

BRING AN AXE AND YOUR WILDEST DREAMS:
POST-APOCALYPTIC DESIRES, SCIENCE DISTRUST,
AND THE DE(CON)STRUCTION OF A ZOMBIE STORY

by

SAMANTHA JO LONG

B.A., Illinois State University, 2011

A thesis submitted to the
Faculty of the Graduate School of the
University of Colorado in partial fulfillment
of the requirement for the degree of

Master of Arts

Department of English

2014

This thesis entitled:
Bring an Axe and Your Wildest Dreams:
Post-Apocalyptic Desires, Science Distrust, and the De(con)struction of a Zombie Story
written by Samantha Jo Long
has been approved for the Department of English

Richelle Munkhoff

Stephen Graham Jones

Date _____

The final copy of this thesis has been examined by the signatories, and we
Find that both the content and the form meet acceptable presentation standards
Of scholarly work in the above mentioned discipline.

Long, Samantha Jo (M.A., English)

Bring an Axe and Your Wildest Dreams: Post-Apocalyptic Desires, Science Distrust, and the De(con)struction of a Zombie Story

Thesis directed by Assistant Professor Richelle Munkhoff

Observing the current popularity of the zombie narrative in American culture, this thesis explores the questions “why zombie?” and “why now?” through a combination of research and the creation of an original zombie story. Moving beyond existing criticism which argues that the zombie transforms to fit each generation’s specific fears, I argue that zombie movies, novels, and video games from George A. Romero-onwards continually speak to a distrust of science and scientific progress while additionally romanticizing the post-apocalyptic landscape.

Consequently, the zombie’s unprecedented mainstream popularity over the last fifteen years could be read as symptomatic of this distrust intensifying, paralleling an increasing politicization of science and a rise in apocalyptic thinking within the public sphere. Through the deconstruction of my own zombie story, I uncover not only what these timely narratives tell us about our perceptions of the future, but also how they can help us change them.

DEDICATION

In memoriam

To my dad, my biggest fan, who keeps me writing.

“And may your song always be sung.”

All of my love, always.

ACKNOWLEDGEMENTS

Special thanks to Richelle Munkhoff for her guidance throughout this project, to my committee members Adam Bradley and Stephen Graham Jones for their invaluable feedback, and to Greg for his editing *and* patience with all-things-zombie over the past two years.

CONTENTS

PROLOGUE.....	1
CHAPTER	
I. A WANNABE ZOMBIE WRITER.....	2
II. SOLEMN SOLON SPRINGS, WISCONSIN	7
III. A BRIEF HISTORY OF “WHY ZOMBIES?”	9
IV. THE PUSH NORTH.....	17
V. APOCALYPSE NOW?	20
VI. WALKIN’ TALL MACHINE GUN MAN	31
VII. THE POST-APOCALYPTIC DREAM.....	35
VIII. REUNION.....	42
IX. MAD SCIENCE.....	44
X. DREAMLAND	50
XI. INTERLUDE	52
XII. FANTASYLAND	53
XIII. WHO’S AFRAID OF SCIENCE?	60
XIV. RED IN THE MORNING	65
XV. IN THE RIGHT CORNER	68
XVI. ALL ABOARD.....	74
XVII. AND IN THE LEFT	83
XVIII. HOME ON THE RANGE.....	91
XIX. SHORT LISTS.....	93
XX. ANIMAL.....	94

XXI. THE ANTI-ZOMBIE NARRATIVE	96
XXII. BREAK.....	97
XXIII. AUTHOR INTERVENTION.....	102
XXIV. ZOMBIE EX MACHINA.....	104
XXV. THE ZOMBIE AS NEGOTIATOR.....	106
XXVI. HOW DOES A RADIO WORK?.....	111
XXVII.DON'T KNOW MUCH ABOUT SCIENCE BOOKS	112
XXVIII.ALIVE 550 AM	119
EPILOGUE.....	122
BIBLIOGRAPHY.....	125

TABLES

Table

1.	A Selection of Zombie Films by Year	46
2.	A Selection of Zombie Stories by Year	47
3.	A Selection of Zombie Video Games by Year	47

PROLOGUE

When I first began working on an English master's thesis, I knew that a strictly by-the-book approach would be insufficient for my ambitions. While my scholarly interest in zombies started traditionally enough, borne from multiple seminars about plague narratives at the beginning of my master's program, a wholly scholarly mindset—and style—was not my chief aspiration. After all, my interest in zombies and their contemporary significance stretched far beyond formal educational experiences; I was a fan, and zombie books, movies, and video games were my hobby. I longed to share my thoughts fan-to-fan as much as scholar-to-scholar, to write about popular culture in a way that was welcoming to those who made up popular culture and had made the undead worthy of such an inquiry in the first place. I also wanted to create—to incorporate a zombie story I had begun just “for fun”—showing not only how research and the production of fiction are intricately linked, but also revealing my process as I came to form an argument (and as that argument subsequently transformed my fiction). “Why not do it?” My advisor asked. So I decided to give it a shot.

The layout that follows is relatively simple. Each new chapter moves back and forth between “academic” nonfiction and my story. Of course, as both develop the divisions become less clear, reflecting their enmeshment. What hopefully results is an immersive experience, where intellectual and creative mindsets meet to work on the biggest question of all—why zombies now?

CHAPTER I A WANNABE ZOMBIE WRITER

I was riding the light rail into Denver with the undead, and all I felt was disappointment. The city-wide crawl had snuck up on me and now there was no time left to debate what kind of zombie I wanted to be, whether freshly transformed or a little more rotten and blood splattered. Instead, I was among the few survivors, surrounded everywhere by creative uses of costume, red dye, and fake flesh that smiled and snapped photos for Facebook, Twitter, and Instagram.

My train ride was no isolated incident. The *Denver Post* reported that an estimated 15,000 zombies and zombie enthusiasts made it out that October afternoon, in an annual event that has been growing since its founding in 2006.¹ For that matter, zombie crawls have grown in popularity across the entire United States as countless cities now host both official and unofficial gatherings. The *Guinness Book of World Records* recently crowned Ashland, New Jersey as the site of largest zombie gathering with 9,592 registered attendants.²

As I walked among them, shuffling from the train station to the 16th Street pedestrian mall where the *Dawn of the Dead* reference was hard to miss, the extent of the zombie phenomenon was made suddenly and shockingly visible. All the popular movies, television shows, books, and video games with their sales charted? Insufficient. The attention from the media which titillated apocalypse hopefuls with reports of zombie-like assaults?³ Fell short. And even the newfound interest from university types to study the implications of the trend—it did not add up to the sight before me—that of a few hundred people on their day off forming a giant undead parade.

Damn, I thought, do I need to write that zombie novel while the getting is good.

Purely profit speaking, getting into zombies was worth a shot, especially from my frame of reference: the soon-to-be-graduated grad student who'd at last admitted that she rather be

writing books than writing about them, and that the books better be fun and have an angle if she was going to spend her post-9 to 5 day working on them. It was easy to fantasize secretly about some kind of meteoric success when looking at Max Brook's *World War Z* or Robert Kirkman's *The Walking Dead*. Everywhere the undead went, fortune and fame followed: zombie films were box office gold;⁴ zombie bogeys dominated video games (the apocalypse-themed *The Last of Us* was the fastest-selling PlayStation 3 game of 2013⁵); and—even on TV—AMC's *The Walking Dead* based off the Kirkman graphic novel series brought in a record breaking 16.1 million viewers with its season four premiere, coming close to the viewership for NFL primetime football.⁶ Indeed, it seemed that ever since Danny Boyle unleashed his fast-moving, rage-infected zombies in *28 Days Later* (2002) that we were in the midst of a “zombie renaissance”⁷ with no end in sight.

As the undead dispersed themselves down the mall, I struck up a conversation with a particularly convincing (albeit adult version of) Karen Cooper from *Night of the Living Dead* (1968). Walking past the mall's regulars—street performers, Scientologists, magazine sellers, a stray Hare Krishna, a man in a fairy costume protesting GMOs, another protesting vaccines, and the masses of Denver's overlooked homeless—we talked about the crawl and about our favorite zombie films. Her face was (re)animated as she discussed that *Night* would always hold a special place in her heart, though this wasn't to say she didn't like fast zombies. I lamented my forgetfulness of the crawl and recommended *Pontypool* (2009) before ducking into a bar where some friends were waiting, thereby closing our moment of mutual fandom. And that's what it seemed this zombie phenomenon was to me more than anything else—something to be enjoyed and something that connected people; zombies had transcended beyond cult status bounds and were now for everyone. In that way, I was simply a fan, spending many a night button-mashing

in zombie survival video games like *Left 4 Dead*, *Dead Rising*, *Red Dead Redemption: Undead Nightmare*, or mowing down zombie-like bogeys—the husks in *Mass Effect* and the necromorphs in *Dead Space*. I watched everything zombie, from Romero’s work to the “splatstick”⁸ zombie films of the 80s and 90s to contemporary films. My boyfriend and I would argue contingency plans over beers—whether to hole up or flee, whether to use ammo or engage in hand-to-hand combat, whether to band up with other survivors or remain isolated. Fictional works like Max Brooks’s *The Zombie Survival Guide* and our own emerging zombie narratives (how we were going to “best” the genre) served as a reference for how things would *really* be.

It wasn’t until I started writing my own zombie story, plotting out interweaving narratives between an alcoholic, a dying woman, and a young widow (the alcoholic’s narrative displayed in this project) that I longed for something more that could better account both for the *why* and the *why now* when it came to zombie popularity. Part of the reason was strategic; as I struggled with originality I hoped that I could pare down zombie films, books, and games to some kind of essence—the lone thing that made them successful even if their plots (and their zombies) varied wildly. But, more important was the nagging feeling that this sustained love for all things zombie (at a height it had not previously reached) foreboded something more troubling than the grotesque body of the zombie and cannibal death (or un-death). As we followed up one drink with another on an afternoon and evening that held little more in store—the status of most Saturdays where there was just enough money to waste on booze—I couldn’t stop thinking about the flocks of zombies still passing by the bar’s front windows. What did we mean by it? What did I mean by it?

I kept dragging the conversation back to zombies, getting cursory responses like *just another excuse to dress up* or *the apocalypse as the ultimate reset button*, or *a hell of a lot more*

fun than sitting in a cube farm all day... Later research would reveal that countless critics already argued for and against all of these points, and many more as the zombie has increasingly becoming an open-ended metaphor in the critical literature about it. But what were zombies doing for me specifically? Was it one of those above reasons? What was that “essence” that would allow me to write my own meaningful zombie story, and why did I find so much of my free time consumed by these narratives in the first place? More important, why had I and so many others started looking at survival handbooks and emergency supplies, making prepper culture (along with its often troubling political agendas) larger than ever before?⁹ With thousands of people dressed up as zombies walking down the 16th Street Mall that day, it was clear that the fictional and the real in this instance were feeding off of each other in ways they had not previously, or at least at an intensity they had not previously.

If I was going to write my own zombie story, I needed to better understand what messages I was communicating and their implications for a world wound up by dreams (or should I say nightmares?) of zombie apocalypse. It seemed, in doing so, an even more interesting and terrifying narrative might unfold, about a world where the end of the world looks increasingly like our best bet. Nevertheless, the words of E.M. Forster (or those falsely attributed to him)—“How will I know what I think till I see what I say?”—were unavoidably true. Discovering these messages would be both a practice in research and creativity, a combined effort of unearthing while building.

So I began my zombie story.

CHAPTER I NOTES

1. Jason Pohl, “Thousands of Zombies, Mutants Overtake Downtown Denver,” *Denver Post*, last modified October 20, 2012, http://www.denverpost.com/ci_21820121/thousand-zombies-mutants-overtake-downtown-denver.

2. “Largest Gathering of Zombies,” *Guinness World Records*, accessed November 8, 2013, <http://www.guinnessworldrecords.com/records-5000/largest-gathering-of-zombies/>.

3. In the wake of zombie popularity, the media has popularized assaults with “zombie-like” qualities. Rudy Eugene’s assault on a homeless man in Miami gained national coverage after it was reported that Eugene had chewed off most of Ronald Poppo’s face before being shot and killed by police. (Nadege Green and Audra Burch, “The Unraveling of Rudy Eugene, aka the Causeway Face Attacker,” *Miami Herald*, last modified July 16, 2012, <http://www.miamiherald.com/2012/07/14/2895973/the-unraveling-of-rudy-eugene.html>.) There was also the assault of a woman in Pennsylvania who was tackled on the street by a naked man who attempted to gnaw at her head (Andy Campbell, “Richard Cimino Jr., Naked and Bloody, Gnaws on Woman’s Head, Cops Say,” *The Huffington Post*, last modified September 13, 2012, http://www.huffingtonpost.com/2012/09/13/richard-cimino-naked-bloody-gnaws-on-head_n_1881604.html), and an incident in Louisiana where a man was bitten by his neighbor while doing yard work. (Andy Campbell, “Carl Jacqueaux Bit a Chunk of Face off Victim Todd Credeur in Louisiana, Cops Say,” *The Huffington Post*, last modified June 6, 2012, http://www.huffingtonpost.com/2012/06/06/carl-jacquaux-bit-a-chunk-of-victims-face_n_1574316.html.)

4. According to Daniel W. Drenzer in *Theories of International Politics and Zombies* (Princeton, NJ: Princeton UP, 2011), “The release of zombie films has spiked since the dawn of the new millennium; according to conservative estimates, more than one-third of all zombie films were released in the past decade...zombies are clearly a global cinematic phenomenon,” 2.

5. Luke Karmali, “The Last of Us Sells 3.4 Million Copies in Three Weeks,” *IGN*, last modified July 9, 2013, <http://www.ign.com/articles/2013/07/09/the-last-of-us-sells-34-million-copies-in-three-weeks>.

6. James Hibberd, “‘The Walking Dead’ Season 4 Premiere Ratings Enormous,” *Entertainment Weekly*, last modified October 14, 2013, <http://insidetv.ew.com/2013/10/14/the-walking-dead-returns-to-record-viewership/>.

7. Kyle William Bishop, *American Zombie Gothic: The Rise and Fall (And Rise) of the Walking Dead in Popular Culture* (Jefferson, NC: McFarland & Company, 2010), 25.

8. Linda Badley, “Zombie Splatter Comedy from *Dawn* to *Shaun*: Cannibal Carnavalesque,” in *Zombie Culture: Autopsies of the Living Dead*, eds. Shawn McIntosh and Marc Leverette (Lanham, MD: Scarecrow, 2008), 35-53.

9. Alan Feuer, “The Preppers Next Door,” *The New York Times*, last modified January 26, 2013, http://www.nytimes.com/2013/01/27/nyregion/the-doomsday-preppers-of-new-york.html?pagewanted=all&_r=0.

CHAPTER II
SOLEMN SOLON SPRINGS, WISCONSIN

Hotwiring the old truck was going well until he heard the gravel crunch and the sour smell hit him. He rocked back on his haunches, shielding himself with the truck's swung-out door. His knees hurt so damn bad from all the walking.

"Get out. Motherfucker."

The voice sounded like it was being squeezed to tears. How most voices sounded anymore. The door was all that stood between them.

"Motherfucker. Get out."

He steadied his breath before he spoke. There was nothing else to do. "Your hands are shaking like crazy aren't they? I can hear it in your voice. Put the rifle down."

"Get out."

"You got no use for this truck now and you know that. Everyone's sick or dead here. I thought this place was empty. Really."

"Motherfucker."

"I got into town yesterday. Looks like you've seen the worst already. I'm sorry. I just got here yesterday."

He thought about yesterday and how he'd totaled his last car, blind drunk.

"That's my truck." A new mantra. He wished he had something more than a small screwdriver in his hand. Careless. He had gotten so fucking careless lately. *Half-cocked*.

"Man, tell you what. Let me get up from here, I'll put my hands up," he raised his hands above the outstretched door panel, "We'll talk."

"My truck."

He pulled himself up as slowly as his knees would allow, hands still in surrender.

In the empty window a man his age stood armed with only a butter knife shaking in his hand. There wasn't a single hair on his head. Beyond him two girls no more than ten years old combined looked on from the porch, the younger one's bottom lip was now the blood and drool on her shirt, the older one twitched violently as she gripped the rail for balance. They were bald too.

“My truck.”

The fall wind hit him with the smell again. The smell was piss and shit—wet and dried and wet again for a week—distinct before it'd be overcome by dried blood and rotten meat. Who's meat? How many sentences did this guy have left in him? Or was it just the homemade chemo cocktail taking him first?

“You're sick and so are your girls. I'm not. I need this truck.”

And it really was too late as the man's features twisted and it looked like he may cry, as if sudden clarity shocked him and he saw himself: shit-in pants, protecting his family with a butter knife. That final pinch of palpable emotion, the anguish of sundown as *all* of his moments dimmed and became words too difficult to make out. But, even then, anguish was just another word. And he lost it just as quickly, his body slackening into a new calm as he let the knife fall, wandering down the driveway toward the tree line, looking for nothing.

He finished wiring the truck. The engine did not faze the girls now, though it would in a day, maybe even hours. Perhaps the man too. It was this thought that made him hobble over to the chopping block he'd spotted near the garage, returning with an axe. And then he threw the truck into reverse, and as he backed up *and* until the tires hit the quiet of the paved highway, he looked only at the image in the rearview mirror, only at what was behind coming toward.

He'd had time for wondering when it'd be him. But right now, it just felt so good to sit.

CHAPTER III A BRIEF HISTORY OF “WHY ZOMBIES?”

The beginning of my zombie story was far from earth-shattering in its approach. I had dropped readers *in media res* with an apparent tough guy protagonist (he can hotwire a truck, after all), encountering either a potential zombie threat or perhaps the even greater threat in many post-apocalyptic zombie narratives (a la Romero)—fellow humans. The scene provided hints of greater societal collapse, whether evidenced in the theft of the truck and supplies, the father’s failure to protect his family, or the *Pontypool*-esque breakdown in communication between the father and protagonist. Gore also played a vital role in meeting the expectations of the zombie “genre,” with the abject state of the young daughters solidifying the horror of the moment (and paying tribute to the popularity of the zombified little girl who makes the apocalypse really real, as seen in *The Walking Dead* TV series, the *Dawn of the Dead* [2004] remake, and—again—Karen Cooper in *Night* [1968]).

Besides this, the detail of the “chemo cocktail” and the family’s lost hair already suggested some sort of cause or misguided cure, riffing off of the ill-fated Phalanx rabies vaccine in *World War Z* or even historically connoting the early days of the AIDS epidemic. However, there was something about this particular detail I had included without deeper thought that did not seem to be business as usual. It was certainly easy to make the connection between the living dead and the in-between state of living described by so many cancer patients undergoing treatment (and what it means for many of those patients to be diagnosed as “terminal”). But, directly, there were no popular zombie narratives that had played with cancer-like causes or the usage of cancer treatments.¹ More important, it suggested that something about this “chemo cocktail” detail was tapping into general trends/qualities in the zombie narratives that I was aware of only subconsciously. While it initially seemed unsurprising that I would cast cancer

and chemotherapy in this uncertain and horrifying role due to my personal experiences as a caregiver/bystander with the disease that killed my father at a young age, the presence of the “chemo cocktail” and its suggestion that the treatment was more to blame than the disease was not in line with those experiences. This skepticism towards the efficacy of chemotherapy (despite it being the sole reason my father lived eighteen months instead of three) seemed at home within the confines of the zombie narrative. And I didn’t know why.

As I began my research, I discovered that the literature about zombies had much to say about “why zombies” that could begin responding to what I had written so far; in fact, it seemed within the past ten to fifteen years that a whole field had sprung up within academia² to account for their current popularity while finally recognizing their legitimate presence in popular culture since the late 1960s. The continued success of the zombie is credited not only to its ability to express primal fears about death³ but also to its ability to represent whatever other anxieties the audience needs the zombie to represent at that point in time. Historically responsive, they can comment on the traumas of slavery (going back to the zombie’s Haitian origins), they can stand-in for the soullessness of capitalism (either in its creation of zombie labor or the mindless consumer zombie), they can capture the anxiety of the post-atom bomb age or the threat of pandemic—they can even speak to post-9/11 terrorism concerns.⁴ In this way, zombies become an effective “barometer of cultural anxiety,” revealing what’s most frightening for the generation creating their narratives.⁵ Their characteristics are changed to maintain relevance, with many critics discussing these changes as an “evolution”⁶ marked by their movement from supernatural to biological entities (created by vodou to created by virus), from drones to cannibals, from stumblers to sprinters, from bodily sound to displaying an advanced state of decay. Changes in speed and voraciousness are especially important to critics who argue that zombies are

responding to our increasingly hypermodern world⁷ or—at least—our need for monsters (including zombies) to fit the fast-paced worlds of our video games.⁸ To every generation, then, there's a zombie controlled and calibrated to express our fears.

Consequently, this education in zombie generations and zombie evolution can explain the presence of my “chemo cocktail” in very specific terms. As a writer in the present moment, I am merely tapping into the current cultural anxiety, which concerns itself with the threat of pandemic and terrorism (the swine/Avian flu and 9/11 attacks at the dawn of the millennium bringing about this new form of zombie). The “chemo cocktail” manifests those fears about a disease so devastating (and did we unwittingly engineer it, did it occur naturally, was it a bioweapon?) that people are dangerously mixing poisons for themselves and their children in hopes that they will stave off the inevitable. And while the uselessness of the chemo drugs in my story does not align with my personal experiences, I am tapping into a greater cultural anxiety which believes that even our most powerful medicines will be revealed as nothing more than snake oil in the face of a true biological/viral threat. If I were writing in the 1970s, the “chemo cocktail” would be replaced by some kind of corporate-engineered chemical, being used to treat the outbreak (with the underlying assumption that it was actually the cause), just another case of science losing its soul and going awry like it did with nuclear weaponry. And if I was writing during the zombie's first U.S. appearance in the 1920s (*White Zombie* [1920]), the only remedy would be breaking the powerful priest's spell, a possible allegory for the working classes' trance-like enslavement under capitalism. To every season, a particular kind of zombie and a particular kind of *zeitgeist*.

Nevertheless, I see multiple issues with this dominant, historicist interpretation. I have been using the term casually, but how do we really define “generation” in terms of a generation's

fears, and how do we know when one cultural anxiety clearly ends and another begins or supersedes it—how do we even differentiate one cultural anxiety from another? (The line between the 60s-70s science-gone-awry plot and contemporary threats of bioterror seems awfully slim.) The reality that older zombie narratives still resonate with today's audiences shows that something more than nostalgia must be at work, connecting past to present with much more fluidity.

Perhaps the bigger issue is the relatively short history of the zombie as a Western culture monster; in trying to understand its cultural impacts, specification and compartmentalization has been preferred to (potentially) a fault. With the zombie as a “barometer of cultural anxiety,” there has been a built-in assumption about its relatively rapid fluctuation, with little room to speculate about long-standing “weather fronts” or “pressure” that is not specific to immediate historical surroundings. While changes to the zombie (its cannibalism, its speed) have provided the strongest evidence for a rapidly evolving and historically responsive zombie, the word “evolution” itself betrays this notion, suggesting a much slower, connected development towards something—a process which takes far longer and would not be revealing such markedly different adaptations so quickly.

Critics are responding to these weaknesses, though. Some view these zombies-by-generation as a cluster concept, less interested in rigid classifications. Others support these classifications despite the multi-generational appeal of zombie narratives by insisting that all zombie narratives create “lasting social value” through their ability to serve as a “preemptive panacea” should the anxiety they represented ever come en vogue once more.⁹ And critics like Stephanie Boluk and Wylie Lenz want to take things a step further, suggesting “that the zombie does not just serve as metaphor for the anxiety *du jour*, but that it *is* metaphor; a kind of walking

meta-metaphor.”¹⁰ The zombie, then, is host to a countless number of signifieds, with “much [that] can be made of him because he makes so little of himself.”¹¹ However, what seems most promising is some of the work done by contemporary critics who are moving entirely away from previous constructions which neither attempt to specify or generalize, instead tracing the longer and nonlinear histories of the zombie, such as its continuing commentary on the traumas of slavery and its dimensions as “other.”¹²

More and more, it seemed that I would have to approach the events unfolding in my story from the perspective of those critics interested in the long-term, more subtly nuanced developments of the zombie. And this seemed especially necessary to answer the question that still burned for me and that neither the zombie-by-generation or zombie-*as*-metaphor camps had sufficiently addressed: why *now*? Why were zombie narratives enjoying more popularity in the last ten to fifteen years than ever before? Most pointed towards 9/11 as a watershed moment for the zombie narrative and for apocalyptic narratives at large, citing an audience that “can hardly help but perceive apocalyptic reality” in this post-9/11 landscape.¹³ But this doesn’t explain the first major upswing in zombie cinema with *28 Days Later* (released 2002, mostly shot pre-9/11), nor does it account for the success of the *Resident Evil* video games which began in the late 1990s. Furthermore, is there really a way we can objectively assess whether one historical moment was more impactful and more game-changing than a prior historical moment without favoring what’s happened most recently? Perhaps this question can be avoided if we understand the zombie as having opened itself up to limitless metaphor, though this does not explain why this quality was only discovered (and exploited) recently. Even changes to the attributes of the zombie are unsatisfactory when it’s clear that the zombie’s most basic, unchanged qualities—that “it is, simply, an animated human corpse”¹⁴—are the ones that make its metaphorical

richness possible (and have made it possible since its appearance in Haitian vodou practice/folklore).

“He looked only at the image in the rearview mirror, only at what was behind coming toward” – this second to final line in the first chapter of my story resonated with my feelings on the dominant critical interpretations of the zombie, which I felt looked far too closely at their immediate past/immediate historical surroundings for answers, with little sense of what stretched further back, or—perhaps more importantly—what lay ahead. I was back at the start, or—at least—starting to realize that a satisfying answer would not be simple.

CHAPTER III NOTES

1. *I Am Legend* directed by Francis Lawrence ([2007; Burbank, CA: Warner Home Video, 2008], DVD) did suggest a cancer cure gone awry with its vampire/zombie hybrids, though this film—loosely based off of the 1954 Richard Matheson novel (which posits a different cause)—is not typically included among zombie cinema.

2. See Drenzer's chart which tracks the rapid increase of scholarly publications on zombies in the last decade (*Politics and Zombies*, 2).

3. Bishop, *American Zombie Gothic*, 30.

4. The representational capabilities of the zombie are summarized in this way by Stephanie Boluk and Wylie Lenz, *Generation Zombie: Essays on the Living Dead in Modern Culture* (Jefferson, NC: McFarland & Company, 2011), 3 and Bishop, *American Zombie Gothic*, 158-96. For an in-depth look at the zombie and its ties to slavery, see Aalya Ahmad's "Gray Is the New Black: Race, Class, and Zombies" in *Generation Zombie*, eds. Boluk and Lenz, 130-46, Elizabeth McAlister's "Slaves, Cannibals, and Infected Hyper-Whites: The Race and Religion of Zombies," *Anthropological Quarterly* 65, no. 2 (2012): 457-86, Kieran M. Murphy's "White Zombie," *Contemporary French and Francophone Studies* 15, no. 1 (2011): 47-55, and Christopher M. Moreman, and Corey James Rushton's edited collection *Race, Oppression, and the Zombie: Essays on Cross-Cultural Appropriations of the Caribbean Tradition* (Jefferson, NC: McFarland & Company, 2011). For the zombie's commentary on consumerism and capitalism, see Matthew Walker's "When There's No More Room in Hell, the Dead Will Shop the Earth: Romero and Aristotle on Zombies, Happiness, and Consumption" in *The Undead and Philosophy: Chicken Soup for the Soulless*, edited by Richard Greene and K. Silem Mohammad (Chicago: Open Court, 2006), 81-90. For zombies in the post-nuclear age, see Kevin Boon's "And the Dead Shall Rise: Part introduction by Kevin Boon" in *Better off Dead: The Evolution of the Zombie as Post-Human*, edited by Deborah Christie and Sarah Juliet Lauro (NY: Fordham UP, 2011), 5-8, and Nick Muntean's "Doomsday America: The Pessimistic Turn of Post-9/11 Apocalyptic Cinema" in *Better off Dead*, eds. Christie and Lauro, 81-97. For the viral/natural disaster zombie, see Lauro's "The Eco-Zombie" in *Generation Zombie*, eds. Boluk and Lenz, 54-66, and for zombies in the post-9/11 world, see Nicole Birch-Bailey's "Terror in Horror Genres: The Global Media and the Millennial Zombie," *The Journal of Popular Culture* 45, no. 6 (2012): 1137-151 and John Walliss and James Aston's "Doomsday America: The Pessimistic Turn of Post-9/11 Apocalyptic Cinema" in *The Journal of Religion and Popular Culture* 23, no. 1 (2011): 53-64.

5. See Peter Dendle, "The Zombie as Barometer of Cultural Anxiety," in *Monsters and The Monstrous: Myths and Metaphors of Enduring Evil*, edited by Niall Scott (Amsterdam: Rodopi, 2007), 45-55. Boluk and Lenz in *Generation Zombie* comment that "each new historical iteration of the zombie...gives expression to the anxieties of that particular cultural moment," 9. Birch-Bailey in "Terror in Horror Genres" writes that "the zombie can be understood as tracking a range of cultural, political, and economic anxieties in North American society," 1148.

6. Bishop in *American Zombie Gothic* details a zombie taxonomy, 20, and "the evolution of the zombie protagonist," 158. Boluk and Lenz in *Generation Zombie* refer to "the evolution of the modern figure of the zombie," 3. In "Zombie as Barometer" Dendle discusses "almost seventy-five years of [zombie] evolution on the big screen," 45. Birch-Bailey in "Terror in Horror Genres" echoes this with "a millennial examination of zombie evolution..." 1139. Also, Christie and Lauro's essay collection is titled *Better off Dead: The Evolution of the Zombie as Post-Human*.

7. Boluk and Lenz claim that the zombie is posthuman in *Generation Zombie* and that "this accelerated and pathologized zombie is...transformed for the age of digital reproduction," 6.

8. In a *Vanity Fair* interview, George Romero commented on the zombie's increased speed, saying "I think it's the video games, man....Those games are all about hand-eye coordination and how quickly can you get them before they get you. So the zombies have to keep coming at you..." (Eric Spitznagel, "George A. Romero: Who Says Zombies Eat Brains?" *Vanity Fair*, last modified May 27, 2010, <http://www.vanityfair.com/online/oscars/2010/05/15milin-romero>).

9. Dendle, "Zombie as Barometer," 36.

10. Boluk and Lenz, *Generation Zombie*, 9-10.
11. See James Parker, "Our Zombies, Ourselves: Why We Can't Get the Undead Off Our Brains," *The Atlantic Monthly* 307, no. 3 (2011): 33.
12. See McAlister's "Slaves, Cannibals, and Infected Hyper-Whites," 457-86, see Moreman and Rushton's *Race, Oppression, and the Zombie*, and see Murphy's "White Zombie," 47-55.
13. See Bishop, *American Zombie Gothic*, 30, and Birch-Bailey "Terror in Horror Genres" who writes, "However, it was not truly until the turn of the millennium, the transformation of the global media following 9/11, that zombie films were propelled forward into an entirely new phase of filmmaking," 1139.
14. See Kim Paffenroth's "Zombies as Internal Fear or Threat," in *Generation Zombie*, eds. Boluk and Lenz, 24.

CHAPTER IV THE PUSH NORTH

It was impossible to determine which way the sickness had come, looking at the north and south bound lanes of Route 53. They were nearly empty, no sign of the bumper-to-bumper panicked push north they'd been talking about down in Milwaukee when they were still let out at mealtime. *Maybe everyone had got where they were going.* The fantasy lulled him as the truck pulled him closer to Superior, his hometown, made only slightly strange by the occasional abandoned car or semi.

We gotta get out. Just look at this road. Fuck. I can't run, look at me. Come on we have to hurry, they're coming, fuck, there's so many of them. I can't run. I'm going to carry you. No don't I don't want, come on we don't have time to fucking argue. You stupid bastard listen to me—

He swerved, just missing the back end of a parked Camry. A body sat in its driver's seat. At the hilltop, Lake Superior came into view.

At first he couldn't quite tell what he was looking at. There was only a thin band of the blue water before it was taken up by the horizon, and everywhere else floated garbage—no—they were boats, sailboats, fishtugs, speedboats—hundreds of them. An empty freighter, masts emerging here and there from the shallows looking like some pier blown to bits. As the truck came down the hill and the bay came into view, he saw a massive, military-looking ship breached on Park Point.

It looked like everyone's efforts had stopped on the waters. As he neared a boat launch, he could already hear the hulls scraping up against one another as they rocked in the wind, a sound loud and alien when magnified by hundreds, or was it thousands—paddleboats, canoes, kayaks—they filled in all the spaces between. Empty. Where were all those people? Did those

things survive in the water? The Navy ship down the shoreline was a monolith with the sun almost gone behind it, its edges blurred by birds. Birds were everywhere. But he couldn't hear them with the engine idling and the boats scraping and birds crying without rhythm, and he said—because he'd taken to saying things aloud lately —“Fuck. You're fucked, aren't you, brother?”

He hadn't been aware of his white grip on the axe across his lap until he needed to shift the truck back into drive, leaving the boat launch, looking down the main drag running into town where the houses weren't lighting up like they should. He turned the radio on even though he'd kicked the last one in his last car quiet, and from seek-to-seeK there was still just the emergency loop and static. The loop he'd long since memorized right down to the stilted intonations of the computerized voice, and the night he'd kicked in the last radio was because he swore he could still hear it even when he turned the car off, even when he'd smashed open the dash and ripped it from its wiring, still repeating and repeating. But now it bothered him less, was bodily, like breathing. “The Federal EMERGENCY MANAGEMENT agency HAS issued A NATIONAL ALERT. SHELTER in place...”

At that moment he could turn the other way and head for the hunting shack in the woods. After all, whose body besides his own hadn't betrayed itself with a tremor and difficult words and all the ugly things before it died or went crazy? At first, he'd often hold his hand out flat like a rifleman, looking for signs of the shake, sure he'd seen it in the pulsing of his blood. But he didn't anymore; it was clear now that his death was to be hard won.

It was true, as he turned and headed into the dark town anyway, that with that chair his brother probably hadn't strayed far from their old house, the one the folks had willed to him when he seemed like a better investment. At the least and also precisely because of that, he

needed to look and be sure, and if he was one of them or half-dead he'd finish him off and get the misery finally over with. If there was anyone in Superior left who could think, they'd be sure to find something poetic in that.

His headlights were off because light attracted them as much as bugs. And combined with the powerless streetlights he did not see the small group—crouched in the road, eating something off of it—until he was nearly upon them, until one hollered something that almost sounded like “Hey!” but was not that or any other word. He slammed on the gas and closed his eyes in the few yards left.

CHAPTER V APOCALYPSE NOW?

“I just *cannot* wait for the zombie apocalypse,” my boyfriend griped as a greedy driver—desperate to get a car length ahead—cut us off in the closing lane. It had been a few weeks since the zombie crawl and we were parked on a notoriously bad stretch of highway in Denver, though there were many bad stretches and far too many greedy drivers to count.

“There’s your answer for zombie appeal. A world where you can upside someone with a baseball bat guilt-free!” The driver behind us rode our bumper and flashed the brights, impatiently peeking out left and right though there was nowhere to go in the deadlock. My boyfriend responded with a firm tap to the brakes and a lifted finger; in the rearview mirror the driver behind repaid him in kind.

At this point, we were bound to be an hour late. “I can’t wait either,” I said, staring out at a sea of taillights, a modern reality butted up against a primal impatience.

My initial journey through the criticism had been unsatisfying, and maybe it was because this issue of longing for the apocalypse—mere joking aside—did not appear to be adequately covered by the criticism though it often felt more immediate than any fear or anxiety such narratives provoked. There was something very exciting about the apocalypse and post-apocalyptic landscapes, touched on over and over again by eager discussions about contingency plans or the opportunities in a “reset” world where an individual’s agency could be resurrected as surely as a swiftly-swung axe. Few imagined themselves as zombies (even if they dressed like them to show their appreciation), and fewer still imagined themselves as one of the unlucky survivors that is dismembered and eaten alive by a horde of zombies a la (to name a few) *Day of the Dead* (1985) or *Shaun of the Dead* (2004) or *Deadsnow* (2009). The survivor was the

aspiration, and perhaps this role and the longing it produced could be a better way into both the “why zombie?” and “why now?” questions.

The dominant criticism made its case by showing how zombies respond to their immediate historical surroundings and subsequently transform because of those events. Paired with the atom bomb or 9/11 (for better or worse), zombie narratives are sites where our current cultural anxieties are played out in full, and their emotional end result is the production of horror or fear (or, at best, a rehearsal of horror or fear that will better equip the viewer/reader/gamer for cataclysms outside of fictional bounds). However, excitement for zombie narratives is not an anomalous emotion; as one interviewee at the Denver zombie crawl summarized, “We love zombies! ...They’re not scary. Zombies are awesome!”¹ “Zombie love” and wishes for the start of the zombie apocalypse can be seen across the demographically diverse fandom, evidenced by popular t-shirts, bumper stickers, coffee mugs, online forums, Facebook pages and social media posts, but also—and perhaps most essentially—by the existence of zombie comedy (or unintentional zombie comedy). “Why are funny zombies funny?”² It seems this question touches upon an even greater one: How can zombie stories produce both fear and fun, dread and longing, and why does it often seem that excitement trumps horror?

While it may be possible to dismiss “I love zombies” as part and parcel of the modern day penchant for hyperbole, or the existence of zombie comedies like *Shaun of the Dead* (2004), *Fido* (2007), or the carnivalesque “splatstick” zombie movies of the 1980s as nothing more than pitch black comedies (ultimately continuing to articulate cultural anxieties), there is a sense of possibility in all zombie narratives that is not captured by either objection. Why do we see any good in our worst fears made manifest? Though it may be uttered in a “careful-what-you-wish-for” manner, why is the wish there at all?

Understanding this wish requires tracing a longer history than the zombie's North American debut, or even its roots in Haitian/African practices. Though it may be stating the obvious, zombie apocalypse narratives evoke the long history of the "apocalypse" and all the fears and desires caught therein. Most clearly beginning from its Christian roots,³ the apocalypse promises a day of ultimate judgment and reckoning, a leveling of the playing field where the righteous are saved and the damned are condemned. But doomsday is also a moment of divine destruction, where the sins and failings of the old world are finally too great to bear and must be purged. In this sense, the apocalypse is also a warning to repent before it is too late; either this will stop the world from ending as quickly, or it will ensure your salvation when it eventually arrives.

The appeal of the apocalypse is varied; it not only maintains one's faith through the promise of reward and the punishment of the wicked, but also critiques the current social situation or climate that makes it seem like an apocalypse is the only way out.⁴ Zombie apocalypse narratives, evoking such promises of ultimate order, dispatch horde upon horde of the undead to end the old world that has been deemed unredeemable, causing humanity to go extinct (at least in the earthly realm). Sarah Juliet Lauro likens the zombie epidemic to "the biblical plague; because zombies are so often raised from the dead by some misdeed of humanity."⁵ Many zombie narratives even directly reference their roots in a religious apocalypse; most notably Peter (Ken Foree) in *Dawn of the Dead* (1978) solemnly reflects, as he looks out over the empty mall, about something his vodou priest grandfather used to say, stating "When there's no more room in hell the dead will walk the Earth."⁶

However, even when zombie apocalypse narratives do not hint at some kind of divine judgment taking place, they still resonate with what could be called a "secular" form of

traditional apocalyptic storytelling. Coined as “neo-apocalyptic” by Elizabeth K. Rosen,⁷ order and a definite end are still guaranteed through humanity’s utter annihilation, even if there is no salvation—no new world or spirit world after. At the very least, “the implication is that humanity has sinned...even if only against natural law,”⁸ and it is time to pay in full. This pessimistic peace through death is possible and can be longed for (however troubling it may be) by the individual that sees our world as beyond redemption. Every instance of “man’s inhumanity to man,” through war, genocide, greed, and general cruelty bolster a belief that “there is nothing worth saving.”⁹

Unfortunately, this kind of fatalism is very much a part of the modern social climate. Following the 2012 Sandy Hook school shooting in Newtown, Connecticut which took the lives of twenty first graders and six educators,¹⁰ I recall seeing a distant acquaintance’s Facebook status which lamented in response to the news, “That’s it. Bring on the zombie apocalypse.” Whether after that tragedy, the Boston marathon bombing, the movie theater shootings in Aurora, Colorado, the daily reports of the deaths of soldiers and civilians in the Middle East (figures so frequent they have struggled to maintain meaning), or even the knowledge of the thousands that perish in extreme poverty throughout the world, I have often felt a similar sense of defeat—a resignation which feels increasingly endemic. Though the logic is fundamentally flawed (solve needless death with needless death?), the zombie apocalypse ensures a sure and relatively swift end to systemic problems that seem beyond fixing.

But is this the only reason behind longings for the zombie apocalypse? It seems that such a conclusion would make little room for the other definite dimension of this desire—that the apocalypse is exciting and promises liberation. While one could darkly perceive death without the promise of afterlife as liberation (in the increasingly popular neo-apocalyptic view), notions

of a reset world fall flat when the apocalypse signals no reset—just game over. It is at this point that the *post-apocalyptic* qualities of the zombie narrative must also be reckoned with. Deborah Christie provides unique insight into the seemingly paradoxical apocalyptic/post-apocalyptic nature of zombie narratives:

We tend to view zombie narratives as apocalyptic because we believe that we are watching either the slow breakdown or the catastrophic destruction of human society, and we generally regard that as a negative event. But because we most clearly identify with the dwindling number of living human subjects, we often miss the larger implications of what we are really witness to in a zombie narrative is a form of violent, transformative renewal.¹¹

In other words, most zombie narratives satisfy apocalyptic desires more by bringing forth the end-of-the-world-as-we-know-it (for survivalists and preppers, abbreviated as TEOTWAWKI¹²) than bringing about the *actual* end of the world. And through the eyes of the few survivors there is both apocalypse *and* post-apocalypse, the latter opening a frontier which includes “the very idea and possibility of starting over, with all of the potential hope and utopian imaginings that starting over implies.”¹³

So here was the “reset button” my friends had discussed. Here was a potential explanation for those feelings of longing and excitement I and others often experienced at moments when modern life was so chafing (as it had been that day in the car), whether it was being caused by the urban banality of busy highways, walkways, waiting rooms, and runways, or whether it was something more systemic like the machinations of life in late capitalism, the increasing isolation from the natural—no matter. While this kind of escapism through apocalyptic/post-apocalyptic landscapes is undoubtedly an inherently privileged venture (as such

fiction is most popular in developed, post-industrial nations where the dangers posited are farthest from reality),¹⁴ it was still a deeply felt one. I thought of myself riding alongside my protagonist as he crested the hill into Superior, truck windows down and breeze blowing in, worrying only about the basics—food, water, shelter. Into the future, there was hope that this destruction-caused shift back in time would mean a life that was impossible to take for granted, built by only true connections and self-determination—whatever those terms meant. The zombie narrative only needed to promise action and movement.

Therefore, “I can’t wait for the zombie apocalypse” functions in two ways. Most importantly, it captures the possibilities of starting over and rebuilding. Zombie narratives deliver by giving us a survivor or survivors¹⁵ to live through in this landscape. In this way, everyone survives the zombie apocalypse because no one we love or care about ever *has* to become a zombie. Despite the “beloved *x* just got bitten” dramas that occur so frequently in zombie narratives and the knowledge of millions or billions dead, as the audience we can always decide to shift characters, or even shift books, films, or video games with the knowledge that the subgenre is prolific and prone to sequels and serialization.¹⁶ The zombie functioning as pure “other” additionally makes it possible for zombies/zombie death to be seen as funny, or even justified in traditional apocalyptic terms where the zombified are the damned and the survivors are the righteous (because they’re us, after all). This apocalyptic dimension bolsters post-apocalyptic dreams by ensuring that the right people¹⁷ will be left when the time comes, ensuring a positive global rebirth.

Nevertheless, it is interesting that many critics and even producers of zombie narratives still look to these stories as principally evoking apocalyptic fear. Because they are tied to current cultural anxieties, the argument is that they primarily serve as a warning of what will come to

pass if our ways remain unchanged (whether that means unchecked capitalism, unchecked government, unchecked exploitation of resources, etcetera). Kim Paffenroth comments that zombie narratives are a “painful wake-up call from our sinful reveries,”¹⁸ and Danny Boyle, commenting on his direction of *28 Days Later* (2002), stated that the movie was “a warning for us as well as entertainment.”¹⁹ Horror and a call to reform/repent are paramount, and yet the affect—created by some of these narratives’ deepest messages—seems to be nothing of the sort.

While I have no doubt that many zombie narratives are intended as cautionary tales (any story that shows massive destruction caused by humans is bound to be), it is clear that the emotions they produce are much more complex or perhaps even in a state of transition. Margo Collins and Elson Bond write about this transition:

Zombies and apocalyptic fiction generally can function as jeremiad, a warning to its audience to repent and reform. In this sense, the new millennium zombies share a similar role with their shambling predecessors as social critiques. But rather than ending with a nearly extinct humanity, these newer zombie apocalypses depict a regeneration following the plague’s scourging.²⁰

What this could ultimately suggest is that the apocalyptic and post-apocalyptic qualities of zombie narratives have not always been so blurred (with post-apocalyptic dreams dominating). This goes not only for how audiences respond to these films, books, and video games, but also may indicate what writers, designers, and directors *now* privilege. Collins and Bond comment that zombie narratives at the turn of the millennium (around the advent of their mainstream popularity) have begun privileging the depiction of survival in a post-apocalyptic environment over the depiction of bearing witness to apocalyptic destruction.

Though this is not across the board, it is possible to see how popular films like *Night of the Living Dead* (1968), *Zombi 2* (1979), and *Return of the Living Dead* (1985) begin from a different place and strike a different tone than contemporary works like *28 Days Later* (2002), *Zombieland* (2009), and *World War Z* (2013). Where older zombie narratives focus more frequently on the first appearance of the zombie and depict the initial societal destruction it causes (often ending with the ominous suggestion that humanity will be eventually finished), contemporary zombie cinema and novels tend to take place after that initial appearance, sometimes weeks, months, or many years later (Carrie Ryan’s series *The Forest of Hands and Teeth* takes place centuries later)—and my own zombie story is no exception to this trend. In addition, many times the protagonist in these contemporary narratives has no memory of the apocalypse that preceded his/her post-apocalyptic reality: in *28 Days Later*, Jim (Cillian Murphy) awakes from a coma to find London abandoned;²¹ in *The Walking Dead*, Rick Grimes also awakes from a coma in a zombie infested hospital.²² While their abandonment, amnesia, and destroyed surroundings still provoke traditional apocalyptic horror (*Left Behind*-style) for the characters themselves, it seems that as an audience we are more there’s something significant about making sure we are mainly concerned with post-apocalyptic issues—all the better if we have no memory of the horrors that created such a world in the first place.

What can we make of this shift in zombie narratives and audience response, then? Its connection to the explosion of zombie interest at the turn of millennium appears hardly coincidental. Perhaps a seemingly benign utterance expressing an eagerness to wield an axe or chainsaw has revealed something essential about the “why now” problem. But what conclusions can be drawn about a society increasingly moved by post-apocalyptic landscapes, and more importantly *towards* them rather than away? These narratives still depict death and destruction

at an unprecedented scale with uncertain futures and odds nearly impossible to beat—every bit a warning to make that sure such things won't happen “for real.” But in the “for real” world, gun sales are on the increase and prepper culture is on the rise amongst all demographics,²³ with “luxury survival condos” being built inside old missile silos for a modest \$1.5 to \$3 million a pop.²⁴ More and more, people seem to be preparing for the worst with the worst being increasingly inevitable. Consequently, zombie narratives are less escapes and more “how-to manuals;”²⁵ even if the characters within the stories themselves are blindsided, we take note of their actions and behaviors and compile do's and don'ts for our own future. We anticipate apocalypse, and, perhaps more disturbingly, in some ways we *want* apocalypse.

The thought was disquieting, especially as someone who spent so much time immersed in zombie narratives that I was in the midst of creating my own. What was I really saying about the current state of affairs and my own beliefs? I tried to find comfort in the spaces, however small, between fiction and the real. But those odds—I'd seen them before. It was the upswing in lotto ticket sales when the Mega Millions is high, or the habit of many to bet on lucky numbers rather than colors at the roulette table. The gambling going on here carried such a greater cost. It was suddenly vital to know how we were going to choose to play when the day really came.

CHAPTER V NOTES

1. Electra Draper, "Undying Love for Undead Enlivens Eighth Annual Zombie Crawl," *The Denver Post*, last modified October 19, 2013, http://www.denverpost.com/breakingnews/ci_24347338/undying-love-undead-enlivens-eighth-annual-zombie-crawl.
2. See Margo Collins and Elson Bond's "'Off the page and into your brains!': New Millennium Zombies and the Scourge of Hopeful Apocalypses," in *Better Off Dead*, eds. Christie and Lauro, 194.
3. Elizabeth K. Rosen in *Apocalyptic Transformation: Apocalypse and the Postmodern Imagination* (Lanham, MD: Lexington Books, 2008) writes that the apocalypse was "fully formed with the advent of Christianity" (xiii).
4. Rosen, *Apocalyptic Transformation*, xii.
5. Christie and Lauro, *Better Off Dead*, 235.
6. *Dawn of the Dead*, directed by George A. Romero (1978; Troy, MI: Anchor Bay Entertainment, 2004), DVD.
7. Rosen, *Apocalyptic Transformation*, xv.
8. Christie and Lauro, *Better Off Dead*, 235.
9. Rosen, *Apocalyptic Transformation*, xv.
10. See Richard Esposito, Candace Smith, and Christina Ng's "20 Children Died in Newtown, Conn., School Massacre," *ABC News*, last modified December 14, 2012, <http://abcnews.go.com/US/twenty-children-died-newtown-connecticut-school-shooting/story?id=17973836>. The shooter also took his mother's life and his own, leaving 28 total dead.
11. Christie and Lauro, *Better Off Dead*, 61-62.
12. James Wesley Rawles, *How to Survive the End of the World as we Know It: Tactics, Techniques, and Technologies for Uncertain Times* (NY: Penguin, 2009), 4.
13. Claire P. Curtis, *Postapocalyptic Fiction and the Social Contract: "We'll Not Go Home Again"* (Lanham, MD: Lexington Books, 2010), 2.
14. Mary Manjikian in *Apocalypse and Post-Politics: The Romance of the End* (Lanham, MD: Lexington Books, 2012) writes "Those who appear to be most fascinated by the study of and imagining of disaster are those who actually have the least to worry about," 4.
15. Even narratives being told from a zombie's perspective such as Isaac Marion's *Warm Bodies: A Novel* (NY: Atria, 2011).
16. Boluk and Lenz in *Generation Zombie* write, "Zombie films beget more zombie films. Zombie video games rarely stop with one sequel, not to mention the mods, fanfiction, and remakes for other consoles and programming languages..." 3.
17. An objection could be made that we often see "evil" people in post-apocalyptic landscapes who are more dangerous than the zombies themselves (and Romero often does this). But these narratives typically include a moment when the "good" people still triumph over the "bad," and the bad succumb to zombies.
18. See Paffenroth, *Gospel of the Living Dead: George Romero's Vision of Hell on Earth* (Waco, TX: Baylor UP, 2006), 136.
19. Bishop, *American Zombie Gothic*, 28.

20. Collins and Bond in *Better Off Dead* (eds. Christie and Lauro), 190.
21. *28 Days Later*, directed by Danny Boyle (2002; Los Angeles, CA: Twentieth Century Fox Film Corporation, 2002), DVD.
22. Robert Kirkman, *The Walking Dead: Compendium One* (Berkeley, CA: Image Comics, 2009).
23. Alan Farnham, "Gun Sales Booming: Doomsday, Obama, or Zombies?" *ABC News*, last modified April 5, 2012, <http://abcnews.go.com/Business/gun-sales-booming-doomsday-obama-zombies/story?id=16073797>.
24. *Luxury Survival Condos* last accessed Mar. 17, 2014, http://www.survivalcondo.com/?page_id=93.
25. See Curtis, *Postapocalyptic Fiction*, 5.

CHAPTER VI
WALKIN' TALL MACHINE GUN MAN

He heard it bounce up onto the hood, or at least he thought he did. A single loud thud that had followed the scream, the wind whipping through the windows drowning the sound of bones crushing, blood choking. When he opened his eyes, there was only more dark road rushing to meet him, the carnage behind already obscured.

He should have ditched the truck sooner. The scream would have alerted others and the roaring engine would only further confirm it, drawing them in droves. They loved the sounds that could feed them, whether they were sick or not. "What were you gonna do anyways," he said aloud to remind himself that he was awake, "Drive right up to the front fucking door?" *I don't have a clue what I'm doing. Dead honest. And don't give the backwoods-bred tough talk. Bet you can't even tie a real knot.*

In an alley off a familiar side street he parked the truck and hoped it'd still be there when he got back or that he'd at least catch the bastards taking it; maybe they'd let him come with. Cutting through yards, the old house was a half mile away and the side street was familiar because it was where Lucy had lived, where long ago in high school they had drank around a shitty kerosene heater in her folks' detached garage. Back then he swore he could make it home to his bed in five minutes flat as long as his little brother heard him knocking on the den room window downstairs. "What's the password," his brother would say, and they were always the lyrics to some Alice in Chains or Pearl Jam song, albums he'd let him borrow because it pissed their mom off. And sometimes he'd say it and sometimes he'd snap at him to get out of the way, crawling in.

He took his first steps across the alley and into a treeless backyard. With no moon and no streetlights the darkness was complete, but as far as he knew they saw no better than he could.

Nearing the house he traced his hand along its bitter cold brick to cover him, listening for loud breathing, for far off cries, choking noises—but there was no sound. There were only the boats scraping in the lake blocks and blocks over, unless it was just in his mind now, their loud graves background accompaniment to “SHELTER in place. On August 15th, the Centers for Disease Control CONFIRMED a GLOBAL outbreak of a DISEASE affecting neurological FUNCTION...”

He slowed, losing his nerve. His hand was gripping a window sill, but he didn't think about it.

Idiot—look out.

There was one hard whap before the pane behind him shattered with a second blow a second later, and he turned to see a hand impaled with a shard of glass swinging out at him. So he started running full bore because fuck a plan, what plan, who was ever prepared for these things? *That's why we're not gonna make it. We're all half-cocked all the time.* Under his feet he heard grass turn to pavement turn to grass and back to pavement again. “Cautionary Preparedness ACTIONS...” He reached the chain link fence that had been hit-or-miss back in the garage drinking days, could add an extra thirty seconds, but now he didn't even remember clearing it. *They're so many of them coming. Got me outta that cell that's all I care about. Give me it if you're not going to do it. I'm not being eaten alive.* He looked behind but couldn't see a damn thing, heard one scream and something else he couldn't figure out, and it was better to think they were just behind him, like cops busting up a party, him pulling a laughing Lucy by the hand in any direction that was away from them. The house was close now, no further than twenty yards—how long had he been running? Five or six minutes? How long since Milwaukee? Since he'd eaten? Just one more lawn, and then, and then—

The sound he couldn't place before was now unbearably close, slurping and smacking. He stood still in the Watson's backyard, his gasps for breath heaving against his effort to hold it, and he could just barely make out the outline of an old dog house only a few feet away. Something was feeding inside. Another scream approaching in the distance. The noise stopped. He gripped the axe.

He could never remember how the moment actually happened. Instead, he'd imagine the thing rushing out from the doghouse, hands forward like a bad horror movie, and—in the after the fact—he was the movie man, his certain death stopped by a needed storyline. He'd sidestep the thing at at the very last moment, pivoting with perfectly choreographed precision as what they'd call a zombie missed him and revealed the back of its skull for one swift, brain-crushing blow of the axe. Then, the axe would be removed with similar speed, his foot kicking the center of its back as he pulled the axe out, as its head lost grip on the blade and it fell forward dead, flinging back blood in an arc which hit the ground at the same time as the body. And an exhale, then—audible—closing a perfect sequence of motion. But this was never how things actually occurred; it was always a much more frightened, much more frenzied, much more desperate thing. He'd lost the axe.

More cries now, coming from everywhere and closing in. He found his brother's old bedroom window boarded up and the back door had been made Dutch with a saw—maybe he'd lasted the first wave. “Seal and secure all WINDOWS, doors, and other sources of VENTILATION such as heating and cooling ducts, FIREPLACES, and vents...” There was only one positive outcome at this point. He started knocking on the door, rhythmic knocking, conscious knocking, shivering without end from cold and adrenaline, saying aloud because they already knew where he was, “Matt, are you in there? Let me in, please. Matt, it's me.” *You*

better have something to do it with if you need to end it. He repeated Matt's name, knocked louder. "Matt, Goddamnit, be in there." The movie man would not stake his life on an answered door, but he was not the movie man. Another one emerged from the darkness. "Someone! Please." What had it been since the truck, ten minutes? Not record worthy. Not quick enough. *Too bad trying doesn't count for something.*

The top half of the door cracked open and a rifle barrel was shoved out.

"I'm not sick, please! I have a truck! Please! They're coming—"

The door was opened wider now, and the candlelight that had been hidden from outside view lit up his brother's face and his own. His brother lowered the rifle.

"Holy shit."

And without thought he replied with a password.

CHAPTER VII THE POST-APOCALYPTIC DREAM

Excitement for the apocalypse had signaled a turn back towards some of the first zombie criticism I read. Though I remain unconvinced by compartmentalized, zombie-by-generation arguments, these critics valued the historical surroundings/circumstances of zombie narratives and their ability to inform on the climate of the culture they were born in. As signs of crossover from real world to fiction and fiction to real world had become increasingly evident in this period of mainstream zombie popularity, it seemed all the more important to ask what was happening in the world “outside.” This question was not merely contained to a single mutation of the zombie but involved all that had been in the works since their appearance in the late 1960s. What rough, zombified beast was slouching, then stumbling, then sprinting towards Bethlehem to be born?

In Chapter V, the growing appeal of the post-apocalyptic landscape in zombie narratives—or, at the very least, the growing belief that the futures they presented were likely or inevitable—suggested that changes were occurring in the minds of both the producers and consumers of such narratives. It seemed, by looking at the transition from deeply apocalyptic storylines to post-apocalyptic storylines, that an argument could be made for a present that has grown weary of its future, taking solace in slim, post-apocalyptic opportunities as opposed to being compelled into action by apocalyptic scenarios. But are there any grounds for such beliefs outside these narratives, or are they merely one pessimistic perspective among many others?

Matthew Barrett Gross and Mel Gilles, in their work *The Last Myth: What the Rise of Apocalyptic Thinking Tells Us About America*, argue that apocalyptic thinking (or, what I feel should also be called *post-apocalyptic* thinking) has intensified and become increasingly secularized since the mid-twentieth century. In addition, they believe that this phenomenon has been further spurred on by Y2K anxieties at the turn of the millennium, which, by making the

apocalypse possible even in binary code, has made it possible anywhere and everywhere.¹ Rosen furthers a similar thesis, commenting that “several historic events have caused our apocalyptic anxiety to grow more acute during the second half of the twentieth century, thereby causing the kind of psychological and physical disruption which inspire apocalyptic storytelling.”² Gross, Giles, and Rosen cite historical events such as the detonating of the atom bomb, the HIV/AIDS epidemic, the 9/11 terrorist attacks, ecological disasters (such as the Deepwater Horizon oil spill), and incidences of extreme weather (suggesting rapid climate change) as all contributing to a sense that the apocalypse might be just around the corner.³ Of course, most of these events are already referenced in the existing zombie criticism, individually highlighted to explain changes to zombie narratives over time. But I am more interested in how these historical moments catalyze or create cultural anxieties on the scale of the apocalyptic, and what greater beliefs or assumptions link them together.

Such a question initially yields a relatively obvious answer. Nuclear holocaust, pandemic, oil or chemical spills, global warming induced-hurricanes—all of these things can be feared because of their potential for catastrophic damage, which makes it not difficult to imagine such events as the harbingers of our apocalyptic end. However, all of these events only reach cataclysmic levels due to human error. Even the threat of pandemic—which *could* be a disaster entirely out of human hands—is often portrayed in the media and our fictions as stemming from human error, whether that’s due to bioterrorism, unregulated research with unforeseen consequences, filthy slaughterhouses, or merely the cramped quarters of modern-day life. (Even my own zombie story suggests that the viral outbreak within it has not been a natural occurrence through the confusion cast on chemotherapy.) Overall, what is essential to all our modern apocalyptic fears—no matter the specific cause—is the belief that we will bring about our own

demise. Concerns about asteroid impacts, super volcanoes, mega earthquakes, and other catastrophic natural disasters shrink in both importance and likelihood when compared to what we can or might do to ourselves. And, most troublingly, if apocalyptic thinking is on the rise and post-apocalyptic landscapes are ever more attractive as sites of opportunity in both zombie narratives and other post-apocalyptic fiction, it means that now—more than ever—we anticipate and are certain of our own self-destruction.

Additionally, it's arguable that this humans-as-cause mentality can be narrowed to specific human endeavors. Whether we blow ourselves up, engineer some kind of super bug, poison our oceans, or melt our polar caps, we've managed to arrive at all of these scenarios through scientific "progress." Without understanding the atom, we would not have the atomic bomb; without mastering the combustion engine there would be no emissions producing automobiles. And it goes on from there—innovations with unforeseen consequences, producing potentially apocalyptic realities. There are two dominant camps representing this weariness towards what human knowledge has produced.⁴ The first could be characterized by a sense of profound disillusionment, seemingly best summarized by the satirical novelist Kurt Vonnegut who famously commented that he had thought, "Scientific truth was going to make us happy and comfortable" before "we dropped scientific truth on Hiroshima."⁵ The bomb, with all its awe-inspiring power and potential for utter global annihilation, had proven to many that humans did not have the ability to control the discoveries that scientific study unearthed. Often too closely associated with government (and consequently, with warfare), scientific innovations were being used to destroy opponents or produce better means of societal surveillance. Therefore, since humans could always be corrupted, "science" could easily be perverted and bring about our demise.

However, the other camp concerned with scientific progress and the products of scientific discovery questions the supposed objective nature of scientific inquiry itself. With profound skepticism, these members see “truth” in all its forms as a word most worthy of scare-quotes, arguing that science—as humanity’s creation—can only ever *be* subjective. Though this does not always indicate participation in full-blown relativism (maybe the sun will rise tomorrow, maybe it won’t), it does seek to challenge science’s unquestioned claim to objectivity if only to inspire reform which could do away with some of the issues also pointed out by the disillusioned. This kind of thinking works well not only for academics in the humanities who privilege perspective, heterogeneity, and a state of “play,” but also—and surprisingly—for religious conservatives who promote other understandings of the universe and our place in it.⁶ Most importantly, though, in this light science is no savior and never could be.

Rosen writes, “Part of what is at stake in [the] postmodern apocalypse is the question of whether objective judgment is possible.”⁷ When looking at “postmodern” as the increasingly secular or neo-apocalyptic view of the apocalypse (where even the objective judgment of a god is gone), it is easy to see how science—the last bastion of objectivity—finds itself in the crosshairs. Both the profoundly disillusioned and the profoundly skeptical can be satisfied by these narratives, even if the odds are awful, because no other way out is seen.

Returning to post-apocalyptic fiction and zombie criticism specifically, awareness of scientific distrust is not new. The problem with the criticism is that it tends to be compartmentalized by the specific manifestations of this distrust and cuts us off from the bigger picture being painted by zombie narratives about the world outside. In discussing the prevalence of post-apocalyptic cinema, John Walliss and James Aston write that “post 9/11 movies posit scenarios where science, technology, and the government are, at best, powerless against the

apocalyptic forces, and at worse willingly complicit with them.”⁸ However, criticism on zombie cinema from the late 60s and 70s says essentially the same things about the films of this era and the post-atomic attitudes which produced them.⁹ The distrust of science never yields to another, more dominant fear in zombie narratives. It is just recapitulated in different ways, riffing off the theme set down by Romero.

But what’s the matter with such cynicism or scientific cynicism? Does it have a capacity beyond mere complaint in a world that—medically, technologically, and otherwise—still seems very much dominated by scientific inquiry? I suppose that question is a matter of opinion. And I suppose it also matters how much we think our fictions depict our mindsets and our future actions. To me, there is something deeply disturbing about this revelation, that over and over again in zombie narratives we envision ourselves bringing about the end of the world or TEOTWAWKI. In these stories, human knowledge in the pre-apocalyptic world only destroys, so we must hold off hope and possibility until we arrive in the post-apocalyptic dream. It is then and only then that a new start is possible. The waiting is the worst part.

Of course, all of these dreams hinge on whether we are among the few to survive, if anyone survives at all. With “global challenges now rushing toward us”¹⁰ that are far from zombies, it is not difficult to see how this mindset is deeply troubled. Not only does this cynicism reveal the precarious position of science and scientific thought in our modern world (an aspect I will discuss in depth later), it additionally blinds us to true threats while making us emotionally and intellectually unable to handle them. Gross and Gilles write that “overreliance on the apocalyptic narrative causes us to fear the wrong things and to mistakenly equate potential future events with current and observable trends.”¹¹ Therefore, when everything is apocalyptic, approachable and immediate problems (climate concerns, anti-vaccine and anti-GMO

campaigns, sustainability issues) become lost in the fervor. In addition, even if a workable issue is addressed, it is hard to drum up public support due to this overwhelming resignation to apocalyptic inevitability. We escape to the post-apocalyptic “fantasia peddled by Hollywood and numerous writers,” without realizing that “a world battered by natural disasters and global warming, facing declining natural resources and civic unrest...is not a setting for a picaresque adventure, nor is it the ideal place to start living in accord with your dreams.”¹²

Peddling fantasia. While I didn’t agree with Gross and Gilles shoot-the-messenger approach, my research had been contributing to a growing sense of cognitive dissonance as I wrote my own story. After all, what did it mean that I was so completely interpellated by these narratives? I had great optimism for scientific endeavor that seemed hopelessly at odds with my longing for the post-apocalyptic frontier. And this growing realization was beginning to impact my protagonist, who was becoming less and less the “movie man” with behaviors that didn’t match the effortless grace of the self-reliant, weapon-wielding man of action. He was me, not idealized, but me, clueless and terrified. My story was well on its way to being fundamentally and irrevocably changed.

CHAPTER VII NOTES

1. Mathew Barrett Gross and Mel Gilles, *The Last Myth: What the Rise of Apocalyptic Thinking Tells Us About America* (Amherst: Prometheus Books, 2012), 27.
2. Rosen, *Apocalyptic Transformation*, xiv.
3. Gross and Gilles, *The Last Myth*, 125, and Rosen, *Apocalyptic Transformation*, xiv.
4. The two “camps” I put forward are based on several science studies and philosophy of science texts. See Peter Godfrey-Smith’s *Theory and Reality: An Introduction to the Philosophy of Science* (Chicago: Chicago UP, 2003) as well as Samir Okasha’s *Philosophy of Science: A Very Short Introduction* (NY: Oxford UP, 2002) for introductory material into science studies; see Ian Hacking’s *The Social Construction of What?* (Cambridge: Harvard UP, 1999) for a discussion of social constructivism; see Paul Boghossian’s *Fear of Knowledge: Against Relativism and Constructivism* (NY: Oxford UP, 2006) for a discussion of relativism; and, see Keith M. Ashman and Philip S. Baringer’s *After the Science Wars* (NY: Routledge, 2001), Andrew Ross’s *Strange Weather: Culture, Science, and Technology in the Age of Limits* (NY: Verso, 1991), and Alan Sokal’s *Beyond the Hoax: Science, Philosophy, and Culture* (NY: Oxford UP, 2008) for a look into the science wars that occurred within academia in the 1990s.
5. Kurt Vonnegut, “Address to Graduating Class at Bennington College,” *James Somers*, last modified 2014, <http://jsomers.net/vonnegut-1970-commencement.html>.
6. The prevalence of scientific distrust throughout the political spectrum will be discussed in Chapters XIII, XV, and XVII.
7. Rosen, *Apocalyptic Transformation*, xxv.
8. Walliss and Aston’s ““Doomsday America: The Pessimistic Turn of Post-9/11 Apocalyptic Cinema,” 57.
9. Muntean’s “Doomsday America: The Pessimistic Turn of Post-9/11 Apocalyptic Cinema.”
10. Gross and Gilles, *The Last Myth*, 28.
11. Gross and Gilles, *The Last Myth*, 132.
12. Gross and Gilles, *The Last Myth*, 200.

CHAPTER VIII
REUNION

“Throw this out there, far as you can!”

“Is this a dead animal?”

“How far did you get it?”

“It’s to the back of the yard.”

“Climb in. Hurry.”

“Will they eat it?”

“They’ll eat anything. Move the hutch over. Jesus did you wake up the whole town?”

“There’s so many of them. I can’t believe you’re alive.”

“We’re gonna see how much longer that lasts for the both of us. Let’s get into the basement, maybe they won’t hear us as much.

“They like dogs or something?”

“I’m not sure. Let’s go.”

“Do you need help?”

“There’s battery power in the lift still. Grab that revolver in the hutch before you come down.”

“Does that thing even fire?”

“I fixed it, I think. Holy shit. What are the odds? How the hell did you make it?”

“It just sounds like people screaming. When I got into town, there was one on the road, and I thought that maybe it was saying—Christ, I can’t see a thing down here. Are the wells boarded up too?”

“Yeah, Jerry did it before he took off.”

“Where’d they go?”

“Out onto the water.”

“Shit.”

“Yeah, I know. Lucky I didn’t blow your head off back there. Haven’t seen another person in ages.”

“Will they stop?”

“I think maybe they get bored. Hopefully the raccoon distracted them.”

“I was fucked if you weren’t here. Or if you were one of those things.”

“Yeah, what was your exit strategy, exactly? You on some kind of crazy suicide—shit!”

One dropped into the window well and from then on they sat silent in the dark.

CHAPTER IX
MAD SCIENCE

Dawn of the Dead (1978) has a particularly memorable scene-within-a-scene moment, as survivors Francine (Gaylen Ross) and Peter (Ken Foree) watch what appears to be a talkshow on one of the last television stations still broadcasting. During that show, the host and a scientist (his guest) begin to argue over how to handle the growing legions of the living dead. The in-studio audience—siding with the host—is outraged at the scientist’s suggestion that major population centers may need to be bombed with nuclear weaponry. After the commotion dies down, what follows next is worth quoting at length:

Scientist: This is not political rhetoric, we are not fighting. This is not the Republicans versus the Democrats—they’ve got us in a hole economically or we’re in another war. It’s more crucial than that. We’re down to the line, folks, we are down to the line. There’s no divisions among living society—[The voices in the audience overwhelm him.]

Host: Please let him finish, please be quiet.

Francine: [Watching the TV.] It’s really all over, isn’t it? [Peter has walked into other room, preparing to shoot Roger who is about to reanimate.]

Scientist: [Responding to indistinguishable voice in audience.] Unemotional! [Peter shoots Roger.] We’ve got to remain rational! Logical, logical, logical...

Host: [Talks over the top of the Scientist, who continues to rub his head and mutter “logical” to himself.] *Scientists always think in these kind of terms. It doesn’t work that way, it’s not how people really are.*

Scientist: We’ve got to, there’s no choice. It has to be. It’s that or the end.¹

“Scientists always think in these kind of terms.” This was a glistening moment showcasing the scientist (and scientists, and science in general) as woefully out of touch with humanity at large. Chanting “logical” like some kind of prayer (therefore, not really above faith), science severs itself from what is deemed a “truer” human essence composed of emotion and feeling. The sin in this particular scene is that the scientist can even fathom bringing about more destruction in an attempt to stop a destructive force. And this is especially sinful because the audience does not believe the scientist’s assertion that such an act may be the only option to save humanity—“it’s that or the end.” They assume he has a political agenda. They assume their fears are being exploited. The scientist—reduced to muttering like a madman—does not inspire confidence in the disillusioned and/or the skeptical. Resignation kicks in, as Francine comments, “It’s really all over, isn’t it?”

In Chapter VII, I discussed the critical acknowledgment of science distrust in zombie narratives. As Sarah Juliet Lauro states, “One of the most prevalent trends in contemporary zombie fiction (Romero-on) is a zombie that is the inadvertent consequence of science misconduct or technological innovation.”² But perhaps it would be more profound to see how different zombie narratives and different media (film, novel, video game) have echoed this sentiment in their own unique (and often times, not-so-unique) ways. Approaching some of the most popular zombie films, stories, and video games, I was greeted again and again by the failings of science. In short, scientists tinkered with things too powerful for their control and the end result was either a grim outlook for humanity or the cementing of a post-apocalyptic reality as evidenced by a sequel or series of sequels. Tables 1, 2, and 3 on the following pages trace these trends through a representative, but by no means exhaustive, chronology of these different kinds of zombie narratives. (Note: Spoiler alert.)

Table 1. A selection of zombie films.

TITLE	YEAR	ZOMBIFICATION AGENT	OUTBREAK ORIGIN	OUTLOOK AT END
Romero's <i>Dead</i> series	1968-on	Radiation from space probe returning from Venus	Probe was blown up in atmosphere when radiation was discovered	Problem contained locally, but outbreak continues through sequels
<i>The Crazies</i>	1973 & 2010	Engineered bioweapon "Trixie" virus	Military plane carrying virus crashes, pollutes drinking water	Potential vaccine is destroyed, more infected cities
<i>Let Sleeping Corpses Lie</i>	1974	Experimental machine designed to kill insects with radiation	Machine's usage on a farm	Machine keeps working, suggesting further outbreak
<i>Zombi 2</i>	1979	A vodou/virus mix, being researched by a scientist	"Cursed" island in the Caribbean	Outbreak has spread to NYC
<i>Return of the Living Dead</i>	1985	Engineered toxic gas	Military misplaces barrel at a medical supply warehouse	Outbreak allegedly contained, but new reports
<i>Zombi 3</i>	1988	Death One serum	Lab not secured; stolen	Outbreak widespread
<i>Dead Alive</i>	1992	Infected Sumatran "rat-monkey" captured by scientist	Monkey bites visitor at zoo	Outbreak contained, emphasis on gory finale
<i>28 Days Later</i>	2002	Engineered "Rage" virus	Lab not secured; released by animal liberation activists	Survivors are rescued, following film suggests global outbreak
<i>Resident Evil</i>	2002	Engineered T-virus	Lab not secured; stolen	T-virus has spread to surface
<i>28 Weeks Later</i>	2007	Continuation of "Rage" virus outbreak	Continuation of <i>28 Days Later</i> origin	Rage virus has spread through Europe
<i>Planet Terror</i>	2007	Experimental bio-nerve gas	Lab not secured; accidentally released at a military base	Survivors on island amidst global outbreak
<i>Quarantine</i>	2008	Mutated form of rabies virus	Lab not secured; stolen by doomsday cult leader	Survivors are killed, sequel suggests spread
<i>Zombieland</i>	2009	Mutated form of mad cow disease	Origins unknown; history of mad cow disease outbreaks usually indicate poor slaughterhouse practices	Survivors reach Pacific Playland; outlook unknown
<i>World War Z</i>	2013	Virus	Origin TBD; novel suggests historical presence, boy in China as patient zero	A vaccine is developed, things improving but greater outlook unknown; sequel planned

Table 2. A selection of zombie stories.

TITLE	AUTHOR	PUB. DATE	ZOMBIFICATION AGENT	OUTBREAK ORIGIN	SEQUEL(S) Y/N
“Herbert West—Reanimator.”	H.P. Lovecraft	1922	A serum	Scientific experimentation	N
<i>On the Far Side of the Cadillac Desert with Dead Folks</i>	Joe R. Lansdale & Tim Truman	1989	Bacteria	Lab not secured; escapes	N
<i>The Rising</i>	Brian Keene	2003	Covert project with cosmic black holes	Scientist unleashes “The Void”	Y
<i>The Walking Dead</i>	Robert Kirkman	2003-now	Unknown pathogen	Unknown	Y
<i>The Zombie Survival Guide</i>	Max Brooks	2003	Solanum virus	Unknown, historical presence	N
<i>Day by Day Armageddon</i>	J.L. Bourne	2004	Virus	China	Y
<i>Monster Island: A Zombie Novel</i>	David Wellington	2006	Unknown	New York City	Y
<i>Plague of the Dead: Morningstar Strain</i>	Z.A. Recht	2006	Virus	Africa	Y
<i>World War Z: An Oral History of the Zombie War</i>	Max Brooks	2007	Virus	Historical presence, unearthed by boy in China	N
<i>Patient Zero: A Joe Ledger Novel</i>	Jonathan Mayberry	2009	Bioweapon	Terrorist attack	Y
<i>Feed</i>	Mira Grant	2010	Virus	Formed from two man-made viruses to cure cancer & cold	Y
<i>The Passage</i>	Justin Cronin	2010	Virus	An immunity-boosting drug gone wrong	Y
<i>Slow Burn: Zero Day</i>	Bobby Adair	2013	New flu strain	First spreading across Africa, Europe, & Asia	Y

Table 3. A selection of zombie video games.

TITLE	YEAR	ZOMBIFICATION AGENT	OUTBREAK ORIGIN	SEQUEL(S) Y/N
<i>Resident Evil</i>	1996-now	Engineered T-virus	Lab not secured; stolen	Y
<i>Dead Rising</i>	2006	“Queen” insects	Lab not secured; one escapes	Y
<i>Dead Space</i>	2008	Extraterrestrial infection	Unearthed during space mining	Y
<i>Left 4 Dead</i>	2008	Green flu	Origin unknown	Y
<i>Red Dead Redemption: Undead Nightmare</i>	2010	Curse	Ancient Aztec mask	N
<i>Dead Island</i>	2011	Infection	Origin unknown	Y
<i>The Walking Dead</i>	2012	Unknown pathogen	Origin unknown	Y
<i>State of Decay</i>	2013	Unknown	Origin unknown	N
<i>The Last of Us</i>	2013	Mutated fungus	Origin unknown	N

One of the most interesting details this data reveals is the number of times outbreaks begin due to a breaching of a science laboratory. Consequently, it is either a testament to incompetence or human limitation; that security measures can fail or that things we create will bypass even our toughest, scientifically-minded security protocols (meaning we really don't understand what we create). In addition, there are notable differences between zombie films, stories (novel, graphic novel, short story), and video games. Both zombie stories and video games appear more open in terms of the agent that causes zombification and where the outbreak originates (and often leave these things unknown). This may be due in part to their greater focus on sequel and serialization, as budgets for multi-part film projects are much larger and typically harder to secure than a multi-book deal. In addition, video game developers aim to create franchise successes which will spawn quick sequels. Nevertheless, even when the agent is unknown or occurs naturally, scientific hubris still takes a hit. Our failure to uncover the cause, the origin, or be able to contain the outbreak means that our so-called greatest weapon—rational thinking—does not or cannot save us, or will take a long time, maybe too long, and result in much death before it does.

Cherry-picking was unnecessary. Zombie narratives were taking the bat to us when it came to science distrust. It was time we figured out what to do with it, and what to do about it.

CHAPTER IX NOTES

1. *Dawn of the Dead* directed by George A. Romero (1978).
2. Boluk and Lenz, *Generation Zombie*, 56.

CHAPTER X DREAMLAND

An hour passed, or maybe two. The screams were less frequent now and the scratching in the window well had stopped. “Reports of VIOLENT behavior remain unconfirmed.” His brother’s breathing had become low and regular, and he’d probably be asleep too if he had not found in the hutch his old man’s bottle of Johnnie Walker Blue, a retirement gift which surely had been saved for a “special occasion” on the scale of Matt walking again or the Second Coming. Otherwise, his family had been of the opinion that if they stopped, he’d stop, because, after all, who wants to be odd man out? That’d been him since the accident though. *No, if there’s a genetic pre-disposition, we’re all odd from the start.* So Dad had quit his lifetime of slamming beers down at the shotgun-styles on Tower Avenue just like that, apparently to prove some kind of bigger point to everybody, but proving to him that he had always been right about his father—he really *was* nothing more than a mean old son of bitch. So here, to the old bastard, and here, to the apocalypse. “Special” didn’t have to mean good.

Halfway through the bottle and the pain of the last few days of traveling dulled, the scratching noises dulled, the hunger and the smell of the putrid blood covering his coat dulled. He lay down on his back on the bare cement floor. If they made it until morning they’d pack what they could and he’d bring the truck up. They’d get the hell out of Superior and make their way towards the hunting shack with its gun safe, firewood, the waterfront to their backs—only a stray wanderer here and there to deal with. He didn’t know how to hunt but he could learn, and he could build a ramp for Matt too, to make it easier for him. They’d be secluded until it blows over, if it ever blew over. They’d survive that first winter—the toughest one. With that thought, his eyes finally stayed shut.

Tomorrow. Tomorrow he would be alive and that would be all he needed, listening to the cicada tides that first summer after the hard winter, kindling the fire pit, just a few treasured beers in their hands and the wood piles heaping and Matt scaling the fish inside, huge fillets, big fish ready for a cool summer night, and it would never need to blow over while Lucy hummed some song that'd be forgotten otherwise and retreated into the shack to grab the fish, leaving him to watch the fire burn. He does not notice her return to his side until she whispers "here," and he looks down at her hands and finds a pistol instead of the skillet. When he takes it, he is back on a familiar stretch of a swarmed highway and Lucy is gone, just the bullet hole in Joe's head—*there's so many of them coming*—pressed against the back seat and the gun in his hand, and Matt in his little league baseball uniform crushed by the dash in the passenger seat as the screams of unrequited thousands draw near, the shack so impossibly far away.

CHAPTER XI INTERLUDE

My protagonist dreamed about basic fulfillments—a warm fire, a full stomach, a romantic partner, a familial bond, the wide open sky with its connections to a nearly eternal history and the ever-present community of the universe. In the post-apocalyptic landscape, they seemed more tangible for him than they had ever been, or perhaps somehow more meaningful. Fire felt warmer, food more filling, love more electrifying, living more profound. Perhaps it encased the desire to return to something more animal, something not cluttered by humanity's modern aspirations—career, material, societal—less significant but ultimately distracting and alienating. TEOTWAWKI, TEOTWAWKI, pronouncing “teot-waw-ki,” or singing that R.E.M. song—it was a certain way to go back to what mattered. A hard but clean living. Perhaps now I understood what the apocalypse had promised me personally.

I wrote his dreams in such a way because they were—*are(?)* my own, even if I wanted him to have his own dreams, mine slipped through. But in what a privileged place in space I sit, never knowing cold or hunger, the loss of a father but certainly not the loss of a community and a whole way of knowing and being in the world. Those who have experienced such would not likely idolize the same. Drunken dreams. Wouldn't it be easier, safer, surer, to simply protest the clutter? Why wait for unlikely events to follow truly unlikely events?

Why blinders, and why the allure? Maybe it was human knowing about being human. That there is no back, never a moment where there is not striving for something more—the gotta haves, the wanna gets. Thus the faith in a cataclysmic shift to revert us back to what we never were, a better luck the second time around. But there is no around, only moving further forward into a still unknown, that bright morning. Couldn't we change our ways, our faith? Couldn't we change faith to knowing?

CHAPTER XII
FANTASYLAND

He woke up to Matt leaned over in his chair, shaking his arm. “Hey, it’s morning.”

He opened his eyes cautiously, half expecting the highway, half expecting to be dead.

The basement was still dark with only hints of daylight working through the boarded up wells.

He was freezing.

“Are they gone?”

“Yeah. Starting to think they’re nocturnal or something. I don’t want to call it strategy, but I don’t know what else to call it.”

“I can’t believe you’re alive. I really can’t. Damn, it’s freezing down here.”

“Same goes for you. You’re lucky I didn’t accidentally blow your head off.”

“*Well*, I was knocking and calling you by name.”

“*Well*, it’s been a long time since I’ve heard anyone’s voice. Thought I was starting to lose it. How’d you get all the way up here? Did they let you out?”

He chuckled as he stretched. “Short story is I escaped. Figured since they were letting the sick inmates eat the healthy ones that it was probably time for me to leave. Hopefully you’re willing to temporarily harbor a fugitive in light of the circumstances?”

“Just an honest question.” Matt eyed the empty bottle on the floor. “Let’s go back upstairs before we freeze to death. Fire’s gotta be burnt down to nothing.”

Once the fire had been rekindled upstairs he was able to take a closer look at the dimly lit house. Everything was pretty much as it had always been—as if Mom or Dad might turn the corner at any moment—minus the computers and recording equipment sprawling across the kitchen table, the plywood and street sign covered windows fighting off the daylight. As he warmed his hands in front of the fire, increasingly aware of how bad he smelled and his

hangover, Matt brought in a scorched pan full of cold soup. *For tonight, an assortment of acorns and potentially poisonous berries?* He hadn't even acknowledged his hunger until he saw the pan. In his traveling he'd inhabited a place somewhere between the sick and what it used to mean to be alive—where hunger and thirst and cold happened to someone else's body but his. Yet, one can of soup had brought back all of humanity's starving soreness, and he sat back in the recliner, dizzy.

Matt talked as he started heating up the soup, but it was muffled—he was swimming in the soup. Blowing up the bridges between here and Duluth, where was it coming from? Night curfews, shootings at the pharmacy for chemo drugs, “Do not TAKE chemotherapy drugs unless they were PREVIOUSLY prescribed to you REPEAT,” and a shortage of boats—shootings for those too. Low-flying military choppers, plugging off both the sick and well on the docks. Soup in his ears. Matt handed him a bowl. He was still reporting about Canada for the local radio station, before it was shut down, before the TV went out and the Internet followed and eventually the power all together. It became hard to tell who was screaming. The other DJ at the station moved the equipment here for safe-keeping, living with him until he had started to shake and forget his words.

He didn't respond until he emptied his bowl. To his unaccustomed stomach it was almost painful, or maybe this was just coming-to. His brother noticed and poured him more from the pan.

“We must be immune,” he finally said to Matt. “I've been around my share of the sick too. But I think it's only to a certain point. My buddy Joe was fine until he got bit, so I don't know what it means. He had figured it was genetic, and if it was genetic it might be hereditary.”

“So you haven't been bitten?”

“Nope, this is all—” he gestured at his coat but hesitated, “—Zombie blood. Guess that’s what we gotta call it.”

“We need to check the outside of the house today. Who knows what they tore up. Or if a few strays are still lurking.”

“We need to get out of this shithole town today, *that’s* what we need to do. Get what we can packed up. I’ll run back for the truck I left near Lucy Donovan’s old folks’ place.” He paused. “ Whatever we can get into it before they show up.”

Matt gave him that familiar glare, one that he’d developed around the time the passwords stopped and the bribes began, around the time when he no longer begged him to let him come with or stay back to play a new game on the PlayStation. He assumed it was because Matt had started to realize who he really was, nothing like the honor student and baseball prodigy he was shaping up to be. The wreck had only assured his bitterness, or what he thought was bitterness. Maybe it was just hate.

“Where do you think we’re going?”

“The hunting shack. Unless you’ve moved Dad’s gun safe, there’ll be plenty of weapons and trees we can actually use for firewood. The lake is right nearby too—for water and fishing—at least until it freezes over.”

Matt smiled, or smirked, or just bared his teeth. “And we’d be nice and secluded. Could hunt even?”

“Yeah, guess it’s never too late to start. See you’re learning how to peg off raccoons.”

“Yeah, and people too.”

“Well I guess that’s also practice.” He rubbed his knees. “Not looking forward to running back for the truck. Least it’s got a quarter tank gas, enough to get us there. Have yet to find a station with gas. Where’s your truck?”

Matt left the room with the pan and without saying a word, but eventually spoke from the kitchen. “I’ll send you off with some supplies.”

Too bad you can’t solve it like most brothers, a good old fashioned fistfight.

He followed him into the kitchen doorway, knowing exactly where he was headed.

“What does that mean?”

“What do you think it means.” He didn’t look up from wiping the pan dry with a filthy rag.

“Why don’t you think this is a good idea? Other than that it’s coming from me.”

“Don’t flatter yourself. I think it’s less than a good idea because we have no way of knowing if the shack is still there. It could’ve long since been looted or burnt to the ground. Or maybe some traveling horde has set up shop there—”

“Any more or less than here? Christ, could hardly make it a few blocks without almost getting eaten. How can you even begin to chop down a tree or pull some wood from a house? You’re running out.”

“Doesn’t matter. We know what we’re getting ourselves into here, and that’s what’s most important. We don’t even have enough fuel to make it back if you’re wrong. You think I’m going cross country in this?” He pushed past him, back into the dining room where he turned on an emergency lantern and began fidgeting with the equipment on the table.

“That shelter in place crap—is that was this is about? How can you buy that? The message hasn’t changed for months. *No one* is coming for us. I don’t care how much food you

have because it's not going to be enough. And you can't eat those things. I'm sorry it's not the choice you want, but we have no other choice."

Matt slammed his hand onto the table, but did not turn. He was addressing nonexistent listeners. "How fucking stupid do you think I am, exactly? Do you think I've been waiting in the wings here, my survival plan entirely contingent upon my brother—who wouldn't drive thirty minutes for our dad's funeral three years ago—breaking out of prison in Milwaukee and somehow getting all the way back up here in the midst of a global disaster, deciding to whisk me away to some alcohol-induced *Little House on the Prairie* fantasyland where I, the grateful cripple, knit by the fire as he drags home kill after kill, on and on into eternity?"

He leaned on the door jam, laughing and shaking his head because he didn't know what else to do. "Should've realized this was a fucking waste of time."

Matt finally faced him. "Yeah, you're right. It *is* a fucking waste of time. We have a secure place here and food, and absolutely no reason to embark on a suicide mission."

"Speaking of suicide and your smartness, that food you have *will* run out. And how many raccoons do you think you can kill from the front porch once winter comes?"

"I got enough food here for myself for six more months—the both of us, three, but I'm sure we could stretch it a bit farther if we ate light. Jerry and his wife traded me more rations for the truck and boat when I wouldn't go with them and their kids. I didn't go with them then and I certainly won't go with you now. They bought me time and I intend to use it."

"For what, your memoirs? To watch these things finally break into the house and eat you alive? Or just to see what it feels like to starve or freeze to death?"

“I can maybe get the radio station running again. I’m not entirely sure how to, but if I can get a steady power source, do some other things, I might be able to get something on the air. Get people organized, get other people broadcasting.”

There was that optimism that even a busted spine couldn’t take away—how family, friends, and neighbors applauded his “bravery” and “go get-‘em” spirit in the face of never walking or doing all those other things everyone was too embarrassed to talk about. He maintained good nature in the face of the great evil which had been done to him at only twelve years old. It was more difficult to be cheery as that great evil. No one expected him to face anything. No one expected anything from him. He’d already done quite enough.

“You’ve got to be kidding me. If there was anyone at all left, anyone who had *any* way to communicate, they’d be well within the government, and they’d be reminding us that taxes were still due next April. The only thing band-to-band is that emergency message, and it’s the same thing yesterday as it was four fucking months ago. We are *not* out of the woods. Everywhere I came through was wiped out. Whether next month or next year, this is it.”

“The government would be smart to not send us an update if it’s begun recovery efforts. People would sit around and die waiting, so it’s better to think we’re on our own. And there has to be more people because we are here, and, hell, even your *cellie* made it until he got bit—”

“Don’t be a fucking dick.”

“All I am saying is that we have no way of knowing how many were immune. Maybe some were even sick but got better. Not everyone turns, so maybe not everyone dies. I have to try.”

“How noble. But what happens in six months if no response? Or three, as if you really want me around to give you even less time?”

“If you were around, it’d probably take less time, for obvious reasons. But if I can’t get on-air, or no one else is out there, or a roaming gang of maniacs are the only ones who pick up the signal and show up and kill me...it won’t matter.”

“And I’m the suicidal one.”

“Until last night, I hadn’t spoken to another human being in two months.” He looked somewhere, far off. It’s clear that we are not built for that. I think it’s worth it.”

He wished he felt the same, but he didn’t. He didn’t think there was anything worth dying for. After a time, he spoke.

“I need to go to the shack. That’s the chance I have to take.” He tried to feel something as he said it, looking at the old family portrait just barely illuminated by the lamp, a pre-accident Monkey Wards shot with a cheap blue background, but there was nothing—just an animal wanting to breathe, dreams that were dark and forgotten, twitching his arms and legs in the night.

Matt was quiet for a time then nodded his head. “Well, if that’s the case, let’s try to increase both our odds, then.”

CHAPTER XIII WHO'S AFRAID OF SCIENCE?

At this point in the game, I felt a desperate need to recap. Several months after I had first asked *why zombies* and *why now*, I found myself pulling books on contemporary attitudes towards scientific study. Zombie film binges has turned into explorations of science studies, the science wars, and news coverage on scientific issues. What had happened from point *A* to *B*? Had I fallen down the rabbit hole of research for good?

So far, I had established that zombie narratives functioned as an outlet for/producer of post-apocalyptic fantasies. They were successful (thus, *why now*) because they gelled well with/enforced a growing tide of apocalyptic thinking, that the end of the world (or TEOTWAWKI) was inevitable. Furthermore, this sense of inevitability—at least in zombie narratives—stemmed from skepticism/disillusionment with science and scientific progress as mad scientists and mad science were overwhelmingly responsible for zombie outbreaks. But it was time to better understand why such a message resonated with the world “outside” these fictions. (Certainly, the line between fiction and reality is blurry, so I mean outside as an approach more than an actual place.)

Existing zombie criticism had already set up how particular zombie narratives spoke to specific historical events (the atom bomb, the AIDS epidemic, environmental disasters), and, in Chapter VII, I linked these historical events as mere recapitulations of a distrust towards science and scientific innovation. Although these moments undoubtedly acted as catalysts for public attitudes about science, I longed for a better sense of how this general sentiment—a baseline—was maintained at all times, particularly into the present moment (and—because it has been within my realm of experience throughout my research—particularly within the United States). What are the qualities of an environment that can produce and sustain science distrust (as

evidenced by, for example, zombie narratives)? More importantly, what can we say about that environment (and potential changes it is undergoing) when zombie narratives—and all they represent—are enjoying more popularity than ever before?

A search of American attitudes towards science quickly uncovers a potentially crucial quality of such environments: a lack of scientific knowledge throughout the general public and a weak science education program. When “America” and “science” are combined, it is not difficult to find headlines which report that the United States continues to lag behind in test scores; in 2009, a study revealed that the U.S. ranked 17th in science and 25th in math out of 34 countries, while its student scores improved at a much slower rate than most others.¹ Beyond test scores, a recent survey conducted by the National Science Foundation revealed that 1 in 4 Americans did not know that the Earth orbited the Sun.² Such alarming statistics have been significant to reform efforts³ as well as continued calls for science outreach and popularization (to lessen the divide between scientists and lay people).

Nevertheless, this lack of understanding and engagement remains prevalent and could go a long way to explain why science easily serves as the modern day bogeyman in zombie narratives. Lacking the most basic of understandings (and sometimes, advanced understandings), science can appear capable of anything—as unpredictable and supernatural as the vodou spell. In addition, the public is typically sealed off from reports on research unless accidents occur (the negative is always far more newsworthy), further enforcing the danger of experimentation and the likelihood of apocalyptic events. While many surveys indicate that there is a great enthusiasm for science which could suggest science distrust is not widespread,⁴ this enthusiasm is paired with ignorance. It is precisely this mix that I find so troubling, because an enthusiasm for science and scientific research despite not believing in evolution,⁵ despite not

believing in climate change, and despite not believing in the safety of vaccines shows that an enthusiasm for science *cannot* possibly exist if critical, scientific thinking is being valued. In fact, the wording reveals the frightening truth—not believing, not *believing*—the question of *belief* has become central to public perceptions of science, and not in a way where hypotheses are tested and re-tested and findings are analyzed—*belief* instead that rings religiously, doctrinally, dogmatically.

It is “belief” that makes it possible to regard or disregard certain scientific evidence based on taste, and to subsequently use these tastes for political purposes. It is “belief” that makes even the most established of scientific findings just another plausible story among other equally credible stories (“you can always find a study that says anything”⁶), much to the benefit of both social constructionists within academia and to those arguing for biblical understandings of the universe. In an atmosphere of ignorance (where belief is often easier than knowing), scientific research is seen more and more as having a political agenda rather than an intellectual one. Being “anti-science,” whether one does or doesn’t identify with the hyperbolic charge, is akin to being anti-government, anti-politician—a protest against centers of authority perceived as corrupted. Unfortunately, because scientific study is far from perfect and is sometimes corruptible (and history will reveal so much⁷), its politicization can appear real and throwing the baby out with the bathwater can sound all the more convincing.

While many have recognized the dangerous position scientific research has been placed in, this recognition is typically divided among party lines and passing the buck ensues (the Republicans are doing it versus the Democrats are doing it). This is a problem precisely because scientific findings which indicate future global crises should be bipartisan efforts; in fact—however romantic it may sound—science should transcend party politics altogether, at least in

terms of how the public understands the evidence it presents. As Alex B. Berezow jokes, “Neither party has a monopoly on scientific illiteracy.”⁸ Pretending otherwise contributes to an environment where science is suspect and where we predict and enforce apocalyptic/post-apocalyptic futures through zombie narratives. We should not be as eager to be a self-fulfilling prophecy; these stories should and can (and already have the ability to) serve as guides to fix the present, not just prepare us for the futures they present.

In Chapters XV and XVII, I will divide the anti-science sentiment along party lines, if only to show how these issues are present across the political spectrum. This will shine light on how zombie narratives and the post-apocalyptic landscape can bring together such a wide demographic, and how we may be able to use this appeal to our advantage. In addition, living in both the conservative, rural Midwest and the liberal area of Colorado has provided unique, personal insights.

I find myself harkening back to the scientist’s plea in *Dawn of the Dead* (1978). He implores, “This is not political rhetoric, we are not fighting. This not the Republicans versus the Democrats...it’s more crucial than that. We’re down to the line, folks, we are down to the line.”⁹ While the message appears unheeded in the film, perhaps zombie narratives—for all the death and apocalypse they promise—are also providing hints at how we might just avoid such a fate, before things get down to the line. We just need to look more closely.

CHAPTER XIII NOTES

1. “In Ranking, U.S. Students Trail Global Leaders,” *USA Today*, last modified December 7, 2010, http://usatoday30.usatoday.com/news/education/2010-12-07-us-students-international-ranking_N.htm and “U.S. Students Still Lag Behind Foreign Peers, Schools Make Little Progress in Improving Achievement,” *Huffington Post*, last modified July 23, 2012, http://www.huffingtonpost.com/2012/07/23/us-students-still-lag-beh_n_1695516.html.
2. Scott Neuman, “1 in 4 Americans Think The Sun Goes Around The Earth, Survey Says,” *NPR*, last modified February 14, 2014, <http://www.npr.org/blogs/thetwo-way/2014/02/14/277058739/1-in-4-americans-think-the-sun-goes-around-the-earth-survey-says>.
3. Justin Gillis, “New Guidelines Call for Broad Changes in Science Education,” *The New York Times*, last modified April 9, 2013, <http://www.nytimes.com/2013/04/10/science/panel-calls-for-broad-changes-in-science-education.html?pagewanted=all&r=0>.
4. Dan Vergano, “Scientists, Public Differ in Outlooks,” *USA Today*, July 10, 2009, http://usatoday30.usatoday.com/tech/science/2009-07-09-science-survey_N.htm and Neuman’s “1 in 4 Americans...”
5. I will discuss more about evolution in Chapter XV.
6. The popular phrase, “You can find a study that says anything,” tends to overlook the quality/intellectual rigor of a particular study and how it holds up over time.
7. Scientists have certainly lied before, practicing pseudoscience or publishing phony data and results. Most notable in contemporary times (and as it pertains to Chapter XVII) is Andrew Wakefield’s infamous research which suggested that the MMR vaccine may cause autism. Though he eventually lost his medical license and his publication was retracted, (Susan Dominus, “The Crash and Burn of an Autism Guru,” *The New York Times Magazine*, last modified April 20, 2011, <http://www.nytimes.com/2011/04/24/magazine/mag-24Autism-t.html?pagewanted=all> and Gardiner Harris, “Journal Retracts 1998 Paper Linking Autism to Vaccines,” *The New York Times*, last modified February 2, 2010, <http://www.nytimes.com/2010/02/03/health/research/03lancet.html>.) Wakefield’s work still fuels the anti-vaccine movement which is primarily responsible for the return of childhood diseases like the measles and whooping cough in developed nations. (Steven Salzberg, “Anti-Vaccine Movement Causes the Worst Whooping Cough Epidemic in 70 Years,” *Forbes*, last modified July 23, 2012, <http://www.forbes.com/sites/stevensalzberg/2012/07/23/anti-vaccine-movement-causes-the-worst-whooping-cough-epidemic-in-70-years/>.) Beyond this, history will reveal times when scientific studies were used to justify racism, sexism, or homophobia. While such pseudoscientific claims can take decades if not centuries to fade from the public mind, the checks and balances within scientific methodology ensure that such behavior will be caught, if unfortunately not quickly enough.
8. Alex B. Berezow, “Column: GOP Might be Anti-Science, But So Are Democrats,” *USA Today*, September 20, 2011, <http://usatoday30.usatoday.com/news/opinion/forum/story/2011-09-20/gop-democrats-science-evolution-vaccine/50482856/1>.
9. *Dawn of the Dead* directed by George A. Romero (1978).

CHAPTER XIV RED IN THE MORNING

He picked his usual stool at his favorite bar on Tower Avenue and sat down after he was sure the place was empty. It was a clear, sharp morning—first frost—and the beers he'd found still stored behind the bar were cool to the touch and taste. It was his final day of scouting the downtown for supplies and a good enough day as any to try and board the breached Navy cargo ship he'd seen when he first arrived two weeks ago. That was Matt's plan anyway. He'd told him about how the ship had maxed out the seaway getting into the Great Lakes, bringing relief supplies—including generators, fuel, and radios—to all those boats on the water in an attempt to keep them there and to stop threats from Canada. However, by the time the ship had reached Lake Superior, an order even higher up had decided it would be best to simply clear the waters of all “unauthorized personnel.” After everyone was dead, it was unclear what had become of the crew on the cargo ship. Some were maybe evacuated, or maybe just gunned down too. There were rumors about the sickness. Matt thought the ship's stern had swung itself into the shore about a month ago—at least that's when he had first noticed it after the city went quiet.

The city *was* quiet. The bar he was in would usually have ESPN on at this time of morning, letting the arguments over last night's games lull its third shift patrons. Now, there was only the sound of the blood beating in his head, the emergency message stuck at this particular moment on “Stay INSIDE, STAY alive.” It was better than the alternative, the screams of the sick hunting—and they *did* seem to hunt, waiting for dark, clawing at the walls. But the downtown was different, almost deserted, as if the sick didn't wander too far from the houses they'd went home to when it was just the flu. Consequently, he had grown braver with each outing over the last two weeks, only needing to be at his most vigilant in those first few blocks from the old house's porch. Otherwise, he'd hear one coming from a mile away.

He cracked open another beer and drew shapes in the powdered plaster that covered the bar. When he wasn't out scouting, he worked on a rope ladder which his brother had begun building to board the stern about twenty-five feet up. His surprise arrival had only meant a faster and easier way for Matt to secure it and prepare a lifeboat as a lift without a massive feat of strength. This was the deal to increase their odds, to help Matt board the ship for a portion of his rations and a rifle. Today was the first day of good weather for their attempt, and he was glad. After all the planning and building was finished there had been nothing left between them but strange silence. They'd never been good at talking, but now it seemed like something more; a new way of being when the rest of the world was gone. What words were there?

"Not quite how I remember this place," he said aloud to no one, then rose from the stool and walked behind the bar to collect several surprisingly untouched liquor bottles—there was still room in the truck and their presence certainly couldn't hurt. As he loaded the last one into the bag he hesitated, then opened it and took a swig. His grandfather had died when he was eleven but he remembered the stories he shared with him and other vets at the Moose lodge. As he and his little brother would stand there impatiently waiting for more quarters, he'd go on and on about how crazy it was *not* to be drunk on the frontlines in World War II. "The stress, we couln' ha' handle it," their grandpop would say, then laugh and drink his Crown and again tell the story of Pete Sawicki—always drunk as a skunk—bringing them all still-warm hotdogs from the mess tent in the midst of firefight. He eventually took a sniper round to the head, "Bu' damn, if he didn' take it smilin'!" One more swig—he'd be crazy not to.

Up the street from the bar, a lime green Volkswagen Beetle had been abandoned when it struck a light pole. He had been looking for other cars in the days prior, thinking that if one of them were still drivable it'd be a wise extra measure for their trip to the shore, in case the truck

broke down or was mobbed while he was still on deck. The damage looked minimal, but when he got inside the engine failed to turn over in the slightest. Popping the hood, the jostled battery was obvious, but—at the time of driving it into the pole—clear thinking had probably been hard to come by.

Upon re-connecting the battery and turning the ignition, he was promptly greeted by 90s pop booming at full blast. He whipped the dial down after jumping out of his skin, but one of them had already heard the sound and emerged from the alleyway in the distance. It looked puzzled, as if it still possessed the capability to be puzzled, and he caught himself staring back at it until he came to his senses and threw the car into reverse. He didn't slow down until he was several blocks away, until the sound of the speeding car was more dangerous than the outburst of music. A sixteenth tank of gas left. When he was finally clear of the downtown he picked up the iPod where the music had come from—likely the last song someone had ever heard, their tune for the apocalypse—shaking his head when his heart finally slowed, not sure if he should laugh as he muttered to himself “Jesus fucking Christ” over and over again.

Inside the old house his brother was finishing a rep on the lat machine in his bedroom. Before Matt could even ask him what had happened, he spoke.

“Let's go.”

CHAPTER XV IN THE RIGHT CORNER

I could tell that my sixth grade science teacher was tense. Normally he and I would joke around before class, me going on about the difficulty of the previous night's homework, him teasing me for whining. But, on this particular day, he was quiet and nervous as he sat back at his desk and finished his preparations. The word "evolution" stood alone on the board. When the tardy bell rang, I noticed several of my classmates missing.

My sixth grade teacher went on to tell us, his voice stern, that we were beginning a unit on evolution. He added that the absent students would be working on an "alternative" unit in the meantime because the subject was controversial and made some people uncomfortable. He did not explain why, probably because he couldn't; we were left to assume religion and the goings-on of a poor, rural community in the Midwest. He insisted that he was not trying to force anything upon us over the next few weeks, wanting only to bring us information that we could determine for ourselves. The caveat ended, and, with some brightness returning to his face, he carried on with the lesson.

This moment stands clear in my memory primarily because—as a curious sixth grader—I was instantly intrigued by the suggestion of scandal. What could make my teacher so uncomfortable, and what would make parents pull their students from class? Nothing else I had formally learned up to that point, especially in a science class, has been treated with such skepticism. (Our "sex education" unit wasn't until eighth grade.) It was my first encounter with skepticism towards science and my guard was up. After all, was I about to be deceived? And, if I wasn't, why were some parents allowing deception? Did they know something that my own didn't?

In early 2014, science educator Bill Nye (famous for educational children’s show *Bill Nye the Science Guy*) agreed to a debate with Ken Ham, founder of Answers in Genesis and the Creation Museum.¹ As a creationist, Ham maintains that the Earth was created in six literal days and in the ways depicted by the Christian Bible. The Creation Museum has been built in Kentucky to promote alternative “theories” to evolution, depicting such events as human beings and dinosaurs coexisting and providing evidence for the global flood in the story of Noah’s ark.² Many in the scientific community were upset by Nye’s acceptance of the invitation because they felt it added scientific legitimacy to creationism/intelligent design by merely agreeing that there was something *to* debate in the first place (and was serving far more as a publicity stunt for Nye than an intellectual exercise).³ However, Nye stated in an op-ed for CNN that he felt it was crucial to engage with Ham because ideas like Ham’s remain popular and Nye perceives scientific literacy as vital to this generation and the ones after it.⁴ Nye expressed worry that creationism—and the push to either introduce or keep intelligent design in tax-funded schools (four such state bills proposed in 2014⁵)—is detrimental to America’s future intellectual and economic growth. With nearly \$14.5 million already publically donated to Ham’s construction of a “life-size” ark⁶ and a surge of funding after the debate,⁷ perhaps the problem is more dire than most wish to realize.

I have opened this chapter with an exploration of the continuing controversy surrounding evolution because this is a particular example of science distrust which accompanies conservative beliefs and politics. (This is to say that most who believe in creationism are highly likely to identify as conservative, not necessarily the other way around.) And perhaps this skepticism towards evolution makes sense, given that conservatives are often religious (Christian) as well, steering their social policies through dominant interpretations of the Bible.

While many conservatives would likely be quick (and correct) to note that creationism is a radical stance within the party, those running for office under the GOP often remain vague or come out against evolution in order to avoid voter backlash from these constituencies.⁸

Evolution and the universe's origins in The Big Bang are not worth defending, then, because their political value (how such beliefs will directly impact policymaking) is perceived as minimal—defending evolution is more likely to incite anger and change votes for the few who care as opposed to rallying the many who don't. While cause and effect are impossible to determine, the indirect acceptance of a creation model which cannot “predict the outcome of any experiment, design a tool, cure a disease, or describe natural phenomena with mathematics”⁹ certainly sets a skeptical tone for conservative politics, and studies have shown a growing distrust of science among conservatives.¹⁰ Perhaps it is unsurprising, then, to find that the GOP also tends to resist evidence of man-made climate change more than other political parties. While a recent Pew Research Center survey indicates that now—more than ever—conservatives are “deeply divided” over the reality of climate change, they are still unlikely to accept that human activity is the chief cause.¹¹

Of course, this is not to say that no one within conservative politics is resisting these dominant, anti-science paradigms (or that all adhere to them). Also, I am not suggesting that all scientific evidence is rejected or looked at skeptically; on the contrary, the suspicious gaze seems reserved only for findings which threaten or complicate party politics, the perceived insurgencies from the “other side” which are dressed up as science (and this goes for conservatives as well as liberals, as I will show in Chapter XVII). For a political party which seeks much guidance in social policy from the Bible, evolution *does* have potentially major implications, as it threatens traditional conceptions of the sanctity of life, the divinity of the human, and the absoluteness of

the Word. Subsequently, this could shake traditional stances against abortion and gay rights (for example). In addition, the valuing of a freer, less-regulated market among conservatives is threatened by anthropogenic climate change because it suggests we will have to alter “business as usual” (in terms of emissions produced to currently sustain such a system). To me, what is frightening is that this pick-and-choose approach is utterly unsustainable. Perhaps the adage “an inconvenient truth” will forever connote Al Gore, but ignoring scientific evidence of this kind because it is difficult to incorporate into party traditions limits science to political rhetoric and diminishes its educational and societal value. With global crises on the horizon—whether climate change, overpopulation, bioterror, etcetera—we cannot continue to abuse the one tool which may allow us to rise above rhetoric. It would be far from a perfect ascension, but as apocalyptic thinking grows and the stories we tell ourselves increasingly depict post-apocalyptic landscapes, it seems vital that we do *something*.

But what does this have to do with zombie narratives themselves? Conservative politics can gel well with these narratives because the outbreaks can be read as apocalyptic visions in the Biblical sense (which is often how some character or characters within the story regard them). Furthermore, because science is so often the “bad guy” (as evidenced in Chapter IX), it can produce a feeling of *schadenfreude* as scientific authority is knocked down a peg—with a potentially higher, divine power doing the knocking. After the hubris of science is duly revealed or punished, a post-apocalyptic world is opened up where big government has crumbled as well, freeing the survivors to reconstruct as they desire or make their own decisions and their own way (lest I even say anything about how much firearms factor into those decisions and ways). My own zombie narrative has employed a kind of pleasing governmental collapse through the abandoned Navy cargo ship. These fantasies can be found outside of fiction and in prepper

culture as well, which is markedly conservative¹² when not bordering on libertarianism. Of course, none of this is sustainable, even if it is being looked at as worst-case (or is it best-case?) scenario. Anything less than the apocalypse would not afford these imagined opportunities, and with an apocalyptic-level event, the odds still remain: we are far more likely to spend our post-apocalypse days buried in a hole or left to rot in the sun—or even roam as a member of the undead—than to utilize this newfound “freedom” in a (right-wing) utopia with ample chance to tell the other party “I told you so.”

And the same goes for the political left.

CHAPTER XV NOTES

1. Bill Chappell, "Watch the Creationism vs. Evolution Debate: Ken Ham and Bill Nye," *NPR*, last modified February 4, 2014, <http://www.npr.org/blogs/thetwo-way/2014/02/04/271648691/watch-the-creationism-vs-evolution-debate-bill-nye-and-ken-ham>.
2. *Creation Museum*, last modified 2014, <http://creationmuseum.org/>.
3. Michael Schulson, "The Bill Nye-Ken Ham Debate Was a Nightmare for Science," *The Daily Beast*, last modified February 5, 2014, <http://www.thedailybeast.com/articles/2014/02/05/the-bill-nye-ken-ham-debate-was-a-nightmare-for-science.html>.
4. Bill Nye, "Why I'm Debating Creationist Ken Ham," *CNN Belief Blog*, last modified February 4, 2014, <http://religion.blogs.cnn.com/2014/02/04/why-im-debating-creationist-ken-ham/>.
5. Travis Gettys, "Republicans blitz four states with five creationism bills so far this year," *The Raw Story*, last modified April 9, 2013, <http://www.rawstory.com/rs/2014/01/31/republicans-blitz-four-states-with-five-creationism-bills-so-far-this-year/>.
6. *Ark Encounter*, last modified 2014, <http://arkencounter.com/>.
7. Neuman, "1 in 4 Americans..."
8. Patricia Cohen, "A Split Emerges as Conservatives Discuss Darwin," *The New York Times*, last modified May 5, 2007, <http://www.nytimes.com/2007/05/05/us/politics/05darwin.html?pagewanted=all>.
9. Nye, "Why I'm Debating Creationist..."
10. Gordon Gauchat's "Politicization of Science in the Public Sphere: A Study of Public Trust in the United States, 1974 to 2010," *American Sociological Review* 77, no. 2 (2012): 161-87 looks at the decline of science trust among conservatives since the 1970s; also see Hadas Gold, "Study: Watching Fox Raises Science Distrust," *Politico*, last modified August 9, 2013, <http://www.politico.com/blogs/media/2013/08/study-watching-fox-raises-science-distrust-170274.html>.
11. "GOP Deeply Divided Over Climate Change," *Pew Research Center*, last modified November 1, 2013, <http://www.people-press.org/2013/11/01/gop-deeply-divided-over-climate-change/>. To add to this, a recent survey of 18 major scientific societies reveals that 97% of scientists agree that humans are chiefly causing climate change. ("Consensus: 97% of climate scientists agree," *NASA: Global Climate Change*, last accessed March 1, 2014, <http://climate.nasa.gov/scientific-consensus/>.)
12. Popular survival writer/blogger Rawles's *How to Survive* remarks that maintaining Christian faith is essential in a post-apocalyptic world, 13, and also makes several other statements throughout his how-to manual which suggest other conservative beliefs. In addition, the *American Preppers Network* website (last modified 2014, <http://americanpreppersnetwork.com/>) is markedly conservative, and even practicing Mormons place an emphasis on food storage and survivalism. ("Self Reliance," *The Church of Jesus Christ of Latter-Day Saints*, last modified 2014, <http://www.mormon.org/faq/self-reliance>.)

CHAPTER XVI ALL ABOARD

They both took different routes to the Park Point after hooking up Matt's hand controls to the Beetle. The scraping sounds were as loud as they had been before, and hundreds—thousands—of birds still circled in the blue skies above the water. It made sense now. So much rotting meat.

Up close the ship was enormous. It took almost a half hour of throwing the end weight as hard as he could before the rope successfully looped over the railing and came back down to the ground. He ran it back to the truck parked out as far as it could be on the muddy shore and tied it to the hitch.

Matt picked up part of the rope. "I'll hold it too."

"I'm more concerned about what's on deck," he responded. In truth, he was more frightened by the climb. *Don't get me wrong. I think events like this can bring out the best in people. But some things stick with us like it or not.* The deck seemed only further and further away as he began to make his way up the makeshift rungs, the rope yawning and twisting in protest, the cold breeze blowing off the water beginning to numb his hands. It wasn't clear if his head was spinning from the booze or the heights, and he hoped if he fell that it'd kill him. What good were busted legs or backs now? What good would two paraplegics do?

When he was between the seventh and eighth rung, the seventh snapped. The rope burned into his hands, and he tried to keep from crying out as his foot flailed wildly for placement. This was it—the end—twenty feet high, his eyes smashed shut. When he somehow got both feet on the eighth he stood stone still, eyes still closed, quietly cursing God and everything else. Below Matt was saying something but without yelling it he could not hear. When the eighth rung began to bend he raced up the few remaining and pulled himself over,

throwing down the rifle strapped across his back and landing on the deserted, bird-shit covered deck, chest heaving. Eventually he stood up and went back to the rail to assure his brother, then wiped his bloodied hands on his jeans and picked up the rifle. He pulled off the sheath on the hunting knife which served as a makeshift bayonet, and fumbled with his coat pockets until he found his brother's headband flashlight. The deck was at a slight angle from digging into the sand, tilted just enough that many of the ship's bulkhead hatches yawned open slightly towards him, making his steps feel strange as he reached the cargo staging area. But when he could not pry open the bay door from the outside he had no choice but to find another route. He paused at the entrance of the nearest bulkhead hatch—inside there was no hint of day. *Can't see shit. Can't see shit.* He scanned the deck one last time for signs of movement, then turned on the flashlight and walked in.

* * *

His cellmate Joe had the idea on the second day they weren't fed. Most of the guards had gone home—were either sick or fleeing—and it was clear that the outbreak was spreading through the prison. Many prisoners carried on day and night, demanding to be released, shouting about sick cellmates. When the power went out, people started screaming. Then something else started screaming.

They'd been allowed access to newspapers and during mealtimes the guards had even rolled in old TVs on carts so they could watch the events that were unfolding outside. These were the early days though, when it was just some highly fatal form of flu impacting children and the elderly, perhaps H1N1 finally crossing over. But then the symptoms became better known, and they were neurological and didn't really match any kind of flu at all. Maybe a new kind of meningitis, some said. But there were tumors in the brains of the sick, as CT scans

plastered all over the news had shown, with reports of some dying quickly and others surviving longer but becoming irrational, violent—the CDC would not confirm. As soon as the first pundit had called it a “contagious cancer,” chemotherapy medications could not be kept in stock, with pharmacies raided and the cancer wings of hospitals—adult and children alike—turning into war zones. As more and more died, it was hard to know who had gotten ill or who had simply poisoned themselves. But the TVs were pulled from the cafeteria not long after. The newspapers too. And then they were served their meals in their cells. And then they weren’t served anything at all.

“They’re going to let us die in here,” Joe said, pacing in what little room there was to pace, dimly silhouetted by the floodlights. “They’re lumping us in with murderers and rapists. Makes it easy, people not worthy of living, just a few less people on the street to spread it. A burglar and a guy who doesn’t know *not* to drive when he’s drunk included, but who cares? Slippery slope! Gateway!”

“Things are just messed up right now. Just gonna take a little more time for them to figure out their next move.” He said this, unaware that half of Milwaukee was already burning.

They’re going to let us rot in here. *That’s* their move.”

On the evening of the fourth day with no food, when he had begun to eye up the rubber on his tennis shoes, he finally agreed to Joe’s plan.

The guard in their cellblock showed signs of the sickness, but, unlike the others, had not gone home to a family principally because he didn’t have one—he was a crazy son of a bitch that the outbreak had only made crazier. As he patrolled the block day and night (because he was always working now) he’d laugh and laugh, his nightstick clattering against the bars, asking

them if they were hungry but getting caught on the word, “Hun. Hun.” Shots were fired on the third day somewhere further down the block.

“Should just shoot all of us and get it the hell over with,” he said to Joe.

“First chance we get, we have to take it. He’ll be dead or one of those things soon. And then we’ll be slitting our own throats.” Joe continued to sharpen the shiv he’d made from the silverware that had never picked up.

On the fourth night, as per the plan, they began arguing loudly. Yelling about a sick cellmate wouldn’t work anymore—the guard would shoot both parties whether true or not—so they pretended that it was a usual prison skirmish. The guard didn’t know any better.

“I said to keep your hands off my motherfucking stuff!” Joe continued, and already there were footsteps rushing down the corridor. Joe quickly handed him the shiv and then squeezed himself under the bottom bunk.

“Lyn’ piece of shit!” He responded, taking his cue to climb up with the shiv into the top bunk. He lay down just as the guard arrived at their cell. Alien screams erupted from the rest of the cellblock.

“What the fuck’s goin’ ...goin’ ...goin’ on, boys?” He stammered some more as he caught his breath, fumbling with the keys to unlock the door. They didn’t respond, sitting silently in the dark as if the arguing had come from somewhere else.

“Wakin’ the whole block up? Get your hands on the fuckin’ wall.” The door opened and he could only see the outline of the guard as he entered the cell, his gun already raised and shaking from the tremors. “Not stupid, know you two are fuckin’ around. Around. Around.” He stepped closer to the bed. “Got two seconds to get those hands on the wall before I start firin’.”

They took advantage that the guard was confused, that his motor skills were failing, and that he had always been an asshole. One step closer to the bunk and Joe grabbed his ankles and pulled hard—as hard as he could—throwing him onto his back. And then it was his turn, so he jumped down from the top bunk, pinning the guard to the cement floor. The guard fought harder than he had thought he would, nearly knocking the shiv out of his hand. When he recovered his grip he plunged it into his forearm, then his chest, and then his chest again for however many more times it took until the guard stopped struggling. In the meantime, Joe had crawled out from under the bunk and grabbed his gun. The guard was choking on his own blood.

“Hey, let’s not stick around him any longer,” Joe said, shaking his shoulder. “Who knows how this infection works.”

He turned back to look at Joe. “We should shoot him. Put him out of his misery.”

“Slit his throat if you want. He’s not worth a bullet,” Joe said, taking off from the cell. He hesitated for a moment, looking down at the man he killed bleeding out beneath him. But then he got up and followed Joe out of the cellblock, out into the rest of the prison which was now largely empty of life as they had known it. Much later, he had tried to think that there weren’t cries for help as they ran past some of the cells, Joe shooting at the sick chasing them. But there were.

* * *

In the darkness of the ship, he pulled the bayonet out from under the chin of one of them dressed in a naval officer’s uniform. Blood poured down the barrel, more than he thought could’ve come from just one. He was in the main cargo hold now, nearly the size of a warehouse, full of shrink-wrapped cardboard boxes stacked high on shelves. He had opened one, sifting through sets of rations, radios, medical supplies, and small battery generators when

that distinct awful smell had hit him, as it hit him before in the passageway and so many other times before the ship, but how long ago was that? How had he got here? What had happened to the one in the passageway? He wiped his hands furiously on his jeans, wondering about his cuts and their blood. *I don't feel...feel bad though. Feel. Feel bad.* He grabbed two sets and pulled up the bay door. Light poured in, illuminating two more of the sick—distantly man and woman—making their way down the aisles. He grabbed the supplies and sprinted towards the starboard lifeboat he'd spotted on the way in.

Lucy would always tell him that he couldn't hit the broadside of a barn and he'd tease her back, calling her Annie Oakley as they played target practice with pop cans at the shack. Now he wished he hadn't been so proud. He took aim at the woman-like one approaching, but only hit the man behind her in the shoulder—certainly not a kill shot. He threw the supplies into the lifeboat and jumped in, releasing the lock on the davit. The lifeboat would not lower quickly enough—they were already too close. He took aim again, this time blowing off half of the woman's head. He was lower than the deck line but the man still approached, so he pulled the trigger again but missed. *Jesus, you're a terrible shot.* The man threw himself off the deck after him, barely missing the lifeboat before he fell the rest of the way down and landed headfirst in the ankle-deep waters below. When the lifeboat hit the shore with a thud, Matt was rushing up to the shoreline to greet him.

“What'd you find?”

That ship's not empty. It's not empty.”

“How many?”

He didn't respond.

“I heard something like eight shots! What was going on up there?”

He didn't remember firing eight shots. When had it happened? He pulled off his shoes and socks and waded through the icy water with the boxes.

"I'm sorry the rope didn't hold like it should have. Good thing we don't have to use it a second time. What all is up there?"

He handed his brother the boxes, sitting down on the beach to put his socks and shoes back on. Right sock, left sock. Right shoe, left shoe.

"Enough stuff for the people they just ended up shooting instead," he replied, walking back towards the truck to undo the rope from the hitch. Clouds were coming in and he hoped the rain would throw off the noise they had made. Matt had opened one of the boxes and was eyeing the battery generator.

"This stuff looks versatile. That's good news for us. Next time we'll both go up with the lifeboat. Do a sweep of the place."

Why couldn't he remember the shots? Is this what the apocalypse did to memory? Or had the blood mixed and this was the start of the sickness?

"I have to go," he said suddenly.

"To the bathroom?" Matt was too enamored with the supplies and their possibilities, the potential for a fast-track return to normalcy.

"No, not to the fucking bathroom," he snapped at him, throwing up his hands. Matt looked up startled. "I need to get out of this town, *now*. I kept my side of the bargain, okay? All that matters."

"You want to leave now? But we hit the jackpot, there's no point—"

He pointed to the ship. "Fuck this ship."

"I don't get it, did something—"

“I said, fuck this ship!” He shouted. He felt furious and couldn’t place it, just like he couldn’t remember firing eight rounds or why he’d even come to Superior in the first place. He dug his hand through his hair. “And you know what? Fuck you too. We could be sitting in the shack right now, far away from these fucking things, getting ready for winter but we’re fucking around out here and almost getting killed!”

Matt tried to say something but he cut him off, continuing, “That was just a part of your plan wasn’t it? You weren’t even going to give me those rations because you figured I’d stick around regardless, never seen a plan through in my life after all, or—better yet—maybe I’d just up and die. All the more convenient for you, then, wouldn’t it be brother? Get your test run. Exploit my damn guilt until it kills me.”

“What guilt?” Matt said, but then realized. “Jesus, you think I’m still mad about *that*?”

“Oh who *wouldn’t* be!” The first raindrops fell sporadically, just enough that it was hard to be sure if it had actually started to rain.

“I don’t think that’s you talking. I think it’s the booze. I can’t say I blame you but—”

He laughed. “Yeah, let’s go *there*. Just that ever dumb, ever selfish, ever drunken asshole, right? Guilty as charged.” He opened the truck door and got in. “You’ve never needed my help and you don’t need it now. Why fix what isn’t broken?” Why couldn’t he remember eight shots? Eight shots—was Matt fucking with him? He turned the ignition.

“You’re the one that came here, just remember that.” At first Matt was angry, but his voice calmed as he looked west to Duluth, then back to him. “And whether I needed you around, or you needed me around, maybe I just *want* you around now. We’re both here and we both somehow survived. We should make that worth something.”

“I will in my own way and you can in yours. I thought we’d established that.”

“At least come back and take the rations. Wait to head out until tomorrow.”

“No, I can’t. I just can’t.” He pulled the bloodied rifle off his back and handed it to him through the window. “You need this more than me. I’ll take the revolver.” They exchanged the weapons silently. “It’s nothing personal.” There were better words to say.

Matt shook his head and laughed. “Nothing personal? At the end of the goddamn world with the only other human being you’ve seen and you’re leaving and it’s nothing personal.”

“You need this radio thing to work. I need the shack to work. I can’t explain it, but there it is, I just have to. Good luck—I really do mean it.”

“Wait just a goddamn second,” he said, moving back towards one of the boxes. He pulled out a hand-crank radio and brought it to him. “At least take this. Listen for me. I’m going to do everything I can.”

He took it from Matt’s hands and stared at it for a moment, then looked back at his brother’s face. There was something in his expression that he hadn’t seen in so long, something that reminded him of when he had been little—when they both had been young, showing him cheat codes on the NES, jamming to Metallica as he drove him around town. Had it been missing in all these long years since or had he just refused to see it? He couldn’t bring himself to say anything. He set the radio down in the passenger seat, nodded his head, and drove away.

As he reached city limits, the rain came down hard—a frigid fall rain—and it soothed him. The movement of both road and rain, the endless movement of out, away, forward, from. When Superior was long behind him he looked over to the passenger seat and saw a high-school aged Lucy tinkering with the radio. In his dream-like trance it did not surprise him. “It’s a pity,” she said, her eyes still on the radio, “What you remember and what you forget.”

CHAPTER XVII AND IN THE LEFT

“What you remember and what you forget.” Lucy’s comment probes the depths of my protagonist and how trauma has shaped his memory, but her words can also serve as a convenient transition into how the public typically locates science distrust. Because it has been so well-documented by the media, “anti-science” attitudes are often remembered as an exclusive feature of the political right.¹ Perhaps this is because the religious beliefs and practices which tend to ground conservative politics make for an easy and easily visible opposition to science, whether or not faith-based arguments are consistently used. But what is forgotten by labeling the right as “anti-science” is the scope of the problem and its significance in the first place; it becomes nothing more than name-calling when in reality it is a nationwide, bi-partisan or trans-partisan problem.

As Alex B. Berezow and Hank Campbell write in their recently published *Science Left Behind: Feel-Good Fallacies and the Rise of the Anti-Scientific Left*, “The reverse phenomenon of progressive hostility toward science remains strangely underreported”² even though leftist campaigns against vaccines and GMO foods reveal that this is certainly not due to a lack of skepticism towards science among liberals. Again—as with conservatives—positions against vaccines and GMOs may be seen as relatively extreme or radical, but those who hold such beliefs are undoubtedly still members of the party at large with votes which are still valuable. And, with religion remaining largely invisible to liberal politics, we must look closer at what drives the (often willful) ignorance and rejection of scientific findings on the left and the pick-and-choose mentality that mirrors conservative behavior. I disagree with Berezow and Campbell in this regard; we are not dealing with a “reverse” phenomenon but one that takes root no matter what the political party. It becomes all the more vital to understand it.

A particularly powerful example of science distrust at work on the left—hands-down—is the growing anti-vaccine movement. This skepticism towards the safety of vaccines is entirely bolstered by Andrew Wakefield’s infamous, now-discredited scientific study which had suggested—through fabricated data—that a link existed between vaccines like MMR and autism in children.³ Although this study was later retracted and Wakefield eventually lost his medical license for misconduct, the myth that vaccines potentially cause autism persists into present-day.⁴ Based on her own son’s autism diagnosis, Jenny McCarthy of *Playboy* fame founded *Generation Rescue*⁵ (when not busy plugging e-cigarettes, that is⁶), similar to other anti-vaccine advocacy groups like *SafeMinds* and the *International Medical Council on Vaccination*.⁷ All of these organizations argue that vaccine safety has not been adequately researched, and also frequently suggest that the dismissal of Wakefield’s findings were part of a Big Pharma cover-up. Though study after study since 1998 has found no link between vaccines and autism (or other neurological disorders),⁸ no amount of studies can exonerate because the scientists behind the studies are seen as equally suspect (to say nothing of how Wakefield maintains his own credibility). In the wake of Wakefield, debilitating and dangerous childhood diseases like the measles and whooping cough have returned in full force over the last decade, “due, at least in part, to insufficient vaccine coverage.”⁹

But why is this skepticism towards the safety of vaccines seen as a predominantly left issue? It is true that vaccine refusal also continues to represent concerns about religious freedom as some faiths still object to vaccinations (making this a right and left issue).¹⁰ However, the dramatic increase in vaccine refusals since Wakefield’s study—as documented by CDC statistics on vaccinated/unvaccinated kindergarteners in the United States—reveal that the highest refusal rates occur in some of the most progressive states such as Washington, Oregon,

and Vermont.¹¹ This interesting correlation is compounded by the connections between the anti-vaccine and anti-GMO movements, which both espouse a nature/natural rhetoric. In an interview Seth Mnookin (author of *The Panic Virus: A True Story of Medicine, Science, and Fear*) states that “I talked to a public health official and asked him what’s the best way to anticipate where there might be higher than normal rates of vaccine noncompliance, and he said take a map and put a pin wherever there’s a Whole Foods. I sort of laughed, and he said, ‘No, really, I’m not joking.’”¹² While this issue may have its roots in religious practice and conservatism, it has certainly crossed the aisle since under the dangerous guise of pseudoscience. Unfortunately, this is a mentality that cannot be sustained, as a continued refusal of vaccines will begin to effect herd immunity, revealing precisely why we developed vaccines for these deadly and debilitating illnesses in the first place.

In the same vein but (perhaps) to a far less extreme degree, the anti-GMO movement also finds a comfortable home within liberal politics. Against major agribusiness and biotech corporations like Monsanto and Syngenta, the fight is waged against the perceived oppressive machinations of capitalism and the endangering of public safety for profit (all within progressive paradigms for bigger government/more regulation). On Pearl Street in Boulder or 16th Street Mall in downtown Denver, it is not difficult to find someone protesting “frankenfoods,” condemning both those who eat and grow them. And this passion isn’t merely reserved for the more colorful characters that frequent these pedestrian malls in these markedly liberal cities. Since moving from the Midwest, I have been surprised by the number of times GMOs and Monsanto (typically seen as one in the same) are brought up in conversation, and—if I hazard to mention that I know people back home who work in biotech—strangers and acquaintances alike

will often follow-up with questions about how they sleep at night or whether they have horns growing out of their heads.

While purely anecdotal, these types of reactions indicate just how deeply political and politicized conversations around genetically modified foods have become. To be for or against them is an expression of one's identity and one's individual sense of morality more than one's knowledge of or familiarity with science or scientific evidence. And while the research is overwhelmingly in favor of GMOs as a safe way to sustain our growing global population and reduce the use of pesticides,¹³ this evidence is either suspect or insufficient with the connection lost between historical gene modification (what has gone on since the dawn of agriculture) and modern-day biotech innovations. While valid concerns are raised about Big Ag's hand in all of this (much like the valid questions aimed at Big Pharma), it is dangerous to conflate science and business practice. This not only potentially shortchanges the future and weakens productive negotiations with Big Ag, but also casts suspicious light on non-related movements that liberals willingly endorse based on scientific evidence. As Mark Lynas—once a major player in the anti-GMO movement—stated during a recent talk in Winnipeg: “You can't take a position saying, ‘I am defending climate change on the basis of scientific consensus, but I'm opposing GMOs and I am opposing the scientific consensus.’”¹⁴ The pick-and-choose mentality when it comes to scientific evidence that is present on both the political left and right shows just how desperately we need scientific, critical thinking to take the fore.

Of course, the left has more rhetorical devices to deflect charges of “anti-science” when traditional religious beliefs do not play a major role in liberal policy formation. Their objections to vaccines and GMOs are more often cloaked in language about freedom, choice, and safety, even when there is no evidence for alarm in the first place.¹⁵ The precautionary principle¹⁶ that

we can never be too sure is stretched on indefinitely, sidestepping practical questions about what will happen when major disease outbreaks begin to affect the unimmunized and immunized alike or how organic models of farming would actually sustain our (growing) global food demands. And it is not difficult to see why some on the left may hesitate to accept the scientific evidence: mandatory vaccinations raise all sorts of questions about the government's regulation of the body (and how this could potentially hinder pro-choice arguments, for instance) and GMOs—coming into prominence through major corporations—raise concerns about the intensifying relationship between our food supply and capitalism.

Unfortunately, denying science (when convenient) does not make any of these issues less complex. Worse, it demands that those on the left adopt a kind of allegiance which is not far removed from the traditional religious allegiance it abhors on the right. And this is dangerous, for all the reasons liberals cite when addressing conservatives who deny evolution or human-made climate change; it limits our ability to address the problems which face us. Furthermore, the fantasies produced for liberals by the zombie narrative are just as incompatible as the conservative fantasies. While the post-apocalyptic landscape in these stories typically does provide opportunities for a more intimate relationship with the natural world, it conveniently ignores the scale of that deserved destruction at the hands of unsafe scientific endeavor—the millions if not billions dead, the other life forms and ecosystems which are decimated, and the potentially long-lasting damage to that ideal, post-apocalyptic environment. Truly, the apocalypse's only comeuppance will be that we did not learn to take our scientific research seriously—to analyze it, to improve it, to *know* it—even if it complicated political agendas.

In Chapter XV and for a majority of this one, I have discussed tendencies across the political spectrum to pick-and-choose which scientific evidence was convenient and discard what

was not. This appears to be a blend of disillusionment towards science and science skepticism. But, on the extreme end of science skepticism, there is something perhaps far more insidious which took root in the ivory tower in the late 1990s—a skepticism towards science’s very claim to objectivity and its pursuit of that academically scare-quote-worthy word “truth.” Dubbed the “science wars” and very broadly summarized as “postmodernists” in the humanities questioning and critiquing the grand narratives of the sciences, this heated discussion at best sought to reveal how culture and subjectivity played into scientific study, and, at worst, championed a kind of relativism.¹⁷ Unfortunately, this debate and its lack of resolution may have inadvertently contributed to science distrust outside of academia and into politics at large. As Michael Bérubé writes in “The Science Wars Redux,” “Some standard left arguments...were fashioned by the right into a powerful device for delegitimizing scientific research.”¹⁸ I would personally go a step farther and argue that both the political right *and* left have adopted relativism in some instances to suit their needs. Of course, that’s not to say that these movements within science studies are at fault for the present national climate towards science; they are merely another factor in its expression.

When science is unknown, it is an unbending authority that asks us to serve it. The resistance to this is understandable—seemingly American. But the relationship does not need to be this way in any capacity. Science simply cannot become as politicized when people are empowered rather than controlled by it; as the scientist in *Dawn of the Dead* (1978) begs, “This is not the Republicans versus the Democrats...it’s more crucial than that.”¹⁹ And for those who think this is still too much power to grant any human endeavor, I think my question is how well they know—or can ever know—what they are serving instead. “What you remember and what you forget.”

CHAPTER XVII NOTES

1. Alex B. Berezow and Hank Campbell write in *Science Left Behind: Feel-Good Fallacies and the Rise of the Anti-Scientific Left* (NY: Public Affairs, 2012) that “The conservative ‘sins’ against science...are widely reported and well known. Other books have already rehashed these themes, and during every election cycle the media aren’t shy about reporting how scientifically ignorant some progressives in science claim conservatives are,” 6. An example of one such popular book would be Chris Mooney’s *The Republican War on Science* (NY: Basic Books, 2005)..

2. Berezow and Campbell, *Science Left Behind*, 6.

3. Dominus, “The Crash and Burn...” and Harris, “Journal Retracts 1998 Paper...”

4. “Concerns About Autism,” *Centers for Disease Control and Prevention*, last modified February 3, 2014, <http://www.cdc.gov/vaccinesafety/concerns/autism/>.

5. *Generation Rescue: Jenny McCarthy’s Autism Organization*, last modified 2013, <http://www.generationrescue.org/>.

6. Matt Carey, “Jenny McCarthy, Shilling for Big Tobacco,” *Left Brain Right Brain: Autism News Science and Opinion*, last modified August 10, 2013, <http://leftbrainrightbrain.co.uk/2013/08/10/jenny-mccarthy-shilling-for-big-tobacco/>.

7. *Safeminds*, last modified 2014, <http://www.safeminds.org/> and *International Medical Council on Vaccination*, last modified 2010, <http://www.vaccinationcouncil.org/>.

8. “Concerns About Autism.”

9. Berezow and Campbell, *Science Left Behind*, 113. Also, see Tara Culp-Ressler’s “We thought We Already Eradicated Measles—But Thanks to Ongoing Anti-Vaccine Beliefs, It’s Back,” *Think Progress*, last modified September 13, 2013, <http://thinkprogress.org/health/2013/09/13/2617061/measles-outbreak-vaccine-beliefs/>, and Salzberg’s “Whooping Cough Epidemic.”

10. Culp-Ressler’s “Ongoing Anti-Vaccine Beliefs.”

11. Berezow and Campbell, *Science Left Behind*, 111. Also, see recent CDC data on non-medical exemptions which shows similar trends. (“Vaccination Coverage Among Children in Kindergarten—United States, 2012-13 School Year,” *Centers for Disease Control and Prevention*, last modified August 2, 2013, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6230a3.htm>).

12. Greg Miller, “Why the ‘Prius Driving, Composting’ Set Fears Vaccines,” *ScienceInsider* last modified 2012, <http://news.sciencemag.org/2011/01/why-prius-driving-composting-set-fears-vaccines>.

13. Berezow and Campbell, *Science Left Behind*, 220.

14. See Allan Dawson, “Global Warming Turned Anti-GMO Activist Mark Lynas Into a Promoter,” *Manitoba Co-Operator*, last modified March 4, 2014, <http://www.manitobacooperator.ca/2014/03/05/global-warming-turned-anti-gmo-activist-mark-lynas-into-a-promoter/>.

15. Berezow and Campbell write in *Science Left Behind* that “This stark contrast between scientists and Democrats is trivialized by progressive pundits as a mere disagreement over morality or safety. For instance, Democrats aren’t anti-science because they oppose animal research...they just have higher moral standards than everybody else. Progressives aren’t ‘anti-science’ about nuclear power; they are just ‘pro-safety.’ Progressives aren’t technophobic about GM foods; they are ‘pro-choice’ about nutrition,” 211-12.

16. Keith Kloor, "GMO Opponents Are the Climate Skeptics of the Left," *Slate*, last modified September 26, 2012, http://www.slate.com/articles/health_and_science/science/2012/09/are_gmo_foods_safe_opponents_are_skewing_the_science_to_scare_people_.html.

17. For a recap of the science wars within academia, see Ashman and Baringer's *After the Science Wars*, Ross's *Strange Weather*, and Sokal's *Beyond the Hoax* (certainly not an exhaustive list, but a start). For an understanding of relativism and social constructivism, see Boghossian's *Fear of Knowledge* and Hacking's *The Social Construction of What?*.

18. Michael Bérubé, "The Science Wars Redux," *Democracy: A Journal of Ideas* 19 (2011): 72.

19. *Dawn of the Dead* directed by George A. Romero (1978).

CHAPTER XVIII
HOME ON THE RANGE

He marked another tree with an “X” as he walked through the forest. The birch wood was soft, yielding to his hunting knife, and the carved dark cross stood out against the white bark. He was tracing his path from the shack to the water’s edge today so he would remember when the first snowfall came and made everything different. The skies were almost always grey now, heavy bellyfuls of snow. Any day now—any day. He made his way into a clearing and the lake appeared before him.

It was hard to be sure how long it had been. He knew he had arrived at the shack and it was in good shape—thankfully hidden from the roads, mercifully untouched. There were some of the sick out there on the main highway around the abandoned cars. He had abandoned his truck out there too when it ran out of gas, hiking the two-mile trip to the shack and back to unload his remaining things in the following day or days. No one ever drove by when he was out there. He hadn’t gone back since.

The rope burns on his hands had since healed—no signs they’d ever been hurt now and no signs that he was sick either. He could remember that after he arrived at the shack he had laid in bed and eaten rations for a couple days—or maybe it was a week—eating them while wondering if he was about to turn, the rest just empty thoughts. But he didn’t end up turning, so he got out of bed and began to chop firewood. How long did it take hands to heal?

He cast the fishing line out into the water—a perfect cast. His dad had made him practice plenty on that shoreline, holding his hands and showing him how when he was little, and when he got older sitting up in a lawn chair under the shade and drinking a beer, repeating “Gotta shift your weight. “Matt, throw it like your brother.” And Matt was only five and would get frustrated, crying. So he would set his own rod down and take Matt’s hands and show him how.

He should have started tallying each day—that was his mistake. In prison he'd lost the day of the week, but he'd kept note in his head of days by their qualities, whether it was four days walking, seven days without food, two days in cars, fourteen days in Superior. It got confusing when qualities overlapped but it had been some kind of number he could tell himself. Now he had no number, just unquantifiable and fleeting moments scouting the woods, practicing with the rifle that he'd pulled from the gun safe, listening to the crunching leaves beneath his feet reminding him that time was moving on whether he kept track of it or not. How many leaves had remained in the trees when he first arrived? The thick skies and his freezing ears. How few were there now?

After a time, something sharply tugged the fishing line and he began to reel it in, the fish's fight for its life forming nothing more than a little wake on the cold water's surface. Sometimes he imagined pulling one of the sick up from the waters, the horrifying climax of some major cinematic moment. But it was just a modestly sized whitefish, which flopped around then died. He had yet to see any sick wandering out in the woods; maybe they were still people after all.

That night, with the snow falling and the fish sizzling on the cast iron stove, he decided that he would call it a month. One month of staying in the shack, doing what he'd set out to do. He didn't worry yet about what winter meant, or this creeping feeling that came to him when dinner was over and the long evening set in. Sipping slowly on rationed gin, he picked up the hand crank radio and wound it until it had enough power to scan from band to band but there was nothing, just the emergency message, and static, and static, and falling snow. "Stay tuned for upcoming announcements. This concludes the NATIONAL ALERT warning..."

CHAPTER XIX SHORT LISTS

Time for reflection. Real reflection. Things I'd miss post-apocalypse, essentials:

1. My family and friends—many of which are probably dead.
2. My dog Pluto, too small to fend for himself, liking dying of starvation or exposure.
3. Electricity – light, heat, air conditioning, working plumbing, ovens, microwaves.
4. Clean water.
5. Modern medicine.

Things I'd miss post-apocalypse, wants:

1. Communication devices – Internet, cell phones, television, radios, etcetera.
2. The concept of “going out” to eat, drink – “catch up” with friends or family.
3. The arts – music, books, films, video games – most destroyed and no time to create.
4. Baseball.
5. Pop Secret popcorn and a Root Beer.

Things I'd miss post-apocalypse, memories:

1. What the world was like before it ended.
2. What the world was like before it ended.
3. What the world was like before it ended.
4. What the world was like before it ended.
5. What the world was like before it ended.

CHAPTER XX
ANIMAL

The lake froze over.

He had known that it was going to happen and he had known he didn't have the gear to ice fish. He had intended to start setting traps, start hunting. But he had never realized what it was like to be truly motivated to do something until he began to starve.

At first, he set a couple snares like Matt had proudly shown him one summer after he returned from a Boy Scouts trip. He had decided to try them because he supposed he was still somewhat worried about the loudness of the rifle firing, especially now that the world was extra quiet with a few feet of snow—who knew what those things were capable of if they were extra hungry too? But then, on the seventh or eighth day of allowing himself only a bite out of the remaining can of refried beans as he waited on his failed snares—just enough to curb the pain—he found himself downing heaping spoonfuls and then using his fingers to dig into the can and scoop out what was left. Somewhere far off there was a voice screaming at him to stop but he couldn't, and when there was none left he threw the can down crying and still didn't feel full.

Now, he sat still on a log overlooking a rash of winterberry plants in the distance. They still had their berries, and he hoped—if he waited long enough—that something would come along. He tightened the rope he'd cut to hold up his jeans and adjusted the strip of bed sheet that covered his ears. It was better than being back in the hunting shack which was growing smaller and colder each day without food. He wondered if the snow he'd brought inside would even melt today.

As he sat there he sometimes thought he saw the sick—or Joe, or Lucy—moving amongst the trees. *Hide and seek*. He had started talking to Joe more and more lately, perhaps because he was sure that Joe was dead, that he would not confuse his hallucinations for reality

and really go crazy. “Fucking freezing to death here, Joe.” He whispered. *Why couldn't this start in the winter? At least give us summer to look forward to.*

“You didn't say that though, that's me. I'm saying that.” He waited for an answer back but just then a rabbit appeared at the winterberry plants, pulling down a low hanging branch. He thought he would shake with excitement at the sight, but something else took over. He raised the rifle, looking down the sights of the still barrel, and aimed directly at its head.

The rabbit was as skinny as he was but it was still a feast. He cooked every part that he could, humming to himself a Christmas carol, deciding that it would be Christmas that day. When it was done cooking he tried to not eat it quickly but it happened anyways, and as he looked over at what was left of the carcass on the countertop, he found himself fixed on its untouched eyes.

There was some place beyond that he was reaching here at the shack, as he removed its eyes, throwing one back, then another—a sweet and altogether profound dessert. Alcohol could not compare to instinct overriding, shutting the mind down only to the moment of the kill or the taste of the food in his mouth, a present without memory or prophecy, not a dulling but a complete erasure—an absolute animal bliss. But when his stomach was full, humanity returned. He grabbed one of the bottles of liquor to quiet it and watched the fire in the stove until he fell into a black sleep.

CHAPTER XXI
THE ANTI-ZOMBIE NARRATIVE

“So, are you writing the anti-zombie narrative instead?” My friend asked over lunch one weekend while we ate pizza and drank wine and discussed writing projects. It was a valid question; my research was revealing how zombie narratives expressed and sustained the atmosphere of science distrust within the U.S. and how this seemed far from a good thing. Of course, it was too easy to blame the stories—that’s what politicians did with video games, television, and movies. And to deny the stories would be to deny and repress the emotion(s) they produced. Post-apocalyptic longing was real and palpable. People were discouraged in the present and looking for silver linings in fallout smoke. I was no different among them.

However, it was impossible to overlook how my own zombie story was being shaped by my discoveries. Zombies were playing less and less of a front-and-center role—they had not even been present in the last two chapters. And my protagonist, a rough drunk who seemed built for the apocalypse, was resisting his role as much as I resisted healing the relationship with his brother or making the hunting shack a site of renewal. I wanted to both fulfill romantic notions and starve them at the same time, resulting in an uncomfortable and often frustrating tension. My protagonist could not reverse the end of the world; he did not have the kind of power we had. So how could he resist and persist with the confines of the zombie narrative? Maybe all this effort would recapture is the cautionary quality of the zombie apocalypse.

I did not have an answer for my friend that day, but now—as I think about it—perhaps what I hope for is the continued expansion of the capabilities of the zombie narrative, whether that means directly confronting and engaging with post-apocalyptic fantasies or not. For me, it is not enough to capture the emotion; I also want to capture the response, *a response, anything.*

CHAPTER XXII
BREAK

“Because I told you I don’t want to listen to it,” he said, stumbling over to the radio on the countertop and turning it off.

Maybe it’s a game. Listen to the message enough times and you’ll win a prize. This whole thing will be over.

“Shut up.” He returned to the floor next to the stove. He’d put in all the remaining wood and heat poured from it, so much so that he was down to his shirt and underwear. But the shack was still dimly lit and the evening had only just begun. How long would the fire last? He drank from one of two glasses sitting beside him—special occasion—getting as drunk as possible on the last of the booze.

“Well, Joe, if you’re not gonna drink yours, I’d be glad to take it,” he said, picking up the second glass. “To the rabbits and squirrels and all those other little unlucky critters stuck out here too,” he giggled, taking a sip. “Can’t say you haven’t been part of a tremendous weight loss plan.”

Why don’t you check the radio again.

“Would you let up on that already?”

Check for your brother, then. If you think he’s still alive. If he didn’t die that day right out on the shore. You didn’t even see him home.

He got angry. “Matt is alive. He’s got time. He’s got plenty of time.” He took a drink. “Said himself it would take a while.”

How much time do you think you have?

Later, as he shifted the revolver from hand to hand, he tried to think about Lucy—the crucial moment—talking until morning on the docks, *really* talking, about how her parents didn’t

love one another or anything else and how his dad was a drunk and he was afraid he'd be one too. And he put his arm around her as the sun came up because she was cold and they were sad and that gesture had led to a kiss which hinted at a better life in an instant—a dream that still caught in his throat when he thought of it. So much depending on that kiss, and Lucy playfully punching his shoulder afterward, making him promise he wouldn't turn mushy-gushy now as they kissed again.

“Damn near twenty years too old to be fixated on things that happened in high school, I know.” He smiled. “No better than the fucking jocks.”

He looked at the revolver and wished he could do it right at that moment—at the zenith of the memory, that kiss, his chance out—but it always gave way, overcome by the accident and all that had happened since. *Remember how that thing ripped a chunk outta my leg? Why didn't you see it?* The last time he'd seen her she was home visiting from college, bar crawling on Tower with her friends. He had been drunk and didn't know why he was doing it as he accused her of fooling around with his younger brother, and what was she trying to prove, that even half a man was better than him? And she could have said so many things as she stood there waiting for the bartender to get her drink, but she didn't need to. When the bartender handed her the mug, she had just looked at him—*really* looked at him—and said “I feel sorry for you” and meant it. And then she turned back to her table, her friends—her life.

“The Federal Emergency Management Agency has issued a national alert.” It came from the darkness across the room and startled him.

“Joe, I thought I told you to keep that damn thing off.”

Joe was silent.

“Shelter in place.” Out of the darkness emerged Lucy, or someone who looked like Lucy—he was having a hard time keeping his eyes focused.

“In June of 1996 Matthew Eklund was permanently crippled by his brother in a single-vehicle accident,” she said, motionless, staring at him. “The driver originally reported that he had lost control of the vehicle and hydroplaned after a dog ran onto the road. Given the storm that afternoon, the baseball game they were en route to should have been postponed. This accident consequently changed local Little League policy.”

This was what it was like to lose it.

“Of course, authorities suspected *much* more than the driver’s account.” Her voice had become conversational as she walked over to the door jam and ran her fingers along where their mom had marked the boys’ heights until Matt’s stopped abruptly at ’96. “Matthew Eklund’s brother had already established quite the reputation among the Superior PD, with numerous underage drinking violations. And their father was equally no stranger to DUIs. Like father like son?”

“No.” He pulled his knees up to his chest and covered his ears, revolver still in one hand.

“Remember when you told me? When you finally spit it out *when* you were drunk *that* you were drunk and there was no dog? That if Matt could only remember the accident he’d remember telling you to slow down—to stop dicking around? You asked me if I felt different about you now. If I could forgive you.”

“You said you did, but I didn’t believe you. Who could?”

She clapped her hands together. “You’re right! Who could forgive you and this fucking on-a-cross act?”

“Lucy,” he didn’t know why he kept talking to her, it, himself.

She relaxed and leaned against the jam, arms crossed. “Cautionary preparedness actions. Confirm their every suspicion. They didn’t make you blow that day—maybe because they felt bad, maybe because they really didn’t care about what happened to white trash, or maybe because it was only 4 o’clock in the afternoon and *really*, what the fuck was wrong with you? But make sure after—with every *stupid*, selfish action after—that they know precisely what you are and what you did.”

He shook his head, his eyes watering. “I still feel horrible, every fucking waking moment of every day! What could I do? Everything was set in stone after that.”

She scoffed. “And yet here you are, at the end of the world! You know, someone once told me about how drunks linger. In accidents they say it’s because they don’t tense up.” She slowly slid down the jam to the floor. “Repeat—they wrap themselves up in so much self-pity that they’re insulated from all the emotions other people have to feel and deal with.” She was crawling over to him now, and he buried his face into his knees.

“Just go away,” he begged.

“But I did.” He thought he could feel the warmth of her breath, but he wouldn’t look up. Her voice softened, and he thought she touched his arm. “Because you were more interested in being a martyr than a man. It broke my heart to see what a pathetic coward you could be. I could no longer reach you—” she paused, “—you were just so entirely resigned.” He thought he heard the boards beneath him creak as she stood up. “But, hell, I got over it eventually. What other choice do we ever have?”

He jammed the barrel into his mouth, looking up at her, talking over the metal, “I’ll do it then. Make your impression complete.”

She rolled her eyes. “I couldn’t think any less of you at this point, so don’t bother. The CDC has not proven that you’ll even make it through the rest of this winter.” She started to retreat into the shadows. “Wasn’t it your buddy Joe who said it? Waste of a bullet?”

“Lucy, please, wait—” he dropped the revolver and got up, head swimming, moving towards her. But she was gone or had never been there, just the radio on the countertop, the robotic voice on and on endlessly, “Call 9-1-1 if YOU or anyone you KNOW is experiencing symptoms. Repeat call 9-1-1. Stay TUNED for upcoming announcements. This concludes the NATIONAL ALERT warning from the Federal EMERGENCY Management Agency... ..
... The Federal EMERGENCY Management AGENCY has issued a NATIONAL ALERT. SHELTER in place...”

He threw the radio against the wall along with everything else he could reach, and screamed, and screamed—so much so that any of those things in the forest outside could hear him, and anyone alive would be hard pressed to tell the difference.

CHAPTER XXIII
AUTHOR INTERVENTION

I carefully made my way through the ruins from the prior night, the artifacts from another time now scattered across the shack's floor, the specks of glass glittering in the sunlight. He was sleeping face-down on the mattress which he had dragged from the other room and set near the stove. It was cold though—the fire was out—and I zipped my own jacket up further. The temperature masked the rotting of animal remains and all the other smells that came from living in a cage. I dug at the cool coals in the stove with the fire poker. No luck.

When his eyes opened, they locked on me startled. “Great. Now I’m seeing you when I’m sober.”

“You, who?” I replied.

“You look like Lucy, but you’re not her.” His eyes searched the room for where the revolver had wound up. “Are you real? What do you want from me?”

“I actually came to ask you the same question.” I set the poker down and walked across the room, pulling the rifle out from beneath a hope chest in the corner. “Here you are,” I said as I handed it to him. “And the revolver’s out in the snow somewhere.” I answered him before he asked, “Because I know you won’t use it on me,” and then headed towards the window.

“What do you want?”

“How long since you’ve seen a zombie? Been forever, hasn’t it?” I kept looking out the window. “Starting to think that’s not what this is even about anymore.”

“Who are you?”

I didn’t say who I was because there was no sense in breaking the wall completely; I was in a rut, but not that desperate. I only needed to know how to write him out of a narrative that was unsustainable and how his narrative would connect to the bigger message, forming

something like a call-to-action now, about understanding the absolute power of the zombie in the present moment. Simple tasks. “What do you need?” I finally asked him.

He paused for a long time, visibly irritated. “What do you mean? Physically? Spiritually? Did I finally go through with it last night—is that what this is about?”

“No, you didn’t.” And I paused too. “I guess I mean both. The world’s been ripped out from beneath you without your say-so, and I haven’t helped much given the circumstances. It’s already too late. Don’t know what I expect you to do about it.”

I felt him backing slowly away from me, his hands tighter on the rifle, “I have no idea what you’re talking about.”

“I can’t give you rations—that’s too unrealistic. And the trees aren’t going to chop themselves into firewood. Ditto for the lake melting before spring. You need a bigger reason anyways, like all people in this kind of position need. You deserve the storyline.” I traced shapes in the dust on the window ledge. “I could burn the place down, get you moving, but that’s so violent—you’ve had more than your fair share at this point.”

He unlocked the safety. “I think you should leave now.”

“I will, don’t worry, no need.” I put my hands up and turned towards him, seeing the barrel pointed at me. “Just entertain me. If I had the power to do something about your situation right now—here at this shack—what would it be?”

He kept the gun pointed but answered. “I don’t wanna die out here. I thought I did but I don’t.” He seemed surprised by what he had said.

“Okay,” I said. “Okay.” I slowly walked to the door, my hands still up. “I’ll see what I can do.” And I walked out into the snow and he eventually lost my tracks in the woods.

CHAPTER XXIV
ZOMBIE EX MACHINA

He followed her footprints in the snow for about two miles until they hit a patch of bare ground and disappeared. He spun around, birch saplings like needles in every direction, beginning to wonder if he had been walking straight into a trap.

“Where are you?!” His voice was hoarse but he still hollered, and a few frightened birds took flight. His words hung in vapor, the echo sucked down into the surrounding snow.

Maybe you're dead. Did you look for your body in the shack this morning?

“Lucy!” He yelled, even though it hadn't really been Lucy, even though Lucy was likely dead like all the others and here he was. But he had nothing else to yell.

There was a response, beyond the saplings where the pine trees picked up. It was an airy scream, but he still knew it. If it had been months earlier he would have begun running back to the shack, but now—fuck it. He raised his rifle in the direction of the sound and headed into the trees. It screamed again, but there was something off, something distant about it.

When he lifted up the low branches on one of the pines where he heard groaning he saw why. Near its trunk was one of the sick, probably once a teenage boy. It did not scare him because it was clear that the thing was weak, its body entirely emaciated as its legs rotted away to little more than bones. *His* body, *his* legs—as he laid there so helplessly it was easier to think of him as human. He wondered where he had come from, how long he had been this way, what he had wanted to do with his life. The boy attempted to crawl towards him but did not have the strength, letting out a painful shriek from his hanging jaw. He turned to see if the noise was signaling others in the woods but nothing stirred, and when he turned back he saw that the kid had begun to shake violently. The seizure persisted for a minute, but then it was done and he was still.

He stood there looking at the boy for a long time. He nudged him with the rifle but nothing happened.

He was dead.

He traced the boy's drag marks in the snow to an overturned camper on a gravel road not far from the tree. There were three others dead—nearly frozen solid—but only one from a gunshot. The camper was empty so he turned back. He didn't have a shovel or the strength.

His mind was empty as he walked back to the shack, his old footsteps smoothing as the midday sun melted the snow. He knew he had witnessed something which changed everything, though he wasn't sure exactly how. The struggle to survive still continued, zombies or not—but maybe that was it after everything else. When he was close to the shack a deer emerged from the brush, the first he'd seen all winter.

Later, as he pulled apart big strips of cooked venison and chewed thoughtfully, he looked at the radio broken on the floor. Time had another way of passing now, feeling like a near year since he'd thrown it. Had it only been hours? *She was more than in your mind.*

He didn't think about that night anymore. He just thought about fixing the radio.

CHAPTER XXV
THE ZOMBIE AS NEGOTIATOR

I was playing as Rochelle in *Left 4 Dead 2*, about to trigger a swarm as I activated the Screaming Oak rollercoaster in a zombie-invested theme park.¹ At that point, it was mainly about running as I carefully navigated the bends in the track. Zombies were still coming in all directions, but—if you fell off—you’d be good as dead.

I played for the rest of the afternoon, finishing the “Dark Carnival” campaign and going on from there, soothed by the repetition and familiarity of the gameplay—grabbing ammo, picking up new melee weapons or Molotovs, healing myself or teammates with first aid kits, taking pills or adrenaline shots for those tight spots, but, most importantly, killing zombies left and right. It was a nice reprieve, a back-to-the-basics moment in what otherwise had often felt like a rather perilous research odyssey. In asking “why zombies?” and “why now?” I had found troubled, apocalyptic attitudes and troubled, politicized science. Struggling under the weight of these implications, I additionally watched my own zombie story become (at times painfully) self-aware, concerned with its perpetuations and whether or not this new knowledge could ever be used to productively challenge or reinvigorate the zombie narrative. My direct intervention in Chapter XXIII, when death was my protagonist’s only other option, seemed to suggest that this experiment in narrative deconstruction was hedging on full-blown narrative *destruction*—even the zombies themselves had largely disappeared from view.

Perhaps it had been foolish of me, then, to think that such reflection was possible if science distrust and post-apocalyptic fantasy were so integral to and embedded within the zombie narrative; maybe all we can hope to do is read these narratives as symptomatic. Of course the problem is that these discussions are rarely taking place within the mainstream, even as thousands parade through major metropolitan areas dressed as zombies, torn between the

fantasies of the survivor and the seemingly inevitable fate of the undead. These conversations fall into a no man's land, typically considered not "serious" enough for the ivory tower and seemingly *too* serious for "popular" discussion. This is nothing new for any inquiry into a pop culture phenomenon, and much work has been done within academia in recent years to reveal how previously perceived "low brow" subjects are worthy of scholarly study. However, in this crusade against stuffy old curmudgeons and cultural elitists within the university, the people who have made popular culture *popular culture* are often left out of the discussion. In the case of zombie popularity, the assumption is that "they" (whoever this troubling "they" is) would not be interested in anything beyond superficial engagement—defined as merely the passive consumption of zombie films, books, and video games—even though the depths that zombies reach are what drives consumption in the first place.

Besides this, tracking consumption reveals a definite interest in critical engagement as evidenced by the reviews from "non-academics" on scholarly works² (a definite rarity), as well as an eagerness for books *about* zombies, such as Brooks's *The Zombie Survival Guide* and Matt Mogk's *Everything You Ever Wanted to Know About Zombies* (both of these guidebooks give voice to the history of the zombie and the popularity of the phenomenon). There are even lively internet forums dedicated to the "why zombie?" question, whether they are based around a particular zombie narrative (such as *The Walking Dead* television series) or not.³ In short, academics are not the only ones interested in why zombies make them tick. While it may seem like the ultimate cop-out when considering a call-to-action, we should use this popularity and interest to our advantage, as a way into discussions about their current cultural significance, their encapsulation of post-apocalyptic desires, the fears they represent when it comes to our technologies and our future—the list goes on. Our fictions time and again have proven

themselves useful in opening up conversations (and brainstorming solutions) about issues in the “real” world; if there is a demand, we should respond to it both inside and outside the classroom. More importantly, the zombie’s widespread demographic appeal can also provide common ground to otherwise disparate groups, perhaps making conversations about the politicization of science far less heated. The staying power of the zombie narrative implores that we begin to see this as something more than a temporary fad—something worthy of attention on every level.

And, turning back to my own zombie story and its experimentation with dominant “trends” in the zombie narrative, perhaps resistance from within the narrative is also possible and already occurring. Certainly, my research has led me to believe that science distrust and longing for the apocalypse/post-apocalypse are necessary components of the contemporary zombie narrative and have intensified over the last fifteen years. But, in many ways, zombie narratives themselves seem to complicate their own dominant messages. While scientific mishap is typically the cause for zombie outbreak and societal collapse, acquiring medical supplies and finding a “doctor” or “scientist” often become paramount in the post-apocalyptic landscape. Similarly, human errors which are linked to the initial scientific mishap—whether fueled by ignorance, greed, cowardice, or plain malcontent—are often frequently overcome in the post-apocalypse, as people work together in ways they have never done before, revealing previously unseen capacities for cooperation, bravery, and innovation (making one wonder why these capacities could not be tapped into pre-apocalypse). And, the overwhelming majority of zombie narratives do *not* provide idyllic visions of post-apocalyptic utopias (or, if they do, there’s also some insidious catch a la The Governor’s Woodbury settlement in *The Walking Dead*⁴); in fact, most of them depict the hardships of merely surviving on a day-to-day basis, despite what we project onto them and despite how we compare these worlds to our present lives. Of course,

these forms of resistance to the narrative are only possible because of, rather than in spite of, the zombie apocalypse. Maybe these stories “invoke the particularly apocalyptic paradox that the world must end in order for there to be any future for the world,”⁵ which makes an appreciation for science, cooperation, and innovation only possible *after* the world as we’ve known it has ended. After all, would my own protagonist ever bother to learn how a radio works or face his own personal demons without a catalyst of epic proportions?

Yet, even if these changes are apocalyptically contingent, they certainly have the power to begin a dialogue on why this is so, and whether or not we are willing to accept this for our own future and the problems we face. Consequently, continuing to complicate the conventions of zombie narratives may be another way to maintain the conversation, as implications are examined and questioned during production. This is far from the whole picture, though. Something else has been clearly uncovered by this journey.

And it has everything to do with our relationship to science.

CHAPTER XXV NOTES

1. *Left 4 Dead 2*, written by Chet Faliszek and designed by Mike Booth (2009; Kirkland, WA: Valve Corporation, 2009), DVD.
2. Scholarly works such as Bishop's *American Zombie Gothic* and Boluk and Lenz's *Generation Zombie*.
3. See *The Walking Dead Forums*, last modified 2014, <http://www.walkingdeadforums.com/>.
4. *The Walking Dead Season 3*, created by Frank Darabont (2012-2013; NY: AMC, 2013), DVD.
5. Scholarly works such as Bishop's *American Zombie Gothic* and Boluk and Lenz's *Generation Zombie*.

CHAPTER XXVI
HOW DOES A RADIO WORK?

How does a radio work?

The ice was breaking in the lake.

How does a radio work?

He first came to know all the little pieces, picking them up from the floor, forming a mini mosaic of technology on the countertop. Arranging the pieces like a puzzle, the question of how now filled his nighttime hours.

How does a radio work?

He still got frustrated now and then. Always tinkering, and it seemed beyond repair. His brother could have it fixed in a heartbeat if he was still alive—please be alive.

How does a radio work?

As a last resort when everything else failed, he pulled a red-hot fire poker from the stove. He tapped it gently to a disconnected wire and the battery terminal. Then, he waited for it to cool. It all hung on that radio—that little bit of hope he'd long last let in.

How does a radio work?

He twisted a pared-down stick where the hand crank had once been. Juicing the battery. The fifth time trying, final time trying. Apocalyptically contingent? He missed Matt.

The radio worked, clicking on, the band light out and the red tab gone, but the emergency message playing like it'd never stopped, all its "Shelter in PLACE" as pointless as his running but, never mind—welcome words now. She *was* more than in his mind. He turned the dial up, more static, then down, with all that sense of possibility in the remaining bandwidth.

And his brother's voice suddenly cut through, clear as a bell. He jumped up and down, laughing, unable to contain himself. "Clear as a bell, clear as a fucking bell!"

CHAPTER XXVII DON'T KNOW MUCH ABOUT SCIENCE BOOKS

It's certainly not the first time anyone's heard it; we need to improve this country's relationship with science. Most of the time it is articulated as an issue with public education, our desperate need for improvement and reform so that more American students can reach scientific literacy (and so that 1 in 4 won't think the Sun revolves around the Earth). Of course, this is not an improper articulation; formal education is essential to depoliticizing science, to shortening the distances between scientist and layman, and to encouraging critical thinking. As the late astrophysicist Carl Sagan—one of the best-known science communicators and educators—writes in *The Demon-Haunted World: Science as a Candle in the Dark*, “When, through indifference, inattention, incompetence, or fear of skepticism we discourage children from science, we are disenfranchising them, taking from them the tools needed to manage their future.”¹ Education is key to stopping the pick-and-choose mentality that proliferates the current atmosphere surrounding scientific study, and it is essential that we invest in it.

Is “education” merely a buzzword, though? After all, Sagan and others have pushed for such improvements since at least the 1980s, and now, approaching forty years later with our educational systems hardly improved, what's the fuss? It is not difficult to see why one might think there's no real cause for worry if things have been so far, so good. However, it is hard to know exactly how continued scientific illiteracy has impacted our nation (environmentally, economically, politically, socially), or contributed to the issues now on our horizon, such as climate change, depleting natural resources, and exploding global population. Unfortunately, these problems are very much real with some only decades away; the recently released 2014 State of the World report documents how overall quality of life is continuing to improve, but will last “only if we rise to the challenges which threaten environmental catastrophe.”² While it was

perhaps possible to be apathetic in the past, it is increasingly clear that we have little time left to procrastinate. And it seems that we may already know this, as zombie narratives and other apocalyptic/post-apocalyptic fiction have come to dominate our culture. Through these stories we are predominantly bombarded by visions of what will happen if we continue to do nothing, with the final standoff—our last shred of denial—maintained only by the false image of the idealized survivor and the delusion of post-apocalyptic utopia. Consequently, zombie narratives are predominantly signaling humanity's grim end as the result of our fractured relationship with science (even if they are quick to villainize science and scientists over the general population). In this sense, it is obvious that more knowledge certainly wouldn't hurt....does it ever?

However, improving science education is far from the whole solution. Another quality of the current climate surrounding science in the United State has everything to do with attitude. In one regard, there's currently a profound sense of cynicism which makes apocalyptic/post-apocalyptic futures appear both inevitable and acceptable. Whether this is due to prolonged wars or recession, I know that personally I have often felt hampered by the weight of "why bother?" and, unfortunately, this sense of helplessness and hopelessness undoubtedly feeds apathy and inaction. In addition, America's long history of strident, anti-intellectualism³ has equally contributed to a public that is often hostile towards or suspicious of scientific endeavors (among other academic activities) merely because they are evidence of higher education, the forte of "nerds," "geeks," and others deemed socially undesirable or potentially threatening. Conversely, this bolsters an acceptable amount of arrogance among some scientists, who feel that their knowledge is not only forever out-of-reach but also not necessary to share (a "just-trust-me" philosophy). To that, E.F. Schumacher provides words to live by, remarking that "Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of

genius — and a lot of courage to move in the opposite direction.”⁴ But, perhaps what attitude is most insidious (because it is the most subtle) is a righteous form of political correctness which has allowed religious faith and pseudoscientific beliefs to make equal claims to scientific truth.

Sagan writes:

In a life short and uncertain, it seems heartless to do anything that might deprive people of the consolation of faith when science cannot remedy their anguish.

Those who cannot bear the burden of science are free to ignore its precepts. But we cannot have science in bits and pieces, applying it where we feel safe and ignoring it where we feel threatened—again, because we are not wise enough to do so. Except by sealing the brain off into separate airtight compartments, how is it possible to fly in airplanes, to listen to the radio or take antibiotics while holding that the Earth is around 10,000 years old or that all Sagittarians are gregarious and affable?⁵

Sagan brings up a crucial point; politically correct science *is* politicized science (if the name wasn't a tip-off enough). And while scientific study does not need to oust or strike down personal or spiritual beliefs, Sagan stresses that they cannot be in direct competition with them (an example being the evolution/creationism debate). We simply cannot pick-and-choose, but, even when we realize this, it seems we are often hesitant to engage with or challenge those who are doing precisely that. Sagan continues, “If we offer too much silent assent about mysticism and superstition—even when it seems to be doing a little good—we abet a general climate in which skepticism is considered impolite, science tiresome, and rigorous thinking stuffy and inappropriate.”⁶ This fear of impoliteness, combined with cynicism, anti-intellectualism, and arrogance, makes for a complicated climate which the classroom alone cannot address.

How can we begin to change attitudes towards science on the large scale? I would argue that work needs to be done *outside* the classroom as much as work needs to be done from within. First of all, the need for science communicators (those who translate scientific ideas and research for a lay audience, prompting their engagement, enthusiasm, and discussion) is at an all-time high. Scientists such as Cornelia Dean and Randy Olson have written books on how researchers can and should improve their public communication skills,⁷ while universities are increasingly seeing the need to include science communication courses in undergraduate and graduate science curriculum.⁸ Contemporary science communicators such as Neil deGrasse Tyson (at the helm of Fox's *Cosmos* reboot which is being broadcast in 170 countries and 45 languages⁹), Brian Cox, Bill Nye, David Pogue, and Phil Plait all emphasize the importance of public education much as Sagan did, using the Internet (for example, Plait's *Bad Astronomy* blog¹⁰) and television to reach large audiences in exciting new ways. While it's not only clear that we need far more women as science communicators (and women in science overall, which is another issue entirely), it's also clear that this list is not nearly long enough. And I see potential to expand this kind of communication by utilizing a pop culture phenomenon like zombies, not only their dreamed physiologies but also what their stories imply. It is here where the humanities (with its insights and knack for communication) can join forces with the sciences, beginning to heal the rift between the disciplines as both sides learn how they can do even better work together.

Nevertheless, how does improving science communication really differ from improving science education within our public school system? Isn't this just another educational Band-Aid to a still bigger problem? While it is true that the goal of science communication is to educate the public, it has additional utility as a PR machine for science at large, putting an active, approachable, and enthusiastic face on scientific research. Part of the current makeup of science

distrust may, in part, be due to the deep divide between scientists and the public. There is a definite sense of us-versus-them (as *Dawn of the Dead* so lovingly showed), and when this happens, the productive relationship between audience and speaker is compromised. As Michael Svoboda writes, “An audience must believe in the expertise the speaker claims to possess or represent....one possible explanation for public skepticism regarding certain kinds of science may be that this shared framework has not yet been established—or has been fractured.”¹¹ The need to build or rebuild rapport becomes a major goal of science communication, then, showing that scientists and the public want the same things, that transparency is possible, and that the public’s participation is just as important. Besides this, because the scale is so much larger, science communication can begin to form common ground: “If we are going to decide big issues...we are going to have to start from some common experience.”¹² Like survivors of the zombie apocalypse, we need to work together, or die alone.

And, in the end, zombie narratives and the people who write them may have one more role to play in improving our relationship with science. These stories have sounded the alarm and have given us ways into larger discussions (as elaborated in Chapter XXV), but they have also given us the image of the pulled-up-by-boot-straps survivor. The survivor provides an idealized image of who we could be—brave, resourceful, cunning, persisting in spite of the odds—a character troubled only by their apocalyptically-contingent existence. But is this necessary? Why do we not approach our everyday life as survivors, of whatever personal hells we’ve endured, of modern life, of post-industrial late capitalism? Maybe it’s a romantic, somewhat hokey notion, but the person we see ourselves as in these narratives is one we’re very much capable of being right now—primarily because we were capable of imagining such a person in the first place. And, zombies or not, the stakes are just as high in the present day, even

if they aren't as bloody. This change in attitude could mean everything, and zombie narratives capture us, the problem, and the solution.

At the end of my own zombie story, it is a radio—and learning how a radio works—that signals the turning point for my protagonist. Of course, he had the radio all along, but it took temporarily breaking it—and realizing what he'd lost—in order for its profound significance to be realized. Do we need to lose things before we realize their worth? Is it necessary, as it happened to my protagonist—my unnamed protagonist, my stand-in—to lose friends and family, health, dignity, and nearly mind before clarity, before understanding that life must be lived in? “What other choice do we ever have?” Lucy's words reverberate. Maybe it takes apocalyptic events to learn that our futures are dictated by present actions. But, truly, the apocalypse is unlikely, so from where shall our catharsis come? Hopefully, it arrives when we finish these narratives, after we've toured hell, looking out at the world around us and knowing—now truly understanding—what amazing parts we play in a better future for more than just a lucky few.

CHAPTER XXVII NOTES

1. Carl Sagan, *The Demon-Haunted World: Science as a Candle in the Dark* (NY: Random House, 1996), 317.
2. Jonathan Owen, "State of the Future report: Humans are doing OK, but nature suffers as a result—and we'll pay for it," *The Independent*, last modified March 16, 2014, <http://www.independent.co.uk/environment/nature/state-of-the-future-report-humans-are-doing-ok-but-nature-suffers-as-a-result—and-well-pay-for-it-9194808.html>.
3. See Richard Hofstadter's classic *Anti-Intellectualism in American Life* (NY: Random House, 1962).
4. E.F. Schumacher's "Small is Beautiful," *The Radical Humanist* 37 (1973): 22.
5. Sagan, *The Demon-Haunted World*, 297.
6. Sagan, *The Demon-Haunted World*, 298.
7. Cornelia Dean, *Am I Making Myself Clear?: A Scientist's Guide to Talking to the Public* (Cambridge, MA: Harvard UP, 2009) and Randy Olson, *Don't Be Such a Scientist: Talking Substance in the Age of Style* (Washington, DC: 2009).
8. See Sarah E. Brownell, Jordan V. Price, and Lawrence Steinman's "Science Communication to the General Public: Why We Need to Teach Undergraduate and Graduate Students this Skill as Part of Their Formal Scientific Training," *Journal of Undergraduate Neuroscience Education* 12, no. 1 (2013): 6-10.
9. Dennis Overbye, "A Successor to Sagan Reboots 'Cosmos,'" *The New York Times*, last modified March 3, 2014, http://www.nytimes.com/2014/03/04/science/space/a-successor-to-sagan-reboots-cosmos.html?_r=0.
10. Phil Plait, *Bad Astronomy: The Entire Universe in Blog Form*, last accessed March 21, 2014, http://www.slate.com/blogs/bad_astronomy.html.
11. Michael Svoboda, "Science Communication Needs the Humanities," *The Yale Forum on Climate Change & The Media*, last modified July 19, 2012, <http://www.yaleclimatemediainforum.org/2012/07/science-communication-needs-the-humanities/>.
12. Overbye, "A Successor to Sagan Reboots 'Cosmos.'"

CHAPTER XXVIII
ALIVE 550 AM

He kept the station on morning and night over the next few days to make sure the broadcast was real and stayed so, now that his brother gave a sure form and certain number to each day, now that he prepared to leave the shack behind for good.

As he hiked towards Superior, there were sometimes bones and the occasional skull on the highway, but otherwise the sick were gone and the spring thaw had readily worked at their remains. In the countryside, it was harder to see how they had ever been there at all, with only the occasional abandoned vehicle continuing its vigil to their memory for the time to come. Maybe it had been wishful thinking—to believe that anything could be undead—as he and his brother had pulled from movie scripts, an us-versus-them rebuilding plan, a runaway last-man-alive plan. Neither could grasp the firsthand, but of course they wouldn't have. When he'd crank the radio for comfort as he walked with the cool spring breeze blowing from the west and the sun at his back, he could hear it in his brother's voice, too. Whether he was talking about the few other survivors onboard the ship, other reports of the sick dying naturally, the availability of food and medical supplies, or how others out there could get on the air, there was always an underlying sense of absurdity, as if at any moment he would sign off with his DJ name and cut to commercial. But what other choice had they been given?

He had debated what to do with the shack before he left. He had fantasies about some kind of cleansing by fire as he had very nearly died within it, whether by starvation or his own hand—if they weren't one in the same far more than he'd ever realized. But, even in the blur of all the booze, the nightmarish contortions of those he'd lost to death or time, the reaching down to the bare animal heart to know the ugliness of the mind at work above it—it had all been so

necessary and unavoidable. And, after all, the shack had also been a place where he very nearly *did not* die. So he cleaned it up and left the rifle.

A day and a half into his walk he came across a family of three reaching the highway from a county road. His voice felt rusted since he had finally let Joe rest but as he walked along with the young husband and wife and their little daughter—a quiet, messy-haired brunette like an elementary-aged Lucy—he started to find the words again. The husband went on about the bunker they had stayed in all winter, smiling and laughing about how everyone for years had said it was crazy tin-foil hat shit but look now—*look now*—who’s crazy now, should’ve expected as much from that idiot in office. The wife’s face was stiff as her husband carried on, clearly a learned response to the reasoning she had heard a hundred times before, just as incomprehensible and unsatisfying and besides-the-fact then as it was now.

Because it was clear that asking why they had left the bunker with only the shirts on their backs would be a source of tension, he left the conversation lull instead, listening to the little girl a few paces ahead humming some song that’d be forgotten otherwise.

“Why are you headed to Superior?” The wife asked after a time, when the husband was ahead with the daughter now napping on his shoulders. He was still getting used to putting sentences together, still surprised by how quick speech seemed, and—sometimes—how insufficient it was.

“I’m the brother,” he finally said.

A smile moved across her face and she laughed. “That’s a good one.”

At dusk they reached the edge of Superior. There were no screams now, and the scraping of the boats had softened—maybe because many had finally sunk or maybe because they had always been louder in his mind. He jogged ahead to the top of the hill where he could see the

lake in the distance, and there the ship appeared with a few of its portholes glowing and a giant banner hanging from the hull which he could just make out in the failing light, written in large black letters across it Matt's radio station "ALIVE 550 AM." With his eyes wet, he cranked the radio and caught the tail end of his brother's broadcast, the final lines which had been the same every time, morning and night:

"...week six, evening thirty-eight broadcast out of Superior in Northern Wisconsin, where food and supplies are available for those in need. Good luck out there, everyone. And to my brother, if you're hearing this...see you soon."

EPILOGUE

I am sitting at an open-air bar on the Las Vegas strip, welcoming one of many more congratulatory piña coladas to come. The location seems a fitting finale to the end of my project which has generally examined the power of illusion, though I suspect that the uncontrollable symbolism of Sin City speaks to nearly any project.

Because it is early spring the weather is still cool, a comfortable seventy degrees which seems at odds with the bone-dry peaks in the distance, the sweatshirt-friendly temperatures on the casino floors, and the dirty roads littered with escort playing cards, their asphalt melted and re-melted a thousand times over during the hot months. But, the light breeze that rustles the imported palm trees beside me is dry—drier than mountain air—a sign of the approaching white-hot summer, the city's desert reality. And, among all these palatial tributes to ultimate excess rising from the desert floor, an even larger monument exists mostly unseen giving a very certain finger to mother nature—a teenaged defiance of water's precious importance and growing scarcity in the Mojave. The timid placards in hotel bathrooms encouraging you to hang up your towels, the low water levels in the fountains, the bathtub rings on Lake Mead visible as you fly in—these are the tourist's only indications of the coming water crisis.¹ Yet, even if we know it as outsiders—even if we realize that the coming decades will surely alter this landscape—we typically preoccupy ourselves with the thought only momentarily. After all, we came here for spectacle. After all, it seems inevitable. And here I am, discovering the building blocks of zombie narrative appeal once more.

Picking at a heaping pile of nachos set down in front of us, my boyfriend and I debate what would happen if the city really did run dry, whether the few remaining mega casinos would ship in water until even that was no longer cost-effective. I entertain an apocalyptic vision of the

desert coming to reclaim these monoliths once they've been long-last abandoned, preserving them like an ancient Egypt for future civilizations. We only flirt with ideas of sustainability for those dreamed-of future generations, a conversation otherwise seemingly too serious, action-oriented, and of the type that just may get things done. It's not always easy to practice what you preach. I'll be the first to admit that.

There are some moments that write themselves, though, as he suddenly interrupts, telling me to look out to the Boulevard where a steady stream of cars, cabs, and moving billboards roll by. Among them this time is a military-style cargo truck, letters painted on the side advertising the "Zombie Apocalypse Store," an outlet just west of the strip selling survival food, supplies, weaponry, and "zombie t-shirts"—even providing the opportunity to "shoot real zombies" on a nearby paintball course for 85 bucks.²

"After all this work, doing research and trying to write my own story," I say to him, shaking my head, "Should've just come out here and snapped a photo of that truck going down the strip."

"Yeah, sums it up nicely, doesn't it?" He responds.

Las Vegas provides one last bit of commentary before we leave, as I watch a \$20 voucher turn into nothing on a Wheel of Fortune slot machine. The saying of disgruntled gamblers everywhere, that "the house always wins," never feels truer than in that moment. But I think about the probability games currently being played with our future, of our seeming resignation to apocalyptic fate like just another layer of gold paint on casino walls. *What else can you expect?* But these games are not the same. And we control the house.

EPILOGUE NOTES

1. See France Weaver's "The unprecedented water crisis of the American Southwest," *The Week* last modified February 1, 2014, <http://theweek.com/article/index/255814/the-unprecedented-water-crisis-of-the-american-southwest> and Eric Holthaus's "The Thirsty West: What Happens in Vegas Doesn't Stay in Vegas," *Slate*, last modified March 18, 2014, http://www.slate.com/articles/technology/future_tense/2014/03/las_vegas_water_conservation_it_s_a_mirage.2.html.

2. *Zombie Apocalypse Store*, last modified 2014, <http://zombieapocalypsestore.com/>.

BIBLIOGRAPHY

- 28 Days Later*. Dir. Danny Boyle. 20th Century Fox Home Entertainment, 2002. DVD.
- 28 Weeks Later*. Dir. Juan Carlos Fresnadillo. Twentieth Century Fox Film Corporation, 2007. DVD.
- Adair, Bobby. *Slow Burn: Zero Day*. CreateSpace, 2013. Kindle file.
- Ahmad, Aalya. "Gray Is the New Black: Race, Class, and Zombies." Boluk and Lenz 130-146.
- American Preppers Network*, 2014. Web. 1 Mar 2014.
- Ark Encounter*. Answers in Genesis, 2014. Web. 1 Mar. 2014.
- Ashman, Keith M. and Philip S. Baringer, eds. *After the Science Wars*. New York: Routledge, 2001. Print.
- Badley, Linda. "Zombie Splatter Comedy from *Dawn* to *Shaun*: Cannibal Carnavalesque." McIntosh and Leverette 35-53.
- Berezow, Alex B. "Column: GOP Might be Anti-Science, But So Are Democrats." *USA Today*. 20 Sep. 2011. Web. 15 Nov. 2012.
- and Hank Campbell. *Science Left Behind: Feel-Good Fallacies and the Rise of the Anti-Scientific Left*. NY: Public Affairs, 2012. Web.
- Bérubé, Michael. "The Science Wars Redux." *Democracy: A Journal of Ideas*. 19 (2011): 64-74. Web. 14 Nov 2012.
- "Best Sellers in Books." *Amazon*, 2012. Web. 15 Nov. 2012.
- Birch-Bailey, Nicole. "Terror in Horror Genres: The Global Media and the Millennial Zombie." *The Journal of Popular Culture* 45.6 (2012): 1137-1151. Web. *Wiley Periodicals*. 6 Nov. 2013.

- Bishop, Kyle William. *American Zombie Gothic: The Rise and Fall (And Rise) of the Walking Dead in Popular Culture*. Jefferson, NC: McFarland & Company, 2010. Print.
- Boghossian, Paul. *Fear of Knowledge: Against Relativism and Constructivism*. New York: Oxford UP, 2006. Print.
- Boluk, Stephanie and Wylie Lenz, eds. *Generation Zombie: Essays on the Living Dead in Modern Culture*. Jefferson, NC: McFarland & Company, 2011. Web. *University of Colorado Libraries*. 26 Nov. 2013.
- Boon, Kevin. "And the Dead Shall Rise: Part introduction by Kevin Boon." Christie and Lauro 5-8.
- Bourne, J.L. *Day by Day Armageddon: Origin to Exile*. New York: Gallery Books, 2011. Print.
- Brooks, Max. *World War Z: An Oral History of the Zombie War*. NY: Broadway, 2006. Print.
- . *The Zombie Survival Guide*. New York: Three Rivers Press, 2003. Print.- #146
- Brownell, Sara E., Jordan V. Price, and Lawrence Steinman. "Science Communication to the General Public: Why We Need to Teach Undergraduate and Graduate Students this Skill as Part of Their Formal Scientific Training." *Journal of Undergraduate Neuroscience Education* 12.1 (2013): 6-10. Web. *National Center for Biotechnology Information*. 21 Mar. 2014.
- Campbell, Andy. "Richard Cimino Jr., Naked and Bloody, Gnaws on Woman's Head, Cops Say." *The Huffington Post*. 13 Sept. 2012. Web. 15 Nov. 2012.
- . "Carl Jacqueaux Bit a Chunk of Face off Victim Todd Credeur in Louisiana, Cops Say." *The Huffington Post*. 6 June 2012. Web. 15 Nov. 2012.

- Carey, Matt. "Jenny McCarthy, Shilling for Big Tobacco." *Left Brain Right Brain: Autism News Science and Opinion*. 10 Aug. 2013. Web. 1 Mar. 2014.
- Chappell, Bill. "Watch The Creationism vs. Evolution Debate: Ken Ham and Bill Nye." *NPR*. 4 Feb. 2014. Web. 1 Mar. 2014.
- Christie, Deborah and Sarah Juliet Lauro, eds. *Better off Dead: The Evolution of the Zombie as Post-Human*. New York: Fordham UP, 2011. Print.
- Cohen, Patricia. "A Split Emerges as Conservatives Discuss Darwin." *The New York Times*. 5 May 2007. Web. 1 Mar. 2014.
- Collins, Margo and Elson Bond. "'Off the page and into your brains!': New Millennium Zombies and the Scourge of Hopeful Apocalypses." Christie and Lauro 187-204.
- "Concerns about Autism." *Centers for Disease Control and Prevention*. 3 Feb. 2014. Web. 11 Mar. 2014.
- "Consensus: 97% of climate scientists agree." *NASA: Global Climate Change*. n.d. Web. 1 Mar. 2014.
- Crazies, The*. Dir. Breck Eisner. Overture Films, 2010. DVD.
- . Dir. George A. Romero. 1973. Cambist Films, 1973. DVD.
- Creation Museum*. Answers in Genesis, 2014. Web. 1 Mar. 2014.
- Cronin, Justin. *The Passage: A Novel*. NY: Ballantine, 2010. Print.
- Culp-Ressler, Tara. "We Thought We Already Eradicated Measles—But Thanks to Ongoing Anti-Vaccine Beliefs, It's Back." *Think Progress*. 13 Sept. 2013. Web. 1 Mar. 2014.
- Curtis, Claire P. *Postapocalyptic Fiction and the Social Contract: "We'll Not Go Home Again"*. Lanham, MD: 2010. Print.
- Dawn of the Dead*. Dir. George Romero. Laurel Group, 1978. DVD.

- Dawn of the Dead*. Dir. Zack Snyder. Universal Studios, 2004. DVD.
- Dawson, Allan. "Global Warming Turned Anti-GMO Activist Mark Lynas Into a Promoter." *Manitoba Co-Operator*. 4 Mar. 2014. Web. 7 Mar. 2014.
- Day of the Dead*. Dir. George A. Romero. United Film Distribution Company, 1985. DVD.
- Dead Alive*. Dir. Peter Jackson. Trimark Pictures, 1993. DVD.
- Dead Island*. Deep Silver. 2011. Video game.
- Dead Rising*. Capcom. 2006. Video game.
- Dead Snow*. Dir. Tommy Wirkola. IFC Films, 2009. DVD.
- Dead Space*. Electronic Arts, 2008. Video game.
- Dean, Cornelia. *Am I Making Myself Clear?: A Scientist's Guide to Talking to the Public*. Cambridge, MA: Harvard UP, 2009. Print.
- Dendle, Peter. "The Zombie as Barometer of Cultural Anxiety." In *Monsters and The Monstrous: Myths and Metaphors of Enduring Evil*. Ed. Niall Scott. Amsterdam: Rodopi, 2007. Print.
- . "Zombie Movies and the Millennial Generation." Christie and Lauro 175-186.
- Diary of the Dead*. Dir. George A. Romero. Third Rail Releasing, 2008. DVD.
- Dominus, Susan. "The Crash and Burn of an Autism Guru." *The New York Times Magazine*. 20 Apr. 2011. Web. 15 Nov. 2012.
- Draper, Electra. "Undying Love for Undead Enlivens Eighth Annual Zombie Crawl." *The Denver Post*. 19 Oct. 2013. Web. 8 Nov. 2013.
- Drenzer, Daniel W. *Theories of International Politics and Zombies*. Princeton: Princeton UP, 2011. Print.

Esposito, Richard, Candace Smith, and Christina Ng. "20 Children Died in Newtown, Conn., School Massacre." *ABC News*. 14 Dec. 2012. Web. 16 Dec. 2012.

Farnham, Alan. "Gun Sales Booming: Domsday, Obama, or Zombies?" *ABC News*. 5 Apr. 2012. Web. 14 Nov. 2012.

Feuer, Alan. "The Preppers Next Door." *The New York Times*. 26 Jan. 2013. Web. 8 Nov. 2013.

Fido. Dir. Andrew Currie. Lionsgate, 2007. DVD.

Gauchat, Gordon. "Politicization of Science in the Public Sphere: A Study of Public Trust in the United States, 1974 to 2010." *American Sociological Review* 77.2 (2012): 167-187. Web. *Sage*. 14 Nov. 2012.

Generation Rescue: Jenny McCarthy's Autism Organization, 2013. n.p. Web. 1 Mar. 2014.

Gettys, Travis. "Republicans blitz four states with five creationism bills so far this year." *The Raw Story*. 31 Jan. 2014. Web. 1 Mar. 2014.

Gillis, Justin. "New Guidelines Call for Broad Changes in Science Education." *The New York Times*. 9 Apr. 2013. Web. 1 Mar. 2014

Godfrey-Smith, Peter. *Theory and Reality: An Introduction to the Philosophy of Science*. Chicago: Chicago UP, 2003. Print.

Gold, Hadas. "Study: Watching Fox Raises Science Distrust." *Politico*. 9 Aug. 2013. Web. 8 Nov. 2013.

"GOP Deeply Divided Over Climate Change." *Pew Research Center*. 1 Nov. 2013. Web. 1 Mar. 2014.

Grant, Mira. *Feed*. New York: Orbit Books, 2010. Print.

- Green, Nadege and Audra D.S. Burch. "The Unraveling of Rudy Eugene, aka the Causeway Face Attacker." *Miami Herald*. 16 July 2012. Web. 15 Nov. 2012.
- Gross, Mathew Barrett and Mel Gilles. *The Last Myth: What the Rise of Apocalyptic Thinking Tells Us About America*. Amherst: Prometheus Books, 2012. Print.
- Hacking, Ian. *The Social Construction of What?* Cambridge: Harvard UP, 1999. Print.
- Harris, Gardiner. "Journal Retracts 1998 Paper Linking Autism to Vaccines." *The New York Times*. 2 Feb. 2010. Web. 15 Nov. 2012.
- Hibberd, James. "'The Walking Dead' Season 4 Premiere Ratings Enormous." *Entertainment Weekly*. 14 Oct. 2013. Web. 8 Nov. 2013.
- Hofstadter, Richard. *Anti-Intellectualism in American Life*. NY: Random House, 1962.
- Holthaus, Eric. "The Thirsty West: What Happens in Vegas Doesn't Stay in Vegas." *Slate*. 18 Mar. 2014. Web. 28 Mar. 2014.
- I Am Legend*. Dir. Francis Lawrence. Warner Bros. 2007. DVD.
- "In Ranking, U.S. Students Trail Global Leaders." *USA Today*. 7 Dec. 2010. Web. 19 Nov. 2012.
- International Medical Council on Vaccination*, 2010. n.p. Web. 1 Mar. 2014.
- Karmali, Luke. "The Last of Us Sells 3.4 Million Copies in Three Weeks." *IGN*. 9 July 2013. Web. 8 Nov. 2013.
- Keene, Brian. *The Rising*. Portland, OR: Deadlite Press, 2003. Print.
- Kirkman, Robert. *The Walking Dead: Compendium One*. Berkeley, CA: Image Comics, 2009. Print.
- Kloor, Keith. "GMO Opponents Are the Climate Skeptics of the Left." *Slate*. 26 Sept. 2012. Web. 1 Mar. 2014.

Land of the Dead. Dir. George A. Romero. Universal Pictures, 2005. DVD.

Lansdale, Joe R. "On the Far Side of the Cadillac Desert with Dead Folks." In *By Bizarre Hands*. NY: Avon Books, 1991. Print.

"Largest Gathering of Zombies." *Guinness World Records*. Web. 8 Nov. 2013.

Lauro, Sarah Juliet. "The Eco-Zombie: Environmental Critique in Zombie Fiction." Boluk and Lenz 54-66.

Last of Us, The. Sony Computer Entertainment. 2013. Video game.

Left 4 Dead. Valve Corporation. 2008. Video game.

Left 4 Dead 2. Valve Corporation. 2009. Video game.

Let Sleeping Corpses Lie. Dir. Jorge Grau. Fida Cinematografica, 1974. DVD.

Lovecraft, H.P. "Herbert West: Re-Animator." *The H.P. Lovecraft Archive*. Donovan K. Loucks, 19 Oct. 2012. Web. 15 Nov. 2012.

Maberry, Jonathan. *Patient Zero: A Joe Ledger Novel*. NY: St. Martin's Press, 2009. Print.

Manjikian, Mary. *Apocalypse and Post-Politics: The Romance of the End*. Lanham, MD: Lexington Books, 2012. Print.

Mass Effect. Microsoft Game Studios. 2007. Video game.

McAlister, Elizabeth. "Slaves, Cannibals, and Infected Hyper-Whites: The Race and Religion of Zombies." *Anthropological Quarterly* 65.2 (2012): 457-86. Web. *Academic Search Premier*. 6 Nov. 2013.

McCormick, Patrick. "Zombie Economics." *U.S. Catholic*. July 2012. Web. *Academic Search Premier*. 15 Nov. 2012.

McIntosh, Shawn and Marc Leverette, eds. *Zombie Culture: Autopsies of the Living Dead*. Lanham, MD: Scarecrow, 2008. Print.

- Miller, Greg. "Why the 'Prius Driving, Composting' Set Fears Vaccines." *ScienceInsider*.
Web. *American Association for the Advancement of Science*, 2012. 15 Nov. 2012.
- Mooney, Chris. *The Republican War on Science*. NY: Basic Books, 2005. Print.
- Mogk, Matt. *Everything You Ever Wanted to Know About Zombies*. New York: Gallery Books,
2011. Print.
- Moreman, Christopher M. and Corey James Rushton, eds. *Race, Oppression, and the Zombie:
Essays on Cross-Cultural Appropriations of the Caribbean Tradition*. Jefferson, NC:
McFarland & Company, 2011. Print.
- Muntean, Nick. "Nuclear Death and Radical Hope in *Dawn of the Dead* and
On the Beach." Christie and Lauro 81-97.
- Murphy, Kieran M. "White Zombie." *Contemporary French and Francophone Studies* 15.1
(2011): 47-55. Web. *Routledge*. 6 Nov. 2013.
- Neuman, Scott. "1 in 4 Americans Thinks The Sun Goes Around The Earth, Survey Says."
NPR. 14 Feb. 2014. Web. 1 Mar. 2014.
- . "Creation Museum: Bill Nye Debate Sparked Funding 'Miracle.'" *NPR*. 1 Mar. 2014.
Web. 1 Mar. 2014.
- Night of the Living Dead*. Dir. George A. Romero. Continental Distributing, 1968. DVD.
- Nye, Bill. "Bill Nye: Why I'm Debating Creationist Ken Ham." *CNN Belief Blog*.
4 Feb. 2014. Web. 1 Mar. 2014.
- Okasha, Samir. *Philosophy of Science: A Very Short Introduction*. New York: Oxford UP,
2002. Print.
- Olson, Randy. *Don't Be Such a Scientist: Talking Substance in the Age of Style*. Washington,
DC: Island Press, 2009. Print.

Overbye, Dennis. "A Successor to Sagan Reboots 'Cosmos.'" *The New York Times*.

3 Mar. 2014. Web. 21 Mar. 2014.

Owen, Jonathan. "State of the Future report: Humans are doing OK, but nature suffers as a result—and we'll pay for it." *The Independent*. 16 Mar. 2014. Web. 21 Mar. 2014.

Paffenroth, Kim. *Gospel of the Living Dead: George Romero's Visions of Hell on Earth*.

Waco, TX: Baylor UP, 2006. Print.

---. "Zombies as Internal Fear or Threat." Boluk and Lenz 18-26

Pagano, David. "The Space of Apocalypse in Zombie Cinema." McIntosh and Leverette 71-86.

Parker, James. "Our Zombies, Ourselves: Why We Can't Get the Undead Off Our Brains."

The Atlantic Monthly 307.3 (2011): 32-33. Web. *Academic Search Premier*.

6 Nov. 2013.

Plait, Phil. *Bad Astronomy: The Entire Universe in Blog Form*, 2014. Web. 21 Mar. 2014.

Planet Terror. Dir. Robert Rodriguez. Dimension Films, 2007. DVD.

Pohl, Jason. "Thousands of Zombies, Mutants Overtake Downtown Denver." *Denver Post*.

20 Oct. 2012. Web. 15 Nov. 2012.

Pontypool. Dir. Bruce McDonald. IFC Films, 2009. DVD.

Quarantine. Dir. John Erick Dowdle. Screen Gems, 2008. DVD.

Rawles, James Wesley. *How to Survive the End of the World as we Know It: Tactics,*

Techniques, and Technologies for Uncertain Times. NY: Penguin, 2009.

Recht, Z.A. *Plague of the Dead: Morningstar Strain*. Permuted Press, 2006. Print.

Red Dead Redemption: Undead Nightmare. Rockstar Games. 2010. Video game.

Resident Evil. Capcom. 1996. Video game.

Resident Evil. Dir. Paul W.S. Anderson. Sony Pictures Releasing, 2002. DVD.

- Return of the Living Dead*. Dir. Dan O'Bannon. Orion Pictures Corporation, 1985. DVD.
- Rosen, Elizabeth K. *Apocalyptic Transformation: Apocalypse and the Postmodern Imagination*. Lanham, MD: Lexington Books, 2008. Print.
- Ross, Andrew. *Strange Weather: Culture, Science, and Technology in the Age of Limits*. NY: Verso, 1991. Print.
- Ryan, Carrie. *The Forest of Hands and Teeth*. New York: Delacorte Press, 2009. Print.
- SafeMinds*, 2014. n.p. Web. 1 Mar. 2014.
- Sagan, Carl. *The Demon-Haunted World: Science as a Candle in the Dark*. NY: Random House, 1996. Print.
- Salzberg, Steven. "Anti-Vaccine Movement Causes the Worst Whooping Cough Epidemic in 70 Years." *Forbes*. 23 July 2012. Web. 14 Nov. 2012.
- Schulson, Michael. "The Bill Nye-Ken Ham Debate Was a Nightmare for Science." *The Daily Beast*. 5 Feb. 2014. Web. 1 Mar. 2014.
- Shaun of the Dead*. Dir. Edgar Wright. Focus Features, 2004. DVD.
- Schumacher, E.F. "Small is Beautiful." *The Radical Humanist* 37 (1973): 22. Web. *Google Books*. 27 Mar. 2014.
- "Self-reliance." *The Church of Jesus Christ of Latter-Days Saints*, 2014. Web. 1 Mar. 2014.
- Sokal, Alan. *Beyond the Hoax: Science, Philosophy, and Culture*. New York: Oxford UP, 2008. Print.
- Spitznagel, Eric. "George A. Romero: 'Who Says Zombies Eat Brains?'" *Vanity Fair*. 27 May 2010. Web. 15 Nov. 2012.
- State of Decay*. Microsoft Studios. 2013. Video game.
- Survival of the Dead*. Dir. George A. Romero. Magnet Releasing, 2010. DVD.

- Svoboda, Michael. "Science Communication Needs the Humanities." *The Yale Forum on Climate Change & The Media*. 19 July 2012. Web. 21 Mar. 2014.
- "U.S. Students Still Lag Behind Foreign Peers, Schools Make Little Progress in Improving Achievement." *Huffington Post*. 23 July 2012. Web. 19 Nov. 2012.
- "Vaccination Coverage Among Children in Kindergarten—United States, 2012-13 School Year." *Centers for Disease Control and Prevention*. 2 Aug. 2013. Web. 1 Mar. 2014.
- Vergano, Dan. "Scientists, Public Differ in Outlooks." *USA Today*. 10 July 2009. Web. 15 Nov. 2012.
- Vonnegut, Kurt. "Address to Graduating Class at Bennington College." *James Somers*. 2014. Web. 18 Feb. 2014.
- Walker, Matthew. "When There's No More Room in Hell, the Dead Will Shop the Earth: Romero and Aristotle on Zombies, Happiness, and Consumption." In *The Undead and Philosophy: Chicken Soup for the Soulless*. Eds. Richard Greene and K. Silem Mohammad. Chicago: Open Court, 2006. 81-90. Print.
- Walking Dead Forums, The*, 2014. n.p. 20 Mar. 2014.
- Walking Dead Season 1, The*. AMC. 2011. DVD.
- Walking Dead Season 3, The*. AMC. 2013. DVD.
- Walking Dead, The*. Telltale Games, 2012. Video game.
- Walliss, John and James Aston. "Doomsday America: The Pessimistic Turn of Post-9/11 Apocalyptic Cinema." *The Journal of Religion and Popular Culture* 23.1 (2011): 53-64. Web. MLA. 24 Nov. 2013.
- Warm Bodies*. Dir. Jonathan Levine. Lionsgate Home Entertainment, 2013. DVD.

Weaver, Frances. "The unprecedented water crisis of the American Southwest." *The Week*.

1 Feb. 2014. Web. 28 Mar. 2014.

Wellington, David. *Monster Island: A Novel*. NY: Thunder's Mouth Press, 2006. Print.

White Zombie. Dir. Victor Halperin. United Artists, 1932. DVD.

World War Z. Dir. Marc Foster. Paramount Pictures Home Entertainment, 2013. DVD.

Zombi 2. Dir. Lucio Fulci. Anchor Bay Entertainment, 1979. DVD.

Zombi 3. Dir. Lucio Fulci. Tokuma Japan Communications Co. Ltd., 1988. DVD.

Zombie Apocalypse Store. 2014, n.p. Web. 28 Mar. 2014.

Zombieland. Dir. Ruben Fleischer. Columbia Pictures, 2009. DVD.