for fifteen cents, and a cheeseburger for fifteen cents, and a Pepsi for five cents, and a piece of chocolate cake for ten cents. That was a good meal. I was eating when this old wino came in. I love winos because they never hurt anyone but themselves.

The old wino sat down at the counter and ordered twenty-six cents worth of food. He ate it like he really enjoyed it. When the owner, Mister Williams, asked him to pay the check, the old wino didn't lie or go through his pocket like he suddenly found a hole.

He just said: "Don't have no money." The owner yelled: "Why did you come in here and eat my food if you don't have no money? That food cost me money."

Mister Williams jumped over the counter and knocked the wino off his stool and beat him over the head

[4] government financial aid

[5] short coat or jacket made of a thick, heavy woolen cloth, typically with a plaid design

[6] person who drinks excessive amounts of cheap wine or other alcohol, especially one who is homeless

with a pop bottle. Then he stepped back and watched the wino bleed. Then he kicked him. And he kicked him again.

I looked at the wino with blood all over his face and I went over.

"Leave him alone, Mister Williams. I'll pay the twenty-six cents."

The wino got up, slowly, pulling himself up to the stool, then up to the counter, holding on for a minute until his legs stopped shaking so bad. He looked at me with pure hate. "Keep your twenty-six cents. You don't have to pay, not now. I just finished paying for it."

He started to walk out, and as he passed me, he reached down and touched my shoulder. "Thanks, sonny, but it's too late now. Why didn't you pay it before?" I was pretty sick about that. I waited too long to help another man.

Study Questions

1. What is the main idea of the selection?
2. Explain how Gregory washes his clothes every night. Why does he do this?
3. Who is Helene Tucker? What was she important to Gregory?
4. What is the teacher's attitude toward Gregory?
5. Explain how Gregory first "learned to be ashamed" of himself during the collection of money for the Community Chest.
6. In what ways does Gregory describe himself as "pregnant"?
7. Reread this essay's first and last paragraphs, and compare how much each one emphasizes shame. Which emotion other than shame does Gregory reveal in the first paragraph, and does it play a role in the last one? Is the last paragraph an effective ending? Explain.

Literary Focus: Subject

In nonfiction, the **subject** is the specific topic about which the author is writing. Nonfiction writers may take an **objective** approach to their subjects, limiting their writing to a creative arrangement and presentation of the facts. Often, however, they take a **subjective** approach, giving us more than just the facts. They choose, organize, and interpret these facts in a certain way, and thus they frequently reveal their own opinions about their subjects. Sometimes they also reveal their own personalities and ways of looking at the world.

Two pieces of nonfiction about the same subject will be different because each writer has selected, organized, and interpreted the facts in a unique way. For example, two writers describing the same baseball game may write very different pieces of nonfiction. One writer may write a serious, detailed study of the game for people who know a great deal about baseball, while the other may write a humorous account to be read by people who know nothing about the game. These accounts of the same subject will differ largely because each author writes for a different purpose and audience, two concepts that will be explored in later chapters of this textbook.

Question: What is the subject of "Shame"? Why might the writer have selected this particular subject? Did the writer take an objective or subjective approach to his subject? How might the writer's approach to the subject differ from another author's?

"This Is No Drill": A Firsthand Account of What Really Happened at Pearl Harbor

by Donald Stratton (with Ken Gire)

The attack on Pearl Harbor was a surprise military strike by the Imperial Japanese Navy Air Service upon the United States against the naval base at Pearl Harbor in Honolulu, Territory of Hawaii, just before 8:00 a.m., on Sunday, December 7, 1941. The United States was a neutral country at the time; the attack led to our formal entry into World War II the next day. The author of this firsthand account provides one survivor's unforgettable story of unfathomable courage at Pearl Harbor. After suffering burns over more than 65 percent of his body, Donald Stratton spent ten months recovering in military hospitals. He was medically discharged from the Navy in 1942, but one year later, he re-enlisted in the military and served as a gunner's mate on the USS Stack in the Pacific. (First published 2016)

It has been said that when an old person dies, it is like a library burning down. For the past 75 years, I have tried to share what I remember of World War II, but a day will come when I can no longer speak. Then what will become of everything I experienced on December 7, 1941? That's why I wrote this account.

A little after 5:00 a.m. The overhanging deck on board the USS Arizona[7]

I awoke on my cot. I stowed the cot away, then went to shower. Afterward I dressed in the clothes that sailors wore on Sundays—pressed white shorts, a white T-shirt, and my sailor's hat. At 5:30, reveille[8] sounded over the intercom. Belowdecks, men headed to the showers.

5:50 a.m. Open waters, 230 miles north of Oahu

A Japanese armada gathered. The attack force consisted of six aircraft carriers, two battleships, two heavy cruisers, one light cruiser, nine destroyers, eight tankers, and three submarines that escorted the carriers. The ships turned east into the wind and increased their speed to 24 knots.

Between 6:15 and 6:30 a.m. Open waters, 230 miles north of Oahu

Japanese carriers launched 183 planes from their decks. The first wave of planes included 51 dive-bombers, 40 torpedo bombers, 49 horizontal bombers, and 43 fighters.

6:30 a.m. Pearl Harbor

Chow call sounded, and I ate typical Sunday fare: coffee, powdered eggs with ketchup, fried Spam, pancakes. The USS Arizona was one of 185 ships of the U.S. Pacific Fleet moored in Pearl Harbor that day. That number included eight battleships, two heavy cruisers, six light cruisers, 29 destroyers, and a number of auxiliary vessels (like tankers, repair ships, and a hospital ship). Because of poor weather, the fleet's three aircraft carriers remained at sea.

6:45 a.m. Outside the entrance to Pearl Harbor

The USS Ward fired on an unidentified sub. It sank, and the destroyer finished her with depth charges[9]. The Ward reported the sub's sinking to authorities at Pearl Harbor, but the report was passed so slowly that no alert was given to other ships in the harbor.

Shortly after 7:00 a.m. Opana Point Radar Station on Oahu's north shore

Army privates Joseph Lockard and George Elliot completed a shift, but Lockard stayed to give the more inexperienced Elliot additional training on the radar equipment while they waited for breakfast. A large blip appeared on the screen. Private Lockard concluded it was a formation of planes approaching Oahu. At the same time, Japanese carriers launched a second wave, which included 77 dive-bombers, 36 fighters, and 54 horizontal bombers.

Ten minutes later, Private Lockard notified Fort Shafter, but the operator told him that personnel had gone for breakfast. On Lockard's radar screen, the blip was now 100 miles north of Oahu and closing. At 7:20, the operator called back, and Lockard answered. Lockard's superior officer told him that a squadron of American planes was

[7] U.S. battleship that sank during the Japanese attack on the naval base at Pearl Harbor, Oahu island, Hawaii, on December 7, 1941. More than 1,170 crewmen were killed.
[8] a signal sounded especially on a bugle or drum to wake personnel in the armed forces

[9] explosive charges designed to be dropped from a ship or aircraft and to explode underwater at a preset depth, used for attacking submarines

arriving at Pearl Harbor that morning and the blip had to be them.

7:40 a.m. Skies above Oahu

Captain Mitsuo Fuchida led the first wave of Japanese planes along the island's north shore. Nine minutes later, his radioman signaled for the attack on Pearl Harbor to begin.

7:51 a.m. Wheeler Field

Japanese Zeros attacked aircraft, hangars, and buildings on the airstrip.

7:53 a.m. Ewa Mooring Mast Field

Enemy planes struck the airstrip as Fuchida radioed on broadband "Tora, Tora, Tora," which meant a "lightning attack" and alerted his superiors that a surprise attack had been achieved.

7:55 a.m. Pearl Harbor

I was belowdecks while prep for morning colors[10] sounded. At the start of each day, a signalman in the Pearl Harbor tower raised a white-and-blue "prep" flag. This signaled the color guards on the ships to raise their American flags. Seven battleships were moored on Battleship Row, along the southeast shore of Ford Island. Ford was a small island in the harbor, cut in half by a runway. The Arizona was sandwiched between the island on one side and the repair ship Vestal on its seaward side.

As I stepped into the sunshine on the forecastle[11] deck, I heard the drone of aircraft engines and bombs exploding on Ford Island. Several of us ran to the bow to see planes on the runway bursting into flames and the water tower toppling over. The men pointed overhead. Craning my neck, I recognized the red "meatballs" on the silver wings of the planes doing the bombing: Japanese Zeros, emblazoned with the nation's Rising Sun disk. They circled in figure eights like birds of prey. We ran to our battle stations.

I sped up steel ladders to get to my station. As I was running, I felt a wallop on the ship's hull, followed by a muffled explosion. I raced up one ladder to the radio shack, up another ladder to the signal bridge, up a third ladder to the bridge, and finally up a fourth ladder to the sky control platform.

I looked over my shoulder at the harbor, which was in chaos. A Zero bore down, splintering our deck. It flew so low, I could see the pilot taunting me with a smirk and a wave. The air defense alarm sounded, followed by general quarters: "Attention! Attention! Attention! Man your battle stations! This is no drill! This is no drill!"

The deck was a frenzy of sailors. As Lauren Bruner raced up the ladder toward me, a Zero fixed its sights on him. One shot hit the back of his lower leg. He limped onto the platform, a trail of blood following him. The rest of our team spilled into the metal enclosure, called the director. This was our station and where we—Harold Kuhn, Russell Lott, Earl Riner, George Hollowell, Alvin Dvorak, Fred Zimmerman, Frank Lomax—directed the antiaircraft guns. I set the dials in the director that engaged the gears to set the sights of the guns. We loaded the ammo and fired at the Zeros. But they were flying so low, we risked hitting the Vestal on one side and our men on Ford Island on the other.

We turned our sights on the high-altitude bombers and fired at a 90-degree angle. We sent volley after volley of fire, but the Japanese bombers were too high and our shells couldn't touch them. It was like boxing an opponent whose reach was twice what yours was. No matter how many times you swung or how hard, you could never hit back. All the while, you were getting pummeled.

We took so many hits, and not just our ship. From a hatch, I watched Japanese planes circling before coming straight down Battleship Row. I observed the Tennessee and the West Virginia take hits. I witnessed the Oklahoma lurch to one side, then roll over and sink. I saw a fireball in the dry dock where the Pennsylvania was.

The entire fleet was being destroyed before my eyes. Great billows of black smoke were eating up the blue sky. Torpedoes slammed against our hull, spewing geysers of water. Ships were taking on water, listing, capsizing. From those ruptured ships spilled oil that congealed when it hit the water and caught fire. It seemed the whole harbor was in flames. The hellish sight of blacks and reds and yellows, devouring everything. The sulfurous smell of burning fuel. The acrid smell of exploding gunpowder.

And the noise—it was deafening. One explosion followed another, and after each you could hear twisted metal writhing, letting out the most wretched sound, as if it were in agonizing pain. As soon as one dive-bomber

[10] daily ceremony wherein the colors (the national flag) are raised at exactly 8:00 am

[11] forward part of a ship below the deck, traditionally used as the crew's living quarters

dropped its torpedo, it pulled away while another plane swooped down to strafe[12] us. Machine gun bullets ricocheted off metal. I heard the screams of our men, their bodies engulfed in flames. The fury of our own antiaircraft guns reverberated inside our metal cubicle so loudly, I felt my eardrums would burst.

With each bomb that hit, the ship shuddered. Another bomb whistled, and we braced for impact. But it hit the Vestal instead. The repair ship was in flames, and its crew was trying to extinguish them.

We were sitting ducks. Not just the Arizona, but every ship in the harbor. And there was nothing we could do. With few exceptions, our planes, which the Japanese hit first, never got a chance to get off the ground. We couldn't head to open waters, because it took two and a half hours for the boilers of a battleship to fire up. So we threw our shells into the sky, hoping shrapnel might shatter a cockpit, rupture a fuel line, clip a propeller. It was all we could do. Shoot and hope. And with each burst that fell short, we lost a little more hope.

Zeros strafed the ship, their bullets ripping up the deck and shredding any sailors on it. With each pass, the Japanese pilot smiled or waved. The whole lot of them were cowards and murderers. Without a declaration of war, they waged war on us. Without warning. Without mercy. Without conscience. We took another hit, which thundered through the ship. It struck the starboard side, but it didn't explode. At the same time, I saw two torpedo wakes heading directly toward us. I braced for the impact. Which never came. Another lucky break. Until seconds later …

8:10 a.m.

A great sucking sound, like a whoosh, rocked the ship with concussive force. A 1,760-pound armor-piercing bomb, dropped from 10,000 feet above, had penetrated four steel decks to the ammunition magazine. The blast blew a turret into the air, which then came crashing back onto the deck. Black smoke spewed out of the forward smokestack, and an expanding fireball shot 500 to 600 feet into the air, engulfing those of us in the director. The blast showered the Tennessee with tons of twisted metal and the twisted parts of our men.

As flames shot through the two openings of our enclosure, we tried to take shelter under some of the equipment. But the flames found us. On the deck, men stumbled around like human torches. Others jumped into the water, and when they did, you could hear them sizzle. James Cory, one of the Marines on board, recalled what he saw from the quarterdeck: "These people were zombies, in essence. They were burned completely white. Their skin was just as white as if you'd taken a bucket of whitewash and painted it white. Their hair was burned off; their eyebrows were burned off … Their arms were held away from their bodies, and they were stumping along the decks."

While that horrific scene was unfolding below us, billows of black smoke pushed into where we were, stinging our eyes, filling our nostrils, our throats, our lungs. We coughed out smoke, unable to catch our breath because the fire had burned off our oxygen. The compartment we were in suddenly became claustrophobic, and two men bolted out the door. I would never see them again.

As we felt our way along the metal walls, the heat scorched our palms. The metal floor was so hot, we could feel the heat through the soles of our shoes. We hopped on one foot, then the other. Once on the outer platform, we moved toward the ladder. But flames from below leaped up the steps and barred our escape. There was no way down, and the metal platform we were standing on was growing hotter.

I looked at myself. My T-shirt had caught fire, burning my arms and back. My legs were burned from ankle to thigh. My face was seared. My hair was singed off, and part of an ear was gone. I stood in a stupor until a breeze parted the smoke, revealing a sailor on the Vestal. It was Joe George, who was following orders to cut the lines that tethered his ship to the Arizona so they could head to open waters.

We called to George, motioning for him to throw us a monkey's fist, a lightweight heaving line knotted around a metal ball and attached to a thicker rope. If we could secure a rope between the two ships, then perhaps we could make it to the Vestal. I looked at my arms. Sheaths of skin had peeled off and were draping over each arm. I tore off one length of skin and threw it on the floor of the platform. Then the other. The remaining tissue was a webwork of pink and white and red, some black, all of it throbbing. My focus narrowed to George and the ball in his hand. He threw it, but it fell short. He gathered up the line and lobbed again. Short once more. George was perhaps the strongest man in the harbor, an All-Navy boxer. He was

[12] attack repeatedly with bombs or machine-gun fire from low-flying aircraft

the only man with a prayer of getting that line to us—if he couldn't do it, then no one could.

George collected the rope once more. For a third time, he tossed it with all his strength. It sailed from one wounded ship to another, across flames, smoke, and carnage. I tracked it with my eyes and caught it in the air. I tied the rope to the railing, cinching it tight, and George secured his end. The rope stretched 70 feet to span the water below us, which was 45 feet down, slicked with fuel that had caught fire. Our only hope was to make it to the Vestal, hand over hand across the rope. But the flesh had been burned off all of our hands, and using those raw fingers and palms would be at best excruciating, and most likely impossible.

The first in line was Harold Kuhn. He wasn't as badly injured as the rest of us, and so he would test the rope to see if it would hold. We looked down at the flames that swept between the two ships. Then we looked at George on the Vestal; his captain was next to him. The officer barked an order, but George stood defiant, glaring at him. The officer left. George waved Kuhn over. As Kuhn made his way across the rope, it started to sag. We recoiled at the sight. A sagging line meant the descent would be steeper, and we'd have to go uphill at the end. George called out to Kuhn, and the rest of us echoed him: "You can make it!" "Come on, now!" "Keep going!" If Kuhn couldn't do it, how could we in our condition? But he made it. Kuhn made it!

A Japanese Zero caught sight of us on the Arizona. We ran into the director to take cover. None of the bullets hit us—this time. It was now or never.

I started hand over hand across the line, feeling a surge of adrenaline. The exposed tissue on my legs and arms felt the heat from the burning oil below me. The pain was excruciating. But somehow my hands kept going. Maybe I felt I would be letting the men down if I gave up. Or perhaps I knew that if I let go of the rope, the rest of the men might not make the attempt. George extended his hand to me as he snatched me from the flames.

One by one, each of us miraculously made it to the Vestal. We hadn't fallen. And we hadn't been hit by machine gun fire. We had help from the good Lord, I'm sure of that. One thing is for certain: Had Joe George not stood up for us—had he not been a rebel and refused to cut the line connecting the Vestal to the Arizona—we would have been cooked to death on that platform. If anyone deserved a Medal of Honor that day, in my opinion, it was him. And I know at least five others who would second that.

We waited on the Vestal as George and several men cut the mooring lines. But before the ship left for open waters, its men flagged down a motor launch. We Arizona escapees were helped into the launch, which brought us to shore and medical help.

As I looked back at the harbor billowing with smoke, seeing the Pacific Fleet destroyed where they were moored, staring at the remains of the Arizona engulfed in flames … the devastating sweep of it was too much.

Now I want to save from that fire something of my memories of the Arizona 75 years ago, so that my grandkids and all of the children after them can understand why it matters.

Study Questions

1. What is the main idea of the selection?
2. What mistakes were made at 6:45 and shortly after 7:00 that might have better prepared the soldiers for attack?
3. Describe the actions of the Japanese pilots. Why did Stratton call them "cowards and murderers"?
4. Describe what happened when the armor-piercing bomb struck the Arizona. What kind of damage did the ensuing fire cause?
5. Why did Stratton ask Joe George to throw him a monkey's fist? What did Stratton do with it?
6. To what does Stratton attribute his and the others making it all the way across to the Vestal?
7. Why does Stratton think Joe George deserves a Medal of Honor?
8. What do you think Stratton means in the last line?

Literary Focus: Purpose

An author's **purpose** is his or her aim for writing the selection. It might be, for example, to entertain, inform, persuade, or present an idea to the reader. It can often be articulated in a selection's **thesis statement**, although not every work of nonfiction contains a single sentence that so clearly states the writer's purpose or the selection's main idea. Often the writer's intent must be inferred by the reader.

Question: What is the authors' purpose in writing this account? Is there a thesis statement that states the authors' purpose? If not, how do you know?

America's Favorite Poison

by Olga Khazan

Olga Khazan is a staff writer for The Atlantic. She has also written for the New York Times, the Los Angeles Times, the Washington Post, Forbes, and other publications. She is a two-time recipient of the International Reporting Project's Journalism Fellowship and winner of the 2017 National Headliner Awards for Magazine Online Writing. In this piece, Khazan tackles an issue that affects millions of Americans every day: alcohol consumption and our culture's attitude toward it. (First published 2020)

Occasionally, Elizabeth Bruenig unleashes a tweet for which she knows she's sure to get dragged: She admits that she doesn't drink.

Bruenig, a columnist at *The New York Times* with a sizable social-media following, told me that it usually begins with her tweeting something mildly inflammatory and totally unrelated to alcohol—e.g., The *Star Wars* prequels are actually good. Someone will accuse her of being drunk. She, in turn, will clarify that she doesn't drink, and that she's never been drunk. Inevitably, people will criticize her. You're really missing out, they might say. Why would you deny yourself?

As Bruenig sees it, however, there's more to be gained than lost in abstaining[13]. In fact, she supports stronger restrictions on alcohol sales. Alcohol's effects on crime and violence, in her view, are cause to reconsider some cities' and states' permissive attitudes toward things such as open-container laws and where alcohol can be sold.

Breunig's outlook harks back to a time when there was a robust public discussion about the role of alcohol in society. Today, warnings about the devil drink will win you few friends. Sure, it's fine if you want to join Alcoholics Anonymous or cut back on drinking to help yourself, and people are happy to tell you not to drink and drive. But Americans tend to reject general anti-alcohol advocacy with a vociferousness typically reserved for IRS auditors and after-period double-spacers. Pushing for, say, higher alcohol taxes gets you treated like an uptight school marm. Or worse, a neo-prohibitionist.

Unlike in previous generations, hardly any formal organizations are pushing to reduce the amount that Americans drink. Some groups oppose marijuana, guns, junk food, and virtually every other vice. Still, the main U.S. organizations I could track down that are by any definition anti-alcohol are Mothers Against Drunk Driving—which mainly focuses on just that—and a small nonprofit in California called Alcohol Justice. In a country where there is an interest group for everything, one of the biggest public-health threats is largely allowed a free pass. And there are deep historical and commercial reasons why.

Americans would be justified in treating alcohol with the same wariness they have toward other drugs. Beyond how it tastes and feels, there's very little good to say about the health impacts of booze. The idea that a glass or two of red wine a day is healthy is now considered dubious. At best, slight heart-health benefits are associated with moderate drinking, and most health experts say you shouldn't start drinking for the health benefits if you don't drink already. As one major study recently put it, "Our results show that the safest level of drinking is none."

Alcohol's byproducts wreak havoc on the cells, raising the risk of liver disease, heart failure, dementia, seven types of cancer, and fetal alcohol syndrome. Just this month, researchers reported that the number of alcohol-related deaths in the United States more than doubled in two decades, going up to 73,000 in 2017. As the journalist Stephanie Mencimer wrote in a 2018 *Mother Jones* article, alcohol-related breast cancer kills more than twice as many American women as drunk drivers do. Many people drink to relax, but it turns out that booze isn't even very good at that. It seems to have a boomerang effect on anxiety, soothing it at first but bringing it roaring back later.

Despite these grim statistics, Americans embrace and encourage drinking far more than they do similar vices. Alcohol is the one drug almost universally accepted at social gatherings that routinely kills people. Cigarette smoking remains responsible for the deaths of nearly 500,000 Americans each year, but the number of smokers has been dropping for decades. And few companies could legally stock a work happy hour with marijuana, but many bosses ply their workers with alcohol, which can be poisonous in large quantities.

America arrived at this point in part because the end of Prohibition took the wind out of the sails of temperance groups. When the nation's 13-year ban on alcohol ended in 1933, alcohol control was left up to states and municipalities to regulate. (This is why there are now dry counties and states where you can't buy alcohol in grocery stores.) At the national level, anti-alcohol efforts

[13] restraining oneself from doing something

were "tainted with an aura of failure," writes the wine historian Rod Phillips in *Alcohol: A History*. Membership in the Woman's Christian Temperance Union, the original prohibitionist group, declined from more than 2 million in 1920 to fewer than half a million in 1940. Some Christian groups continued to push for restrictions on things such as liquor advertising throughout the '40s and '50s. But eventually alcohol dropped off as a major national political issue and was eclipsed by President Richard Nixon's war on drugs such as marijuana and heroin.

This dearth of anti-alcohol advocacy was met with a gradual shift in the way Americans began to view alcoholism—and with commercial interests that were ready to step into the breach. When Alcoholics Anonymous was founded in 1935, it portrayed alcoholism as a disease rather than a moral scourge on society, says Aaron Cowan, a history professor at Slippery Rock University, in Pennsylvania. (In time, the medical community would come to agree with the idea of alcohol abuse as a medical disorder.) By emphasizing individual rather than social reform, the organization helped cement the idea that the problem was not alcohol writ large, but the small percentage of people who could not drink alcohol without becoming addicted. The thinking became, If you have a problem with alcohol, why don't you get help? Why ruin everyone else's fun?

Of course, many people have a normal relationship with alcohol, which has been a fixture of social life since the time of the Sumerians and ancient Egyptians. But today, what actually constitutes a "normal" relationship with alcohol can be difficult to determine, because Americans' views have been influenced by decades of careful marketing and lobbying efforts. Specifically, beer, wine, and spirit manufacturers have repeatedly tried to normalize and exculpate[14] drinking. "The alcohol industry has done a great job of marketing the product, of funding university research looking at the benefits of alcohol, and using its influence to frame the issue as one of 'The problem is hazardous drinking, and as long as you drink safely, you're fine,'" says Michael Siegel, a professor of community health sciences at Boston University.

During World War II, the brewing industry recast beer as a "moderate beverage" that was good for soldiers' morale. One United States Brewers' Foundation ad from 1944 depicts a soldier writing home to his sweetheart and dreaming of enjoying a glass of beer in his backyard hammock. "By the end of the war, the wine industry, the distilled-spirits industry, and the brewing industry had really defined themselves as part of the American fabric of life," says Lisa Jacobson, a history professor at the University of California at Santa Barbara.

In later decades, beer companies created the Alcoholic Beverage Medical Research Foundation, now called the Foundation for Alcohol Research, which proceeded to give research grants to scientists, some of whom found health benefits to drinking. More recently, the National Institutes of Health shut down a study on the effects of alcohol after *The New York Times* reported that it was funded by alcohol companies. (George Koob, the director of the National Institute on Alcohol Abuse and Alcoholism, told the *Times* that the foundation through which the funds were channeled is a type of "firewall" that prevents interference from donors.)

Meanwhile, the National Beer Wholesalers Association, which is listed as the top campaign contributor to political candidates in the "beer, wine, and liquor" category by the Center for Responsive Politics, has lobbied for a bill that would, among other things, reduce excise taxes on beer and spirits. (In an email, the NBWA spokeswoman Lauren Kane said, "The alcohol industry has varying views when it comes to regulation, but NBWA will continue to advocate for laws and policies that support public health and safety through thoughtful, common-sense alcohol regulation led by the states.")

A few temperance[15] organizations are still out there, says Mark Schrad, a political-science professor at Villanova University, but they're more active in Europe. Alcohol Justice, the California nonprofit, supports tighter limits on alcohol sales and advertising. But Bruce Lee Livingston, the group's executive director, says that because many nonprofits are dependent on state, federal, and county grants, it's difficult for the group to lobby policy makers. And nonprofits' forces are dwarfed by the firepower of the alcohol industry. "Alcohol has, to a large extent, been abandoned by foundations and certainly is not funded by direct corporate donations, so alcohol prevention as a field of advocacy is very limited," Livingston says.

The way Bruenig sees it, pop culture tends to depict society as split between "good guys" who just want to have fun and "bad guys" who want to destroy all the fun.

[14] declare that something is not wrong

[15] abstinence from alcoholic drink

If you're someone who calls alcohol into question, she said, "you get kind of recruited against your will into this anti-fun agenda."

Regardless of how much Americans love to drink, the country could be safer and healthier if we treated booze more like we treat cigarettes. The lack of serious discussion about raising alcohol prices or limiting its sale speaks to all the ground Americans have ceded to the "good guys" who have fun. And judging by the health statistics, we're amusing ourselves to death.

Study Questions

1. What is the main idea of the selection?
2. For what does Elizabeth Breunig always "get dragged" on social media?
3. According to Khazan, what is worrisome about alcohol consumption?
4. Given the health concerns, why does Khazan think America has such a lax attitude toward alcohol?
5. According to Khazan, In what ways has the alcohol industry tried to "normalize" drinking?
6. How does Elizabeth Breunig explain pop culture's view of society as it relates to alcohol?

Literary Focus: Audience

A writer's **audience** is the type of reader for whom the work is intended. Many nonfiction works are written for experts, while others are meant for more casual readers. If a writer's audience are people who already have an interest in the work's subject, he or she might assume that the readers already possess some basic background knowledge about the subject. If writing for a general (broad) audience, however, it is necessary for a writer to provide all the most essential information so that readers will be able to understand what the author has written.

Question: Who do you think is the audience for this selection? Is it a general audience or an audience that would already possess critical background knowledge about the subject?

Into Thin Air

by Jon Krakauer

Jon Krakauer is a preeminent writer of narrative nonfiction. His numerous bestsellers include Missoula, Where Men Win Glory, Under the Banner of Heaven, Into the Wild, and Into Thin Air. He was a member of an ill-fated expedition to summit Mount Everest in 1996, one of the deadliest disasters in the history of climbing Everest. The first successful climb to the top of Everest, the tallest mountain in the world, was in 1953 by Edmund Hillary and Tenzing Norgay. Hundreds have died attempting to make it to the acme since then. In this essay, Krakauer gives a firsthand account of that deadly day in 1996. (First published 1997)

Straddling the top of the world, one foot in Tibet and the other in Nepal, I cleared the ice from my oxygen mask, hunched a shoulder against the wind, and stared absently at the vast sweep of earth below. I understood on some dim, detached level that it was a spectacular sight. I'd been fantasizing about this moment, and the release of emotion that would accompany it, for many months. But now that I was finally here, standing on the summit of Mount Everest, I just couldn't summon the energy to care.

It was the afternoon of May 10. I hadn't slept in 57 hours. The only food I'd been able to force down over the preceding three days was a bowl of Ramen soup and a handful of peanut M&M's. Weeks of violent coughing had left me with two separated ribs, making it excruciatingly painful to breathe. 29,028 feet[16] up in the troposphere[17], there was so little oxygen reaching my brain that my mental capacity was that of a slow child. Under the circumstances, I was incapable of feeling much of anything except cold and tired.

I'd arrived on the summit a few minutes after Anatoli Boukreev[18], a Russian guide with an American expedition, and just ahead of Andy Harris, a guide with the New Zealand–based commercial team that I was a part of and someone with whom I'd grown to be friends during the last six weeks. I snapped four quick photos of Harris and Boukreev striking summit poses, and then turned and started down. My watch read 1:17 p.m. All told, I'd spent less than five minutes on the roof of the world.

After a few steps, I paused to take another photo, this one looking down the Southeast Ridge, the route we had ascended. Training my lens on a pair of climbers approaching the summit, I saw something that until that moment had escaped my attention. To the south, where the sky had been perfectly clear just an hour earlier, a blanket of clouds now hid Pumori, Ama Dablam, and the other lesser peaks surrounding Everest.

Days later — after six bodies had been found, after a search for two others had been abandoned, after surgeons had amputated the gangrenous[19] right hand of my teammate Beck Weathers — people would ask why, if the weather had begun to deteriorate, had climbers on the upper mountain not heeded the signs? Why did veteran Himalayan guides keep moving upward, leading a gaggle of amateurs, each of whom had paid as much as $65,000 to be ushered safely up Everest, into an apparent death trap?

Nobody can speak for the leaders of the two guided groups involved, for both men are now dead. But I can attest that nothing I saw early on the afternoon of May 10 suggested that a murderous storm was about to bear down on us. To my oxygen-depleted mind, the clouds drifting up the grand valley of ice known as the Western Cwm looked innocuous, wispy, insubstantial. Gleaming in the brilliant midday sun, they appeared no different from the harmless puffs of convection condensation that rose from the valley almost daily. As I began my descent, I was indeed anxious, but my concern had little to do with the weather. A check of the gauge on my oxygen tank had revealed that it was almost empty. I needed to get down, fast.

The uppermost shank of the Southeast Ridge is a slender, heavily corniced fin[20] of rock and wind-scoured snow that snakes for a quarter-mile toward a secondary pinnacle known as the South Summit. Negotiating the serrated[21] ridge presents few great technical hurdles, but the

[16] In 1999, after this article was written, scientists using sophisticated equipment determined the elevation of Everest to be 29,035 feet, not 29,028 feet, as previously believed.

[17] portion of the atmosphere directly below the stratosphere (it extends from six to eight miles above the earth's surface).

[18] Boukreev was killed in an avalanche about a year and a half later, on December 25, 1997, while climbing Annapurna in the Himalayas.

[19] affected by the decay of tissue resulting from a lack of blood supply

[20] ridge with an overhanging mass of snow or ice deposited by the wind

[21] notched like a saw

route is dreadfully exposed. After 15 minutes of cautious shuffling over a 7,000-foot abyss, I arrived at the notorious Hillary Step, a pronounced notch in the ridge named after Sir Edmund Hillary, the first Westerner to climb the mountain, and a spot that does require a fair amount of technical maneuvering. As I clipped into a fixed rope and prepared to rappel[22] over the lip, I was greeted by an alarming sight.

Thirty feet below, some 20 people were queued up [23] at the base of the Step, and three climbers were hauling themselves up the rope that I was attempting to descend. I had no choice but to unclip from the line and step aside.

The traffic jam comprised climbers from three separate expeditions: the team I belonged to, a group of paying clients under the leadership of the celebrated New Zealand guide Rob Hall; another guided party headed by American Scott Fischer; and a nonguided team from Taiwan. Moving at the snail's pace that is the norm above 8,000 meters, the throng labored up the Hillary Step one by one, while I nervously bided my time.

Harris, who left the summit shortly after I did, soon pulled up behind me. Wanting to conserve whatever oxygen remained in my tank, I asked him to reach inside my backpack and turn off the valve on my regulator, which he did. For the next ten minutes I felt surprisingly good. My head cleared. I actually seemed less tired than with the gas turned on. Then, abruptly, I felt like I was suffocating. My vision dimmed and my head began to spin. I was on the brink of losing consciousness.

Instead of turning my oxygen off, Harris, in his hypoxically[24] impaired state, had mistakenly cranked the valve open to full flow, draining the tank. I'd just squandered the last of my gas going nowhere. There was another tank waiting for me at the South Summit, 250 feet below, but to get there I would have to descend the most exposed terrain on the entire route without benefit of supplemental oxygen.

But first I had to wait for the crowd to thin. I removed my now useless mask, planted my ice ax into the mountain's frozen hide, and hunkered on the ridge crest. As I exchanged banal[25] congratulations with the climbers filing past, inwardly I was frantic: "Hurry it up, hurry it up!" I silently pleaded. "While you guys are messing around here, I'm losing brain cells by the millions!"

Most of the passing crowd belonged to Fischer's group, but near the back of the parade two of my teammates eventually appeared: Hall and Yasuko Namba. Girlish and reserved, the 47-year-old Namba was 40 minutes away from becoming the oldest woman to climb Everest and the second Japanese woman to reach the highest point on each continent, the so-called Seven Summits.

Later still, Doug Hansen—another member of our expedition, a postal worker from Seattle who had become my closest friend on the mountain—arrived atop the Step. "It's in the bag!" I yelled over the wind, trying to sound more upbeat than I felt. Plainly exhausted, Doug mumbled something from behind his oxygen mask that I didn't catch, shook my hand weakly, and continued plodding upward.

The last climber up the rope was Fischer, whom I knew casually from Seattle, where we both lived. His strength and drive were legendary — in 1994 he'd climbed Everest without using bottled oxygen — so I was surprised at how slowly he was moving and how hammered he looked when he pulled his mask aside to say hello. "Bruuuuuuce!" he wheezed with forced cheer, employing his trademark, fratboyish greeting. When I asked how he was doing, Fischer insisted he was feeling fine: "Just dragging a little today for some reason. No big deal." With the Hillary Step finally clear, I clipped into the strand of orange rope, swung quickly around Fischer as he slumped over his ice ax, and rappelled over the edge.

It was after 2:30 when I made it down to the South Summit. By now tendrils of mist were wrapping across the top of 27,890-foot Lhotse and lapping at Everest's summit pyramid. No longer did the weather look so benign. I grabbed a fresh oxygen cylinder, jammed it onto my regulator, and hurried down into the gathering cloud.

Four hundred vertical feet above, where the summit was still washed in bright sunlight under an immaculate cobalt sky, my compadres[26] were dallying, memorializing their arrival at the apex of the planet with photos and high-fives—and using up precious ticks of the

---

[22] descend a mountain by means of a double rope arranged around the climber's body so that he or she can control the slide downward

[23] lined up

[24] characterized by hypoxia, a condition resulting from a decrease in the oxygen reaching body tissues. Hypoxia is a common condition at very high altitudes.

[25] everyday; commonplace

[26] close friends; in this case, fellow members of the climbing team

clock. None of them imagined that a horrible ordeal was drawing nigh[27]. None of them suspected that by the end of that long day, every minute would matter. . . .

At 3 p.m., within minutes of leaving the South Summit, I descended into clouds ahead of the others. Snow started to fall. In the flat, diminishing light, it became hard to tell where the mountain ended and where the sky began. It would have been very easy to blunder off the edge of the ridge and never be heard from again. The lower I went, the worse the weather became.

When I reached the Balcony again, about 4 p.m., I encountered Beck Weathers standing alone, shivering violently. Years earlier, Weathers had undergone radial keratotomy to correct his vision. A side effect, which he discovered on Everest and consequently hid from Hall, was that in the low barometric pressure at high altitude, his eyesight failed. Nearly blind when he'd left Camp Four in the middle of the night but hopeful that his vision would improve at daybreak, he stuck close to the person in front of him and kept climbing.

Upon reaching the Southeast Ridge shortly after sunrise, Weathers had confessed to Hall that he was having trouble seeing, at which point Hall declared, "Sorry, pal, you're going down. I'll send one of the Sherpas[28] with you." Weathers countered that his vision was likely to improve as soon as the sun crept higher in the sky; Hall said he'd give Weathers 30 minutes to find out — after that, he'd have to wait there at 27,500 feet for Hall and the rest of the group to come back down. Hall didn't want Weathers descending alone. "I'm dead serious about this," Hall admonished his client. "Promise me that you'll sit right here until I return.

"I crossed my heart and hoped to die," Weathers recalls now, "and promised I wouldn't go anywhere." Shortly after noon, Hutchison, Taske, and Kasischke[29] passed by with their Sherpa escorts, but Weathers elected not to accompany them. "The weather was still good," he explains, "and I saw no reason to break my promise to Rob."

By the time I encountered Weathers, however, conditions were turning ugly. "Come down with me," I implored, "I'll get you down, no problem." He was nearly convinced, until I made the mistake of mentioning that Groom was on his way down, too. In a day of many mistakes, this would turn out to be a crucial one. "Thanks anyway," Weathers said. "I'll just wait for Mike. He's got a rope; he'll be able to short-rope[30] me." Secretly relieved, I hurried toward the South Col, 1,500 feet below.

These lower slopes proved to be the most difficult part of the descent. Six inches of powder snow blanketed outcroppings of loose shale. Climbing down them demanded unceasing concentration, an all but impossible feat in my current state. By 5:30, however, I was finally within 200 vertical feet of Camp Four, and only one obstacle stood between me and safety: a steep bulge of rock-hard ice that I'd have to descend without a rope. But the weather had deteriorated into a full-scale blizzard. Snow pellets born on 70-mph winds stung my face; any exposed skin was instantly frozen. The tents, no more than 200 horizontal yards away, were only intermittently visible through the whiteout. There was zero margin for error. Worried about making a critical blunder, I sat down to marshal my energy.

Suddenly, Harris appeared out of the gloom and sat beside me[31]. At this point there was no mistaking that he was in appalling shape. His cheeks were coated with an armor of frost, one eye was frozen shut, and his speech was slurred. He was frantic to reach the tents. After briefly discussing the best way to negotiate the ice, Harris started scooting down on his butt, facing forward. "Andy," I yelled after him, "it's crazy to try it like that!" He yelled something back, but the words were carried off by the screaming wind. A second later he lost his purchase[32] and was rocketing down on his back.

Two hundred feet below, I could make out Harris's motionless form. I was sure he'd broken at least a leg, maybe his neck. But then he stood up, waved that he was OK, and started stumbling toward camp, which was for the moment in plain sight, 150 yards beyond.

---

[27] near

[28] members of a Tibetan people living on the southern slopes of the Himalayas. As experienced mountain climbers, Sherpas are often hired to assist or act as guides for mountaineering

[29] Stuart Hutchison, Dr. John Taske, and Lou Kasischke were three clients on Rob Hall's team

[30] assist a weak or injured climber by hauling him or her

[31] After writing this article, Krakauer discovered through conversations with Martin Adams (a client on Scott Fischer's team) that the person he thought was Harris was, in fact, Martin Adams.

[32] firm hold

I could see three or four people shining lights outside the tents. I watched Harris walk across the flats to the edge of camp, a distance he covered in less than ten minutes. When the clouds closed in a moment later, cutting off my view, he was within 30 yards of the tents. I didn't see him again after that, but I was certain that he'd reached the security of camp, where Sherpas would be waiting with hot tea. Sitting out in the storm, with the ice bulge still standing between me and the tents, I felt a pang of envy. I was angry that my guide hadn't waited for me.

Twenty minutes later I was in camp. I fell into my tent with my crampons[33] still on, zipped the door tight, and sprawled across the frost-covered floor. I was drained, more exhausted than I'd ever been in my life. But I was safe. Andy was safe. The others would be coming into camp soon. We'd done it. We'd climbed Mount Everest.

It would be many hours before I learned that everyone had in fact not made it back to camp — that one teammate was already dead and that 23 other men and women were caught in a desperate struggle for their lives. . . .

Meanwhile, Hall and Hansen were still on the frightfully exposed summit ridge, engaged in a grim struggle of their own. The 46-year-old Hansen, whom Hall had turned back just below this spot exactly a year ago, had been determined to bag the summit this time around. "I want to get this thing done and out of my life," he'd told me a couple of days earlier. "I don't want to have to come back here."

Indeed Hansen had reached the top this time, though not until after 3 p.m., well after Hall's predetermined turnaround time. Given Hall's conservative, systematic nature, many people wonder why he didn't turn Hansen around when it became obvious that he was running late. It's not far-fetched to speculate that because Hall had talked Hansen into coming back to Everest this year, it would have been especially hard for him to deny Hansen the summit a second time—especially when all of Fischer's clients were still marching blithely toward the top.

"It's very difficult to turn someone around high on the mountain," cautions Guy Cotter, a New Zealand guide who summited Everest with Hall in 1992 and was guiding the peak for him in 1995 when Hansen made his first attempt. "If a client sees that the summit is close and they're dead set on getting there, they're going to laugh in your face and keep going up."

In any case, for whatever reason, Hall did not turn Hansen around. Instead, after reaching the summit at 2:10 p.m., Hall waited for more than an hour for Hansen to arrive and then headed down with him. Soon after they began their descent, just below the top, Hansen apparently ran out of oxygen and collapsed. "Pretty much the same thing happened to Doug in '95," says Ed Viesturs, an American who guided the peak for Hall that year. "He was fine during the ascent, but as soon as he started down he lost it mentally and physically. He turned into a real zombie, like he'd used everything up."

At 4:31 p.m., Hall radioed Base Camp to say that he and Hansen were above the Hillary Step and urgently needed oxygen. Two full bottles were waiting for them at the South Summit; if Hall had known this he could have retrieved the gas fairly quickly and then climbed back up to give Hansen a fresh tank. But Harris, in the throes of his oxygen-starved dementia[34], overheard the 4:31 radio call while descending the Southeast Ridge and broke in to tell Hall that all the bottles at the South Summit were empty. So Hall stayed with Hansen and tried to bring the helpless client down without oxygen, but could get him no farther than the top of the Hillary Step.

Cotter, a very close friend of both Hall and Harris, happened to be a few miles from Everest Base Camp at the time, guiding an expedition on Pumori. Overhearing the radio conversations between Hall and Base Camp, he called Hall at 5:36 and again at 5:57, urging his mate to leave Hansen and come down alone. . . . Hall, however, wouldn't consider going down without Hansen.

There was no further word from Hall until the middle of the night. At 2:46 a.m. on May 11, Cotter woke up to hear a long, broken transmission, probably unintended: Hall was wearing a remote microphone clipped to the shoulder strap of his backpack, which was occasionally keyed on by mistake. In this instance, says Cotter, "I suspect Rob didn't even know he was transmitting. I could hear someone yelling—it might have been Rob, but I couldn't be sure because the wind was so loud in the background. He was saying something like 'Keep moving! Keep going!' presumably to Doug, urging him on."

[33] metal plates with spikes fixed to a boot for walking on ice or rock climbing

[34] mental impairment

If that was indeed the case, it meant that in the wee hours of the morning Hall and Hansen were still struggling from the Hillary Step toward the South Summit, taking more than 12 hours to traverse a stretch of ridge typically covered by descending climbers in half an hour.

Hall's next call to Base Camp was at 4:43 a.m. He'd finally reached the South Summit but was unable to descend farther, and in a series of transmissions over the next two hours he sounded confused and irrational. "Harold[35] was with me last night," Hall insisted, when in fact Harris had reached the South Col at sunset. "But he doesn't seem to be with me now. He was very weak."

Mackenzie[36] asked him how Hansen was doing.

"Doug," Hall replied, "is gone." That was all he said, and it was the last mention he ever made of Hansen.

On May 23, when Breashears and Viesturs, of the IMAX team[37], reached the summit, they found no sign of Hansen's body but they did find an ice ax planted about 50 feet below the Hillary Step, along a highly exposed section of ridge where the fixed ropes came to an end. It is quite possible that Hall managed to get Hansen down the ropes to this point, only to have him lose his footing and fall 7,000 feet down the sheer Southwest Face, leaving his ice ax jammed into the ridge crest where he slipped.

During the radio calls to Base Camp early on May 11, Hall revealed that something was wrong with his legs, that he was no longer able to walk and was shaking uncontrollably. This was very disturbing news to the people down below, but it was amazing that Hall was even alive after spending a night without shelter or oxygen at 28,700 feet in hurricane-force wind and minus-100-degree windchill.

At 5 a.m., Base Camp patched through a call on the satellite telephone to Jan Arnold, Hall's wife, seven months pregnant with their first child in Christchurch, New Zealand. Arnold, a respected physician, had summited Everest with Hall in 1993 and entertained no illusions about the gravity of her husband's predicament. "My heart really sank when I heard his voice," she recalls. "He was slurring his words markedly. He sounded like Major Tom[38] or something, like he was just floating away. I'd been up there; I knew what it could be like in bad weather. Rob and I had talked about the impossibility of being rescued from the summit ridge. As he himself had put it, 'You might as well be on the moon.'"

By that time, Hall had located two full oxygen bottles, and after struggling for four hours trying to de-ice his mask, around 8:30 a.m. he finally started breathing the life-sustaining gas. Several times he announced that he was preparing to descend, only to change his mind and remain at the South Summit. The day had started out sunny and clear, but the wind remained fierce, and by late morning the upper mountain was wrapped with thick clouds. Climbers at Camp Two reported that the wind over the summit sounded like a squadron of 747s, even from 8,000 feet below. . . .

Throughout that day, Hall's friends begged him to make an effort to descend from the South Summit under his own power. At 3:20 p.m., after one such transmission from Cotter, Hall began to sound annoyed. "Look," he said, "if I thought I could manage the knots on the fixed ropes with my frostbitten hands, I would have gone down six hours ago, pal. Just send a couple of the boys up with a big thermos of something hot—then I'll be fine."

At 6:20 p.m., Hall was patched through a second time to Arnold in Christchurch. "Hi, my sweetheart," he said in a slow, painfully distorted voice. "I hope you're tucked up in a nice warm bed. How are you doing?"

"I can't tell you how much I'm thinking about you!" Arnold replied. "You sound so much better than I expected. . . . Are you warm, my darling?"

"In the context of the altitude, the setting, I'm reasonably comfortable," Hall answered, doing his best not to alarm her.

"How are your feet?"

"I haven't taken my boots off to check, but I think I may have a bit of frostbite."

"I'm looking forward to making you completely better when you come home," said Arnold. "I just know you're going to be rescued. Don't feel that you're alone. I'm sending all my positive energy your way!" Before signing off, Hall told his wife, "I love you. Sleep well, my sweetheart. Please don't worry too much."

These would be the last words anyone would hear him utter. Attempts to make radio contact with Hall later that night and the next day went unanswered. Twelve days later, when Breashears and Viesturs climbed over the South

---

[35] Andy Harris's nickname

[36] Dr. Caroline Mackenzie was Base Camp doctor for Rob Hall's team

[37] another team of climbers, who were shooting a $5.5-million giant-screen movie about Mount Everest

[38] reference to the David Bowie song "Space Oddity," which is about an astronaut, Major Tom, who is lost in space

Summit on their way to the top, they found Hall lying on his right side in a shallow ice-hollow, his upper body buried beneath a drift of snow.

Early on the morning of May 11, when I returned to Camp Four, Hutchison, standing in for Groom, who was unconscious in his tent, organized a team of four Sherpas to locate the bodies of our teammates Weathers and Namba. The Sherpa search party, headed by Lhakpa Chhiri, departed ahead of Hutchison, who was so exhausted and befuddled that he forgot to put his boots on and left camp in his light, smooth-soled liners. Only when Lhakpa Chhiri pointed out the blunder did Hutchison return for his boots. Following Boukreev's directions, the Sherpas had no trouble locating the two bodies at the edge of the Kangshung Face.

The first body turned out to be Namba, but Hutchison couldn't tell who it was until he knelt in the howling wind and chipped a three-inch-thick carapace[39] of ice from her face. To his shock, he discovered that she was still breathing. Both her gloves were gone, and her bare hands appeared to be frozen solid. Her eyes were dilated[40]. The skin on her face was the color of porcelain. "It was terrible," Hutchison recalls. "I was overwhelmed. She was very near death. I didn't know what to do."

He turned his attention to Weathers, who lay 20 feet away. His face was also caked with a thick armor of frost. Balls of ice the size of grapes were matted to his hair and eyelids. After cleaning the frozen detritus[41] from his face, Hutchison discovered that he, too, was still alive: "Beck was mumbling something, I think, but I couldn't tell what he was trying to say. His right glove was missing and he had terrible frostbite. He was as close to death as a person can be and still be breathing.

Badly shaken, Hutchison went over to the Sherpas and asked Lhakpa Chhiri's advice. Lhakpa Chhiri, an Everest veteran respected by Sherpas and sahibs[42] alike for his mountain savvy, urged Hutchison to leave Weathers and Namba where they lay. Even if they survived long enough to be dragged back to Camp Four, they would certainly die before they could be carried down to Base Camp, and attempting a rescue would needlessly jeopardize the lives of the other climbers on the Col, most of whom were going to have enough trouble getting themselves down safely.

Hutchison decided that Chhiri was right. There was only one choice, however difficult: Let nature take its inevitable course with Weathers and Namba, and save the group's resources for those who could actually be helped. It was a classic act of triage[43]. When Hutchison returned to camp at 8:30 a.m. and told the rest of us of his decision, nobody doubted that it was the correct thing to do.

Later that day a rescue team headed by two of Everest's most experienced guides, Pete Athans and Todd Burleson, who were on the mountain with their own clients, arrived at Camp Four. Burleson was standing outside the tents about 4:30 p.m. when he noticed someone lurching slowly toward camp. The person's bare right hand, naked to the wind and horribly frostbitten, was outstretched in a weird, frozen salute. Whoever it was reminded Athans of a mummy in a low-budget horror film. The mummy turned out to be none other than Beck Weathers, somehow risen from the dead.

A couple of hours earlier, a light must have gone on in the reptilian core of Weathers' comatose[44] brain, and he regained consciousness. "Initially I thought I was in a dream," he recalls. "Then I saw how badly frozen my right hand was, and that helped bring me around to reality. Finally I woke up enough to recognize that the cavalry[45] wasn't coming so I better do something about it myself."

Although Weathers was blind in his right eye and able to focus his left eye within a radius of only three or four feet, he started walking into the teeth of the wind, deducing correctly that camp lay in that direction. If he'd been wrong he would have stumbled immediately down the Kangshung Face, the edge of which was a few yards in the opposite direction. Ninety minutes later he encountered "some unnaturally smooth, bluish-looking rocks," which turned out to be the tents of Camp Four.

The next morning, May 12, Athans, Burleson, and climbers from the IMAX team short-roped Weathers down to Camp Two. On the morning of May 13, in a hazardous helicopter rescue, Weathers and Gau[46] were evacuated from

[39] covering
[40] made wider; here, referring to the pupil of the eye
[41] debris
[42] term used by Sherpas to refer to the paying members of the expeditions
[43] assigning of priorities of medical care based on chances for survival
[44] deeply unconscious due to injury or disease
[45] soldiers on horseback or motorized transport; an allusion to the idea that troops were not coming to the rescue
[46] "Makalu" Gau Ming-Ho, leader of the Taiwanese National Expedition, another team climbing on Everest

the top of the icefall by Lieutenant Colonel Madan Khatri Chhetri of the Nepalese army. A month later, a team of Dallas surgeons would amputate Weathers' dead right hand just below the wrist and use skin grafts to reconstruct his left hand.

After helping to load Weathers and Gau into the rescue chopper, I sat in the snow for a long while, staring at my boots, trying to get some grip, however tenuous[47], on what had happened over the preceding 72 hours. Then, nervous as a cat, I headed down into the icefall for one last trip through the maze of decaying seracs[48].

I'd always known, in the abstract[49], that climbing mountains was a dangerous pursuit. But until I climbed in the Himalayas that spring, I'd never actually seen death at close range. And there was so much of it: Including three members of an Indo-Tibetan team who died on the north side just below the summit in the same May 10 storm and an Austrian killed some days later, 11 men and women lost their lives on Everest in May 1996, a tie with 1982 for the worst single-season death toll in the peak's history. . . .[50]

Climbing mountains will never be a safe, predictable, rulebound enterprise. It is an activity that idealizes risk-taking; its most celebrated figures have always been those who stuck their necks out the farthest and managed to get away with it. Climbers, as a species, are simply not distinguished by an excess of common sense. And that holds especially true for Everest climbers: When presented with a chance to reach the planet's highest summit, people are surprisingly quick to abandon prudence [51] altogether. "Eventually," warns Tom Hornbein, 33 years after his ascent of the West Ridge, "what happened on Everest this season is certain to happen again."

Study Questions

1. What is the main idea of the selection?
2. On top of Everest, why did Krakauer have the "mental capacity of a slow child"?
3. Why was Krakauer in a hurry to descend the mountain?
4. What did Krakauer see as he prepared to rappel over the Hillary Step?
5. What mistake did Andy Harris make at the Hillary Step? Why?
6. What physical ailment did Beck Weathers suffer from? What offer does Krakauer make to him? Why did Weathers refuse?
7. How did Harris (Adams) make it back to camp?
8. How did Krakauer feel when he made it back to camp?
9. Why does Krakauer think Hall did not turn Hansen around?
10. Why did Hansen collapse when he began his descent?
11. What did Cutter hear on Hall's unintended broken transmission? What might it have meant?
12. What did the IMAX team find when they reached the summit?
13. What kind of conditions did Hall have to endure overnight without shelter or oxygen?
14. Why was Hall's wife alarmed after their call at 5 A.M.?
15. What did Hutchinson discover when he found Namba and Weathers? What advice did the sherpa give him?
16. Describe Weathers as he returned to camp. What eventually happened to his hands?
17. What conclusions does Krakauer make about mountain climbers (and mountain climbing) in the final paragraph?

Literary Focus: Narration

An author can write for any number of purposes. Four of the most common purposes are to narrate, describe, persuade, or inform. **Narration** is a type of writing that tells a story. A narrative work can be either fictional or nonfictional, depending on whether the story it tells actually happened. Biographies, narrative essays, short stories, and novels are all kinds of narrative writing.

Most narratives are told in **chronological order**, the order in which events naturally occur. Effective narratives usually follow a pattern similar to the plot of a short story. That is, a **conflict**, or problem, of some kind sets in motion a chain of events. These events build to a **climax**, or peak of interest--the point at which we realize how the conflict or problem will be solved.

---

[47] weak or slight
[48] pointed masses of ice
[49] the theoretical consideration of something
[50] It was actually the worst death toll on record. After Krakauer wrote this article, a twelfth death was discovered.
[51] cautiousness

Events in a narrative are also often related by **cause and effect**. That is, certain events lead logically to certain other events.

Question: Is this selection an example of narration? Is it written in chronological order? Are the events related by cause and effect? Does the selection have a conflict or climax? If so, identify them.

Kon-Tiki

by Thor Heyerdahl

Thor Heyerdahl was a Norwegian ethnologist – a person who studies and compares different cultures throughout the world. Heyerdahl became famous in 1947 when he and five companions sailed a balsa-wood raft, named the Kon-Tiki, more than four thousand miles across the Pacific Ocean, from Peru in South America to the Polynesian islands. Heyerdahl made the trip to test his idea that Polynesia might actually have been settled centuries ago by South American Indians. Heyerdahl narrates the story of his remarkable adventure in his book Kon-Tiki. Of the strange creatures seen by the crew of the Kon-Tiki, which do you find the most memorable? (First published 1950)

The very first day we were left alone on the sea we had noticed fish round the raft, but we were too much occupied with the steering to think of fishing. The second day we went right into a thick shoal[52] of sardines, and soon afterward an eight-foot blue shark came along and rolled over with its white belly uppermost as it rubbed against the raft's stern[53], where Herman and Bengt stood barelegged in the seas, steering. It played round us for a while but disappeared when we got the hand harpoon ready for action.

Next day we were visited by tunnies, bonitos[54], and dolphins, and when a big flying fish thudded on board we used it as bait and at once pulled in two large dolphins (dorados) weighing from twenty to thirty-five pounds each. This was food for several days. On steering watch we could see many fish we did not even know, and one day we came into a school of porpoises which seemed quite endless. The black backs tumbled about, packed close together, right in to the side of the raft, and sprang up here and there all over the sea as far as we could see from the masthead. And the nearer we came to the Equator, and the farther from the coast, the commoner flying fish became. When at last we came out into the blue water where the sea rolled by majestically, sunlit and serene, ruffled by gusts of wind, we could see them glittering like a rain of projectiles which shot from the water and flew in a straight line till their power of flight was exhausted and they vanished beneath the surface.

If we set the little paraffin[55] lamp out at night, flying fish were attracted by the light and, large and small, shot over the raft. They often struck the bamboo cabin or the sail and tumbled helpless on the deck. Unable to get a take-off by swimming through the water, they just remained lying and kicking helplessly, like large-eyed herrings with long breast fins. It sometimes happened that we heard an outburst of strong language from a man on deck when a cold flying fish came unexpectedly, at a good speed, slap into his face. They always came at a good pace and snout first, and if they caught one full in the face they made it burn and tingle. But the unprovoked attack was quickly forgiven by the injured party, for, with all its drawbacks, we were in a maritime land of enchantment where delicious fish dishes came hurling through the air. We used to fry them for breakfast, and whether it was the fish, the cook, or our appetites, they reminded us of fried troutlings once we had scraped the scales off.

The cook's first duty, when he got up in the morning, was to go out on deck and collect all the flying fish that had landed on board in the course of the night. There were usually half a dozen or more, and once we found twenty-six fat flying fish on the raft. Knut was much upset one morning because, when he was standing operating with the frying pan, a flying fish struck him on the hand instead of landing right in the cooking fat.

Our neighborly intimacy with the sea was not fully realized by Torstein till he woke one morning and found a sardine on his pillow. There was so little room in the cabin that Torstein had to lie with his head in the doorway, and, if anyone inadvertently trod on his face when going out at night, he bit him in the leg. He grasped the sardine by the tail and confided to it understandingly that all sardines had his entire sympathy. We conscientiously drew in our legs so that Torstein should have more room the next night, but then something happened which caused Torstein to find himself a sleeping place on top of all the kitchen utensils in the radio corner.

It was a few nights later. It was overcast and pitch dark, and Torstein had placed the paraffin lamp close by his head, so that the night watches could see where they were treading when they crept in and out over his head. About four o'clock Torstein was awakened by the lamp tumbling

[52] school of fish
[53] end of a boat, raft, or other sailing craft
[54] tunnies and bonitos are types of tuna
[55] substance similar to wax

over and something cold and wet flapping about his ears. “Flying fish, ” he thought and felt for it in the darkness to throw it away. He caught hold of something long and wet, which wriggled like a snake, and let go as if he had burned himself. The unseen visitor twisted itself away and over to Herman, while Torstein tried to get the lamp lighted again. Herman started up, too, and this made me wake, thinking of the octopus which came up at night in these waters.

When we got the lamp lighted, Herman was sitting in triumph with his hand gripping the neck of a long thin fish which wriggled in his hands like an eel. The fish was over three feet long, as slender as a snake, with dull black eyes and a long snout with a greedy jaw full of long sharp teeth. The teeth were as sharp as knives and could be folded back into the roof of the mouth to make way for what was swallowed. Under Herman’s grip a large-eyed white fish, about eight inches long, was suddenly thrown up from the stomach and out of the mouth of the predatory fish, and soon after up came another like it. These were clearly two deepwater fish, much torn by the snakefish’s teeth. The snakefish’s thin skin was bluish violet on the back and steel blue underneath, and it came loose in flakes when we took hold of it.

Bengt too was awakened at last by all the noise, and we held the lamp and the long fish under his nose. He sat up drowsily in his sleeping bag and said solemnly:

“No, fish like that don’t exist.”

With which he turned over quietly and fell asleep again.

Bengt was not far wrong. It appeared later that we six sitting round the lamp in the bamboo cabin were the first men to have seen this fish alive. Only the skeleton of a fish like this one had been found a few times on the coast of South America and the Galapagos Islands; ichthyologists[56] called it Gempylus, or snake mackerel, and thought it lived at the bottom of the sea at a great depth because no one had ever seen it alive. But, if it lived at a great depth, it must have done so by day when the sun blinded its big eyes. For on dark nights Gempylus was abroad high over the surface of the sea; we on the raft had experience of that.

A week after the rare fish had landed on Torstein’s sleeping bag, we had another visit. Again it was four in the morning, and the new moon had set so that it was dark but the stars were shining. The raft was steering easily, and when my watch was over I took a turn along the edge of the raft to see if everything was shipshape for the new watch. I had a rope round my waist, as the watch always had, and, with the paraffin lamp in my hand, I was walking carefully along the outermost log to get round the mast. The log was wet and slippery, and I was furious when someone quite unexpectedly caught hold of the rope behind me and jerked till I nearly lost my balance. I turned round wrathfully with the lantern, but not a soul was to be seen. There came a new tug at the rope, and I saw something shiny lying writhing on the deck. It was a fresh Gempylus, and this time it had got its teeth so deep into the rope that several of them broke before I got the rope loose. Presumably the light of the lantern had flashed along the curving white rope, and our visitor from the depths of the sea had caught hold in the hope of jumping up and snatching an extra long and tasty tidbit. It ended its days in a jar of Formalin[57].

The sea contains many surprises for him who has his floor on a level with the surface and drifts along slowly and noiselessly. A sportsman who breaks his way through the woods may come back and say that no wild life is to be seen. Another may sit down on a stump and wait, and often rustlings and cracklings will begin and curious eyes peer out. So it is on the sea, too. We usually plow across it with roaring engines and piston strokes, with the water foaming round our bow[58]. Then we come back and say that there is nothing to see far out on the ocean.

Not a day passed but we, as we sat floating on the surface of the sea, were visited by inquisitive guests which wriggled and waggled about us, and a few of them, such as dolphins and pilot fish, grew so familiar that they accompanied the raft across the sea and kept round us day and night.

When night had fallen and the stars were twinkling in the dark tropical sky, a phosphorescence[59] flashed around us in rivalry with the stars, and single glowing plankton resembled round live coals so vividly that we involuntarily drew in our bare legs when the glowing pellets were washed up round our feet at the raft’s stern. When we caught them, we saw that they were little brightly shining species of shrimp. On such nights we were sometimes

[56] scholars who study fish

[57] solution of water and formaldehyde used to disinfect and preserve specimens

[58] front end of a sailing craft

[59] glowing light coming from a substance that has absorbed heat or light

scared when two round shining eyes suddenly rose out of the sea right alongside the raft and glared at us with an unblinking hypnotic stare. The visitors were often big squids which came up and floated on the surface with their devilish green eyes shining in the dark like phosphorus. But sometimes the shining eyes were those of deep-water fish which came up only at night and lay staring, fascinated by the glimmer of light before them. Several times, when the sea was calm, the black water round the raft was suddenly full of round heads two or three feet in diameter, lying motionless and staring at us with great glowing eyes. On other nights balls of light three feet and more in diameter would be visible down in the water, flashing at irregular intervals like electric lights turned on for a moment.

We gradually grew accustomed to having these subterranean or submarine creatures under the floor, but nevertheless we were just as surprised every time a new species appeared. About two o'clock on a cloudy night, when the man at the helm[60] had difficulty in distinguishing black water from black sky, he caught sight of a faint illumination down in the water which slowly took the shape of a large animal. It was impossible to say whether it was plankton shining on its body, or whether the animal itself had a phosphorescent surface, but the glimmer down in the black water gave the ghostly creature obscure, wavering outlines. Sometimes it was roundish, sometimes oval, or triangular, and suddenly it split into two parts which swam to and fro under the raft independently of each other. Finally there were three of these large shining phantoms wandering round in slow circles under us.

They were real monsters, for the visible parts alone were some five fathoms[61] long, and we all quickly collected on deck and followed the ghost dance. It went on for hour after hour, following the course of the raft. Mysterious and noiseless, our shining companions kept a good way beneath the surface, mostly on the starboard side where the light was, but often they were right under the raft or appeared on the port side[62]. The glimmer of light on their backs revealed that the beasts were bigger than elephants but they were not whales, for they never came up to breathe. Were they giant ray fish which changed shape when they turned over on their sides? They took no notice at all if we held the light right down on the surface to lure them up, so that we might see what kind of creatures they were. And, like all proper goblins and ghosts, they had sunk into the depths when the dawn began to break.

We never got a proper explanation of this nocturnal visit from the three shining monsters, unless the solution was afforded by another visit we received a day and a half later in the full midday sunshine. It was May 24, and we were lying drifting on a leisurely swell in exactly 95° west by 7° south. It was about noon, and we had thrown overboard the guts of two big dolphins we had caught earlier in the morning. I was having a refreshing plunge overboard at the bow, lying in the water but keeping a good lookout and hanging on to a rope end, when I caught sight of a thick brown fish, six feet long, which came swimming inquisitively toward me through the crystal-clear sea water. I hopped quickly up on to the edge of the raft and sat in the hot sun looking at the fish as it passed quietly, when I heard a wild war whoop from Knut, who was sitting aft behind the bamboo cabin. He bellowed "Shark!" till his voice cracked in a falsetto, and, as we had sharks swimming alongside the raft almost daily without creating such excitement, we all realized that this must be something extra special and flocked astern to Knut's assistance.

Knut had been squatting there, washing his pants in the swell, and when he looked up for a moment he was staring straight into the biggest and ugliest face any of us had ever seen in the whole of our lives. It was the head of a veritable sea monster, so huge and so hideous that, if the Old Man of the Sea himself had come up, he could not have made such an impression on us. The head was broad and flat like a frog's, with two small eyes right at the sides, and a toadlike jaw which was four or five feet wide and had long fringes drooping from the corners of the mouth. Behind the head was an enormous body ending in a long thin tail with a pointed tail fin which stood straight up and showed that this sea monster was not any kind of whale. The body looked brownish under the water, but both head and body were thickly covered with small white spots.

The monster came quietly, lazily swimming after us from astern. It grinned like a bulldog and lashed gently with its tail. The large round dorsal[63] fin projected clear of the water and sometimes the tail fin as well, and, when the creature was in the trough of the swell, the water flowed about the broad back as though washing round a

[60] steering mechanism

[61] 30 feet – a fathom is a unit of measurement equal to six feet

[62] the starboard side is the right-hand side of a sailing craft; the port-side is the left-hand side

[63] on the back

submerged reef. In front of the broad jaws swam a whole crowd of zebra-striped pilot fish in fan formation, and large remora fish and other parasites sat firmly attached to the huge body and traveled with it through the water, so that the whole thing looked like a curious zoological collection crowded round something that resembled a floating deep-water reef.

A twenty-five-pound dolphin, attached to six of our largest fishhooks, was hanging behind the raft as bait for sharks, and a swarm of the pilot fish shot straight off, nosed the dolphin without touching it, and then hurried back to their lord and master, the sea king. Like a mechanical monster it set its machinery going and came gliding at leisure toward the dolphin which lay, a beggarly trifle, before its jaws. We tried to pull the dolphin in, and the sea monster followed slowly, right up to the side of the raft. It did not open its mouth but just let the dolphin bump against it, as if to throw open the whole door for such an insignificant scrap was not worth while. When the giant came close up to the raft, it rubbed its back against the heavy steering oar, which was just lifted up out of the water, and now we had ample opportunity of studying the monster at the closest quarters—at such close quarters that I thought we had all gone mad, for we roared stupidly with laughter and shouted overexcitedly at the completely fantastic sight we saw. Walt Disney himself, with all his powers of imagination, could not have created a more hair-raising sea monster than that which thus suddenly lay with its terrific jaws along the raft's side.

The monster was a whale shark, the largest shark and the largest fish known in the world today. It is exceedingly rare, but scattered specimens are observed here and there in the tropical oceans. The whale shark has an average length of fifty feet, and according to zoologists it weighs fifteen tons. It is said that large specimens can attain a length of sixty feet; one harpooned baby had a liver weighing six hundred pounds and a collection of three thousand teeth in each of its broad jaws.

Our monster was so large that, when it began to swim in circles round us and under the raft, its head was visible on one side while the whole of its tail stuck out on the other. And so incredibly grotesque, inert, and stupid did it appear when seen fullface that we could not help shouting with laughter, although we realized that it had strength enough in its tail to smash both balsa logs and ropes to pieces if it attacked us. Again and again it described narrower and narrower circles just under the raft, while all we could do was to wait and see what might happen. When it appeared on the other side, it glided amiably under the steering oar and lifted it up in the air, while the oar blade slid along the creature's back.

We stood round the raft with hand harpoons ready for action, but they seemed to us like toothpicks in relation to the mammoth beast we had to deal with. There was no indication that the whale shark ever thought of leaving us again; it circled round us and followed like a faithful dog, close up to the raft. None of us had ever experienced or thought we should experience anything like it; the whole adventure, with the sea monster swimming behind and under the raft, seemed to us so completely unnatural that we could not really take it seriously.

In reality the whale shark went on encircling us for barely an hour, but to us the visit seemed to last a whole day. At last it became too exciting for Erik, who was standing at a corner of the raft with an eight-foot hand harpoon, and, encouraged by ill-considered shouts, he raised the harpoon above his head. As the whale shark came gliding slowly toward him and its broad head moved right under the corner of the raft, Erik thrust the harpoon with all his giant strength down between his legs and deep into the whale shark's gristly[64] head. It was a second or two before the giant understood properly what was happening. Then in a flash the placid half-wit was transformed into a mountain of steel muscles.

We heard a swishing noise as the harpoon line rushed over the edge of the raft and saw a cascade of water as the giant stood on its head and plunged down into the depths. The three men who were standing nearest were flung about the place, head over heels, and two of them were flayed[65] and burned by the line as it rushed through the air. The thick line, strong enough to hold a boat, was caught up on the side of the raft but snapped at once like a piece of twine, and a few seconds later a broken-off harpoon shaft came up to the surface two hundred yards away. A shoal of frightened pilot fish shot off through the water in a desperate attempt to keep up with their old lord and master. We waited a long time for the monster to come racing back like an infuriated submarine, but we never saw anything more of him.

Study Questions

[64] tough, bony, and elastic
[65] whipped

1. What is the main idea of the selection?
2. Describe the unusual long fish that Torstein discovers one night. What does this creature turn out to be?
3. For what sort of traveler does the sea have "many surprises," according to Heyerdahl?
4. One night one of the crew saw a large glowing shape circling under the raft. Why does this shape puzzle the men on the *Kon-Tiki*?
5. Describe the whale shark that Knut sees. List three facts that zoologists know about this creature.
6. What does the crew do during the encounter with the whale shark?
7. From Heyerdahl's descriptions what is your overall impression of the sea and the life it contains?
8. What is your impression of the general attitude of the author and his crew toward the sea and its various forms of life?
9. What is Heyerdahl's purpose in telling us about the various creatures that he sees?

Literary Focus: Description

Description is the type of writing that creates a clear picture of something--a person, animal, object, or place, for example. All works of literature, both fiction and nonfiction, contain description.

Good descriptive writing should create a strong **overall impression** of the subject. This overall impression is made up of many concrete **details**: specific images, pictures, colors, shapes, sounds, sometimes smells, tastes, textures, and even emotions.

Question: Is "Kon-Tiki" an example of descriptive writing? Does it create an overall impression of its subject? Identify three concrete details that help describe its subject.

Is Marijuana as Safe as We Think?

by Malcolm Gladwell

Cannabis, also known as marijuana or pot among other names, is a psychoactive drug from the Cannabis plant. Tetrahydrocannabinol (THC) is the main psychoactive component of cannabis, which is one of the 483 known compounds in the plant. Cannabis has various mental and physical effects, which include euphoria, altered states of mind and sense of time, difficulty concentrating, impaired short-term memory and body movement, relaxation, and an increase in appetite. The effects last for two to six hours, depending on the amount used. Although it remains illegal at the federal level, there have been many recent attempts to legalize it for recreational purposes based on the supposition that it is largely safe for consumption. This assumption, however, continues to come under scientific scrutiny as explained in the following article. (First published 2019)

A few years ago, the National Academy of Medicine convened a panel of sixteen leading medical experts to analyze the scientific literature on cannabis. The report they prepared, which came out in January of 2017, runs to four hundred and sixty-eight pages. It contains no bombshells or surprises, which perhaps explains why it went largely unnoticed. It simply stated, over and over again, that a drug North Americans have become enthusiastic about remains a mystery.

For example, smoking pot is widely supposed to diminish the nausea associated with chemotherapy. But, the panel pointed out, "there are no good-quality randomized trials investigating this option." We have evidence for marijuana as a treatment for pain, but "very little is known about the efficacy, dose, routes of administration, or side effects of commonly used and commercially available cannabis products in the United States." The caveats[66] continue. Is it good for epilepsy? "Insufficient evidence." Tourette's syndrome[67]? Limited evidence. A.L.S., Huntington's, and Parkinson's[68]? Insufficient evidence. Irritable-bowel syndrome? Insufficient evidence. Dementia and glaucoma? Probably not. Depression? Probably not.

Then come Chapters 5 through 13, the heart of the report, which concern marijuana's potential risks. The haze of uncertainty continues. Does the use of cannabis increase the likelihood of fatal car accidents? Yes. By how much? Unclear. Does it affect motivation and cognition? Hard to say, but probably. Does it affect employment prospects? Probably. Will it impair academic achievement? Limited evidence. This goes on for pages.

We need proper studies, the panel concluded, on the health effects of cannabis on children and teen-agers and pregnant women and breast-feeding mothers and "older populations" and "heavy cannabis users." The panel also called for investigation into "the pharmacokinetic and pharmacodynamic properties of cannabis, modes of delivery, different concentrations, in various populations, including the dose-response relationships of cannabis and THC or other cannabinoids."

Figuring out the "dose-response relationship" of a new compound is something a pharmaceutical company does from the start of trials in human subjects, as it prepares a new drug application for the F.D.A. Too little of a powerful drug means that it won't work. Too much means that it might do more harm than good. The amount of active ingredient in a pill and the metabolic path that the ingredient takes after it enters your body—these are things that drugmakers will have painstakingly mapped out before the product comes on the market, with a tractor-trailer full of supporting documentation.

With marijuana, apparently, we're still waiting for this information. It's hard to study a substance that until very recently has been almost universally illegal. And the few studies we do have were done mostly in the nineteen-eighties and nineties, when cannabis was not nearly as potent as it is now. Because of recent developments in plant breeding and growing techniques, the typical concentration of THC, the psychoactive ingredient in marijuana, has gone from the low single digits to more than twenty percent.

Are users smoking less, to compensate for the drug's new potency? Or simply getting more stoned, more quickly? Is high-potency cannabis more of a problem for younger users or for older ones? For some drugs, the dose-response curve is linear: twice the dose creates twice the effect. For other drugs, it's nonlinear: twice the dose can increase the effect tenfold, or hardly at all. Which is true for cannabis? It also matters, of course, how cannabis

[66] warnings

[67] a disorder that involves repetitive movements or unwanted sounds (tics) that can't be easily controlled.

[68] these are neurodegenerative diseases--incurable and debilitating conditions that result in progressive degeneration and/or death of nerve cells, which can cause problems with movement or mental functioning

is consumed. It can be smoked, vaped, eaten, or applied to the skin. How are absorption patterns affected?

Last May, not long before Canada legalized the recreational use of marijuana, Beau Kilmer, a drug-policy expert with the RAND Corporation, testified before the Canadian Parliament. He warned that the fastest-growing segment of the legal market in Washington State was extracts for inhalation, and that the mean THC concentration for those products was more than sixty-five per cent. "We know little about the health consequences—risks and benefits—of many of the cannabis products likely to be sold in nonmedical markets," he said. Nor did we know how higher-potency products would affect THC consumption.

When it comes to cannabis, the best-case scenario is that we will muddle through, learning more about its true effects as we go along and adapting as needed—the way, say, the once extraordinarily lethal innovation of the automobile has been gradually tamed in the course of its history. For those curious about the worst-case scenario, Alex Berenson has written a short manifesto, "Tell Your Children: The Truth About Marijuana, Mental Illness, and Violence."

Berenson begins his book with an account of a conversation he had with his wife, a psychiatrist who specializes in treating mentally ill criminals. They were discussing one of the many grim cases that cross her desk—"the usual horror story, somebody who'd cut up his grandmother or set fire to his apartment." Then his wife said something like, "Of course, he was high, been smoking pot his whole life."

Of course? I said.

Yeah, they all smoke.

Well . . . other things too, right?

Sometimes. But they all smoke.

Berenson used to be an investigative reporter for the *New York Times*, where he covered, among other things, health care and the pharmaceutical industry. Then he left the paper to write a popular series of thrillers. At the time of his conversation with his wife, he had the typical layman's[69] view of cannabis, which is that it is largely benign[70]. His wife's remark alarmed him, and he set out to educate himself. Berenson is constrained by the same problem the National Academy of Medicine faced—that, when it comes to marijuana, we really don't know very much. But he has a reporter's tenacity[71], a novelist's imagination, and an outsider's knack for asking intemperate[72] questions. The result is disturbing.

The first of Berenson's questions concerns what has long been the most worrisome point about cannabis: its association with mental illness. Many people with serious psychiatric illness smoke lots of pot. The marijuana lobby typically responds to this fact by saying that pot-smoking is a response to mental illness, not the cause of it—that people with psychiatric issues use marijuana to self-medicate. That is only partly true. In some cases, heavy cannabis use does seem to cause mental illness. As the National Academy panel declared, in one of its few unequivocal conclusions, "Cannabis use is likely to increase the risk of developing schizophrenia[73] and other psychoses[74]; the higher the use, the greater the risk."

Berenson thinks that we are far too sanguine[75] about this link. He wonders how large the risk is, and what might be behind it. In one of the most fascinating sections of "Tell Your Children," he sits down with Erik Messamore, a psychiatrist who specializes in neuropharmacology[76] and in the treatment of schizophrenia. Messamore reports that, following the recent rise in marijuana use in the U.S. (it has almost doubled in the past two decades, not necessarily as the result of legal reforms), he has begun to see a new kind of patient: older, and not from the marginalized communities that his patients usually come from. These are otherwise stable middle-class professionals. Berenson writes, "A surprising number of them seemed to have used only cannabis and no other drugs before their breaks. The disease they'd developed looked like schizophrenia, but it had developed later—and their prognosis seemed to be worse. Their delusions and paranoia hardly responded to antipsychotics[77]."

Messamore theorizes that THC may interfere with the brain's anti-inflammatory mechanisms, resulting in damage to nerve cells and blood vessels. Is this the reason, Berenson wonders, for the rising incidence of

[69] ordinary person's; non-expert's
[70] harmless
[71] persistence
[72] here, difficult and unwanted
[73] a serious mental disorder in which people interpret reality abnormally. Schizophrenia may result in some combination of hallucinations, delusions, and extremely disordered thinking and behavior that impairs daily functioning, and can be disabling.
[74] conditions that affect the way your brain processes information. They cause you to lose touch with reality.
[75] optimistic
[76] the study of how drugs affect the nervous system
[77] medicines that help people deal with psychoses

schizophrenia in the developed world, where cannabis use has also increased? In the northern parts of Finland, incidence of the disease has nearly doubled since 1993. In Denmark, cases have risen twenty-five per cent since 2000. In the United States, hospital emergency rooms have seen a fifty-percent increase in schizophrenia admissions since 2006. If you include cases where schizophrenia was a secondary diagnosis, annual admissions in the past decade have increased from 1.26 million to 2.1 million.

Berenson's second question derives from the first. The delusions and paranoia that often accompany psychoses can sometimes trigger violent behavior. If cannabis is implicated in a rise in psychoses, should we expect the increased use of marijuana to be accompanied by a rise in violent crime, as Berenson's wife suggested? Once again, there is no definitive answer, so Berenson has collected bits and pieces of evidence. For example, in a 2013 paper in the *Journal of Interpersonal Violence*, researchers looked at the results of a survey of more than twelve thousand American high-school students. The authors assumed that alcohol use among students would be a predictor of violent behavior, and that marijuana use would predict the opposite. In fact, those who used only marijuana were three times more likely to be physically aggressive than abstainers were; those who used only alcohol were 2.7 times more likely to be aggressive. Observational studies like these don't establish causation. But they invite the sort of research that could.

Berenson looks, too, at the early results from the state of Washington, which, in 2014, became the first U.S. jurisdiction to legalize recreational marijuana. Between 2013 and 2017, the state's aggravated-assault rate rose seventeen per cent, which was nearly twice the increase seen nationwide, and the murder rate rose forty-four per cent, which was more than twice the increase nationwide. We don't know that an increase in cannabis use was responsible for that surge in violence. Berenson, though, finds it strange that, at a time when Washington may have exposed its population to higher levels of what is widely assumed to be a calming substance, its citizens began turning on one another with increased aggression.

His third question is whether cannabis serves as a gateway drug. There are two possibilities. The first is that marijuana activates certain behavioral and neurological pathways that ease the onset of more serious addictions. The second possibility is that marijuana offers a safer alternative to other drugs: that if you start smoking pot to deal with chronic pain you never graduate to opioids[78].

Which is it? This is a very hard question to answer. We're only a decade or so into the widespread recreational use of high-potency marijuana. Maybe cannabis opens the door to other drugs, but only after prolonged use. Or maybe the low-potency marijuana of years past wasn't a gateway, but today's high-potency marijuana is. Methodologically, Berenson points out, the issue is complicated by the fact that the first wave of marijuana legalization took place on the West Coast, while the first serious wave of opioid addiction took place in the middle of the country. So, if all you do is eyeball the numbers, it looks as if opioid overdoses are lowest in cannabis states and highest in non-cannabis states.

Not surprisingly, the data we have are messy. Berenson, in his role as devil's advocate, emphasizes the research that sees cannabis as opening the door to opioid use. For example, two studies of identical twins—in the Netherlands and in Australia—show that, in cases where one twin used cannabis before the age of seventeen and the other didn't, the cannabis user was several times more likely to develop an addiction to opioids. Berenson also enlists a statistician at N.Y.U. to help him sort through state-level overdose data, and what he finds is not encouraging: "States where more people used cannabis tended to have more overdoses."

The National Academy panel is more judicious. Its conclusion is that we simply don't know enough, because there haven't been any "systematic" studies. But the panel's uncertainty is scarcely more reassuring than Berenson's alarmism. Seventy-two thousand Americans died in 2017 of drug overdoses. Should you embark on a pro-cannabis crusade without knowing whether it will add to or subtract from that number?

Drug policy is always clearest at the fringes. Illegal opioids are at one end. They are dangerous. Manufacturers and distributors belong in prison, and users belong in drug-treatment programs. The cannabis industry would have us believe that its product, like coffee, belongs at the other end of the continuum. "Flow Kana partners with independent multi-generational farmers who cultivate under full sun, sustainably, and in small batches," the

[78] Opioids are a class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, morphine, and many others.

promotional literature for one California cannabis brand reads. “Using only organic methods, these stewards of the land have spent their lives balancing a unique and harmonious relationship between the farm, the genetics and the environment.” But cannabis is not coffee. The experience of many users is relatively benign and predictable; the experience of a few, at the margins, is not. Products or behaviors that have that kind of muddled risk profile are confusing, because it is very difficult for those in the middle to appreciate the experiences of those at the statistical tails. Low-frequency risks also take longer and are far harder to quantify, and the lesson of “Tell Your Children” and the National Academy report is that we aren’t yet in a position to do so. For the moment, cannabis probably belongs in the category of substances that society permits but simultaneously discourages. Cigarettes are heavily taxed, and smoking is prohibited in most workplaces and public spaces. Alcohol can’t be sold without a license and is kept out of the hands of children. Prescription drugs have rules about dosages, labels that describe their risks, and policies that govern their availability. “Start low and go slow” is probably good advice for society as a whole, at least until we better understand what we are dealing with.

Late last year, the commissioner of the Food and Drug Administration, Scott Gottlieb, announced a federal crackdown on e-cigarettes. He had seen the data on soaring use among teen-agers, and, he said, “it shocked my conscience.” He announced that the F.D.A. would ban many kinds of flavored e-cigarettes, which are especially popular with teens, and would restrict the retail outlets where e-cigarettes were available.

In the dozen years since e-cigarettes were introduced into the marketplace, they have attracted an enormous amount of attention. There are scores of studies and papers on the subject in the medical and legal literature, grappling with the questions raised by the new technology. Vaping is clearly popular among kids. Is it a gateway to traditional tobacco use? Some public-health experts worry that we’re grooming a younger generation for a lifetime of dangerous addiction. Yet other people see e-cigarettes as a much safer alternative for adult smokers looking to satisfy their nicotine addiction. That’s the British perspective. Last year, a Parliamentary committee recommended cutting taxes on e-cigarettes and allowing vaping in areas where it had previously been banned. Since e-cigarettes are as much as ninety-five per cent less harmful than regular cigarettes, the committee argued, why not promote them? Gottlieb said that he was splitting the difference between the two positions—giving adults “opportunities to transition to non-combustible products,” while upholding the F.D.A.’s “solemn mandate to make nicotine products less accessible and less appealing to children.” He was immediately criticized.

“Somehow, we have completely lost all sense of public-health perspective,” Michael Siegel, a public-health researcher at Boston University, wrote after the F.D.A. announcement:

Every argument that the F.D.A. is making in justifying a ban on the sale of electronic cigarettes in convenience stores and gas stations applies even more strongly for real tobacco cigarettes: you know, the ones that kill hundreds of thousands of Americans each year. Something is terribly wrong with our sense of perspective when we take the e-cigarettes off the shelf but allow the old-fashioned ones to remain.

Among members of the public-health community, it is impossible to spend five minutes on the e-cigarette question without getting into an argument. And this is nicotine they are arguing about, a drug that has been exhaustively studied by generations of scientists. We don’t worry that e-cigarettes increase the number of fatal car accidents, diminish motivation and cognition, or impair academic achievement. The drugs through the gateway that we worry about with e-cigarettes are Marlboros, not opioids. There are no enormous scientific question marks over nicotine’s dosing and bio-availability. Yet we still proceed cautiously and carefully with nicotine, because it is a powerful drug, and when powerful drugs are consumed by lots of people in new and untested ways we have an obligation to try to figure out what will happen.

A week after Gottlieb announced his crackdown on e-cigarettes, on the ground that they are too enticing to children, Siegel visited the first recreational-marijuana facility in Massachusetts. Here is what he found on the menu, each offering laced with large amounts of a drug, THC, that no one knows much about:

Strawberry-flavored chewy bites
Large, citrus gummy bears
Delectable Belgian dark chocolate bars
Assorted fruit-flavored chews
Assorted fruit-flavored cubes
Raspberry flavored confection

Raspberry flavored lozenges
Chewy, cocoa caramel bite-sized treats
Raspberry & watermelon flavored lozenges
Chocolate-chip brownies.

He concludes, "This is public health in 2018?"

Study Questions

1. What is the main idea of the selection?
2. What is the "dose-response" relationship?
3. Identify three specific questions about cannabis that we still don't have conclusive answers for.
4. Who is Alex Berenson? What caused him to start investigating the effects of cannabis on humans?
5. What conclusions did Berenson draw about marijuana use based on his studies?
6. What did the 2013 study from the *Journal of Interpersonal Violence* show?
7. What might be inferred from studying assault rates in Washington from 2013-2017? Why?
8. What can be learned from studies of twins in Australia and the Netherlands?
9. What point is being made in the discussion of e-cigarettes and nicotine use?
10. What is the significance of Siegel's question at the end of the article?

Literary Focus: Persuasion

Persuasion attempts to convince people to accept an opinion or to take action of some kind. Persuasion is used in such different types of expression as editorials, advertisements, and speeches.

Persuasive writers should appeal to the intellects of their audience by presenting **evidence**, **examples**, and **logical arguments** in favor of their opinions. In addition, a persuasive work should present arguments that are logically connected in a clear, simple structure that readers can easily follow.

Persuasion can also try to convince its readers by touching the audience's emotions. Effective writers understand that if their readers can be moved to feel compassion, pride, anger, or determination, then they are also more likely to agree with the speaker's opinions.

Question: What did the writer intend for readers to think, do, or believe in response to the article? What techniques did the writer use to try to persuade his audience?

Literary Focus: Ethos, Logos, Pathos

For speakers and writers to be persuasive, they must be both tactical and tactful. They have to find the method that works for their specific audience.

Aristotle argued that there are three primary ways to make a persuasive appeal. He called these logos, ethos, and pathos. These three rhetorical appeals are at the heart of communication.

Ethos is the **appeal to the authority and reputation of the speaker or writer**. Let's say you want to know more about what it's like to be a female CEO in corporate America. Would you more likely trust a man or woman to tell you? Or let's say you want to read a compelling argument against the death penalty. Would you read an essay written by a murderer on death row?

We want an author or speaker to have credibility. One way writers establish their ethos is to draw attention directly to their credentials. Their book might have a bio on the dustjacket. They might also describe your experience in relation to the subject matter, by saying something like, "Having been forced to wear a school uniform myself, I can tell you …"

A more subtle way writers can establish ethos is to let their writing style draw a portrait of their personality and character. Their writing style can make them seem fair-minded, thoughtful—cool even. It can also make them seem arrogant, selfish, or obsessive. A persuasive writer must inspire trust.

Pathos is the **appeal to the emotions and feelings**. Anytime writing has an emotional impact, we are dealing with pathos. Consider the following two statements:

"I think we need to provide more mental health instruction."

"I lost my daughter to suicide."

Which statement pulls at your heartstrings? The second one of course.

Writers can appeal to people's emotions in many ways. They can make readers cry, they can make jokes, and they can show outrage. Even the most seemingly objective writing styles will contain some element of pathos. A science textbook, for instance, my instill feelings of awe

and amazement at the beauty and complexity of the universe.

Logos is the **appeal to logic**. Anytime a writer builds a case by presenting logical reasons (for example, by showing cause and effect, showcasing scientific studies, drawing reasonable conclusions from data, etc.), he or she is using logos.

Here are two examples of logos in action:

"The rise in violent crime that lasted from the 1960s to the 1990s can be explained by higher levels of lead in the atmosphere. Since leaded gasoline has been phased out, crime levels have plummeted."

"Cats should not be allowed to roam the neighborhood. A study conducted in Lemmington, Michigan, showed that when cats were kept on a leash or indoors, the songbird population rose by 23%."

Not every attempt at logic will persuade. Sometimes the writer may be guilty of a logical fallacy. In other cases, the logic may be sound, but the reader may not trust the source (ethos) or may find the reasoning cold and heartless (a lack of pathos).

It's always best to think of all three rhetorical appeals as different pieces of the puzzle. When they are present in such a way that they appeal to readers and listeners, the effect is a powerful, persuasive, and convincing argument.

Question: Rank each technique (ethos, pathos, logos) according to how effectively it was used in the selection.

Confabulation

by David McRaney

Confabulation is a type of memory error in which gaps in a person's memory are unconsciously filled with fabricated, misinterpreted, or distorted information. When someone confabulates, they are confusing things they have imagined with real memories. Most people believe they know when they are lying to themselves. In truth, people are often ignorant of our motivations and create fictional narratives to explain our decisions, emotions, and history without realizing it, as explained by David McRaney in the following essay. (First published 2011)

When a movie begins with the words "Based on a True Story," what crosses your mind? Do you assume every line of dialogue, every bit of clothing and song in the background is the same as it was in the true event on which the film was based ? Of course you don't. You know movies like Pearl Harbor or Erin Brockovich take artistic license with facts, shaping them so a coherent story will unfold with a beginning, middle, and end. Even biopics about the lives of musicians or politicians who are still alive are rarely the absolute truth. Some things are left out, or some people are fused into single characters. The details, you think when watching, are less important than the big picture, the general idea.

If only you were so savvy when it came to looking back on the biopic in your head, but you are not so smart. You see, the movie up there is lust as dramatized, and scientists have known this for quite a while.

It all starts with your brain's desire to fill in the gaps.

Take your thumbs and place them side by side in front of you. Close your left eye and slowly move your right thumb away in a horizontal line to your right. Notice anything? Probably not. Somewhere along the line is your blind spot, the point where your optic nerve breaks into your retina. You have one per eye, and in this area of your vision you can't see anything. It is larger than you think too--roughly 2 percent of your eyesight. If you want to see for yourself, take a blank sheet of paper and draw on it a dot about the size of a dime. Now, about two inches to the right, draw another. Close your left eye and focus on the left-hand dot. Move the paper closer to you until the right-hand dot disappears. There it is, one of your blind spots.

Now look around the room with your eye closed. Try the same trick above with some words on this page. Notice anything? Is there a giant gap in your vision? Nope. Your brain fills it in with a bit of mental Photoshopping. Whatever surrounds the blind spot is copied and pasted into the hole in an automatic imaginary bit of visual hocus-pocus. Your brain lies to you, and you go about your business none the wiser.

Just as the brain fills in your blind spot every moment of the day without your consciously noticing, so do you fill in the blind spots in your memory and your reasoning.

Have you ever been telling a story about something you and someone else did long ago, and then they stop you to say, "No, no, no. That's not how it happened," just as you get on a roll? You say it was at a Christmas party when you acted out the final episode of *Lost* with stockings on your hands; they say it was Easter. You remember opening presents and drinking eggnog, but they promise it was eggs and it wasn't even you. It was your cousin, and they used a chocolate bunny to represent the smoke monster.

Consider how often this seems to happen, especially in a family with people who can call you out in this way all the time. Is it possible if you had a recording of everything you've ever done it would rarely match up with how you remember it? Think of all the photographs that have blown your mind when you saw yourself in a place you had completely deleted from memory. Think of all the things your parents bring back up about your childhood that you have zero recollection of, or which you remember differently. But you still have a sense of a continuous memory and experience. The details are missing, but the big picture of your own life persists. But the big picture is a lie, nurtured by your constant and unconscious confabulation, adding up to a story of who you are, what you have done, and why.

You do this so much and so often that you can't be sure how much of what you consider to be the honest truth about your past is accurate. You can't be sure how you came to be reading these words at this moment instead of languishing on a street corner or sailing around the world. Why didn't you go in for the kiss? Why did you say those horrible things to your mother? Why did you buy that laptop? Why are you really angry with that guy? What is the truth about who you are and why you are here?

To understand confabulation, we have to head into surgery. Every once in a while, in extreme cases where

nothing else will work, doctors resort to splitting a patient's brain right down the middle. And what they discover is fascinating.

To get a rough idea of how large and how halved your brain is, hold your hands out in front of you and form two fists. Now bring

them together so that if you were wearing rings they would be facing upward. Each fist represents a hemisphere. Your two hemispheres communicate with each other via a dense series of nerve fibers called the corpus callosum. Imagine when you made those fists you grabbed two handfuls of yarn—the yarn is your corpus callosum. In a corpus callosotomy (which is sometimes performed when a case of epilepsy becomes so severe and unmanageable that no drug will bring relief and normalcy) that yarn is cut. The two halves of the brain are disconnected in a careful way that allows the patients to live out their lives with as much normalcy as possible.

Split-brain patients seem fine from the outside. They are able to hold down jobs and carry their weight in conversation. But researchers who have looked deeper have discovered the strengths and weaknesses of the separate hemispheres with the help of split-brain patients. Since the 1950s, studies with those who have undergone this procedure have revealed a great deal about how the brain works, but the insight most germane[79] to the topic at hand is how quickly and unflinchingly these patients are capable of creating complete lies which they then hold to as reality. This is called split-brain confabulation, but you don't have to have a split brain to confabulate.

You feel like a single person with a single brain, but in many ways, you really have two. Thoughts, memories, and emotions cascade throughout the whole, but some tasks are handled better by one side than the other. Language, for example, is usually a task handled by the left side of the brain, but then bounced back and forth between the two. Strange things happen when a person's brain hemispheres are disconnected, making this transfer impossible.

Psychologist Michael Gazzaniga at the University of California at Santa Monica was one of the first researchers, along with Roger Sperry, to enlist the help of split-brain patients in his work. In one experiment subjects looked at a cross in the center of a computer screen, and then a word like "truck" was flashed on only the left side. They were then asked what they saw. Those with connected brains would, of course, say "truck." Those with split brains would say they didn't know, but then, amazingly, if they were asked to draw with their left hand what they had seen, they easily doodled a truck.

Oddly enough, your right hand is controlled by your left brain and your left hand by the right. What the left eye sees travels diagonally through the cranium into the right hemisphere and vice versa, and these nerves are not severed when the brains are split. (To be precise, the right hemisphere gets information from the left visual field, not just the left eye. The opposite is true for the right. A portion of the left visual field can be seen by the right eye, just around the nose.)

Normally this isn't a problem, because what one side of the brain perceives and thinks gets transmitted to the other, but a split-brain can't say what they see when a scientist shows an image to the left visual field. The language centers are in the other hemisphere, across from where the image is being processed. The part of their brain in charge of using words and sending them to the mouth can't tell the other side, the one holding the pencil, what it is looking at. The side that saw the image can, however, draw it. Once the image appears, the split-brain person will then say, "Oh, a truck." The communication that normally takes place across the corpus callosum now happens on the paper.

This is what goes on in the world of a split-brain patient. The same thing happens in your head too. The same part of your brain is responsible for turning thoughts into words and then handing those words over to the mouth. All day long, the world appearing in your right hemisphere is being shared with your left in a conversation you are unaware of. At the biological level, this is a fundamental source of confabulation, and it can be demonstrated in the lab.

If split-brain people are shown two words like "bell" on the left and "music" on the right and then asked to point out with their right hand in a series of four photos what they saw, they will point to the image with a bell in it. They will ignore other photos of a drummer, an organ, and a trumpet. The amazing confabulatory moment happens when they are asked why they chose the image. One split-brain patient said it was because the last music they heard was coming from the college's bell towers. The left eye saw a bell, and told the right hand to point to it, but the right side saw music and was now concocting a

[79] relevant

justification for ignoring the other pictures that were also related to the idea.

The side of the brain in charge of speaking saw the other side point out the bell, but instead of saying it didn't know why, it made up a reason. The right side was no wiser, so it went along with the fabrication. The patients weren't lying, because they believed what they were saying. They deceived themselves and the researcher but had no idea they were doing so. They never felt confused or deceptive; they felt no different than you would.

In one experiment a split-brain person was asked to perform an action only the right hemisphere could see, and the left hemisphere once again explained it away as if it knew the cause. The word “walk” was displayed; the subject stood. When the researcher asked why he got up, the subject said, "I need to get a drink." Another experiment showed a violent scene to only the right hemisphere. The subject said she felt nervous and uneasy and blamed it on the way the room was decorated. The deeper emotional centers could still talk to both sides, but only the left hemisphere had the ability to describe what was bubbling up. This split-brain confabulation has been demonstrated many times over the years. When the left hemisphere is forced to explain why the right hemisphere is doing something, it often creates a fiction that both sides then accept.

Remember though, your brain works in the same way—you just have the benefit of a connection between the two halves to help buffer against misunderstandings, but they can still happen from time to time. Psychologist Alexander Luria compared consciousness to a dance and said the left hemisphere leads. Since it does all the talking, it sometimes has to do all the explaining. Split-brain confabulation is an extreme and amplified version of your own tendency to create narrative fantasies about just about everything you do, and then believe them. You are a confabulatory creature by nature. You are always explaining to yourself the motivations for your actions and the causes to the effects in your life, and you make them up without realizing it when you don't know the answers. Over time, these explanations become your idea of who you are and your place in the world. They are your self.

The neuroscientist V. S. Ramachandran once encountered a split-brain patient whose left hemisphere believed in God, but whose right hemisphere was an atheist. Essentially, as he put it, there were two people in one body-two selves. Ramachandran believes your sense of self is partly the action of mirror neurons. These complex clusters of brain cells fire when you see someone hurt themselves or cry, when they scratch their arm or laugh. They put you in the other person's shoes so you can almost feel that person's pain and itches. Mirror neurons provide empathy[80] and help you learn. One of the greatest discoveries in recent years was to find that mirror neurons fire also when *you* do things. It is as if part of your brain is observing yourself as an outsider.

You are a story you tell yourself. You engage in introspection[81], and with great confidence you see the history of your life with all the characters and settings-and you at the center as protagonist in the tale of who you are. This is all a great, beautiful confabulation without which you could not function.

As you move through your day, you imagine a wide range of potential futures, potential situations outside your senses. When you read news articles and nonfiction books, you create fantasy worlds for situations that actually did happen. When you recall your past, you create it on the spot—a daydream part true and part fantasy that you believe down to the last detail. If you were to lie back and imagine yourself sailing around the world, seeing all the wonders of the planet' from one port to the next, you could with varying levels of detail imagine the entire globe from Paris to India, from Cambodia to Kansas, but you know you haven't actually taken this trip. And there are severe brain disorders where sufferers cannot sort out their own confabulations:

- Patients with Korsakoff's syndrome have amnesia surrounding recent events but can recall their past. They make up stories to replace their recent memories and believe them instead of becoming confused. If you were to ask someone with Korsakoff's syndrome where they had been over the last few weeks, they might say they worked in the hospital's garage and need to get back to work when in reality they are patients receiving daily treatment in that same hospital.

- Anosognosia sufferers are paralyzed but won't admit it. They tell their doctors and loved ones they

[80] the ability to understand and share the feelings of another

[81] the examination or observation of one's own mental and emotional processes

have severe arthritis or need to watch their weight if asked to move their incapacitated arm to take a piece of candy. They lie, but they don't know they are lying. The deception is only directed inward. They truly believe the fiction.

- A person with Capgras delusion believes their close friends and family have been replaced by impostors. The part of the brain that provides an emotional response when you see someone you know stops functioning properly in those with this dysfunction. They recognize their loved ones, but don't feel the spark. They make up a story to explain their confusion and accept it entirely.

- Those with Cotard's syndrome believe they have died. Those with this affliction will assume themselves to be spirits in an afterlife and believe the delusion so strongly they sometimes die of starvation.

Psychologists have long assumed that you aren't aware of your higher cognitive processes, as Richard Nisbett and Timothy DeCamp Wilson at the University of Michigan suggested in their 1977 article for Psychological Review. In their paper they shot holes in the idea of introspection, saying you are rarely aware of the true stimuli that have led to your responses over the years, even from one day to the next. In one study, they write, subjects were asked to think of their mother's maiden name.

Go ahead. You try. What is your mother's maiden name? The next question in the study was "How did you come up with that?"

So how did you?

You don't know. You just thought it. How your mind works is something you can never access, and although you often believe you understand your thoughts and actions, your emotions and motivations, much of the time you do not. The very act of looking inward is already several steps removed from the thoughts you are remembering. This, however, doesn't prevent you from assuming you really do know, you really can recall in full detail, and this is how narratives begin. This is how confabulation provides a framework from which to understand yourself.

As the psychologist George Miller once said, "It is the result of thinking, not the process of thinking, that appears spontaneously in consciousness." In other words, in many ways you are only reporting on what your mind has already produced instead of directing its performance. The flow of consciousness is one thing; the recollection of its course is another, yet you usually see them as the same. This is one of the oldest concepts in psychology and philosophy – phenomenology[82]. It was one of the first debates among researchers over just how deep psychology could delve into the mind. Since the early 1900s, psychologists have wrestled with the conundrum of how, at a certain level, subjective experience can't be shared. For instance, what does red look like? What do tomatoes smell like? When you stub your toe, what does it feel like? What would you say if you had to explain any of these to someone who had never experienced them? How would you describe red to a person blind from birth or the scent of a fresh tomato to someone who had never smelled before?

These are qualia[83], the deepest you can tunnel down into your experience before you hit rock. Most everyone has seen red but can't explain what it is like to do so. Your explanations of experience can build up from qualia but can't go any lower. These are the ineffable[84] building blocks of consciousness. You can explain them only in relation to other experiences, but you can never completely describe the experience of qualia to another person, or yourself.

There is more at work in your mind than you can access; beneath the rock there is more complexity to your thoughts and feelings than you can directly behold. For some behaviors, the antecedent[85] is something old and evolved, a predilection[86] passed down through thousands of generations of people like you trying to survive and thrive. You want to take a nap on a rainy afternoon because perhaps your ancestors sought shelter and safety in the same conditions. For other behaviors, the impetus may have come from something you simply didn't notice. You don't know why you feel like leaving in the middle of Thanksgiving dinner, but you come up with an explanation

---

[82] the study of things as they appear in our experience or the ways we experience things
[83] the internal and subjective component of sense perceptions, arising from stimulation of the senses
[84] too great or extreme to be expressed or described in words
[85] something that existed before or logically precedes another
[86] preference or special liking for something

that seems to make sense at the time. Looking back, the explanation may change.

Philosopher Daniel Dennett calls seeing yourself in this way heterophenomenology. Basically, he suggests when you explain why you feel the way you do, or why you behaved as you did, to take it with a grain of salt, as if you were listening to someone tell you about their night out. When you listen to someone else tell a story, you expect some embellishment and you know they are only telling you how the events seemed to transpire to them. In the same way, you know how reality seems to be unfolding, how it seems to have unfolded in the past, but you should take your own perception with a grain of salt.

In another study, two groups of people who said they were very afraid of snakes were shown slides of snakes while listening to what they believed was their heart rate. Occasionally one group would see a slide with the word "shock" printed on it. They were given a jolt of electricity when they saw this slide, and the researchers falsely increased the sound of the beating of their hearts in the monitor. When they later were asked to hold a snake, they were far more likely to give it a shot than the group who didn't see the shock slide and hear a fake increase in heart rate. They had convinced themselves they were more afraid of being shocked than of snakes and then used this introspection to truly be less afraid.

Nisbett and Miller set up their own study in a department store where they arranged nylon stockings side by side. When people came by, they asked them to say which of four items in a set was the best quality. Four-to-one, people chose the stocking on the right-hand side even though they were all identical. When the researchers asked why, people would comment on the texture or the color, but never the position. When asked if the order of the presentation influenced their choice, they assured the scientists it had nothing to do with it.

In these and many other studies the subjects never said they didn't know why they felt and acted as they did. Not knowing why didn't confuse them; they instead found justification for their thoughts, feelings, and actions and moved on, unaware of the machinery of their minds.

How do you separate fantasy from reality? How can you be sure the story of your life both from long ago and minute to minute is true? There is a pleasant vindication[87] to be found when you accept that you can't. No one can, yet we persist and thrive. Who you think you are is sort of like a movie based on true events, which is not necessarily a bad thing. The details may be embellished, but the big picture, the general idea, is probably a good story worth hearing about.

Study Questions

1. What is the main idea of the selection?
2. What is a blind spot? What is the writer's point in explaining it?
3. What is a corpus callosotomy? Why is it performed? What is "split-brain confabulation"?
4. Explain the experiment performed by Michael Gazzanig at the University of California Santa Monica?
5. What is the "amazing confabulating moment" that occurs in the example of split-brain patients being shown the words "bell" and "music"? What other such examples were provided in the essay?
6. According to the writer, "split-brain confabulation is an extreme and amplified version" of what?
7. What are mirror neurons? How do they help us?
8. What is Korsakoff's syndrome? Anosognosia? Capgras' delusion? Cotard's syndrome?
9. What do Richard Nesbitt and Timothy DeCamp Wilson believe about our ability to introspect?
10. To what degree, according to the essay, are we able to share subjective experience?
11. What is heterophenomenology?
12. In the snake experiment, why was one group less afraid to handle snakes?
13. What did the experiment with the nylon stockings show?

Literary Focus: Exposition

Exposition (or **expository writing**) is the type of writing that presents facts or explains an idea. It is the language of learning and understanding the world around us. If you've ever read an encyclopedia entry, a how-to article on a website, or a chapter in a textbook, then you've encountered examples of expository writing.

Question: Why is this selection an example of expository writing?

[87] proof that someone or something is right, reasonable, or justified

Emily Dickinson

by Van Wyck Brooks

Emily Dickinson (1830–1886) was an American poet. Little-known during her life, she has since been regarded as one of the most important figures in American poetry. Dickinson was born in Amherst, Massachusetts, into a prominent family with strong ties to its community. Evidence suggests that Dickinson lived much of her life in isolation. Considered an eccentric by locals, she developed a penchant for white clothing and was known for her reluctance to greet guests or, later in life, to even leave her bedroom. Dickinson never married, and most friendships between her and others depended entirely upon correspondence. While Dickinson was a prolific writer, her only publications during her lifetime were 10 of her nearly 1,800 poems, and one letter. Although Dickinson's acquaintances were most likely aware of her writing, it was not until after her death in 1886—when Lavinia, Dickinson's younger sister, discovered her cache of poems—that her work became public. In his essay on Emily Dickinson, Van Wyck Brooks looks at the eccentricities that formed a legend after the poet's death, and he places her in the setting of family and small-town life in a remote part of New England in the middle of the nineteenth century. Brooks also raises a question that has long fascinated and baffled her biographers: Why did she retire into seclusion? Like all of Dickinson's biographers, Brooks can only guess at the answer to this question. (First published in 1940)

The Dickinsons lived in the principal house in Amherst. A large, square, red-brick mansion that stood behind a hemlock hedge, with three gates accurately closed, it was a symbol of rural propriety and all the substantialities of western New England. Edward Dickinson, the lawyer, had always had his office in the village, and four times a day, in his broadcloth coat and beaver hat, with a gold-headed cane in his hand, he had passed through one of the gates, going or coming. A thin severe punctilious[88] man who had once been a member of Congress, a friend of Daniel Webster[89] in his youth, a Calvinist[90] of the strictest persuasion, he was a pillar of Amherst College until his death in 1874. The college had been founded, largely by his father, to check the sort of errors that were spreading from Harvard, and he never abated his rigor in the interests of pleasure. He was said to have laughed on one occasion, but usually he was as cold and still as the white marble mantel in his parlor. The story was told in Amherst, however, that once he had rung the church bell, as if to summon the people to a fire. The whole town came running, for he rang the bell excitedly.

He wished to call attention to the sunset.

Next door, behind the hemlock hedge, another ample dwelling stood, suggesting in its style an Italian villa. Here lived the Squire's[91] son Austin, once his partner, who kept open house for the college. While the Dickinson mansion was somewhat forbidding, with the stamp of the Squire's grim ways and his invalid wife, the villa was a center of Hampshire hospitality that shared its rolling lawns and charming garden. Olmsted[92] had visited there, when he was planning Central Park, to examine the shrubs and trees, the plants and flowers; and distinguished guests at the college commencements and lecturers during the winter season were received and welcomed there as nowhere else. Emerson[93], Wendell Phillips[94], and Beecher[95] had stayed in this house next door, and Samuel Bowles of the *Springfield Republican*[96] was an intimate friend of all the Dickinsons. *The Republican* was a school for journalists, known far and wide, and travelers – Dickens and Kingsley[97] among them – constantly stopped at *Springfield* in order to have a chat with Samuel Bowles. His paper was a sovereign authority in Amherst, and he often drove over for a call at the villa or the mansion, sometimes bringing manuscripts by well-known authors to show the Dickinson daughters before they were published. His favorite was Emily, who was older than Lavinia, but Emily usually "elfed it" when visitors came. She was always in the act of disappearing. Through the blinds of her western windows, overlooking the garden, she observed the hospitalities of the villa, and snatches of whatever was current in the books and talk of a college town, in the politics and thought of the moment,

[88] showing great attention to detail
[89] American statesman and orator (1782-1852)
[90] believer in the religious doctrines of the size God's sternness and believe in a strict moral code

[91] lawyer's
[92] Frederick Law Olmsted (1822-1903), American landscape architect. He designed New York's Central Park
[93] Ralph Waldo Emerson (1803-1882), American writer and philosopher
[94] American abolitionist and social reformer (1811-1884)
[95] Henry Ward Beecher (1813-1887), American clergyman famous for his powerful sermons
[96] a Massachusetts newspaper
[97] Charles Kingsley (1819-1875), English novelist

reached her when the guests had gone away. But even her oldest friends seldom saw her. While sometimes, in the evening, she flitted across the garden, she never left the place by day or night. To have caught a fleeting glimpse of her was something to boast of, and a young girl across the way who watched at night for a light at her window was thrilled if Miss Emily's shadow appeared for a moment. There were nursemaids who thought she was a witch. They frightened the children by uttering her name, as if there were something malign in Miss Dickinson's queerness.

While her friends seldom saw her, and almost never face to face – for she spoke from the shadows of the hallway as they sat in the parlor or sometimes down the stairs – they were used to receiving little letters from her. These letters were also peculiar. Miss Dickinson rarely addressed the envelopes. Some other hand, perhaps her sister's, performed this office for her. More often the names of and town had been clipped from a printed paper and pasted together, as if it were a sort of violation to expose the strokes of her pen to the touch of the postman. The letters themselves were brief and cryptic, usually only a line or two: "Do you look out tonight?" for example. "The moon rides like a girl through a topaz town." Or "The frogs sing sweet today – they have such pretty, lazy times – how nice to be a frog." Or "Tonight the crimson children are playing in the West." Or "The lawn is full of south and the odors tangle, and I hear today for the first the river in the tree." Now and again, some fine phrase emerged from the silvery spray of words – "Not what the stars have done, but what they are to do, is what detains the sky." Sometimes her notes had a humorous touch: "Father steps like Cromwell[98] when he gets the kindlings," or "Mrs. S. gets bigger, and rolls down the lane to church like a reverend marble." But her messages often contained no words at all. She would lower baskets of goodies out of the window to children waiting below. At times, instead of a letter, she sent a poem, an odd little fragment of three or four lines, with a box of chocolate caramels or frosted cakes and a flower or a sprig of pine on top, heliotrope, perhaps, or an oleander blossom or a dandelion tied with a scarlet ribbon.

Her letters were rhythmical, they scanned like the poems, and they were congested with images – every phrase was an image; while the poems themselves suggested nursery rhymes or Dr. Watts's[99] hymns, broken up and filled with a strange new content. They might have struck unsympathetic readers as a sort of transcendental[100] baby talk. It was evident that Miss Dickinson had lost the art of communication, as the circle of her school friends understood it. She vibrated toward them, she put forth shy, impalpable[101] tentacles, she instantly signalized with a verse or a note every event in their lives. But she did not speak the language of the world outside her, and one gathered that she did not wish to touch it. She was rapt in a private world of sensations and thoughts. It was even observed that her handwriting went through three distinct phases and that toward the end the letters never touched. Each character, separately formed, stood quite alone.

She had been a recluse[102] since the early eighteen-sixties, and her family surmised the reason. She had fallen in love with a married man, a Philadelphia clergyman, and had buried herself at home by way of refuge. When her supposed lover supposedly pursued her there, her sister dashed across to the house next door and exclaimed to their brother Austin's wife, "Sue, come! That man is here. Father and Mother are away, and I am afraid Emily will go away with him." Such was the family legend, which may have been apocryphal[103]. Undoubtedly, the clergyman came to see her, but probably only to call. Was he in love with Emily? Probably not. In any case, she did not go away. She withdrew from all activities outside the household, and her mind turned in upon itself.

She had hitherto been eminently social, or as much so as her little world permitted. Born in 1830, in the red-brick mansion, she had grown up a lively girl who was always a center of attention. She was a capital mimic. She travestied[104] the young-lady pieces, the "Battle of Prague" and others, which she played on the mahogany piano, and her odd and funny stories enthralled her friends. Later they remembered that she placed bouquets of flowers in the pews of those she liked best at church. Dancing and card playing were not allowed in Amherst, but Noah Webster's granddaughter, who lived there, evaded the prohibition on behalf of her circle. She held "P.O.M." meetings for the

[98] Oliver Cromwell (1599-1658), English general who led the Puritan revolt against King Charles I. Cromwell's name is associated with formidable power

[99] Isaac Watts (1674-1748) was an English hymn writer

[100] relating to a spiritual or nonphysical realm

[101] unable to be felt by touch

[102] a person who lives a solitary life and tends to avoid other people

[103] fictitious; not true

[104] satirized; spoofed

Poetry of Motion, and Emily Dickinson excelled in this branch of learning. She joined in picnics and walks over the Amherst hills with groups of boys and girls from the town and the college. They had "sugaring-off" parties and valentine parties, and they often climbed Mount Norwottuck where they found ferns and lady's-slippers; and sometimes they met at a brookside in the woods, where the boys went fishing and the girls made chowder. Emily was an ardent botanist[105]. She knew the haunts of all the wild flowers in the region, and sometimes she scrambled along through the forest, perhaps with her big dog Carlo.

She was an expert cook. At home she baked the bread and boiled her father's puddings, but her father was difficult to please. He read "lonely and rigorous books," she said, on Sunday afternoons, fearing that anything else might "joggle the mind"; and Shakespeare, the Bible, and Dr. Watts's hymns were the reading that he chose for his daughter. He did not like her to work in the garden, or to make visits without him, and when she was too witty he left the table. At fifteen she could not tell the time: her father supposed he had taught her, but she had not understood him, and she did not dare to ask him again or ask anyone else who might have told him. Now and again, she rebelled. She smashed a plate or a teacup, and her friends and her brother found ways to provide her with books, hiding them in the box-bush that stood beside the front door or on the parlor piano, under the cover. In one way or another, she contrived to read most of the current authors, especially the Brontës and the Brownings, with Hawthorne, Coleridge, Irving, Keats, and Ruskin. One of her special favorites was Sir Thomas Browne, and she loved the drollery[106] of Dickens. For the rest, she read Heine in German and Emerson's poems, and Frank B. Sanborn's letters in the *Springfield Republican* kept her in the literary current.

She was by no means passive in this house of duty. Once, at a funeral in Hadley, whither she had gone with her father in the family barouche[107], she ran away for several hours with a young cousin from Worcester and drove back to Amherst in his buggy. At school, she declared her independence. She had been sent as a boarding pupil to Mary Lyon's seminary, where she had written her themes on the nature of sin. She had listened to lectures on total depravity[108] as if, like most of the other girls, she had meant to be a missionary's wife; but when, one day, Miss Lyon asked all the girls to rise, all who wished to be Christians, Emily alone refused to do so. She had found that she could not share the orthodox faith.

Otherwise her life went on, with a few journeys here and there, like that of any country lawyer's daughter. As a young girl, she had visited Boston. She remembered the concerts and Bunker Hill, the Chinese Museum and Mount Auburn; and later, on two occasions, she stayed in Cambridge to receive some treatment for her eyes. When her father was serving his term in Congress, in 1854, she spent seven weeks in Washington with him. Her father's friends were struck by her charm and her wit. It was on her way home that she stopped at Philadelphia and received the sudden shock that had changed her life.

This was the whole of Miss Dickinson's story, so far as outward events were concerned, when Thomas Wentworth Higginson[109] entered the picture. Higginson had written an appeal in *The Atlantic*, addressed to the rising generation. Remembering the days of *The Dial*, when the hazel wand, waved over New England, had indicated hidden springs of talent in many a country town, he said that to find a "new genius" was an editor's greatest privilege. If any such existed who read *The Atlantic*, let him court the editor – "draw near him with soft approaches and mild persuasions." Higginson added a number of admonitions: "Charge your style with life ... Tolerate no superfluities … There may be years of crowded passion in a word, and half a life in a sentence." This appeal was anonymous, but many of the Amherst people knew who wrote the articles in *The Atlantic*, for Sanborn's literary gossip kept them posted; and presently Colonel Higginson, who was living in Worcester, received an odd little letter. The letter was unsigned, but the writer sent four poems, and she placed in a separate envelope the signature "Emily Dickinson." She begged this distant friend to be her "master."

The poems puzzled Higginson. While he felt a curious power in them, he was not prepared for a "new genius" who broke so many rules as this lady in Amherst, who punctuated with dashes only and seemed to have small use for rhyme and merely wished to know if she was

[105] student of the scientific study of plants
[106] humor
[107] four-wheeled carriage with a folding top
[108] the Calvinist doctrine that human nature is thoroughly corrupt and sinful as a result of the Fall from Eden
[109] American Unitarian minister, author, abolitionist, politician, and soldier (1823–1911)

“clear." She did not ask him to publish the poems, and he did not pass them on to the editor, but he wrote her a sympathetic letter that was followed by a long correspondence. She continued to send him poems at intervals, signing her notes "your gnome" and "your scholar," but, although she asked him again if he would be her "preceptor,"[110] and he offered her a number of suggestions, she never changed a line or a word to please him. In one note she said, "If I read a book and it makes my whole body so cold no fire can ever warm me, I know that is poetry. If I feel physically as if the top of my head were taken off, I know that is poetry. These are the only ways I know it. Is there any other way?" And once she replied, when he asked her for a photograph, "I had no portrait now, but am small, like the wren; and my hair is bold, like the chestnut burr; and my eyes like the sherry in the glass that the guest leaves." This feminine mystification piqued[111] the colonel. He wrote, "You enshroud yourself in this fiery mist and I cannot reach you, but only rejoice in the rare sparkles of light." When she told him that her companions were the hills and the sundown, he replied that she ought to come to Boston: she would find herself at home at Mrs. Sargent's. At last, in 1870, he went to Amherst. After a brief delay, while he waited in the parlor, he heard a faint footstep in the hallway and a shy, little childlike creature glided in. She carried two daylilies, which she placed in his hand, saying, in a soft, breathless voice, "These are my introduction," adding in a whisper, "Forgive me if I am frightened. I never see strangers and hardly know what to say." She spoke of her household occupations and said that "people must have puddings," and she added a few detached enigmatic remarks. She seemed to the amiable Higginson as unique and remote as Undine or Mignon or Thekla[112]. But he was disturbed by the tension in the air and was glad he did not live too near this lady. There was something abnormal about her, he felt. He had never met anyone before who drained his nerve power so much.

At that time, Miss Dickinson was forty years old and had long since withdrawn from the world; and the friends who came to see her sister were used to the "hurrying whiteness" that was always just going through a door. She sometimes swept into the parlor, bowed and touched a hand or two, poised over the flowered Brussels carpet, and vanished like a ghost or an exhalation; but even these appearances had grown rarer and rarer. Only the neighbors' children really saw her. She had given up wearing colors and was always dressed in diaphanous[113] white, with a cameo pin that held the ruching[114] together. She was decisive in manner, anything but frail. Her complexion was velvety white, her lips were red. Her hair was bound with a chestnut colored snood, and when it was chilly she wore a little shoulder cape crocheted with soft white worsted[115] run through with a ribbon. She often had a flower in her hand. She moved about in a sort of reverie, flitting "as quick as a trout" when she was disturbed. (This was one of her sister Lavinia's phrases.) The children knew her "high, surprised voice." They knew her dramatic way of throwing up her hands as she ended one of the stories she liked to tell them. She made them her fellow conspirators. They followed her upstairs and heard her comments on the guests she had left in the parlor. She would say, with finger on lip, as feminine callers left, "Listen! Hear them kiss, the traitors!" Or, peeping down the stairs, she would say of some man, "Look, dear, his face is as pretty as a cloth pink," or "His face is as handsome and meaningless as the full moon." She remarked, apropos[116] of some scholarly person, "He has the facts, but not the phosphorescence of learning." She said that her own ideal caller was always just going out of sight, and that it made her shiver to hear people talk as if they were "taking all the clothes off their souls." She called herself the "cow lily," because of the orange lights in her hair and her eyes, and she observed that the housemaid moved about "in a calico sarcophagus[117] .’” Once she said to her little niece, who was puzzled by her shy ways, "No one could ever punish a Dickinson by shutting her up alone." Meanwhile, her life went on with her flowers and her sister. She had a small conservatory[118], opening out of the dining room, a diminutive glass chamber with shelves around it; and there she grouped the ferns and the jasmine, the lilies and the heliotrope and the oxalis plants in their hanging baskets. She had a little

[110] teacher
[111] offended
[112] various mysterious women. Undine is a legendary water sprite. Mignon is a mysterious Italian girl in a story by Goethe. Thekla is a saint about whom little is known.
[113] light, delicate, and translucent
[114] pleats of lace or ribbon.
[115] a kind of smooth fabric
[116] related to
[117] tomb; coffin
[118] room with a glass roof and walls, attached to a house at one side and used as a greenhouse or a sun parlor

watering pot, with a long slender spout that was like the antenna of an insect, and she sat up all night at times in winter to keep her flowers from freezing. The garden was her special care, and occasionally one saw her at dusk through the gate, fluttering about the porch like a moth in the moonlight. When it was damp, she knelt on an old red army blanket that she had thrown on the ground to reach the flowers. Usually, on summer evenings, she sat for a while with Lavinia on the side piazza, overlooking the flagged path that led to the villa. There stood the giant daphne odora[119], moved out from the conservatory, and the two small oleanders in their tubs.

Meanwhile, since 1862, Miss Dickinson had been writing poems, although there were few of her friends who knew it. They all knew the little rhymes she sent them with arbutus buds, but they did not know how seriously she pursued her writing, at night, beside the Franklin stove in the upstairs corner bedroom, in the light that often glimmered over the snow. From her window she had caught suggestions that gave her a picture, a fancy, an image. Perhaps a boy passed whistling, or a neighbor on her way to church, or a dog with feet "like intermittent plush"; or perhaps she knew that a traveling circus was going to pass in the early morning, and she sat up to watch the "Algerian procession." A dead fly on the windowpane stirred her imagination, and once in the glare of a fire at night she saw a caterpillar measuring a leaf far down in the orchard. She saw the bluebirds darting round "with little dodging feet,"

> "The motions of the dipping birds,
> The lightning's joined road;"

and all these observations went into her verses. She wrote on sheets of notepaper, which she sewed together, rolling and tying the bundles with a thread or a ribbon and tucking them away in the drawers of her bureau; although sometimes the back of an envelope served her as well. But, casual in this, she was anything but casual – she was a cunning workman – in her composition. Poetry was her solitaire and, so to speak, her journal, for, like Thoreau[120] in Concord, she watched the motions of her mind, recording its ebbs and flows and the gleams that shot through it; and she labored over her phrases to make them right. Were they all her own? Were there echoes in them, or anything of the conventional, the rhetorical, the fat? Were they clear, were they exact, were they compact? She liked the common hymn meters, and the meters of nursery jingles, which had been deeply ingrained in her mind as a child, and she seemed to take a rebellious joy in violating all their rules, fulfilling the traditional patterns while she also broke them.

She was always experimenting with her rhymes and her rhythms, sometimes adding extra syllables to break up their monotony, sometimes deliberately twisting a rhyme, as Emerson did, for the sake of harshness, to escape the mellifluous[121] effect of conventional poems. Many of her pieces were like parodies of hymns, whose gentle glow in her mind had become heat lightning. For Emily Dickinson's light was quick. It was sudden, sharp and evanescent; and this light was the dry light that is closest to fire.

The visible setting of these poems was the New England countryside, the village, the garden, the household that she knew so well, a scene, the only scene she knew, that she invested with magic, so that the familiar objects become portents and symbols. Here were the hills, the changing seasons, the winter light, the light of spring, the bee, the mouse, the hummingbird, the cricket, the lonely houses off the road, the village inn, the lamppost that became, in the play of her fancy, sublime[122] or droll[123]; and with what gifts of observation she caught the traits of her birds and insects, of everything that crept or ran or flew – the snake "unbraiding in the sun," the robin's eyes, "like frightened beads," the umbrella of the bat that was "quaintly halved."

She often seemed a little girl, amusing herself with childish whimsies, and, in fact, as the ward of her father, she remained in some ways adolescent; and, as she dressed to the end in the fashion of her early youth, so she retained the imagery of the child in the household. But her whimsies sometimes turned into bold ideas. She saw the mountain, like her father, sitting "in his eternal chair"; her ocean had a "basement," like the house in Amherst, and her wind and snow swept the road like the brooms that she had been taught to use – the brooms of the breeze swept vale and tree and hill. A journey to the Day of Judgment struck

[119] a fragrant plant

[120] Thoreau: Henry David Thoreau (1817-1862), American naturalist and writer. In his book *Walden*, Thoreau describes a time he lived alone in the woods near Concord, Massachusetts

[121] sweet and smooth (like honey)

[122] of such excellence, grandeur, or beauty as to inspire great admiration or awe

[123] curious or unusual in a way that provokes amusement

her as a "buggy ride," and she saw a "school room" in the sky. She domesticated the universe and read her own experience into the motions of nature and the world she observed. The sun rose in the east for her "a ribbon at a time," and the "housewife in the evening West" came back to "dust the pond." Clouds for her were "millinery[124]," mountains wore bonnets, shawls, and sandals, eternity "rambled" with her, like her dog Carlo; the wind had fingers and combed the sky, and March walked boldly up and knocked like a neighbor. Volcanoes purred for her like cats, and she saw the planets "frisking about," her Providence kept a store on the village street, and she thought of death as coming with a broom and a dustpan. The moon slid down the stairs for her "to see who's there," and the grave for her was a little cottage where she could "lay the marble tea." One could not "fold a flood," she said, and "put it in a drawer," but she rolled up the months in mothballs and laid them away, as she had swept up the heart and put away love; and she saw hope, fear, time, future, and past as per sons to rally, welcome, play with, flee, or tease.

The turns of fancy[125] that marked these poems were sharp and unpredictable, and yet they were singularly natural – nothing was forced. Miss Dickinson lived in a world of paradox, for, while her eye was microscopic, her imagination dwelt with mysteries and grandeurs. Ribbons and immortality were mingled in her mind, which passed from one to the other with the speed of lightning, though she sometimes took a mischievous pleasure in extravagant combinations of thought, uniting the droll and the sublime, the trivial and the grand. There was in this an element of the characteristic American humor that liked to play with incongruities, and Miss Dickinson maintained in the poems of her later years the fun-loving spirit she had shown as a schoolgirl. To juxtapose[126] the great and the small, in unexpected ways, had been one of her prime amusements as the wit of her circle, and this, like the laconic speech that also marked the Yankee, had remained an essential note of her style as a poet. "Shorter than a snake's delay," her poems were packed with meaning; and, swiftly as her images changed, they were scarcely able to keep the pace with which her mind veered from mood to mood, from faith to mockery, from mysticism to rationalism, through ecstasy, disillusion, anguish, joy. These poems were fairy-like in their shimmer and lightness, they moved like bees upon a raft of air; and yet one felt behind them an energy of mind and spirit that only the rarest poets ever possessed. Was not Emily Dickinson's idiom[127] the final proof that she possessed it? Her style, her stamp, her form were completely her own.

Such were the games of solitaire that Miss Dickinson played in the silent room, as lonely as Jane Eyre [128], in her red-curtained alcove, dreaming over the book with its pictures the arctic wastes and the rock that stood up in the sea of billow and spray. Miss Dickinson had only this "acre of a rock," and yet what a harvest it yielded of grape and maize. Having but a crumb, she was sovereign of them all, as she said quite truly; for her constant theme was deprivation, the "banquet of abstemiousness[129]," and this sharpened as nothing else her perception of values. When the well's dry, we know the worth of water, and she felt that she knew victory because she knew defeat, she felt that she knew love because she had lost it. Certainly for all she missed she made up in intensity: where others merely glowed, she was incandescent.

Study Questions

1. What is the main idea of the selection?
2. Why did Edward Dickinson once ring the church bell?
3. What does the writer mean when he says Emily Dickinson “elfed it” when vistors came?
4. How did Dickinson usually speak to friends?
5. What was unusual about Dickinson’s “little letters”? Give examples of her letters’ content. Describe the messages that contained “no words at all.”
6. In what ways had Dickinson “lost the art of communication”?
7. What did Dickinson’s family believe was the reason she became a recluse?
8. Describe Dickinson’s social life before becoming a recluse.
9. Describe Dickinson’s relationship with her father.
10. Who was Thomas Wentworth Higginson? What was his impact on Dickinson’s life?

[124] women's hats
[125] imagination
[126] place close together for contrasting effect
[127] a characteristic mode of artistic expression
[128] heroine of Charlotte Brontë's novel of the same name, published in 1847
[129] without self-indulgence

11. Describe Dickinson’s meeting with Higginson. What was his reaction to it?
12. How did Dickinson dress later in life? How did she look? Act? Talk?
13. Describe Dickinson’s writing process and poetic style.
14. Brooks says that Dickinson's poetry "domesticated the universe." In other words, she used everyday objects and experiences to evoke spiritual or universal ideas. What examples from Dickinson's poetry does Brooks use to illustrate this? Can you see how this tendency might have resulted from the kind of life the poet led? Explain.
15. Dickinson's constant poetic theme, says Brooks, was deprivation, which means "loss," or "being kept away from something." According to Brooks, how did Dickinson benefit from her "deprived" life?
16. Several times Brooks describes Dickinson in terms of fire and light. He says that her "light was quick ... this light was the dry light that is closest to fire." What image does he use to describe Dickinson in the last sentences of the essay? How would you explain this comparison in your own words?

Literary Focus: Biography and Autobiography

A **biography** is the story of a person’s life written by someone other than that person. A good biography both relates the facts about its subject’s life and present’s the writer’s attitude toward the subject. The skilled biographer uses details, incidents, examples, and quotations to help us understand the subject’s personality. In particular, a good biographer includes **anecdotes**, brief accounts of true events, to add depth and color to a biography. Anecdotes help us see the subject’s personality in action. For example, in the preceding biography, the author tells us that Tubman teased Josiah bailey for refusing to look at Niagara Falls on his way to freedom. This anecdote gives us a vivid picture of Tubman’s personality--her earthiness, her sense of humor, and, most important, her fearlessness.

An **autobiography** is the story of a person’s life written by that person. Like any other author of nonfiction, the autobiography writes for a particular purpose. Authors write autobiographies, for example, in order to inform us about their own successes and failures or persuade us to appreciate their actions or to entertain us with stories from their past. An autobiographer may combine some of these purposes or may write for an entirely different purpose.

Question: Is this selection a biography or autobiography? How do you know?

Is the Indian Rope Trick for Real?

by William Poundstone

The Indian rope trick is a magic trick said to have been performed in and around India during the 19th century. Sometimes described as "the world's greatest illusion", it reputedly involved a magician, a length of rope, and one or more boy assistants. But is there any evidence that it was ever performed? Author William Poundstone examines this question in the following essay. (First published 1986)

Botched attempts to capture the Indian rope trick on film abound. In the 1930s, a traveling fakir performed the trick for the British Resident[130]. The Resident asked the fakir[131] to repeat the trick a few days later in front of some other Westerners. The British minister hid a cameraman on the Residency grounds. He got eight pictures, which were subsequently published in a London weekly in 1934. None showed the rope in the air only the coiled rope on the ground, a boy to the side.

A Major G. H. Rooke presented a photograph of the trick at a London meeting of the East India Association in 1936. Taken by one of Rooke's men, it shows only a seated holy man, the rope being out of the shot. Rooke himself had not seen the trick.

A Colonel Barnard, chief of police of Calcutta, and an assistant took a camera to a performance of the trick. A rope was thrown into the air. A boy climbed up it, with a fakir in pursuit. Then both vanished. So did the image on Colonel Barnard's film.

It's little wonder that many doubt if the Indian rope trick exists at all. In 1954 a group of Indian stage magicians branded the trick a legend and nothing more. American mentalist the Amazing Kreskin studied the trick and came to the same conclusion. There is nonetheless strong reason to believe that there is or was a real rope trick. It may have been no more supernatural than a Western magician's illusions, but it was just as real.

The trick was not exclusively Indian. Ibn Batutu, an Arab from North Africa, saw the trick in Han chow China, in 1355. The rope trick has come to be strongly identified with the fakirs, India's religious ascetics[132] who live by begging. The trick was performed to encourage donations, much as contemporary Hare Krishnas[133] perform dance and music.

Such ancient Hindu texts as the *Vedanta Sutra* and the *Badrayana Vyas* mention the rope trick. A proverb holds that illusion and reality are as different "as the magician who in reality remains upon the earth is different from the magician who, with sword and shield, climbs up the string." This simile suggests that the rope trick was a conjuring illusion, and that this fact was appreciated by the educated.

Quite a few reputable Westerners, including William Beebe and Maxim Gorki, witnessed the rope trick during the 1800s. After 1900, reports dwindle to a handful. There are few if any authentic performances today (though stage magicians in India and elsewhere have devised their own versions of the trick). For that matter, one of many conflicting stories says that the trick was performed only by one long-dead fakir and that all subsequent performances are pale imitations of the real thing.

From time to time, Westerners have offered large rewards to anyone who would reveal the trick's secret or perform it under controlled circumstances. Lord Northbrook, viceroy of India, offered £10,000 in 1875. British magician John Nevil Maskelyne offered a stipend of £5,000 a year for any fakir who could perform the trick. The Magic Circle, a stage magicians' club, offered a $25,000 lump sum. Magician David Devant offered £5000 for a presentation of the standard version of the rope trick in England. Devant required that the performer work in the open, surrounded by spectators. He would throw the rope in the air, and a boy would climb to the top and vanish. "If the Magician cared to embellish his performance in accordance with some of the more highly-colored versions of this illusion, such as by himself climbing up the rope after the boy, cutting his assistant to pieces amid blood¬curdling screams and sending the pieces of his body hurtling to earth' then, so much the better value we would be receiving for our five thousand pounds," Devant said. None of these offers had any takers.

---

[130] British official who dealt with the relations between the government of India and the British government

[131] Muslim or Hindu religious holy man who lives solely on alms

[132] those who practice severe self-discipline and abstention from all forms of indulgence

[133] members of the International Society for Krishna Consciousness, a religious sect based mainly in the US and other Western countries

There's more to the rope trick than you might surmise from cartoon depictions. The classic version has a fakir and several assistants. The principal assistant is always a small boy. At the beginning of the trick, the fakir sits on the ground playing a drum and flute. (The drum is a traditional element of Indian magic.) Nearby is a coil of rope and a large wicker basket. The fakir has a large curved knife. Incense burns in torches.

The pace of Indian magic is slower than that in the West. Minutes may pass with nothing happening. Eventually, the rope slowly uncoils and rises straight up in the air. The entire length of rope stands vertically. The top of the rope is said to be out of sight, according to the equivocal descriptions of the trick.

The fakir tells the boy to climb the rope. The boy is reluctant and argues with the fakir. The boy climbs the rope nonetheless until he too is out of sight. The boy laughs and taunts the fakir from his perch. The fakir angrily demands that the boy return. He refuses. The fakir puts his knife between his teeth and climbs up the rope himself.

Now both the fakir and the boy are invisible to the spectators. Their voices raised in argument are heard. The boy screams. Something falls from above, dropping near the base of the rope. It is the boy's severed hand.

Another scream is cut short. The boy's head falls to the ground. Other parts of the boy follow.

His clothing splattered with blood, the fakir climbs back down the rope with the blood-smeared knife in his teeth. The fakir or his assistants gather the boy's remains and put them in the basket. The fakir resumes beating his drum. The rope slowly descends, forming a coil at the fakir's feet. The basket rocks. A voice shouts from within. The boy, resurrected, steps out of the basket.

Rarely do two accounts of the trick agree on all particulars. The plot varies and in some versions much Grand Guignol[134] detail is omitted. Some reports say the trick was performed only at night. Others swear they saw it in daylight. At least some of the time the trick was performed in urban settings. In a village, it probably would not be too hard to suspend a supporting wire between houses. But others insist they saw it in an open field. The version Ibn Batutu saw in China used a leather thing in lieu of rope.

Audiences for the rope trick were probably less skeptical than contemporary audiences. The crowd often thought the tricks of the fakirs to be "real" magic (as did the audiences of medieval European magicians). Spectators were not necessarily trying to see how it was done.

It's one thing to levitate a rope onstage. All it takes is a thread attached to one end and an assistant up in the rafters. But the rope trick was done out in the open. If the description of the rope and climbers rising out of sight is interpreted to mean that the rope extended to a vanishing point at the zenith, then clearly the must have been fantastically long. The trick becomes altogether incredible.

Some of the attempts at a rational explanation for the trick defy belief themselves. Would-be explanations can be classed as physical or psychological.

Physical explanations usually postulate supporting wires or a stiff rope. Supporting wires seem to be ruled out if the trick was truly done in the open, during the daytime. The stiff rope idea has limitations, too. A metal-core rope stiff enough to climb could not be coiled. You'd need someone to push it up from a subterranean chamber. The most ingenious mechanical explanations suppose the rope was composed of linking segments that could somehow lock into rigidity when extended.

Limited versions of the rope trick have been performed with a stiff rope. In the mid-1950s, John Keel, an American journalist traveling in India, saw a street magician, Babu, demonstrating a rope trick at a Muslim festival in New Delhi. Keel bribed Babu for twenty-five rupees and learned his method.

Babu used a bamboo-reinforced rope. He sat on a raised platform with a high canvas backdrop. He allowed spectators to examine a ten¬foot-long rope. Then he coiled it and placed it in a basket on the platform. As Babu tooted a gourd flute, the rope rose from the basket, completely rigid.

As any skeptical person would have guessed, it wasn't the same rope. The rope Babu passed for inspection was still in the basket. There was a pit beneath the platform, and an assistant in the pit thrust a rope-covered bamboo pole up through a hole in the platform and the bottom of the basket.

Babu remained on the ground. A boy in a large red hooded robe climbed to the top of the rope. Babu clapped his hands. The robe fell to the ground. The boy was gone. Then he reappeared in the crowd.

[134] dramatic entertainment of a sensational or horrific nature, originally a sequence of short pieces as performed at the Grand Guignol theater in Paris

The boy's robe had a wire frame that collapsed like an umbrella. When the the boy reached the top of the rope, he hooked the robe and frame onto the top of the rope. He unbuttoned the back of the robe and hopped over the canvas backdrop to the ground. Babu had a thread that triggered the frame to collapse on command.

Among the psychological explanations of the traditional rope trick is hypnosis. American psychologist V. E. Fisher claimed the trick was done with hypnosis in a 1932 text on abnormal psychology. Donovan Hilton Rawcliffe, a British investigator of the paranormal, endorsed that idea" arguing that the trick was often done for relatively small groups of royalty. It might have been possible to hypnotize the few witnesses. For demonstrations in front of large crowds, it would suffice to hypnotize a few suggestible members of the audience. The others would go away reporting the reactions of these persons and feel that they too had participated in something miraculous.

Clouds of smoke from burning incense are mentioned in many accounts. Maybe the performers drugged the audience with smoke to make them more suggestible.

Finally, there are those who think the full-fledged rope trick is just a story kept alive by such petty imitations as Babu's. After vainly circulating handbills of his offer in India, Devant concluded that the trick is "altogether beyond the limitations of scientific illusion and therefore, humanly impossible. That no one has ever seen an Indian Rope Trick performed I do not for one moment assert. The evidence of its existence in some form is altogether too strong to dismiss the whole thing as a myth, but I believe that the trick is largely a tale that has grown in the telling and that those who have seen rope tricks in India are confusing many partial memories into one general and erroneous impression."

Wires and Hooks

There have been two believable exposés of the rope trick. In 1955 John Keel came across a guru who said he had performed the true rope performed years earlier. Sadhu Vadrakrishna told Keel that he had stopped performing the trick because it was a "false illusion." After Vadramakrishna revealed the secret, Keel attempted to demonstrate the trick on the grounds of the Ambassador Hotel in New Delhi. He failed miserably as a cloudburst upset his preparations.

In the December 1956 issue of *Tops*, a magician's magazine, magician W. T. Lawhead claimed to have learned the secret from an unnamed high caste[135] Brahman [136]. ("He is of a wealthy East Indian family was educated in America and England, and is one of the most influential personages in all India," Lawhead said.) The Brahman would not have known the secret himself but for subterfuge. When he was a child, his father gave him a birthday party. A fakir was hired to perform the trick as entertainment. The Brahman's sister slipped away during the performance. She got a pair of binoculars and observed from the house and was thereby able to see how it was done. Both Lawhead's informant and Vadramakrishna agree on the basics of the method.

The trick was done at dusk, according to Vadramakrishna. Bright torches illuminated the site, preventing spectators' eyes from adjusting to the dark. Anything more than a few feet in the air was invisible. Sometimes oily bonfires were used to produce a smokescreen as well.

The trick's mechanism was simple. A fine strong wire or thin horse-hair rope was stretched in secrecy between two hills, trees, or houses. The trick could not be done entirely in the open; there had to be trees or something. But with a well-chosen site, such as a large grassy clearing bounded by a few tall trees, people would go away swearing it had been done "in the open." The wire had to be high enough to be invisible to the nightblind audience.

The end of the coiled rope (the rope that was going to rise) had a wooden ball serving as a weight. The ball had a few holes in it.

Another preparation was a fine thread with a small hook on one end. The fakir concealed the hook on his person, and the thread was draped over the horizontal supporting wire. The other end ran to an assistant. When this assistant pulled the thread, the hook would rise.

At the beginning of the performance, the fakir tossed the ball into the air a number of times. Each time, the ball and rope fell back to the earth. After the audience grew tired of watching the ball, the fakir casually attached the hook to the ball. Then he threw the ball up and the

[135] hereditary class of Hindu society
[136] member of the highest Hindu caste, that of the priesthood

assistant reeled in the thread. This time the ball halted in midair.

The rope was slowly extended to its full height. If the horizontal wire was fifty or sixty feet, the upper end of the rope would be invisible at night.

The hook was designed to catch on the horizontal wire when the rope was extended. All the assistant could do to facilitate this was jiggle the thread. Lawhead, who performed a stage rope trick based on the Brahman's description, modified the setup. Instead of using a ball, the end of the rope was frayed, and a hook was hidden in the frayed part. Lawhead used a four-pronged steel hook looking like four fishhooks set at right angles. He didn't use a thread. The horizontal wire was only twenty feet above the stage, and Lawhead threw the rope until it caught on one of the four prongs. This was strong enough to support the weight of a boy. Lawhead himself did not climb the rope.

In the traditional trick, as well, the boy climbed the rope, supported only by that hook. When he reached the top, he attached the ball to the horizontal wire with a sturdier hook. Then the rope was capable of supporting the fakir's weight.

Sometimes the boy tightrope-walked to one of the supporting trees or houses and climbed down. He then slipped into the basket unnoticed, or a similar-looking boy would be hidden in the basket from the beginning. In another version, the boy held tight to the fakir's chest and was concealed by his voluminous robes during the fakir's descent.

The fakir concealed parts of a slaughtered monkey in his clothing to toss down during the unseen argument. A monkey hand may not look exactly like a boy's, but no one was likely to examine it too closely. (Cavalier treatment of animals is common among India's street per-formers. Some snake charmers sew their cobras' mouths shut for safety. The snakes starve to death in a few days and have to be replaced constantly.)

The requisite[137] degree of agility is probably what has killed the trick. Both the fakir and his assistant must be accomplished acrobats. Knowing how the trick is done is of little use unless they can climb a rope with ease and tightrope-walk. These skills, once passed from generation to generation among street performers, are dying out in contemporary India.

[137] required

Study Questions

1. What is the main idea of the selection?
2. Why do people have doubts that the rope trick is real? Why might some believe it is?
3. Describe the rope trick.
4. How did audiences for the rope trick differ from contemporary audiences?
5. Why would the rope trick have been easier to perform on stage?
6. What are some physician explanations for the rope trick? Psychological explanations?
7. According to W.T. Lawhead in the magazine *Tops*, how was the trick accomplished?
8. According to the essay, why might the trick no longer be performed?

Literary Focus: The Total Effect

The most effective way to approach nonfiction is to read it actively and attentively. Keep in mind that a work of nonfiction, while factual, represents only one author's version of the truth, written for a particular purpose and audience .When you actively look for clues about the author's intentions, you will increase your ability to understand and judge what the author is saying. You will also find more pleasure in reading nonfiction if you notice the facts, details, and language that the author uses to accomplish his or her purpose. When you think about the various elements of nonfiction as you read and contemplate what you have read, you will experience the **total effect** of the work.

Reminders for Active Reading of Nonfiction

1. The **title** often announces the author's purpose.
2. The nonfiction writer uses various elements and techniques, including the following:
    a. a **thesis statement** or clearly implied main idea
    b. **facts, incidents, evidence,** and **examples** supporting this idea
    c. **topic sentences** to alert the reader to the main idea in each paragraph
    d. **chronological order, cause-and-effect order**, or some other clear organization
    e. **anecdotes** to reveal character
    f. **logos, pathos,** and **ethos** to persuade
    g. **concrete details** to create vivid pictures

3. The writer of any piece of nonfiction has a **purpose** in mind. The reader should uncover that purpose.

Question: How would you evaluate the total effect of this selection?

Selections for Further Reading

Three Hoaxes

by David Wallechinsky

Have you ever believed something only to find out later that someone had deceived you? If so, you may have been the victim of a hoax. A hoax occurs when a person or group of people purposefully make up a false story and pass it off as the truth. Hoaxes are different from simple misunderstandings or jokes because they are deliberate attempts to deceive others. Hoaxes are different from practical jokes and pranks, too. Rather than simple and harmless, hoaxes tend to be more complex and larger deceptions. Often the purpose of hoaxes is to trick or cheat others. In this selection, you will read about three different hoaxes that, at the time, created significant stirs. (First published in 1995)

THE PILTDOWN MAN

For more than forty years, the discovery of Piltdown man was widely regarded as a landmark in the study of human evolution and one of the most important scientific breakthroughs of all time.

And it would have been, but for one catch. It was as phony as a three-eyed toad.

In 1908 Charles Dawson was strolling along a country road outside Piltdown Common, in Sussex, England, when some workmen showed him two bone fragments they'd dug up in a nearby gravel pit. Dawson, a country lawyer with a passion for paleontology, conducted his own search of the pit and found a humanoid skull, along with some primitive tools. He returned to the pit repeatedly over the next few years and excavated several more items. In 1912, believing his findings might be significant, he sent them to Arthur Smith Woodward, keeper of paleontology at the British Museum.

Woodward came out to Piltdown, where the two unearthed several more fragments, including a jawbone. It was an extraordinary find: the skull was strikingly human in appearance, but the jaw was that of an ape. Assuming the two pieces had come from the same toolmaking creature, Dawson and Woodward had located nothing less than the common ancestor of apes and humans—the evolutionary "missing link" whose existence had been postulated[138] by Charles Darwin in 1871.

In 1913 Dawson presented his findings in the Quarterly Journal of the Geological Society of London. Eminent scientists, hungry for hard proof of Darwin's theory, offered quick and unquestioning acceptance. The respected British scientific journal *Nature* hailed the Dawson-Woodward find as "the most important discovery of its kind hitherto made in England." The name "Piltdown man" became part of the English language and Woodward prevailed on the British Museum to officially label the species Eoanthropus dawsoni—Dawson's dawn man—who was estimated to have lived a half-million years ago.

Additional bone fragments and implements were found at the pit over the next few years. Also discovered were the teeth and cranial bone fragments of a second creature—Piltdown II—two miles away. By now a number of prominent world figures had gotten into the act, including Arthur Conan Doyle[139], who personally offered to chauffeur Dawson around, and Jesuit priest Pierre Teilhard de Chardin, who assisted in the digging. Meanwhile, the minor village of Piltdown became a major tourist destination. Guided tours were offered of the area around the gravel pit, and the local pub changed its name from the Lamb Inn to the Piltdown Man.

As early as 1913, David Waterston, an anatomy instructor at King's College, said that, from where he sat, the "ancient" jawbone of the Piltdown man looked suspiciously like that of a modern-day chimpanzee. A few others raised doubts about Piltdown man's pedigree. But the skeptics had a tough time finding cracks in the Piltdown hypothesis because all the remains were kept under lock and key at the British Museum. Then in 1949 a geologist at the museum, Kenneth Oakley, gained access to a few fragments, with an eye to subjecting them to more rigorous scrutiny than had previously been applied.

It had long been known that buried bones absorb fluorine[140] from groundwater and that by measuring the amount of fluorine they hold, one can estimate their relative age. Using this method, Oakley determined that the Piltdown man's cranial bones couldn't have been more than 50,000 years old.

---

[138] assumed as true
[139] (1859-1930) creator of Sherlock Holmes
[140] pale yellow gaseous element

Piltdown loyalists attacked Oakley and his methods. But others added their voices to his. Among them was Oxford University anthropologist J. S. Weiner, who showed that Piltdown man's teeth seemed to have come from an orangutan[141], and were mechanically filed and stained.

In 1953 Oakley retested the bones. This time he noticed a strong burning smell when he drilled into the jaw to remove a sample. Only new bone would emit a burning smell; the cranial bone, however, gave off no such odor, indicating that the two could not have come from the same person. There was also evidence that some of the bones had been dyed with potassium dichromate before they were taken out of the ground. Piltdown Man, said Oakley, had never existed. He was no more than an "elaborate and carefully prepared hoax."

Oakley's revelation caught the scientific establishment red-handed. Newspaper headlines waggishly proclaimed the century's most celebrated case of "skullduggery[142]," and several members of Parliament angrily called on the British Museum to explain why that revered institution of research and learning had been so easily hornswoggled.

That Piltdown man was a fraud is no longer in question. Modern dating methods determined the jaw and the skull to be about 500 years old. But the identity of its perpetrator remains uncertain. Some point their finger at Dawson, for whom the Piltdown was a ticket into the Royal Society. Moreover, a neighbor of his, Harry Morris, claimed that Dawson often trafficked in bogus artifacts and once fobbed off a phony fossil on him in exchange for one of the most valuable items in Morris's collection. But Dawson was known to be a somewhat stuffy small-town lawyer, not given to practical jokes. Many of those who knew him doubted he could have planned and pulled off such a masterful ruse.

Over the years many others have been implicated and then exonerated. They include Teilhard de Chardin, who often joined Dawson on his bone hunts and would have had ample opportunity to plant the forged fossils, and Grafton Eliot Smith, an Australian anatomist whose theories about evolution would have been advanced by the Piltdown find.

In his 1990 book, *Piltdown: A Scientific Forgery,* anthropologist Frank Spencer suggests it was Dawson after all who planted the bones and artifacts, but that the mastermind of the hoax was Arthur Keith. An ambitious young anatomist in 1912, Keith would have had much to gain from popular acceptance of the Piltdown hoax, since it supported his own suppositions about the role of the brain in human development. In May 1996, British paleontologist Brian Gardiner, writing in *Nature*, put the blame on Martin Hinton, a young student who was angry with Arthur Smith Woodward because of a pay dispute over work Hinton had done for Woodward.

THE COTTINGLEY FAIRIES

Toward the end of the Great War, a pair of British schoolgirls astounded the world with several photographs they had taken of fairies, gnomes, and pixies at play. The pictures, which were widely circulated on both sides of the Atlantic, made the girls overnight media stars and were received with varying degrees of credulity[143] by professional photographers and journalists.

They were a hoax, of course—although the girls didn't admit as much until 1976, when they were considerably advanced in years.

It all began in the quiet Yorkshire village of Cottingley in the summer of 1917, when Elsie Wright, age thirteen, and her ten-year-old cousin, Frances Griffiths, asked to borrow Elsie's father's new Midge camera. While playing in a glen[144] behind the Wrights' house, the girls explained, they had made friends with a group of fairies and wanted to photograph them.

The girls took two photos, which Arthur Wright developed from glass negatives. In one, four fairies were dancing, with Frances looking on in the background, her hand resting on her chin; they were beguiling creatures with gossamer[145] wings and ballerina's legs. The other showed Elsie, seated, with a winged gnome poised to leap into her lap. Charmed by their beauty, Mr. Wright assumed the photos were no more than a clever cut-and-paste job. When he searched the glen and Elsie's bedroom, however, he found no paper scraps or other evidence of trickery. The snapshots were stowed on a shelf and forgotten.

[141] large, reddish-brown ape
[142] trickery
[143] tendency to believe that something is true
[144] narrow valley
[145] a fine, filmy substance

Three years later Edward Gardner, a prominent Theosophist[146], heard about the photos and got in touch with Frances's parents to ask if his friend Henry Snelling might have a look at them. A professional photographer, Snelling prided himself on his ability to tell authentic photos from fakes. He deemed the fairy snapshots the real thing.

"There is no trace whatever of studio work involving card or paper models, dark backgrounds, painted figures, etc.," he said. "In my opinion, they are both straight untouched pictures."

Around this time, Sir Arthur Conan Doyle[147] was working on an article on fairies for the Strand magazine. Doyle's days as a mystery writer were long over; his main interest now—many called it an obsession—was spiritualism[148]. He believed wholeheartedly in the existence of fairies, and when he got wind of the Cottingley photographs, he contacted Gardner. Doyle hoped to publish the photos with his article.

To ascertain their validity, Doyle brought the photos to Kodak. There was no "evidence of superimposition, or other tricks," the company's experts said. But they also insisted that Kodak had the technology and know-how to produce pictures every bit as realistic. Doyle was annoyed by their hedging but vowed to use the photos anyway. He never visited Cottingley or spoke directly with Frances or Elsie.

Meanwhile, Gardner did go to Cottingley and arranged for Frances and Elsie to take more snapshots of their fairy friends. Gardner found the girls' request that he not accompany them on the photo shoot suspicious. He accepted their explanation that the sudden appearance of "strangers" might frighten the fairies and prevent them from emerging. Lest skeptics claim that the Wrights were promoting the pictures to score a quick profit, Gardner pointed out that the family had actually refused to accept payment for them, and even insisted that their names be omitted from Doyle's article.

On that 1920 outing, Frances and Elsie made three more photos, for a total of five. Doyle published them in an article entitled "An Epoch-Making Event — Fairies Photographed," in the November 1920 edition of the *Strand*; the issue sold out in three days. The rest of the pictures appeared in a second article, which came out the following spring, and in a 1922 book *The Coming of the Fairies*.

Though the writer himself wouldn't swear to the pictures' authenticity, many accepted them at face value, and Doyle found himself ridiculed in the press for his gullibility[149]. *The New York Herald Tribune* claimed the fairies were actually dolls. The *London Star* ran an especially derisive[150] article, illustrated by a picture of Doyle with fairies cavorting about his head. And in a letter to the *New York World*, one cynic wrote, "When Peter Pan called out to the audience in London at a recent performance the question about fairies, Conan Doyle was the first to give an affirmative."

Some skeptics noted that the Cottingley fairies sported modern hairstyles and the latest Paris fashions; others observed an uncanny resemblance between the fairies and figures in a popular ad campaign for candles. Could the Cottingley fairies have been the product of adolescent puckishness[151], a stack of magazines, and a gluepot? "One must freely admit that the children who could produce such fakes would be very remarkable children," observed a critic in the *Spectator*. "But then, the world, in point of fact, is full not only of very, but of very, very remarkable children."

By today's standards the photos are hardly convincing. The fairies have a flat, pasted-on look. Moreover, Kodak experts have since pointed out that, given the light conditions under which the pictures were taken, the camera lens would have had to have been kept open for at least a full second—much longer than the girls had claimed. And that was too much time to have captured the fairies, with their beating wings, in such sharp detail.

Nonetheless, the two girls clung to their story well into old age. Finally, on a 1976 TV show called *Calendar*, Elsie came clean. "As for the photographs," she confessed, "let's say they were figments[152] of our imagination—and leave it at that." In 1981 she and Frances, eighty and seventy-seven respectively, admitted to writer Joe Cooper that they had cut many of the pictures of fairies from a children's book called *Princess Mary's Gift Book*, and propped them up on leaves and twigs, holding them secure

---

[146] one who teaches about God and the world based on mystical insight
[147] (1859-1930) creator of Sherlock Holmes
[148] communication with the spirits of the dead
[149] a tendency to be easily persuaded
[150] expressing contempt or ridicule
[151] playfulness
[152] things that someone believes to be real but that exist only in the imagination

with hatpins (which Doyle mistook in one case for a fairy's navel). Said Elsie, "How on earth anyone could be so gullible as to believe that they were real was always a mystery to me."

THE LOCH NESS MONSTER PHOTO

The long neck, reptilian head, and single hump above the waterline has been the common image of the Loch Ness Monster in the public mind. A single photo of Nessie, taken in 1934 and called the Surgeon's Photograph, has been the "type" picture for all subsequent monster hunts. Dark, grainy, but still eerily distinct, the photo was one of the first and still the most popular photo of the creature ever taken.

And it's a fake.

In 1993 the last surviving hoaxer, ninety-year-old Christian Spurling, confessed the fraud to David Martin and Alastair Boyd—researchers on a Loch Ness biology and geography project—nearly sixty years after the fact and four months before his own death. The most famous image of the Loch Ness Monster was really a toy submarine from Woolworths[153], fitted with a sea serpent's head made of plastic wood.

The story of the Loch Ness Monster in modern times begins in 1933, when a new highway through Scotland opened the twenty-four-mile-long loch[154] to passing traffic. With the opening of the highway came a sudden wave of sightings of a "queer beastie." The first report came on April 13, 1933, when Mr. and Mrs. John MacKay sighted an "enormous animal rolling and plunging" in the loch. *The Inverness Courier* carried the story, which quickly spread throughout the local press. By October there had been twenty additional sightings and the news had spread throughout Great Britain. London newspapers sent swarms of correspondents and desperately attempted to scoop each other. Automobiles lined the lochsides for miles. Radio stations interrupted their regular programs for the latest news from Loch Ness. A special passenger train service from Glasgow to Inverness was added to handle the crowds, and steamship tours of the loch became big business. It was 1933 and Britain was in the darkest part of the Great Depression. Media consumers were desperate for any stories that would mitigate the bleak news in the papers. Autumn of 1933 was perhaps simply a media circus waiting to happen, and the sudden appearance of the monster was all that was needed.

To cash in on firsthand knowledge of the monster, London's *Daily Mail* sent self-styled "big-game hunter" Duke Wetherell to track down the beast and scoop their rival newspaper, the *Daily Express*. Within forty-eight hours Wetherell had found two fresh footprints of "a very powerful soft-footed animal about twenty feet long." The *Mail* proudly published the first hard evidence of the Loch Ness Monster and sent plaster casts of the footprints to the Museum of Natural History for verification. The *Mail* was less than proud two weeks later when the museum reported that the two footprints were identical and came from a hippo-leg umbrella stand pressed into mud. Wetherell quietly sank out of sight.

Duke Wetherell was never again associated with the monster, and the incredible photo of Nessie a year later—from an unimpeachable[155] source, a top London surgeon—helped the public forget the shabby hoax. Here at last was proof that Nessie did exist. It wasn't until 1993 that Wetherell's stepson explained the connection between the hoaxer and the famous photo.

Wetherell was apparently angry and humiliated by the blow to his reputation. "All right," he vowed to his twenty-one-year-old son, Ian, "we'll give them their monster." Also corralling his stepson Christian Spurling into the plan, Wetherell bought a toy submarine for two shillings and sixpence and gave it to the young men to turn into a monster. Spurling built a head and neck of plastic wood over the sub's conning tower[156] and sea trials were conducted in a local pond. With camera in hand Wetherell and Ian photographed the "monster" in the shallows of Loch Ness. When they heard a water bailiff[157] approaching, Wetherell stuck out his foot and sank the Loch Ness Monster.

Wetherell showed the photo to his friend Maurice Chambers, who suggested the perfect "front" for the hoax: a London doctor he knew, Colonel Robert Wilson. Dr. Wilson was given the photo and a cover story, and he sent them to the *Daily Mail*, which instantly trumpeted the news of real evidence for the Loch Ness Monster from an

[153] a department store
[154] Irish word for a lake or sea inlet
[155] entirely trustworthy
[156] the superstructure of a submarine, from which it can be commanded when on the surface, and containing the periscope
[157] law-enforcement officer responsible for the policing of bodies of water

unimpeachable London surgeon. History was made, and the astonishing photo went on to launch the careers of a thousand cryptozoologists[158].

In fact, it was Boyd and Martin who discovered an obscure news story from 1975 in which Ian Wetherell, by now a pub owner, claimed that he and his father had faked a photo of the monster. The article didn't mention which photo, but it did name Maurice Chambers as co-conspirator—and Boyd and Martin were already familiar with the name: articles from 1933 listed Maurice Chambers as a passenger in the car with Dr. Wilson when he took the photo. When the researchers tracked down the last surviving member of the hoax team in 1993, Wetherell's ninety-year-old stepson, Christian Spurling, he cheerfully admitted everything. Boyd and Martin looked forward to unveiling the hoax on the sixtieth anniversary of the photo in April 1994, but Spurling died before he could receive the fame—or infamy[159]—he deserved.

The famous photo, the "type" artifact of the entire Loch Ness Monster hunt, was blown out of the water like so much tin and plastic wood. Does this make Nessie a clear fraud, joining the Piltdown man and cold fusion in the pantheon of exploded scientific hoaxes?

Well, not really, considering that the first mention of Nessie is recorded in 565 A.D. when Saint Columba had a run-in with a large water beast in Scotland. And considering that the original sighting by Mr. and Mrs. MacKay—the one that started off the whole furor—took place a year before the hoax photo ever appeared. Since the publication of the fraudulent Surgeon's Photo, literally hundreds of photos and thousands of feet of film and video have been taken of large unidentified and unexplained creatures in Loch Ness. Amid these millions of frames there is not one in which an undeniable, clearly identifiable creature can be seen. Yet the stories, the sightings, and the photos continue.

The Surgeon's Photo may be a hoax, but Nessie is clearly still a mystery.

Study Questions

1. What is the main idea of the selection?
2. What was the Piltdown man? What was the hoax? How was the hoax discovered? Who might have perpetrated the hoax and why?
3. What were the Cottingley Fairies? What was the hoax? Who perpetrated the hoax? Why? How was the hoax discovered?
4. What was Sir Arthur Conan Doyle's role in the Cottingley Fairy controversy?
5. Who were Mr. and Mrs. John MacKay? How did they help instigate a media firestorm over the Loch Ness Monster?
6. What is the Loch Ness Monster? What was the hoax? Who perpetrated the hoax? Why? How was the hoax discovered?
7. What is the most famous photo of Nessie called? Why?
8. Which of the three hoaxes would have been the easiest to debunk? Why? Which would have been the most difficult? Why?

[158] those who search for and study animals whose existence or survival is disputed or unsubstantiated
[159] being well known for some bad quality or deed

Once More to the Lake

By E.B. White

"Once More to the Lake" is an essay first published in Harper's Magazine by author E. B. White. White was the author of several highly popular books for children, including Stuart Little, Charlotte's Web, and The Trumpet of the Swan. In addition, he was a writer and contributing editor to The New Yorker magazine, and also a co-author of the English language style guide The Elements of Style. "Once More to the Lake" chronicles White's pilgrimage back to a lakefront resort, Belgrade Lakes, Maine, that he visited as a child. While he initially finds great joy in his visit, the nostalgia causes him to struggle to remember that he is now a man, as he grapples with his own mortality. (First published 1941)

One summer, along about 1904, my father rented a camp on a lake in Maine and took us all there for the month of August. We all got ringworm from some kittens and had to rub Pond's Extract on our arms and legs night and morning, and my father rolled over in a canoe with all his clothes on; but outside of that the vacation was a success and from then on none of us ever thought there was any place in the world like that lake in Maine. We returned summer after summer--always on August 1st for one month. I have since become a salt-water man, but sometimes in summer there are days when the restlessness of the tides and the fearful cold of the sea water and the incessant wind which blows across the afternoon and into the evening make me wish for the placidity[160] of a lake in the woods. A few weeks ago this feeling got so strong I bought myself a couple of bass hooks and a spinner and returned to the lake where we used to go, for a week's fishing and to revisit old haunts[161].

I took along my son, who had never had any fresh water up his nose and who had seen lily pads only from train windows. On the journey over to the lake I began to wonder what it would be like. I wondered how time would have marred this unique, this holy spot--the coves and streams, the hills that the sun set behind, the camps and the paths behind the camps. I was sure that the tarred road would have found it out and I wondered in what other ways it would be desolated. It is strange how much you can remember about places like that once you allow your mind to return into the grooves which lead back. You remember one thing, and that suddenly reminds you of another thing. I guess I remembered clearest of all the early mornings, when the lake was cool and motionless, remembered how the bedroom smelled of the lumber it was made of and of the wet woods whose scent entered through the screen. The partitions in the camp were thin and did not extend clear to the top of the rooms, and as I was always the first up I would dress softly so as not to wake the others, and sneak out into the sweet outdoors and start out in the canoe, keeping close along the shore in the long shadows of the pines. I remembered being very careful never to rub my paddle against the gunwale[162] for fear of disturbing the stillness of the cathedral.

The lake had never been what you would call a wild lake. There were cottages sprinkled around the shores, and it was in farming although the shores of the lake were quite heavily wooded. Some of the cottages were owned by nearby farmers, and you would live at the shore and eat your meals at the farmhouse. That's what our family did. But although it wasn't wild, it was a fairly large and undisturbed lake and there were places in it which, to a child at least, seemed infinitely remote and primeval[163].

I was right about the tar: it led to within half a mile of the shore. But when I got back there, with my boy, and we settled into a camp near a farmhouse and into the kind of summertime I had known, I could tell that it was going to be pretty much the same as it had been before--I knew it, lying in bed the first morning, smelling the bedroom, and hearing the boy sneak quietly out and go off along the shore in a boat. I began to sustain the illusion that he was I, and therefore, by simple transposition, that I was my father. This sensation persisted, kept cropping up all the time we were there. It was not an entirely new feeling, but in this setting it grew much stronger. I seemed to be living a dual existence. I would be in the middle of some simple act, I would be picking up a bait box or laying down a table fork, or I would be saying something, and suddenly it would be not I but my father who was saying the words or making the gesture. It gave me a creepy sensation.

We went fishing the first morning. I felt the same damp moss covering the worms in the bait can, and saw the dragonfly alight on the tip of my rod as it hovered a few inches from the surface of the water. It was the arrival of

[160] pleasant calmness or peacefulness
[161] places frequently visited
[162] the upper edge of the side of a boat
[163] resembling the earliest ages in the history of the world

this fly that convinced me beyond any doubt that everything was as it always had been, that the years were a mirage and there had been no years. The small waves were the same, chucking the rowboat under the chin as we fished at anchor, and the boat was the same boat, the same color green and the ribs broken in the same places, and under the floor-boards the same freshwater leavings and debris--the dead hellgrammite[164], the wisps of moss, the rusty discarded fishhook, the dried blood from yesterday's catch. We stared silently at the tips of our rods, at the dragonflies that came and wells. I lowered the tip of mine into the water, tentatively, pensively dislodging the fly, which darted two feet away, poised, darted two feet back, and came to rest again a little farther up the rod. There had been no years between the ducking of this dragonfly and the other one--the one that was part of memory. I looked at the boy, who was silently watching his fly, and it was my hands that held his rod, my eyes watching. I felt dizzy and didn't know which rod I was at the end of.

We caught two bass, hauling them in briskly as though they were mackerel, pulling them over the side of the boat in a businesslike manner without any landing net, and stunning them with a blow on the back of the head. When we got back for a swim before lunch, the lake was exactly where we had left it, the same number of inches from the dock, and there was only the merest suggestion of a breeze. This seemed an utterly enchanted sea, this lake you could leave to its own devices for a few hours and come back to, and find that it had not stirred, this constant and trustworthy body of water. In the shallows, the dark, water-soaked sticks and twigs, smooth and old, were undulating in clusters on the bottom against the clean ribbed sand, and the track of the mussel was plain. A school of minnows swam by, each minnow with its small, individual shadow, doubling the attendance, so clear and sharp in the sunlight. Some of the other campers were swimming along the shore, one of them with a cake of soap, and the water felt thin and clear and insubstantial. Over the years there had been this person with the cake of soap, this cultist, and here he was. There had been no years.

Up to the farmhouse to dinner through the teeming, dusty field, the road under our sneakers was only a two-track road. The middle track was missing, the one with the marks of the hooves and the splotches of dried, flaky manure. There had always been three tracks to choose from in choosing which track to walk in; now the choice was narrowed down to two. For a moment I missed terribly the middle alternative. But the way led past the tennis court, and something about the way it lay there in the sun reassured me; the tape had loosened along the backline, the alleys were green with plantains and other weeds, and the net (installed in June and removed in September) sagged in the dry noon, and the whole place steamed with midday heat and hunger and emptiness. There was a choice of pie for dessert, and one was blueberry and one was apple, and the waitresses were the same country girls, there having been no passage of time, only the illusion of it as in a dropped curtain--the waitresses were still fifteen; their hair had been washed, that was the only difference--they had been to the movies and seen the pretty girls with the clean hair.

Summertime, oh summertime, pattern of life indelible, the fade proof lake, the woods unshatterable, the pasture with the sweet fern and the juniper forever and ever, summer without end; this was the background, and the life along the shore was the design, the cottages with their innocent and tranquil design, their tiny docks with the flagpole and the American flag floating against the white clouds in the blue sky, the little paths over the roots of the trees leading from camp to camp and the paths leading back to the outhouses and the can of lime for sprinkling, and at the souvenir counters at the store the miniature birch-bark canoes and the post cards that showed things looking a little better than they looked. This was the American family at play, escaping the city heat, wondering whether the newcomers at the camp at the head of the cove were "common" or "nice," wondering whether it was true that the people who drove up for Sunday dinner at the farmhouse were turned away because there wasn't enough chicken.

It seemed to me, as I kept remembering all this, that those times and those summers had been infinitely precious and worth saving. There had been jollity and peace and goodness. The arriving (at the beginning of August) had been so big a business in itself, at the railway station the farm wagon drawn up, the first smell of the pine-laden air, the first glimpse of the smiling farmer, and the great importance of the trunks and your father's enormous authority in such matters, and the feel of the wagon under you for the long ten-mile haul, and at the top of the last long hill catching the first view of the lake after

[164] the aquatic larva of a dobsonfly, often used as fishing bait

eleven months of not seeing this cherished body of water. The shouts and cries of the other campers when they saw you, and the trunks to be unpacked, to give up their rich burden. (Arriving was less exciting nowadays, when you sneaked up in your car and parked it under a tree near the camp and took out the bags and in five minutes it was all over, no fuss, no loud wonderful fuss about trunks.)

Peace and goodness and jollity. The only thing that was wrong now, really, was the sound of the place, an unfamiliar nervous sound of the outboard motors. This was the note that jarred, the one thing that would sometimes break the illusion and set the years moving. In those other summertimes, all motors were inboard; and when they were at a little distance, the noise they made was a sedative, an ingredient of summer sleep. They were one-cylinder and two-cylinder engines, and some were make-and-break and some were jump-spark, but they all made a sleepy sound across the lake. The one-lungers throbbed and fluttered, and the twin-cylinder ones purred and purred, and that was a quiet sound too. But now the campers all had outboards. In the daytime, in the hot mornings, these motors made a petulant[165], irritable sound; at night, in the still evening when the afterglow lit the water, they whined about one's ears like mosquitoes. My boy loved our rented outboard, and his great desire was to achieve single-handed mastery over it, and authority, and he soon learned the trick of choking it a little (but not too much), and the adjustment of the needle valve. Watching him I would remember the things you could do with the old one-cylinder engine with the heavy flywheel, how you could have it eating out of your hand if you got really close to it spiritually. Motor boats in those days didn't have clutches, and you would make a landing by shutting off the motor at the proper time and coasting in with a dead rudder. But there was a way of reversing them, if you learned the trick, by cutting the switch and putting it on again exactly on the final dying revolution of the flywheel, so that it would kick back against compression and begin reversing. Approaching a dock in a strong following breeze, it was difficult to slow up sufficiently by the ordinary coasting method, and if a boy felt he had complete mastery over his motor, he was tempted to keep it running beyond its time and then reverse it a few feet from the dock. It took a cool nerve, because if you threw the switch a twentieth of a second too soon you would catch the flywheel when it still had speed enough to go up past center, and the boat would leap ahead, charging bull-fashion at the dock.

We had a good week at the camp. The bass were biting well and the sun shone endlessly, day after day. We would be tired at night and lie down in the accumulated heat of the little bedrooms after the long hot day and the breeze would stir almost imperceptibly outside and the smell of the swamp drift in through the rusty screens. Sleep would come easily and in the morning the red squirrel would be on the roof, tapping out his gay routine. I kept remembering everything, lying in bed in the mornings--the small steamboat that had a long rounded stern like the lip of a Ubangi[166], and how quietly she ran on the moonlight sails, when the older boys played their mandolins and the girls sang and we ate doughnuts dipped in sugar, and how sweet the music was on the water in the shining night, and what it had felt like to think about girls then. After breakfast we would go up to the store and the things were in the same place--the minnows in a bottle, the plugs and spinners disarranged and pawed over by the youngsters from the boys' camp, the fig newtons and the Beeman's gum. Outside, the road was tarred and cars stood in front of the store. Inside, all was just as it had always been, except there was more Coca Cola and not so much Moxie and root beer and birch beer and sarsaparilla. We would walk out with a bottle of pop apiece and sometimes the pop would backfire up our noses and hurt. We explored the streams, quietly, where the turtles slid off the sunny logs and dug their way into the soft bottom; and we lay on the town wharf and fed worms to the tame bass. Everywhere we went I had trouble making out which was I, the one walking at my side, the one walking in my pants.

One afternoon while we were there at that lake a thunderstorm came up. It was like the revival of an old melodrama that I had seen long ago with childish awe. The second-act climax of the drama of the electrical disturbance over a lake in America had not changed in any important respect. This was the big scene, still the big scene. The whole thing was so familiar, the first feeling of oppression and heat and a general air around camp of not wanting to go very far away. In mid-afternoon (it was all the same) a curious darkening of the sky, and a lull in everything that had made life tick; and then the way the boats suddenly swung the other way at their moorings with the coming of

[165] sulky or bad-tempered

[166] a woman of the district of Kyabé village in Chad with lips pierced and distended to unusual dimensions with wooden disks

a breeze out of the new quarter, and the premonitory rumble. Then the kettle drum, then the snare, then the bass drum and cymbals, then crackling light against the dark, and the gods grinning and licking their chops in the hills. Afterward the calm, the rain steadily rustling in the calm lake, the return of light and hope and spirits, and the campers running out in joy and relief to go swimming in the rain, their bright cries perpetuating the deathless joke about how they were getting simply drenched, and the children screaming with delight at the new sensation of bathing in the rain, and the joke about getting drenched linking the generations in a strong indestructible chain. And the comedian who waded in carrying an umbrella.

When the others went swimming my son said he was going in, too. He pulled his dripping trunks from the line where they had hung all through the shower, and wrung them out. Languidly, and with no thought of going in, I watched him, his hard little body, skinny and bare, saw him wince slightly as he pulled up around his vitals the small, soggy, icy garment. As he buckled the swollen belt suddenly my groin felt the chill of death.

Study Questions

1. What is the essay's main idea?
2. Why does White take a vacation at this particular lake? Who accompanies him?
3. What contrast does White make between the sea and a lake? Why does he make this contrast?
4. What "creepy sensation" does White experience at the lake?
5. Describe White's experience fishing with his son.
6. Why does White refer to the lake as "utterly enchanted"?
7. Why does the road to the farmhouse now have two tracks, not three? How does White describe the waitresses there?
8. What does White explain about trunks?
9. Find three images that White uses to show how the lake has changed since he was there as a boy. Find two images that suggest that the lake has not changed.
10. Which change bothers White the most? Why?
11. How does White describe the store?
12. What breaks out over the lake? How does White describe it?
13. What happens in the closing paragraph? How does it reinforce or give some closure to the central concerns of the essay? When does White feel a "chill of death"?

The Eponymous Mr. Ponzi

by Michael Durbin

A Ponzi scheme is a fraudulent investing scam promising high rates of return with little risk to investors. It generates returns for earlier investors with money taken from later investors. This is similar to a pyramid scheme in that both are based on using new investors' funds to pay the earlier backers. Both Ponzi schemes and pyramid schemes eventually bottom out when the flood of new investors dries up and there isn't enough money to go around. At that point, the schemes unravel. In this selection, you'll read about Ponzi himself and the misdeeds that made him infamous. (First published 2019)

Nobody knows who did it first. Swindlers[167] have been pulling off the scam for centuries, paying existing investors with the deposits of new ones to create the illusion of an incredibly profitable investment opportunity. Before 1920, it was known as "robbing Peter to pay Paul" or "the Peter-to-Paul scheme." For example, Sarah Howe, a fortune-teller and frequent guest of the State Lunatic Asylum in Massachusetts, employed it in 1880 to take in nearly $500,000 from her followers. In 1884, former president Ulysses S. Grant fell victim to such a scheme that left him penniless.

But it was Charles Ponzi who, in Boston in 1920, earned permanent naming rights to the scheme by dazzling the investing public and dumbfounding authorities like no other. That sweltering summer, Bostonians of every stripe were all but begging this diminutive[168] investment banker to take their money for an unheard-of return: 100 percent in 90 days. In less than a year, Ponzi raked in nearly $7 million—more than $90 million in today's dollars. His downfall came as swiftly as his meteoric rise.

Carlo Pietro Giovanni Guglielmo Tebaldo Ponzi was born on 3 March 1882 in Lugo, Italy. His father, a postal worker, died when Carlo was ten, leaving the family without a breadwinner. His mother, Imelde, was descended from Italian aristocracy. She sent Carlo to the University of Rome with just enough money to earn a degree, and high hopes he would use it to prosper and restore the family to its erstwhile[169] rank in society.

Carlo dashed any such hopes. He loved college, 500 miles from home, but not for the education. There he enjoyed the life of a bon vivant[170], skipping classes and befriending students from more privileged families. He spent much of his money on fine dining and equally fine clothing, and by picking up more bar tabs than books. He returned home penniless and diploma-less.

Determined to patch things up with his unhappy mother, Carlo vowed to sail to America, scoop up some of the gold rumored to line its streets, and become a very rich man. He left Naples on 3 November 1903 with $200 in his pocket. He arrived in Boston with $2.50, the balance in the pockets of cardsharps[171] who earned their living from unsuspecting immigrants on ships.

Ponzi found making money in America rather harder than he'd expected. For nearly four years, he worked as a grocery clerk, factory hand, dishwasher, waiter, and painter. He did repair work, folded laundry, and anything else to keep food in his belly. He took the first name Charles and a variety of surnames other than his own, including Bianchi, Ponsi, Ponci, and Ponce.

Ponzi did not limit his job search to Boston. Willing to go anywhere for employment that exercised his mind and not just his back, he found it in Montreal in July 1907. There, a man by the name of Louis Zarossi hired him as a bank clerk after a 5-minute interview. He fit right in at Banco Zarossi, which did a booming business catering to the Italian immigrant community and paying 6 percent interest to depositors—three times the rate other banks offered. And he did so in a most unscrupulous manner.

Among Zarossi's customers were not just depositors but immigrants who gave him money to wire home to family in Italy. Some of these funds he simply stole, using it to pay his depositors their promised 6 percent. It could take months for wire customers to complain, and when they did he pleaded ignorance and laid blame on the receiving end. Nobody can say exactly how much Zarossi stole in this manner, but in July 1908, he filled a suitcase with cash and fled to Mexico.

Again out of work and tired of earning money in the conventional manner, Ponzi one day entered the office of the Canadian Warehousing Company, a former Banco Zarossi customer. The office staff knew and trusted Ponzi. While nobody was looking, he located their company

[167] those who uses deception to deprive someone of money or possessions
[168] extremely small
[169] previous
[170] person who enjoys a sociable and luxurious lifestyle
[171] those who cheat at cards in order to win money

checkbook, removed a check, and slipped it into a pocket. Later, he wrote it out to himself in the seemingly authentic amount of $423.58, then carefully forged the signature.

After cashing the check and visiting a number of clothiers to outfit himself in style, Ponzi found his buying spree short-lived. Bank officials suspected the authenticity of the check's signature. They contacted the police, who had little trouble finding and arresting him. He feigned mental illness by chewing a towel to shreds, then wildly climbing a wall toward a barred window. Convincingly calmed by a straitjacket, he earned an upgrade to the infirmary by persuading his jailer he suffered from epilepsy. His insanity act only went so far. Ponzi was ultimately sentenced to a three-year term at the Saint-Vincent-de-Paul Penitentiary, his jailers settling on the name of Charles Ponsi.

At the penitentiary, he crushed stone, slept on a bed of corn cob husks, and shared a cell with an especially nasty convict named Louis Cassullo. Ponzi would later describe him as "one of those prowling, petty, sneaky thieves whose counterparts in the animal kingdom are the hyenas and the jackals." After serving a term shortened to 20 months for good behavior, Ponzi was only too happy to bid farewell to his unpleasant cellmate.

Not three weeks later, after living with friends and doing odd jobs to earn a bit of money, Ponzi hopped on a train headed back to the U.S. Sitting with him were five other Italians, all recent immigrants who spoke no English and lacked proper papers. They appreciated his company, advice, and interpretation skills, all of which he would soon regret providing. When a customs official questioned the group, Ponzi was assumed to be their leader, despite his protestations that he did not know the men. Bias against immigrants of Italian origin—also known as Anti-Italianism—was the discrimination du jour. Ponzi was arrested on charges of smuggling aliens. At trial, prosecutors secured a conviction, aided by the testimony of the other Italians, each of whom testified against Ponzi in return for their release.

Ponzi was sentenced to two years at the federal penitentiary in Atlanta. Upon release, he wandered the Southeast U.S. for the next five years working a variety of jobs—bookkeeper, translator, painter, librarian—before finding himself back in Boston.

There, in 1917, Ponzi landed a most promising job as a clerk for the J.R. Poole Company, an import/export firm. His job was to keep track of foreign operations. The starting pay of $16 a week was not great, but soon rose to $25, and then $50.

In May of 1917, Ponzi met and married Rose Gnecco, the daughter of a produce merchant. Rose enjoyed their modest, newlywed lifestyle. But Ponzi was determined to make her the wife of a millionaire. "I want you to be able to throw away a hundred dollars," he told her.

In September 1918, Ponzi quit his job at J.R. Poole to help run his father-in-law's failing produce business. Ponzi was confident he could turn things around and turn the shop into a commercial empire with himself at the helm. Instead, the business quickly went into bankruptcy. Ponzi found himself again out of work, but not out of ideas for getting rich, this time as a commodities[172] broker[173].

Unfortunately, the first commodity he tried to sell apparently belonged to someone else. In May 1919, authorities served Ponzi a warrant for stealing 5,387 pounds of cheese. It's unknown whether the warrant was warranted. As the investigation got under way, Ponzi feared that once authorities learned of his two prison sentences, he might be deported. He feared too that Rose would learn of his criminal past, in the mistaken belief she did not already know. During their engagement, his mother had told Rose all about his prison stints, and both women decided not to tell him Rose was privy to his past. But Ponzi had a lucky break—a misspelling of his name on the cheese charge court documents, as "Charles Pouzi," led to the dismissal of charges.

Ponzi then decided to publish an international trade publication he called the Traders Guide, in which advertisers would pay for listings seen in every corner of the world. So confident was Ponzi in his new scheme that he rented office space, bought $350 of furniture on credit from the Daniels & Wilson Furniture Company, and hired a small staff.

Ponzi quickly exhausted his meager savings. To keep the operation afloat, he applied for a loan at the Hanover Trust Company. Henry Chmielinski, the bank's president, turned him down personally. Ponzi reminded him he was already a loyal customer of the bank. Chmielinski added an insult Ponzi would never forget: "Your account is more of a bother than a benefit to us.

---

[172] raw materials or primary agricultural products that can be bought and sold, such as copper or coffee

[173] person who buys and sells goods or assets for others

Good day, sir." Ponzi returned to his office and laid off his staff.

Not long after the demise of the Traders Guide, in August 1919, Ponzi received a letter from a merchant in Spain asking about it. Enclosed with the letter was a curious, official-looking square of paper. It was an International Reply Coupon, or IRC. Created in 1906 by a multinational body of postal services to simplify the international exchange of mail, one could buy an IRC at a local post office and enclose it in a letter sent to any of the participating countries. There, the recipient could redeem it for whatever local postage stamps were required to send a return. Staring at the coupon, Ponzi at last realized how he could make millions. And this time he was right.

Known today as arbitrage, the strategy Charles Ponzi devised was theoretically sound. Owing to interest rate and foreign exchange fluctuations among countries, say the United States and Italy, one U.S. dollar could buy 20 IRCs in Boston—or more than 60 in Rome. Hence Ponzi knew he could have someone buy IRCs in Italy for roughly 1.5 cents each, and send them back to the U.S., where he could sell them for 5 cents each, earning the eye-popping profit of 233 percent—more than enough for him to offer investors a tantalizing 50 percent return in 45 days, or 100 percent in 90, and keep the rest for himself. He just needed funding to get things started.

As Ponzi set about looking for investors, the Daniels & Webster Furniture company came looking for him. He had fallen behind on his payments for his office furniture. With unbridled confidence and charm, Ponzi convinced Joseph Daniels to not only hold off on repossessing the furniture, but to essentially convert his obligation into a loan. Daniels even wrote Ponzi a check for $20 as a further investment in the IRC operation.

Ponzi tried but failed to convince other acquaintances to trust him with their money, including the grocer Ettore Giberti. Giberti was walking out the door after politely declining Ponzi's offer to invest, when Ponzi sweetened the offer: Invest just $10 and become his first sales agent, keeping 10 percent of whatever Giberti raised. This did the trick. By early January 1920, Giberti had raised $1,770 from 18 investors. More agents soon came on board, as did a modest stream of small investors.

While essentially legal, Ponzi's IRC idea was in practice absurd. Beyond the problem of how to compete with the U.S. Postal Service for selling stamps, there were simply not enough International Reply Coupons in existence to make any significant profit through arbitrage.

At the end of February 1920, Ponzi owed $2,655 to Giberti's initial investors—their $1,770 capital plus $885 interest. Ponzi had no arbitrage profits with which to pay them. But he had money from more recent investors, so he simply used that, dipping into funds from Peter, as it were, to pay Paul. He claimed the gains were legitimate, that an associate named Lionello Sarti had gone to Italy and returned with large quantities of coupons, along with the fortunate news there were plenty more to be had. It's very likely Sarti never existed—nobody other than Ponzi would ever report meeting the man. Ponzi's satisfied investors didn't care as long as they were getting paid.

Ponzi saw his February deception as a stopgap, necessary only until he generated the juicy profits that to him were so obviously available through his IRC strategy. When word got out that Ponzi's word was good, that he actually did pay 50 percent in 45 days, more people clamored to invest. When the next investors were due their interest, he again used the proceeds from the newest investors. And then again and again. The stopgap didn't stop. And Charles Ponzi would never again have to ask investors for money. From then on, they asked him to take it.

Bostonians literally lined up at the door of Ponzi's office at 27 School Street to entrust their money with him. In February 1920, Ponzi's Securities Exchange Company took in $5,290 from new investors. In March, 110 investors turned in nearly $25,000.

Most of the people gathering at his door had only a few dollars to spare. Ponzi tailored his pitch directly to them. Climbing atop the stoop, which helped to augment his 5 feet 2 inches of height, he spun a story of humble beginnings in Italy, of descending the gangplank in Boston with a mere $2.50 in his pocket, then toiling tirelessly in the years since. He intended to build a financial operation that would benefit not Wall Street bankers, he told the mesmerized crowd, but honest and hard-working people just like them.

His populist[174] appeal, playing on fears that rich bankers were keeping exorbitant profits to themselves, would remain the foundation of Ponzi's pitch. Far from

[174] approach that strives to appeal to ordinary people who feel that their concerns are disregarded by established elite groups

hiding his humble days of barely making ends meet, he was happy to talk with prospective investors about the years of working one menial job after another. It made a moving story. But he left out the part about going to prison for check forgery, knowing it would spell the end of his reputation as a legitimate financier.

So it was with no little alarm that one day he recognized the face of one of the many people applying for a job at his office. It belonged to Lou Cassullo, his former cellmate from Montreal, who had tracked Ponzi down after learning of his success. The man Ponzi compared to a hyena knew very well that Ponzi could ill-afford for anyone to know of his prison past, and Ponzi knew that he knew. Cassullo soon found himself on Ponzi's payroll, accepting a generous paycheck and helping himself to a few bonus bills whenever he chose. Ponzi wanted him out. With Prohibition in full swing, he once tried to get his new hire arrested by sending him out to buy a few bottles of his favorite whiskey. But Cassullo just returned with the booze.

Whether Cassullo kept his mouth shut or not, Ponzi feared that sooner or later law enforcement would take an interest in his operation. And one day, the Boston police did indeed send two detectives to look it over. Ponzi put on an especially convincing show for the two men, each of whom deemed the plan legitimate, then pulled out their wallets and invested on the spot.

Five police inspectors and a lieutenant would eventually put their money into Ponzi's Securities Exchange Company, as would hundreds of street cops. Several in fact became agents, earning the 10 percent commission and giving his operation a veneer of legitimacy no money could buy. By the spring of 1920, Ponzi was taking in $30,000 every week. In May alone, 1,525 investors contributed $440,000. In June, nearly 8,000 investors entrusted Ponzi with $2.5 million, equivalent to $32 million today.

Flush with cash, Ponzi paid off all of his debts, including $200 he still owed on his loan from furniture dealer Joseph Daniels. He invested in the Splendor Macaroni Company. And the Napoli Macaroni Company. He bought real estate.

It had taken nearly 17 years, but by June 1920, Charles Ponzi had at last made good on his promise to his mother. Now a very rich man, he sent her first-class tickets to sail to America. Imelde arrived to join the Ponzis in their life of American aristocracy at a newly decorated mansion in the affluent town of Lexington, Mass., basking in wealth that only grew with every new investor.

By the end of June, the sheer amount of cash coming in the door at 27 School Street overwhelmed Ponzi's growing staff. His bookkeeper is said to have put cash into wastebaskets until it could be counted, sorted, and deposited in a bank—minus whatever bills Cassullo deposited into his pocket.

Ponzi could have kept his money at any of Boston's banks. Curiously, his favorite was Hanover Trust, whose president Henry Chmielinski had rudely turned him down for a loan several months earlier. By June, Ponzi was the bank's largest depositor, which ensured Chmielinski would never again do anything to risk offending him. Because banks lent out depositors' money to other customers as loans, a sudden withdrawal by a large depositor would prove disastrous. Well aware of this fact, Ponzi enjoyed his position of power.

As summer got into full swing, with so many Boston police among his happy investors, inquiries into the legitimacy of Ponzi's operation were minimal. But there were some. In July, U.S. postal authorities issued a formal ban against anyone redeeming more than 50 cents' worth of IRCs at one time. This made it all but impossible for anyone to turn a large-scale profit by trading in IRCs. But that fact was now moot. By mid-July, Ponzi was taking in $1 million a week, about $13 million in today's dollars, from investors. He delivered on his promise of exorbitant returns, and to them that was all that mattered.

On the same day U.S. postal authorities issued their ban, a lawyer for furniture dealer Joseph Daniels filed a lawsuit against Charles Ponzi. The suit claimed that, in return for loaning Ponzi some office furniture and giving him a check for $20 back in December, Daniels was entitled to half ownership of the Securities Exchange Company. He wanted $1 million.

Lawsuits for seven-figure sums were still newsworthy at this time. When The Boston Post put it on the front page of its Sunday, July 4 edition, one reader took particular interest — state banking commissioner Joseph C. Allen, a quiet but diligent public servant, whom Governor Calvin Coolidge had just recently appointed to office. Reading about the Ponzi lawsuit, Allen went to Massachusetts Attorney General J. Weston Allen (no relation) to recommend an inquiry. Something about Ponzi didn't seem right, the newly appointed Allen told the veteran Allen. Sensing a newcomer treading on his turf, the

attorney general told the political neophyte to back off. Commissioner Allen eased off as ordered—but his suspicions about Ponzi did not go away.

The Daniels lawsuit had also piqued the curiosity of Robert Grozier, who had recently become publisher of *The Boston Post* when his father Edwin Grozier fell ill. The younger Grozier never sought nor wanted his father's position, nor had the son of privilege shown a talent for this or any other job requiring intellectual acumen[175]. He flunked out of Harvard three times—freshman composition had been especially challenging, which is never a good portent for a journalist. Grozier was the first to recognize his own limitations. Out of family obligation, he felt he had little choice but to watch over the venerated *Boston Post* for his dad.

Ponzi's dealings with Hanover Trust continued to grow. In addition to keeping most of his money in its vaults, he also began buying the bank's stock and making friends with other shareholders. When the bank announced plans to issue a new block of 2,000 shares, Ponzi made a visit to Mr. Chmielinksi and offered to buy them all. Chmielinksi refused him—politely this time—on grounds this would give Ponzi control of the bank. This was exactly what Ponzi had in mind. When he made a casual inquiry about his current, very large balance, Chmielinski relented some. He told Ponzi he could buy 1,500 shares. Ponzi accepted. With his ties to other shareholders, who would soon elect him a director and then to a position on the executive board, Charles Ponzi effectively controlled the Hanover Trust Bank. He would soon make plans to put this new power to use.

When news of the stock purchase reached commissioner Allen, he again decided to make an inquiry into Ponzi, with or without anyone's permission. This time the other Allen went along, sending two assistant attorneys general to join the commissioner in a meeting with Ponzi at the Boston state house.

Ponzi had no legal obligation to comply with the invitation but eagerly attended anyway. His pitch polished to perfection, Ponzi handled every question with aplomb[176], indeed feeling intellectually superior to the government officials. "I was almost ashamed to match wits with them. It was like stealing candy from a baby," he would later say. After Ponzi left the meeting, the officials agreed that his strategy seemed plausible and could find no reason to stop him.

Given that investors could only be paid as long as new ones kept showing up, Charles Ponzi was well aware that no Peter-to-Paul scheme could last forever. With the IRC strategy no longer an option and authorities beginning to take interest, he devised a number of plans to go legitimate. Among the most grandiose was a plan to buy Navy ships, mothballed since the end of World War I, and turn them into giant floating showrooms where American manufacturers could bring samples of their wares to foreign ports.

Ponzi did not believe he was doing anything fundamentally wrong by paying off investors with other investors' capital, convinced that in the end he would meet his liabilities through fully legitimate means. He wanted to be sure the public knew of his legitimate business plans, and to help with that he hired William McMasters, a straight-laced publicist with an exceptionally bright future. McMasters had earned his reputation helping numerous public officials to get elected, including political luminaries such as John F. "Honey Fitz" Fitzgerald—future grandfather of President John F. Kennedy. McMasters began work 23 July 1920.

On 24 and 25 July, The Boston Post ran back-to-back feature stories on Ponzi and his operation. These were generally upbeat and positive—Robert Grozier carefully avoided printing anything that might bring on a libel suit and put the family newspaper at risk—mentioning only that federal authorities were investigating Ponzi's operation. But on 26 July, the Post reported the more ominous news that respected financial authority Clarence Walker Barron, whose name remains to this day on the masthead of the financial and investment publication Barron's, found the plan implausible. The stinging indictment might as well have been a full-page endorsement. In the following days, the number of new investors only grew. Ponzi took in $6.5 million from nearly 20,000 investors that month. To date, nearly 30,000 men, women, and even a number of children had entrusted him with a total of $9.6 million.

While the stories excited investors, Ponzi knew they would also excite additional authorities who would soon come knocking. Rather than wait, he decided to go to them. With McMasters at his side, Ponzi hurriedly arranged meetings with U.S. District Attorney Dan Gallagher, County District Attorney Joseph Pelletier, and

[175] ability to make good judgments and quick decisions
[176] self-confidence

Attorney General J. Weston Allen. He did not arrange a meeting with commissioner Allen, convinced that their earlier meeting had assuaged any of his concerns.

With McMasters taking notes, Ponzi made an astonishing offer to each of the authorities: He would open his books to an auditor of their choosing, to prove he had sufficient assets to meet his liabilities. This was of course impossible—but only if he limited the assets to his own.

Ponzi calculated he would need to show $15 million in cash and other liquid assets to prove his solvency. But he had, at most, only half of this amount. For the rest, he planned to simply walk into Hanover Trust when the day of reckoning came and, as a bank director, authorize a most unusual loan to himself. He would then enter the vault, exit with several million dollars of other depositors' money, take it to the auditor as proof of his liquidity, and then return it the same day.

While the audit got under way over the coming days, *The Boston Post* stepped up its criticism of Charles Ponzi. It ran an editorial stating flatly their opinion that Ponzi's scheme could not last. One day, it reported that the New York Postmaster said there were not enough International Reply Coupons in the whole world to make a fortune like Ponzi's. Then they published another, more detailed analysis by Barron. Why would Ponzi put his own money into investments earning single digit returns, Barron argued, if he could realize 100 percent returns in 90 days? The clear indictment used logic that anyone could understand, and should have been more than enough to convince Ponzi's investors to flee. But it did not. Nearly all of them stayed.

Ponzi might have thanked Barron for the unintended imprimatur[177], but instead sued him for $5 million, even laying claims on Barron's vast farm in case Barron didn't have the cash. To Robert Grozier's relief, Ponzi did not sue *The Boston Post*. But he had fired a shot across their bow, threatening to "own their presses" if they weren't careful.

While the state auditor, a diligent accountant named Edwin Pride, struggled to make sense of the haphazard record-keeping at the Securities Exchange Company, William McMasters struggled with a personal dilemma. At the meetings where Ponzi had offered to be audited, McMasters noted inconsistencies as his boss moved from meeting to meeting. Thus tipped off, he used the next several days to take a closer look at Ponzi's operation. It took him no time at all to conclude it was a massive fraud. Knowing his own career was at grave risk, he went to Robert Grozier of *The Boston Post* with his discovery, offering to write a full exposé. Grozier declined. He had gone as far out on the limb as he could go without risking a devastating lawsuit.

Known for being a straight-laced stickler for the law, McMasters made an exception by going to district attorney Nathan Tufts, who guaranteed that the Post would be immune from lawsuits "in case the story turned out to be untrue and libelous." When Robert Grozier learned of this promise, he allowed McMasters to publish an astonishing exposé. "DECLARES PONZI IS NOW HOPELESSLY INSOLVENT," blared the headline. The story went on to describe in detail everything McMasters had seen and concluded.

The next day, a small number of Ponzi's investors asked for their money back. But the exposé did not make a significant dent in public confidence. Ponzi claimed McMasters did not have access to details of the operation, and was telling this lie to divert attention from the true crime: McMasters had not accounted for $2,000 entrusted to him to place ads. To bolster the claim that McMasters was a thief, Ponzi sued him for that amount. McMasters promptly sued him back for $5,000. The public sided with Ponzi. Within a few days, his operation was more or less back to normal.

Ponzi's plan to temporarily borrow money from the Hanover Trust vaults might have worked were it not for one miscalculation. Bank Commissioner Joseph Allen had not lost interest in Ponzi at all. Indeed, unbeknownst to Ponzi when he made his offer of an audit, Allen used his authority to call Hanover Trust and instruct them to monitor every dollar going into and out of their vaults and to provide him detailed reports. When those reports further raised his suspicions, he posted two examiners at the bank. When further investigation revealed that Ponzi had clearly overdrawn his checking account, and that bank officials had been conducting illegal operations having nothing to do with Ponzi, Allen posted a sign on the door of the bank: He was taking possession of Hanover Trust and closing its doors until further notice.

When Ponzi found out, he knew there was no way he could rob his own bank. He could only hope now that auditor Pride would miscalculate, or some other stroke of

[177] guarantee that something is of a good standard

luck would come his way. But what happened next was anything but lucky.

A *Boston Post* reporter had received a most interesting tip: A "Charles Ponsi" was rumored to have spent time in jail in Montreal for forging checks. Dubious of the anonymous tip, Grozier sent a reporter to Montreal to check it out. With photos of Charles Ponzi in hand, the reporter had little trouble finding several people, including the warden of the Saint-Vincent-de-Paul Penitentiary, to identify the man in the photos as the same Charles Ponsi who had spent time in his prison 12 years earlier.

At 1:00 a.m. on 11 August 1920, a Post reporter confronted Ponzi at his home in Lexington about the article being prepared for that day's edition. Hearing the claim, Ponzi denied being Ponsi and told them not to run the story, else "you are going to get the presses ripped out of your building." The story ran anyway, encapsulated by its headline: "Montreal Police, Jail Warden and Others Declare That Charles Ponzi of Boston and Charles Ponsi of Montreal Who Was Sentenced to Two and Half Years in Jail for Forgery on Italian Bank Are One and the Same Men." At an interview with reporters that afternoon, Ponzi changed his response. Yes, he was the man sentenced for that crime. But he hadn't committed it. He claimed to have taken blame out of mercy, for a crime actually committed by his boss Louis Zarossi, who was struggling to support his wife and children. The impromptu story was so far-fetched that even Ponzi's own lawyer, standing at his side, resigned on the spot.

The next day, authorities informed Ponzi that Edwin Pride had calculated his liabilities at about $7 million. The official tally would be announced the next day. Ponzi did not wait, and instead turned himself in to the authorities. He was placed under arrest on charges of using the U.S. mail to commit fraud. In public statements, Ponzi continued to portray himself as doing the work of the people, this time by admitting that he did indeed lie about relying on the postal coupon scheme, but only to keep Wall Street bankers from discovering his true operation, which would earn not tens of millions of dollars but more than $100 million. He offered no details. But now it made no difference. A stream of additional indictments soon followed.

In the days that followed, hundreds of investors registered their names as victims, hoping to recover some of their losses. They were aided by numerous more fortunate investors, ones who had received payouts from Ponzi and kindly returned their ill-gotten gains. In the end, roughly 20,000 victims were awarded refunds of just under 40 percent of their investments. Thousands more got nothing but a costly lesson in naïveté.

Charles Ponzi was convicted on federal mail fraud charges and sentenced to five years of prison. In May 1921, while Ponzi enjoyed the nice view of Cape Cod Bay from the Plymouth County Jail, The *Boston Post*'s publisher Robert Grozier won a Pulitzer Prize, the first awarded outside of New York, for his "courage and fine sense of newspaper honor" in exposing Ponzi. There was no mention that his courage was bolstered by a secret and legally dubious[178] promise of immunity from prosecution. That fact would remain hidden until 2009, when the unpublished memoirs of William McMasters were unearthed in a book shop in New Jersey.

Charles Ponzi's mail fraud sentence was reduced by one year for good behavior. Upon his release in 1925, state prosecutors took their turn and secured another conviction and prison sentence of seven to nine years. While on bail awaiting his return to jail, and confident he would win an appeal, Ponzi went to Florida and hatched a brand new investment scheme, this time in real estate, and this time offering investors a 200 percent return in 60 days. Florida officials quickly shut it down and arrested him. He was sentenced to one year in prison for violating state securities laws.

Out on appeal for this latest charge, Ponzi decided he could not bear the thought of returning to prison. So he disappeared. With a nationwide manhunt underway, he used his fluent Italian and years of experience as a manual laborer to secure a job as a waiter and dishwasher aboard an Italian freighter. Disguised by a moustache and shaved head, he decided to end the manhunt by faking suicide, asking friends to put some of his clothes and a suicide note on a Florida beach. The ship set sail from Tampa and Charles Ponzi, now using the alias Andrea Luciana, was again a free man.

It was a perfect escape. Almost. After revealing his true identity to a shipmate, Ponzi was in time met by authorities in New Orleans who placed him under arrest. Taken back to Massachusetts, Ponzi served seven years in prison and then, having never obtained U.S. citizenship, was promptly deported.

---

[178] doubtful

Back home in Italy, Ponzi struggled to make ends meet doing odd jobs. He spent two years writing his autobiography but failed to find an American publisher. He moved to Brazil in 1939 to take a job for the Italian state airline. When that job fizzled, he operated a small rooming house and taught English in Rio de Janeiro, where, following a steep decline in health, he died in 1949 with a net worth of $75.

Charles Ponzi's Ponzi scheme was not history's first. But its ingenuity, audacity, and unlikely success was such that the *Encyclopedia Britannica*, in 1957, lent Ponzi's name permanently to the scheme. The *Oxford English Dictionary* would later cement the term "Ponzi scheme" into the lexicon with its definition: "A form of fraud in which belief in the success of a nonexistent enterprise is fostered by the payment of quick returns to the first investors from money invested by later investors."

Ponzi's scheme was also not the largest in history. That honor (so far) goes to Bernie Madoff, famously arrested in 2008 for defrauding investors of an estimated $65 billion over the course of 16 years, using the same basic ruse of paying off earlier investors using proceeds from new ones. And in the time since the Madoff conviction, the U.S. Securities and Exchange Commission has enforced actions against more than 50 similar schemes.

And those are just the ones authorities have managed to find.

Study Questions

1. What is the main idea of the selection?
2. Describe Ponzi's college experience.
3. Who was Louis Zarasso? Describe his banking practices.
4. Why was Ponzi arrested and jailed in 1908? Why was he arrested three weeks after his first release from prison?
5. Why was Ponzi not charged with stealing 5,387 lbs. of cheese?
6. What was the Traders Guide? What happened to the company?
7. What gave Ponzi the inspiration for his arbitrage strategy? What was the plan? What made it "absurd"?
8. How did Ponzi pay off his initial investors? Who was Lionello Sarti? How did Ponzi attract new investors?
9. What happened when police came to inspect Ponzi's operation?
10. What two events happened on the same day in July that would pose a threat to Ponzi's scheme?
11. How did Ponzi gain control of the Hanover Trust Bank?
12. How did Ponzi plan to prove his solvency to investigators? What eventually made the plan impossible?
13. What fact about Ponzi did the *Boston Post* publish on August 11, 1920?
14. What was Ponzi's sentence on federal charges? State charges? What did Ponzi do to try to avoid his second sentence? How was he finally caught?
15. Where and under what circumstances did Ponzi die?

The Curse of Konzo

by Matt Castle

Mozambique is a scenic southern African nation whose long Indian Ocean coastline is dotted with popular beaches like Tofo, as well as offshore marine parks. In 1981, an international group of doctors identified the devastating disease behind a perplexing outbreak of paralysis in northern Mozambique. In this essay, the writer, Matt Castle, examines the mystery behind the curse of Konzo. (First published 2018)

On 21 August 1981, Australian physician Julie Cliff received the following message on her telex, a print-on-paper precursor to modern text messaging:

"Polio outbreak. Memba District. 38 cases. Reflexes increased."

The apparently routine message was sent from the Provincial Health Directorate in Nampula, a city in northern Mozambique. Cliff worked in the epidemiology department of the Mozambican Ministry of Health in Maputo, at the southern end of the country. Effective vaccines against poliomyelitis—a food and water-borne infectious disease that can damage nerves and cause paralysis—had been developed in the 1950s and 1960s, eliminating polio from many industrialized countries. However, the disease remained rife[179] throughout sub-Saharan Africa. So the message was unremarkable—except for one thing. In the acute phase of polio, tendon reflexes are not increased. They are absent.

Only a few possible reasons could account for this inconsistency: flawed examination of the patients, a typo in the telex, or some unknown disease process causing an unusual pattern of paralysis in the unfortunate Mozambicans.

Dr. Cliff arrived in Nampula province shortly afterwards as part of a small Health Ministry investigation team, determined to get to the root of the mystery. Typographical errors and poor clinical examination technique were quickly ruled out as possible explanations for the anomaly. Close inspection of affected individuals confirmed the disease was definitely not polio. Yet the question remained: what else could it be?

Other doctors already at the scene included a young medic from Sweden named Hans Rosling, who was working in one of the affected areas as a District Medical Officer. When first confronted with a line of women and children suffering various degrees of paralysis, he reached for the biggest neurology textbook he could find. "Their disease did not exist in that book," he later recounted. Lacking other ideas, Rosling was soon forced to entertain a disturbing possibility: biological or chemical warfare.

The notion was not so outlandish. At the time, the new nation of Mozambique was in the early stages of a bitter civil war. Forces loyal to the socialist ruling party Frelimo (Frente de Libertação de Moçambique)—supported by the Soviet Union[180]—were battling the anti-Communist Renamo organisation (Resistência Nacional Moçambicana), sponsored by the apartheid-era South African and Rhodesian governments. In this edgy and complex, post-colonial, proxy-Cold War situation, rumors proliferated and almost anything seemed possible. Residents reported sightings of a South African submarine off the Nampulan coast a few weeks prior. Rosling's suspicions of skulduggery were sufficiently strong that he packed his young family into a car and sent them to the safety of the nearest city, while he stayed to continue his work.

In the days that followed, no evidence for any kind of biological or chemical attack emerged. Nevertheless, cases of the mysterious paralysis continued to mount. Each followed a troubling pattern: the disease usually affected women and children, almost invariably in rural villages that had already endured months of a severe drought. Typically, it would strike quickly, over a matter of days or even hours. Previously active young mothers and children would go to sleep with little inkling of anything amiss, only to wake the next morning with various degrees of muscle stiffness and contractions in the legs, and—less commonly—in the arms, too. Sometimes a bout of heavy exertion, such as collecting water for the household from a distant well, seemed to trigger symptoms the next day. Affected people would find themselves unable to walk normally or, in the worst cases, at all. It was almost as if someone—or something—had tied their legs together with invisible cord.

The affliction appeared to be irreversible. As the number of paralysed people grew, the investigators worked

[179] widespread

[180] a powerful group of Communist republics including Russia, Belarus, Ukraine, Georgia, and 11 others

with increasing urgency, traveling to remote parts of the province to examine potential cases, interview members of local communities to establish possible causes for the disease, and take blood samples for laboratory analysis.

Initial indications favored a microbial origin for the condition: if not polio, then some other pathogen[181]. Many early case reports described symptoms such as fever, headache, and diarrhea preceding the onset of paralysis—symptoms consistent with an infectious disease. Likewise, the clear clustering of cases in small communities and family groups pointed to person-to-person transmission. After all, Africa hosted many unpleasant and little known parasites, bacteria, and viruses—such as the newly emerged Ebola virus, first identified in Sudan and Zaire in 1976.

But subsequent investigations revealed no obvious pathogens. After several days in the field Cliff's team withdrew to Maputo to regroup and consult with international experts, including those from the World Health Organization. Telex machines from Mozambique to Geneva chattered with criss-crossing hypotheses, while blood samples were hastily dispatched[182] to specialist labs overseas, including the British biological and chemical weapons research center in Porton Down, England.

The team perused a series of increasingly dusty and dense printed journals and textbooks. They identified two diseases with possible relevance to the Nampulan outbreak. One disease, called lathyrism, produced a very similar clinical picture: upper motor neuron damage leading to increased muscle tone and paralysis. Lathyrism typically occurred on a sporadic basis in south Asia, but was also noted among the detainees of Vapniarka, a concentration camp in Romania, during World War II. The other disease was an obscure neurological disorder named Tropical Ataxic Neuropathy, or TAN, first reported in Jamaica in 1897 but since described in a number of other countries scattered across the tropics, including another East African country, Tanzania.

Intriguingly, both diseases were nutritional, rather than infectious, in nature. With lathyrism, the illness was caused by a toxin present in certain legumes[183]—including the livestock peas that were the sole foodstuff allowed to the unfortunate Jewish internees in Vapniarka. However, none of these legume species were grown or consumed in northern Mozambique. The purported cause of TAN was more vague—even a century after its discovery, the exact cause is unknown, although nutritional deficiencies have been proposed as possible factors, and experts had long linked it to a food crop widely cultivated in Mozambique and elsewhere. But the symptoms of TAN—which include blindness, hearing loss, and an unsteady gait—bore little resemblance to the distinctive paralysis the doctors saw in Nampula province.

Meanwhile, infectious disease experts in Maputo remained convinced that an unidentified virus was the culprit. They suggested further investigation of insect disease vectors[184] in the affected areas. The team dutifully added questions about insects to their interview questionnaires, and went back into the field. It emerged that lots of mosquitoes and bedbugs bit people in affected communities—but lots of mosquitoes and bedbugs bit people in unaffected communities, too.

By the end of September 1981, Cliff's team—now expanded to include Dutch botanist Paul Jansen—was no longer looking for a contagious disease. They had considered and excluded all known infectious agents that could possibly perpetrate the perplexing plethora of paralysis. Nor had detailed analysis of various bodily fluids demonstrated any unknown ones.

The investigators' attention turned back towards dietary factors. Despite the drought, the problem wasn't a lack of food. While many local people had suffered, few actually starved and unlike later famines elsewhere in East Africa, mortality was low. Much of the credit for this could be attributed to a single plant species that had come to the rescue: Manihot esculenta, also known as 'cassava'.

Cassava is a small tropical shrub that produces a starchy and edible underground root. It was originally cultivated in Latin America and the Caribbean, but was introduced to Africa in the 16th century by the Portuguese. It subsequently spread throughout the tropics and beyond. The versatile tuber[185] can be processed into a starchy powder exported to temperate regions, where it is known as tapioca, and used to make pudding. In many ways, cassava

[181] bacterium, virus, or other microorganism that can cause disease
[182] sent off
[183] plants of the pea family
[184] an organism, typically a biting insect or tick, that transmits a disease or parasite from one animal or plant to another
[185] a much thickened underground part of a stem or rhizome, e.g. a potato, serving as a food reserve and bearing buds from which new plants arise

is an exemplary food, whose virtues are particularly relevant to Africa. Notably drought- and pest-resistant, cassava thrives in marginal soils incapable of supporting other crops. Although it lacks protein, it is a good source of calcium and vitamin C, and an exceptional provider of energy. Indeed, of all the main staple food crops, cassava yields the highest number of calories per area cultivated, making it invaluable on a continent still stalked by famine.

In rural Mozambique, as in much of Africa, people often grow cassava on a small-scale basis close to households as a "crop of last resort," for consumption when they lack other food sources in the hungry season—or in times of conflict, crisis, or drought. Cassava comes in "bitter" and "sweet" (or, more accurately, "not bitter") varieties, with the bitter types particularly valued for their resistance to locusts and other herbivores.

Early in the investigation, an elderly man in one of the affected villages told the doctors, "This disease has happened because the rain has not washed our cassava." Perhaps understandably, investigators initially ignored him. The practice of disease outbreak investigation involves an established sequence of steps concerned with relating cases to "time, place, and person." Heeding advice from grizzled old locals does not feature prominently in field epidemiology manuals.

However, as each new test failed to yield evidence for any old or new pathogens, the investigators returned to the old man's words. Cassava was an important element of the local diet in Nampula, and therefore hard for Cliff and her team to overlook if they were considering a nutritional cause for the puzzling paralysis. The doctors formulated a worrying hypothesis involving one of humanity's most feared poisons—a substance that disrupts the body's utilization of oxygen at a cellular level, and formed the principal ingredient of the notorious Zyklon B gas used in the Nazi extermination camps: hydrogen cyanide.

One clue was the fact that cassava often leaves a bitter taste in the mouth. This bitterness derives from two types of sugar molecules: linamarin and lotaustralin. These molecules are termed "cyanogenic glucosides," meaning that in certain circumstances—for example, when exposed to the enzymes and bacteria of the human intestine—they will decompose and produce hydrogen cyanide. The more bitter the cassava, the greater the potential exposure to cyanide.

Sure enough, when Jansen tested a range of foodstuffs[186] from the disease-affected areas, he found high levels of cyanogens[187] in the cassava samples. And when the team tested blood samples from affected people for thiocyanate—cyanide's breakdown product within the human body—the average result was 20 times normal levels. The researchers now had to entertain the possibility that the food that saved so many Mozambicans from starvation was, in some cases, paralyzing them.

With a plausible hypothesis to test, the application of tried-and-tested disease outbreak investigation methods started to yield results. When Cliff and her colleagues related the pattern of cases to time, they realized the August peak of the epidemic corresponded closely to the region's main cassava harvest. When they mapped out cases by place, they saw that the disease largely spared coastal areas, which was consistent with their understanding of the local diet: access to fish and to food markets meant people depended less on cassava. Finally, when the team looked closely at "person," the preponderance of the disease in women of childbearing age and children over the age of two also made sense: in rural Mozambique, as in much of Africa, women prepare food for the household and they, with their accompanying children, would be most exposed to cassava during processing and consumption. Men are usually privileged with more diverse dietary pickings, and are spared the additional nutritional stress of pregnancy and breastfeeding. Furthermore, the extreme food shortage caused by the recent drought had forced many women to eat something that would normally be thrown away: cassava root peel, which Jansen's tests had shown to harbor particularly high levels of cyanogens.

With the warm glow of hindsight, it may seem surprising that the investigators did not realize the connections earlier: a number of commonplace foods are known to contain cyanide, cassava among them. Outside of the tropics, one of the better known examples are bitter almonds. In crime fiction, their aroma traditionally emanates from fresh corpses as a sign of villainy afoot. For most of us, the distinct odor of bitter almonds is indeed the scent of cyanide, but up to 40 percent of the population—presumably including a few unfortunate

[186] substances suitable for consumption as food

[187] colorless, flammable, highly poisonous gasses made by oxidizing hydrogen cyanide

detectives—have a complete genetic inability to smell the poison. Many wild varieties of the almond tree express the bitterness trait—determined by a single recessive gene—and produce these deadly seeds; it has been estimated that consumption of around a dozen will kill an average person. The seeds of many other familiar agricultural plants also contain cyanogens, including apricots, cherries, peaches, plums, and even apples. The growing tips of sorghum, a traditional crop domesticated in Africa long before the arrival of cassava, contain high levels of cyanogens, while some of the very highest levels—up to 8,000 mg of hydrogen cyanide per kilogram—are found in bamboo shoots.

Nonetheless, very few people who eat these foods suffer adversely from cyanide exposure. In many cases, cyanogen levels are extremely low in the specific varieties consumed—the whole almonds found in grocery stores almost invariably belong to the sweet type, rather than the bitter, for example. And the part of the plant makes a difference: while the stones, pits, and seeds of various fruits may cause illness if chewed and swallowed in large quantities, such seeds are usually discarded before consumption, or excreted intact and undigested. With sorghum, it is the cyanogen-less grain that people eat, rather than the young leaves—although the latter have been known to poison grazing livestock. With bamboo shoots, research revealed substantial variation in the levels of cyanogens found in the various species of edible bamboo, but standard processing and cooking methods effectively eliminate the toxin in almost all cases. As always, there are exceptions—an account of an unusually fatal bamboo pickling incident in Thailand was published in 2011—but safety can normally be assured by means of a thorough stir fry.

Much of this background was familiar to Cliff and her team in 1981—so they knew that in theory, at least, the cyanide in cassava should not have posed a significant threat to human health. Furthermore, there were at least a couple of conditions already attributed to cyanide ingestion, but neither were anything like the illness the doctors saw in Nampula province. First, there was the well-established progression of symptoms seen in acute cyanide poisoning, which include vomiting, diarrhea, seizures, coma, and ultimately, death—but not normally paralysis. Second, there was Tropical Ataxic Neuropathy, the disease that the team had read about in Maputo. TAN had long been linked to cassava cultivation, and at the time was also hypothesized to be linked to cyanide exposure. But in both cases, the entirely different pattern of symptoms threw the investigators off the bitter scent.

Doctors even lacked an established name for the "new" disease. Initially, they used the local Mozambican word—mantakassa—but it was later discovered that an Italian physician, Giovanni Trolli, had identified the same pattern of symptoms in the 1930s in rural areas of Kwango province in the then-Belgian Congo. While Trolli did not establish the cause of the symptoms at the time, he collated reports from several other doctors in the region over a two-year period and recorded the local Congolese name for the condition: khoondzo, or "konzo." The word meant "tied legs" and was also the name given to a talisman and a trap used by people in the area to ensnare wild animals. Although separated by nearly 50 years and more than 1,000 miles, the two diseases were clearly the same. Eventually, the all-too-appropriate name "konzo" prevailed.

When the researchers looked beyond Africa, another mystery became apparent: konzo's geographical distribution does not map neatly onto areas of cassava consumption. Half a billion people living across the tropics rely on cassava as an important part of their diet, yet in global terms konzo is, thankfully, a rare disease. It has never been reported in the Americas, where cassava was first domesticated, nor in Asia, where it has become an important staple crop in many areas. Cassava is widely consumed in West Africa—and grown on a commercial scale in countries such as Nigeria—but konzo has never been documented in this region.

For cassava, as with almonds and bamboo shoots, it seems that much depends on the particular variety of plant grown and the circumstances surrounding its preparation. In Asia, people tend to only cultivate the "sweet" cassava varieties, so starting concentrations of cyanogens are low. In the Americas, traditional processing methods—such as the "tipiti" plaited sleeve press used by Amazonian tribes—are highly effective at removing cyanide, although they require large volumes of water. In Africa, different areas rely on different processing techniques. In central and eastern Africa, the preferred method involves soaking peeled cassava roots in water for three days, followed by a period of sun drying, before pounding the resulting product into granules or flour. But when drought and hunger intervene, soaking and drying times are cut short.

Even then, the resulting cyanide exposure should not be sufficient to cause konzo in normal nutritional circumstances. Adequate intake of sulfur amino acid-containing protein helps the body metabolize[188] and excrete cyanide, but cassava's low protein content—and often, a lack of access to meat, fish, and other protein-rich foods—means that cassava-dependent communities may not be able to maintain this basic dietary defense. Compounding this problem, in times of drought, bitter cassava becomes even more bitter: the water-stressed plants concentrate additional cyanogens in their leaves and roots to deter insects and other animals who might otherwise be sorely tempted by such a convenient "crop of last resort."

By the end of October 1981, Cliff and her colleagues had collected and connected the most important pieces of the Nampulan paralysis puzzle. They were certain that the disease was associated with the high levels of cyanide found in affected individuals. The cyanide came from the bitter cassava that was—thanks to an unfortunate collision of socioeconomic, botanical, and meteorological factors—the defining feature of the local diet. However, the exact biochemical and neurological chain of causation remains uncertain to this day. Konzo can be considered a form of chronic[189] cyanide poisoning, but it is still unclear why its symptoms differ so much from those of acute[190] cyanide poisoning—and what relationship, if any, konzo has with those other mysterious nutritional diseases, lathyrism and TAN. Occasionally, people in drought-stricken, cassava-dependent areas indeed display symptoms of acute cyanide toxicity. Reports of these early symptoms may have initially misdirected Cliff and her colleagues toward considering an infectious cause for the disease, but the onset of konzo itself usually occurs much later, after weeks of excess and near-exclusive cassava consumption.

As the regional diet diversified in the months following the 1981 cassava harvest, the incidence of konzo in Nampula province slowed and eventually stopped. The Health Ministry investigation team dispersed. Julie Cliff returned to Maputo. Hans Rosling left his job as a District Medical Officer later that year but maintained a strong interest in konzo, going on to write his Ph.D. thesis on the disease. Jansen returned to botanizing[191], co-authoring a tome[192] on the traditional use of medicinal plants in Mozambique published in 1983, before expanding his ethnobotanical interests ever further across the tropics: he later became instrumental in projects to catalog the traditional plant resources of both Southeast Asia and tropical Africa. Meanwhile, the rains returned to northern Mozambique for the 1982-83 growing season, providing water to soak the cassava and yield a safer harvest for the local population.

Over the following decades, Cliff, Rosling, and others identified more konzo clusters in several countries in central and eastern Africa. They ultimately diagnosed more than 1,000 cases in the 1981 Mozambique epidemic—a similar number from Trolli's original 1936-37 Congolese outbreak. Researchers believe that the cumulative number of cases reported officially in Africa—around 11,000—represents a gross underestimate, largely because of poor access to health care—and hence poor case-reporting—in vulnerable regions. In the now-Democratic Republic of Congo alone, estimates go as high as 100,000 cases. Here, in particular, it remains a significant ongoing problem: decades of conflict have lumbered the population of this repeatedly re-named country with a legacy of social and economic problems, making it vulnerable to nutritional diseases like konzo.

For individual konzo sufferers, treatment options are minimal. The muscles in the legs tighten and contract to a varying extent ("spastic paraparesis," or "tetraparesis" if all four limbs are affected). In mild cases, people can still walk unaided, albeit with the tiptoeing "tied legs" gait[193] that gives the disease its name. In moderate cases, crutches or walking sticks are needed. In severe cases, people's legs are completely paralyzed ("spastic paraplegia"). Physical therapy can help people manage their symptoms, but the motor neuron damage is irreversible. This is particularly devastating in societies with very little formal health or social support—where physiotherapy[194], for example, is not widely available, and where income is often earned via physical labor.

However, in 2004, it was discovered that the disease is completely and easily preventable. A recently retired Australian plant scientist named Howard Bradbury

[188] process a substance in order to maintain life
[189] persisting for a long time or constantly recurring
[190] of short duration but typically severe
[191] studying plants
[192] a book, especially a large, heavy, scholarly one
[193] a person's manner of walking
[194] the treatment of disease, injury, or deformity by physical methods such as massage, heat treatment, and exercise rather than by drugs or surgery

discovered that an additional step in cassava processing—namely, wetting cassava flour with water and leaving the resulting paste to stand for five hours—would greatly reduce cyanogen levels. As long as the gloop contains sufficient linamarase, a natural enzyme that should be present in the flour anyway, and there is adequate ventilation to allow the safe outgassing of hydrogen cyanide, the procedure—not too dissimilar, of course, from the "rain-washing" the old man in Nampula had described—will nearly always reduce human cyanide exposure to safe levels. Subsequently, Bradbury discovered that in direct sunlight, the enzyme works even faster: just two hours will suffice. The water requirements are modest, and field trials in east and central Africa have shown this "wetting method" to be practical, effective, and widely welcomed by women in vulnerable villages.

The story of cassava and konzo should not alarm global connoisseurs[195] of tapioca pudding, bamboo shoots, and sweet almonds. It demonstrates that well-nourished, well-educated, and wealthy people generally have very little to fear from eating potentially cyanide-containing food plants. Only a sustained period of consumption of large amounts of inadequately prepared bitter cassava—which only occurs in conjunction with a collection of other disagreeable social and environmental circumstances—causes the disease. In short: only poor people suffer the curse of konzo.

Study Questions

1. What is the main idea of the selection?
2. What two possible reasons for the disease were quickly ruled out?
3. Describe the pattern of the disease.
4. What two diseases bore possible relevance to the Nampula outbreak?
5. What is cassava? What makes it an exemplary food?
6. What did the elderly man tell doctors? Why did they ignore him?
7. What is hydrogen cyanide?
8. Why does cassava often leave a bitter taste in the mouth?
9. What evidence supported the cassava-cyanide hypothesis?
10. What other foods contain cyanide? Why don't people who consume them suffer from cyanide exposure?
11. What did doctors call the new disease? Why?
12. In what way did the victims' symptoms differ from the usual progression of cyanide poisoning?
13. Why isn't cassava generally associated with cyanide poisoning, even where it is commonly consumed?
14. When did the disease stop? Why?
15. What discovery was made in 2004?

[195] expert judges in matters of taste

The Little Store

by Eudora Welty

Eudora Welty (1909-2001) was a celebrated writer from Jackson, Mississippi, who won the National Medal for Literature and the Presidential Medal of Freedom. When she wrote an essay out of memory, as she did in "The Little Store," she brought to reminiscence the storyteller's skills of narration and use of significant detail. She also brought the stylist's ear for rhythms of word and sentence that compel attention. (First published 1978)

Two blocks away from the Mississippi State Capitol, and on the same street with it, where our house was when I was a child growing up in Jackson, it was possible to have a little pasture behind your backyard where you could keep a Jersey cow, which we did. My mother herself milked her. A thrifty homemaker, wife, mother of three, she also did all her own cooking. And as far as I can recall, she never set foot inside a grocery store. It wasn't necessary.

For her regular needs, she stood at the telephone in our front hall and consulted with Mr. Lemly, of Lemly's Market and Grocery downtown, who took her order and sent it out on his next delivery. And since Jackson at the heart of it was still within very near reach of the open country, the blackberry lady clanged on her bucket with a quart measure at your front door in June without fail, the watermelon man rolled up to your house exactly on time for the Fourth of July, and down through the summer, the quiet of the early-morning streets was pierced by the calls of farmers driving in with their plenty. One brought his with a song, so plaintive we would sing it with him:

"Milk, milk,

Buttermilk,

Snap beans - butterbeans -Tender okra - fresh greens...

And buttermilk."

My mother considered herself pretty well prepared in her kitchen and pantry for any emergency that, in her words, might choose to present itself. But if she should, all of a sudden, need another lemon or find she was out of bread, all she had to do was call out, "Quick! Who'd like to run to the Little Store for me?"

I would.

She'd count out the change into my hand, and I was away. I'll bet the nickel that would be left over that all over the country, for those of my day, the neighborhood grocery played a similar part in our growing up.

Our store had its name - it was that of the grocer who owned it, whom I'll call Mr. Sessions - but "the Little Store" is what we called it at home. It was a block down our street toward the capitol and a half a block further, around the corner, toward the cemetery. I knew even the sidewalk to it as well as I knew my own skin. I'd skipped my jumping-rope up and down it, hopped its length through mazes of hopscotch, played jacks in its islands of shade, serpentined along it on my Princess bicycle, skated it backward and forward. In the twilight I had dragged my steamboat by its string (this was homemade out of every new shoebox, with candle in the bottom lighted and shining through colored tissue paper pasted over windows scissored out in the shapes of the sun, moon, and stars) across every crack of the walk without letting it bump or catch fire. I'd "played out" on that street after supper with my brothers and friends as long as "first-dark" lasted; I'd caught its lightning bugs. On the first Armistice Day[196] (and this will set the time I'm speaking of) we made our own parade down that walk on a single velocipede[197] - my brother pedaling, our little brother riding the handlebars, and myself standing on the back, all with arms wide, flying flags in each hand. (My father snapped that picture as we raced by. It came out blurred.)

As I set forth for the Little Store, a tune would float toward me from the house where there lived three sisters, girls in their teens, who ratted their hair over their ears, wore headbands like gladiators, and were considered to be very popular. They practiced for this in the daytime; they'd wind up the Victrola, leave the same record on they'd played before, and you'd see them bobbing past their dining-room windows while they danced with each other. Being three, they could go all day, cutting in:

"Everybody ought to know-oh

How to do the Tickle-Toe (how to do the Tickle-Toe)"

--they sang it and danced to it, and as I went by to the same song, I believed it.

A little further on, across the street, was the house where the principal of our grade school lived - lived on,

[196] The first Armistice Day November 11, 1918, marked the end of World War I. It is now celebrated as Veterans Day.

[197] an early form of bicycle propelled by working pedals on cranks fitted to the front axle

even while we were having vacation. What if she would come out? She would halt me in my tracks -- she had a very carrying and well-known voice in Jackson, where she'd taught almost everybody - saying "Eudora Alice Welty, spell oblige." Oblige was the word that she of course knew had kept me from making 100 on my spelling exam. She'd make me miss it again now, by boring her eyes through me from across the street. This was my vacation fantasy, one good way to scare myself on the way to the store.

Down near the corner waited the house of a little boy named Lindsey. The sidewalk here was old brick, which the roots of a giant chinaberry tree had humped up and tilted this way and that. On skates, you took it fast, in a series of skittering hops, trying not to touch ground anywhere. If the chinaberries had fallen and rolled in the cracks, it was like skating through a whole shooting match of marbles. I crossed my fingers that Lindsey wouldn't be looking.

During the big flu epidemic he and I, as it happened, were being nursed through our sieges at the same time. I'd hear my father and mother murmuring to each other, at the end of a long day, "And I wonder how poor little Lindsey got along today?" Just as, down the street, he no doubt would have to hear his family saying, "And I wonder how is poor Eudora by now?" I got the idea that a choice was going to be made soon between poor little Lindsey and poor Eudora, and I came up with a funny poem. I wasn't prepared for it when my father told me it wasn't funny and my mother cried that if I couldn't be ashamed for myself, she'd have to be ashamed for me:

“There was a little boy and his name was Lindsey.
He went to heaven with the influinzy.”

He didn't, he survived it, poem and all, the same as I did. But his chinaberries could have brought me down in my skates in a flying act of contrition before his eyes, looking pretty funny myself, right in front of his house.

Setting out in this world, a child feels so indelible [198]. He only comes to find out later that it's all the others along his way who are making themselves indelible to him.

Our Little Store rose right up from the sidewalk; standing in a street of family houses, it alone hadn't any yard in front, any tree or flowerbed. It was a plain frame building covered over with brick. Above the door, a little railed porch ran across on an upstairs level and four windows with shades were looking out. But I didn't catch on to those.

Running in out of the sun, you met what seemed total obscurity inside. There were almost tangible smells - licorice recently sucked in a child's cheek, dill-pickle brine that had leaked through a paper sack in a fresh trail across the wooden floor, ammonia-loaded ice that had been hoisted from wet croker sacks[199] and slammed into the icebox with its sweet butter at the door, and perhaps the smell of still-untrapped mice.

Then through the motes of cracker dust, cornmeal dust, the Gold Dust of the Gold Dust Twins that the floor had been swept out with, the realities emerged. Shelves climbed to high reach all the way around, set out with not too much of any one thing but a lot of things - lard, molasses, vinegar, starch, matches, kerosene, Octagon soap (about a year's worth of octagon-shaped coupons cut out and saved brought a signet ring addressed to you in the mail. Furthermore, when the postman arrived at your door, he blew a whistle). It was up to you to remember what you came for, while your eye traveled from cans of sardines to ice cream salt to harmonicas to flypaper (over your head, batting around on a thread beneath the blades of the ceiling fan, stuck with its testimonial catch).

Its confusion may have been in the eye of its beholder. Enchantment is cast upon you by all those things you weren't supposed to have need for, it lures you close to wooden tops you'd outgrown, boy's marbles and agates in little net pouches, small rubber balls that wouldn't bounce straight, frazzly kitestring, clay bubble-pipes that would snap off in your teeth, the stiffest scissors. You could contemplate those long narrow boxes of sparklers gathering dust while you waited for it to be the Fourth of July or Christmas, and noisemakers in the shape of tin frogs for somebody's birthday party you hadn't been invited to yet, and see that they were all marvelous.

You might not have even looked for Mr. Sessions when he came around his store cheese (as big as a doll's house) and in front of the counter looking for you. When you'd finally asked him for, and received from him in its paper bag, whatever single thing it was that you had been sent for, the nickel that was left over was yours to spend.

Down at a child's eye level, inside those glass jars with mouths in their sides through which the grocer could run his scoop or a child's hand might be invited to reach for

[198] unforgettable

[199] Large bags made of burlap

a choice, were wineballs, all-day suckers, gumdrops, peppermints. Making a row under the glass of a counter were the Tootsie Rolls, Hershey Bars, Goo-Goo Clusters, Baby Ruths. And whatever was the name of those pastilles that came stacked in a cardboard cylinder with a cardboard lid? They were thin and dry, about the size of tiddlywinks, and in the shape of twisted rosettes. A kind of chocolate dust came out with them when you shook them out in your hand. Were they chocolate? I'd say rather they were brown. They didn't taste of anything at all, unless it was wood. Their attraction was the number you got for a nickel.

Making up your mind, you circled the store around and around, around the pickle barrel, around the tower of Cracker Jack boxes; Mr. Sessions had built it for us himself on top of a packing case, like a house of cards.

If it seemed too hot for Cracker Jacks, I might get a cold drink. Mr. Sessions might have already stationed himself by the cold-drinks barrel, like a mind reader. Deep in ice water that looked black as ink, murky shapes that would come up as Coca-Colas, Orange Crushes, and various flavors of pop, were all swimming around together. When you gave the word, Mr. Sessions plunged his bare arm in to the elbow and fished out your choice, first try. I favored a locally bottled concoction called Lake's Celery. (What else could it be called? It was made by a Mr. Lake out of celery. It was a popular drink here for years but was not known universally, as I found out when I arrived in New York and ordered one in the Astor bar.) You drank on the premises, with feet set wide apart to miss the drip, and gave him back his bottle.

But he didn't hurry you off. A standing scales was by the door, with a 20 stack of iron weights and a brass slide on the balance arm, that would weigh you up to three hundred pounds. Mr. Sessions, whose hands were gentle and smelled of carbolic, would lift you up and set your feet on the platform, hold your loaf of bread for you, and taking his time while you stood still for him, he would make certain of what you weighed today. He could even remember what you weighed last time, so you could subtract and announce how much you'd gained. That was good-bye.

Is there always a hard way to go home? From the Little Store, you could go partway through the sewer If your brothers had called you a scarecat, then across the next street beyond the Little Store, it was possible to enter this sewer by passing through a privet hedge, climbing down into the bed of a creek, and going into its mouth on your knees. The sewer - it might have been no more than a "storm sewer" -- came out and emptied here, where Town Creek, a sandy, most often shallow little stream that ambled through Jackson on its way to the Pearl River, ran along the edge of the cemetery. You could go in darkness through this tunnel to where you next saw light (if you ever did) and climb out through the culvert at your own street corner.

I was a scarecat, all right, but I was a reader with my own refuge in storybooks. Making my way under the sidewalk, under the street and the street-car track, under the Little Store, down there in the wet dark by myself, I could be Persephone[200] entering into my six-month sojourn underground -though I didn't suppose Persephone had to crawl, hanging onto a loaf of bread, and come out through the teeth of an iron grating. Mother Ceres[201] would indeed be wondering where she could find me, and mad when she knew. "Now am I going to have to start marching to the Little Store for myself?"

I couldn't picture it. Indeed I'm unable today to picture the Little Store with a grown person in it, except for Mr. Sessions and the lady who helped him, who belonged there. We children thought it was ours. The happiness of errands was in part that of running for the moment away from home, a free spirit. I believed the Little Store to be a center of the outside world, and hence of happiness - as I believed what I found in the Cracker Jack box to be a genuine prize, which was as simply as I believed in the Golden Fleece[202].

But a day came when I ran to the store to discover, sitting on the front step, a grown person, after all -- more than a grown person. It was the Monkey Man, together with his monkey. His grinding-organ was lowered to the step beside him. In my whole life so far, I must have laid eyes on the Monkey Man no more than five or six times. An itinerant of rare and wayward appearances, he was not punctual like the Gipsies, who every year with the first cool days of fall showed up in the aisles of Woolworth's. You never knew when the Monkey Man might decide to favor Jackson, or which way he'd go. Sometimes you heard him as close as the next street, and then he didn't come up yours.

---

[200] In Greek mythology, the daughter of Zeus and Demeter. She is abducted by Pluto to reign with him in the underworld for six months of every year.

[201] the Roman name for Demeter, mother of Persephone

[202] in Greek mythology, the fleece of the golden ram, stolen by Jason and the Argonauts

But now I saw the Monkey Man at the Little Store, where I'd never seen him before. I'd never seen him sitting down. Low on that familiar doorstep, he was not the same any longer, and neither was his monkey. They looked just like an old man and an old friend of his that wore a fez, meeting quietly together, tired, and resting with their eyes fixed on some place far away, and not the same place. Yet their romance for me didn't have it in its power to waver. I wavered. I simply didn't know how to step around them, to proceed on into the Little Store for my mother's emergency as if nothing had happened. If I could have gone in there after it, whatever it was, I would have given it to them - putting it into the monkey's cool little fingers. I would have given them the Little Store itself.

In my memory they are still attached to the store - so are all the others. Everyone I saw on my way seemed to me then part of my errand, and in a way they were. As I myself, the free spirit, was part of it too.

All the years we lived in that house where we children were born, the same people lived in the other houses on our street too. People changed through the arithmetic of birth, marriage, and death, but not by going away. So families just accrued stories, which through the fullness of time, in those times, their own lives made. And I grew up in those.

But I didn't know there'd ever been a story at the Little Store, one that was going on while I was there. Of course, all the time the Sessions family had been living right overhead there, in the upstairs rooms behind the little railed porch and the shaded windows; but I think we children never thought of that. Did I fail to see them as a family because they weren't living in an ordinary house? Because I so seldom saw them close together, or having anything to say to each other? She sat in the back of the store, her pencil over a ledger, while he stood and waited on children to make up their minds. They worked in twin black eyeshades, held on their gray heads by elastic bands. It may be harder to recognize kindness -- or unkindness either -- in a face whose eyes are in shadow. His face underneath his shade was as round as the little wooden wheels in the Tinker Toy box. So was her face. I didn't know, perhaps didn't even wonder: Were they husband and wife or brother and sister? Were they father and mother? There were a few other persons, of various ages, wandering singly in by the back door and out. But none of their relationships could I imagine, when I'd never seen them sitting down together around their own table.

The possibility that they had any other life at all, anything beyond what we could see within the four walls of the Little Store, occurred to me only when tragedy struck their family. There was some act of violence. The shock to the neighborhood traveled to the children, of course; but I couldn't find out from my parents what had happened. They held it back from me, as they'd already held back many things, "until the time comes for you to know."

You could find out some of these things by looking in the unabridged dictionary and the encyclopedia -- kept to hand in our dining room -- but you couldn't find out there what had happened to the family who for all the years of your life had lived upstairs over the Little Store, who had never been anything but patient and kind to you, who never once had sent you away. All I ever knew was its aftermath: They were the only people ever known to me who simply vanished. At the point where their life overlapped into ours, the story broke off.

We weren't being sent to the neighborhood grocery for facts of life, or death. But of course those are what we were on the track of, anyway. With the loaf of bread and the Cracker Jack prize, I was bringing home the intimations of pride and disgrace, and rumors and early news of people coming to hurt one another, while others practiced for joy - storing up a portion for myself of the human mystery.

Study Questions

1. What is the main idea of the selection?
2. Why didn’t the writer’s mother ever go into a grocery store?
3. What was the name of the store? What did the writer call it?
4. How did the writer know the sidewalk leading to the store so well?
5. Describe the three teenage girls who listen to music.
6. What does the principal say to the writer whenever she sees her? Why?
7. What does the writer remember about the flu epidemic?
8. Describe the appearance of the little store.
9. What details of smell does the writer appeal to? What about visual details? Details of taste?
10. How does the writer describe Mr. Sessions?
11. Who was the Monkey Man? Describe him.

12. What realization does the writer make about the Sessions family? Why doesn't she express the specific details?

Big Macs

by Emily Belfiore and Brian Dunning

Is eating Big Macs the worst thing you can do for your health? Or is it possible that eating even multiple Big Macs a day can be part of a healthy diet? Here are two differing views on the loathed, loved, and feared McDonald's classic.

"9 Reasons Why You Should Never Eat a Big Mac, Like, Ever"

by Emily Belfiore
(First published 2017)

There's nothing quite as delicious as a Big Mac from McDonald's. I mean, it's two beef patties layered with lettuce, cheese, onions, pickles and Big Mac sauce -- and, there are three buns! Though the popular fast food burger is undeniably delicious, not many people know the effect it has on their bodies. From its calories and sodium, to its ability to reprogram your brain into wanting more unhealthy foods, here's why you should choose another Mickey D's sandwich for lunch:

1. It has a lot of calories

According to McDonald's, one Big Mac has 540 calories. When you combine these calories with the ones you'll be getting from the french fries and soft drink that comes with the meal, you're looking at a LOT of unhealthy calories.

2. There's a lot of sodium in there, too!

One Big Mac has 950 milligrams of sodium. That means you're getting almost 1,000 milligrams of sodium with just ONE burger. Let that sink in...

3. It raises your blood pressure to "abnormal levels"

Between the calories, sodium, 46 grams of carbs and 28 grams of fat, your Big Mac causes your blood pressure to spike in as little as 10 minutes of eating it!

4. The bun is made with high fructose corn syrup

McDonald's hamburger buns contain high fructose corn syrup and add even more sodium to your meal. These ingredients are highly addictive and can cause obesity, diabetes, and heart disease.

5. It can make you dehydrated

All of that sodium in your burger can start to make you dehydrated in as little as 30 minutes after eating it. But this feeling can closely mimic the symptoms of hunger, which may make you reach for your fries instead of a glass of water.

6. It makes your heart work harder to pump blood

Having too much sodium makes it harder for your kidneys to eliminate salt. When this happens, your heart has to work harder and faster to pump blood through your veins. This can cause high blood pressure and eventually lead to heart disease and stroke.

7. It can make you crave more fast food

We know that Big Macs are high in calories and fat, but we often fail to recognize the effect it has on our cravings. Since this is such a high-calorie food, your insulin response can cause your glucose levels to drop and make you want to eat more. This will cause you to overeat and overconsume your recommended calories for the day, especially if you choose another unhealthy fast food item to snack on.

8. They can take days to digest

All of the fat, calories and sodium in your Big Mac make it a challenge to digest. It can take at least 2-3 days to fully digest your Big Mac, and that's just the burger!

9. It can cause high cholesterol

One Big Mac contains 10 grams of saturated fat, which increases your risk of developing high cholesterol if consumed often and excessively. It also puts you at risk for heart disease, too! Not to mention that it's also got 1 gram of trans fat, which the Harvard School of Public Health says can cause heart problems later on.

"Three Big Macs a Day"

by Brian Dunning
(First published 2018)

Today we're going make a frontal assault against one specific manifestation[203] of pop food woo[204]: the notion that the iconic and oft-maligned[205] McDonald's Big Mac is among the most unhealthy foods in the world. This notion is popular among organic proponents, foodies, and the majority of the population who conflate[206] fast food with unhealthy food. It's gotten to the point that virtue signaling [207] by vilifying[208] the Big Mac has become a de facto[209] requirement of the modern foodie movement.

Many foodies will typically throw up their hands in horror at the prospect of eating even a single Big Mac, let alone one every day. But food science shows that such a reaction is unjustified. Nutritional science just doesn't work that way. So to hammer the point home, I want to take this to an extreme: three Big Macs, eaten in a single day. According to pop[210] fearmongering[211], this sounds like it should trigger an immediate trip to the emergency room. But it doesn't. In fact, the truth is so far from that, I'm hoping you will be surprised.

And really, the point has nothing to do with McDonald's or the Big Mac. It has to do with any normal food item that has some foodie stigma attached to it. A candy bar, a pizza, or a quart of ice cream aren't going to hurt you. They all contain things your body needs, and often they contain excesses of other things that your body doesn't want, but that won't cause any issue at all if they're integrated into a diverse diet.

For the actual eating habits of people and comparisons to what we currently consider ideal, I'm going by the 2015-2020 Dietary Guidelines, a publication of the US Office of Disease Prevention and Health Promotion, part of the Department of Health and Human Services. Here are the report's three bullet points for the chapter "Current Eating Patterns in the United States":

- About three-fourths of the population has an eating pattern that is low in vegetables, fruits, dairy, and oils.
- More than half of the population is meeting or exceeding total grain and total protein foods recommendations, but are not meeting the recommendations for the subgroups within each of these food groups.
- Most Americans exceed the recommendations for added sugars, saturated fats, and sodium.

So it's a fact that Americans are missing the mark. And one place that I see the Finger of Blame pointed for this problem is fast food; specifically, McDonald's; and even more specifically, the world's single best-known food product, the famous Big Mac hamburger. My purpose is to drill to the root of this puzzlingly widespread belief. Is the Big Mac indeed representative of America's nutrition problem?

The answer, as we're now going to prove, is a resounding no. In fact, we're going to show that not simply one, not even two, but three Big Mac hamburgers a day can be part of a nutritious and healthy diet — one that, if not perfect, is substantially better than what most people eat each day. The reason for this is simple: people are generally ignorant about nutrition, believing healthy eating to require strict adherence to certain things and avoidance of others. The simple fact is that human beings are omnivorous. We can, and do, live quite well on extremely varied diets. Historically, the Inuit[212] did perfectly fine on a diet consisting mainly of saturated fat, the Maasai[213] on cow's milk and blood loaded with cholesterol, Paleolithic Europeans on a staple of starchy grains and tubers[214] with a little of everything else sprinkled in. The notion that a Big Mac's full complement of diverse ingredients would be lacking in nutrition is wrong; as is the belief that it contains unusually large amounts of things we normally think of as bad. It does have a couple excesses, but as we'll see they're not unusual, and by themselves not problematic.

As McDonald's is constantly under pressure from food activist groups, they publish all of their sources in

[203] An indication of the existence, reality, or presence of something
[204] An attempt to get support for something
[205] Frequently spoken about in a spitefully critical manner
[206] Combine as one
[207] “Virtue signaling”: the practice of publicly expressing opinions or sentiments intended to demonstrate one's good character or the moral correctness of one's position on a particular issue
[208] Defaming
[209] “De facto”: something real, but not formally accepted
[210] Popular
[211] The action of deliberately arousing public fear or alarm about a particular issue
[212] a group of indigenous peoples of northern Alaska, arctic Canada, and Greenland
[213] a pastoral and hunting people of Kenya and Tanzania
[214] potatoes and potato-like plants

every country on their website. If you want to know where they source their ketchup or their pickles in France, it's right there.

The Big Mac consists of the bun, the 100% USDA-inspected beef patty seasoned with salt and pepper (there was never any truth to urban legends that the beef contains "fillers" or anything else), shredded lettuce, special sauce, American cheese, pickle slices, and onions. With the exception of the special sauce, these are all sourced from the same food suppliers who sell the same stuff to almost all restaurants. The special sauce is their own custom variation on Thousand Island dressing, made for them by a major food packer that creates ingredients for many restaurants and food manufacturers. The other ingredients are all basically what you'd buy at the supermarket to make a hamburger with these same toppings. Though some people claim McDonald's adds huge amounts of salt and sugar to their ingredients, according to the published lists — which are scrutinized all the time — it's simply not true.

In 2012, McDonald's executive chef made a Big Mac, special sauce included, on YouTube, using supermarket sourced ingredients. He said:

> *...Quite honestly, the ingredients have been available in the restaurant, or as well now on the Internet, for many years. So, not really a secret. But what we're going to do today is we're going to make a version of the Big Mac with ingredients that are similar that you could buy at your local grocery store.*

So let's see what three of these bad boys will do to our daily diet. We'll look at the nutritional content of a Big Mac — both the good and the bad — and compare it to the daily recommendations. And we're going to triple everything, because even three Big Macs can be part of a perfectly healthy daily diet.

First, the basics. Three Big Macs come to 1,610 calories. That's well under the 2,000 calorie recommended goal for an adult. This most basic nutritional metric tells us that if you ate three Big Macs every single day, and took in no other calories, you'd lose weight. That's the first surprise, and it's a big one for many people.

Our meal also scores well on carbs. Three Big Macs gives you only 45% of the recommended upper limit; and as there are no essential carbohydrates, this a great thing. Bet you never realized three Big Macs could be part of an Atkins-style low-carb diet.

Total sugar is not an issue. Three Big Macs deliver 26 grams of total sugars, about half of the recommended upper limit.

The three Big Macs also give us only 79% of the cholesterol intake we ideally want to stay below. Three Big Macs: low carbs, low calorie, low sugar, and low cholesterol.

However they are also low in most vitamins and minerals. They give a decent amount of Vitamin A, calcium, and iron, but if you ate nothing else every single day, you'd probably want to take a good multivitamin supplement. Even without that, three Big Macs plus an orange would meet most of your body's needs for a day, plus still be low carb, low cholesterol, and low calorie.

Not surprisingly, three Big Macs with their six beef patties give you a fantastic amount of protein. The average person wants about 50 grams a day; three Big Macs deliver 75.

Now let's look at the unwanted compounds where the Big Macs go over. Specifically, fats and sodium. You'd be over the recommended daily limit on all three, but surprisingly, only a little bit. You'd get 118% of your recommended sodium allowance, 131% of the recommended fat allowance, and 150% of the saturated fat allowance.

Let's look at each of these in closer detail. Three Big Macs deliver 2.8 grams of sodium. The recommended upper limit is about 2.3 grams. However, the average American goes way over that. Adult men average about 4.2 grams; adult women average about 3.2. So even though three Big Macs deliver more sodium than you want, they deliver much less than the average person eats on an average day. The myth that the Big Mac delivers unusually high sodium is busted.

Of all the nutrients for which data was available and that I evaluated, only fat, including saturated fat, was problematic. This comes from all the beef. It's recommended to keep total fats to no more than 25-35% of all your calories; but 48% of the calories in Big Macs come from fats, so our three Big Macs would give us more fat than the average person eats on an average day. For saturated fats, it's recommended to keep it to less than 10% of your total daily calories; but 17% of the calories in a Big Mac are from saturated fats, quite a bit more than the 11% of their calories that the average person gets in this way.

If the fats are a deal breaker for you, then drop one of the three Big Macs, and replace it with 540 other calories from some low-fat source. There are lots of ways to build a healthy daily diet, and without any reservations, Big Macs can be a part of that.

You shouldn't misinterpret this to mean I'm saying you should eat multiple Big Macs every day, which will no doubt be the default straw man[215] criticism of this essay. The best diets are diverse and include a little bit of many different foods; that's the best way to make sure you get all the nutrient categories well covered. However it's also true that pretty much everyone in the United States — in fact, nearly everyone in every developed country — gets more than enough of the required nutrients, which as our paleolithic ancestors proved, isn't all that hard to do. Our real problem is that most of us eat too much. We don't need mythical "superfoods"; we simply need less of what we already eat.

Focus on variety and eating less overall. Limit your calories from added sugar and saturated fats. Reduce your sodium intake. Beyond that, relax and enjoy food. As we've proven, there really aren't any normal foods that can't fit into a healthy diet — even as many Big Macs as you're likely to want.

Study Questions

1. What is the main idea of each selection?
2. According to Belfiore, how many calories are in a Big Mac?
3. According to Belfiore, how does a Big Mac cause you to crave more food?
4. According to Dunning, in what three ways are Americans missing the mark in adhering to dietary guidelines?
5. What is Dunning’s point in stating that humans are omnivorous?
6. Identify four ways that Big Macs are not out of line with a healthy diet, according to Dunning. Identify two ways in which they are.
7. Dunning discusses many reasons the hypothesis that “Big Macs are unhealthy” is false; he also discusses some ways in which it might be true. How does conceding that there are some points in which his main idea is weak add or detract from his credibility? Does Belfiore offer any concessions in her argument? Does this make her credibility stronger or weaker?
8. Which argument did you feel was stronger? Identify three reasons why.

[215] an intentionally misrepresented proposition that is set up because it is easier to defeat than an opponent's real argument.