Epiphanies of the Ordinary: Personal Stories of Climate Change

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A Magical Time and Place

Summer 2016. The warm, humid breeze from Lake Huron rattles absentmindedly through our tents, the oak trees wave lazily in afternoon sun, the cicadas drone, the squirrels natter as they chase each other above our campsites. My sisters and I have recreated our childhood adventures for our own children: this multi-family camping trip is inspired by the days spent on our wooded property outside of the city and our extended camping trips throughout Ontario. Just as we did on our childhood adventures, our children run wild, tethered to us only by hunger. They have disappeared into a heady, beguiling world of play, their imaginations drunk on the magic of the endless sand dunes and oak savannah that separate our campsites from the beach.

The adults sit in camping chairs around a blackened fire pit, the half-burnt remains of last night's failed roast marshmallows and hotdogs caught in its grill. My father is much like he was on our childhood camping adventures: baseball cap, cut-off jeans, tube socks, irrepressible energy even at seventy-five. He clutches a sweaty can of Labatt's Canadian beer and holds court, cracking jokes, reminiscing, sharing random facts from the prodigious library of his mind. My mother, sisters, and I corral his conversational detours, knock back his tangents, make fun of his exuberant excesses. My brothers-in-law carefully add to these swirling conversations, not quite able to follow the course of these family discussions, their well-worn paths obvious to us but invisible to others.

"Mommmmmmm!"

The children crash through the forest back into the campsite.

"We're thirsty and hungry!" Through the alchemy of the forest, the lake breeze, and their imaginations, the five voices have merged into one.

Cooler lids clatter, pop cans hiss, plastic wrappers crackle. The circle around the fire pit dissolves and then reforms, expanded to make room for the children, who tell us—rapid fire—of their exploration.

"We saw a huge snake. Vinnie scared it off."

"The big piece of driftwood is not on the beach any more, but we found that big fossil again."

"And there are a lot more windmills around here now."

"Oh, those stupid windmills," my father interjects.

I freeze.

"What do you mean, stupid windmills?" I ask, although I am quite sure that I know exactly what he means. I have spent the last six months forcing myself to read about climate change: the science, the politics, the comments on social media. I am raw with this new knowledge. I am shaken, fragile, and impatient with the slow pace of our transition away from fossil fuels. In this state, I forget that I cannot discuss politics with my father: it is the radioactive, Chernobyl-wasteland, go-only-to-die zone of our family conversations.

"We do have to move to renewable energy," I continue. "Those windmills are a good first step."

My mother and sisters exchange looks and retreat quietly away from the conversation, nuclear explosion imminent.

I remind my father that my husband, a scientist who works on climate change but who is absent from this trip, has explained the scientific research to him.

"Well, those climate models are wrong, and those windmills are a waste of money."

"Read the more recent science. The models have been steadily getting better. Besides, their estimates could also be too conservative: the margin of error could swing the other way. Why would we want to risk these kids' futures?" I point to the children who are quiet now, sensing the danger in this conversation.

"Don't hide bad science behind that rhetoric. Carbon dioxide is no pollutant," he grumbles. A thousand retorts crowd into my mouth: appeals to his logic, pleas to his fatherly wisdom, entreaties to his love of the outdoors. But I hold back, the force of my desire to respond tempered by the knowledge that nothing I can say will change his mind. Instead, I stomp off in furious, desperate tears. If my father—a well-educated, intelligent man, an engineer whose career was built on understanding scientific thinking—can dismiss the consensus of climate scientists, one of whom is his respected son-in-law, then what hope do we have?

My ten-year-old son follows me to our tent across the road. He is surprised to see me so angry and upset.

"Mama," he asks, "Is Grandpa one of the ten percent of people who don't believe in climate change?" I laugh through my tears: he has been listening too closely to his parents' conversations about their

work. From his worried face, I can see that he is pulled between his love for me and his adoration of his grandfather, with whom he shares a particular genius for building.

I free him from his conflicted loyalties: "It's okay. We disagree with the people we love sometimes. Now, go see if your cousins want to go to the beach." He runs off, relieved and reanimated.

I sit down at the empty picnic table next to our tent, wrestling with my fears for this world. The birds sing; the trees move in the wind; a mosquito buzzes around my face; an ant crawls over my bare foot. I push away my grief, shove my despair into silence, and force myself to stand and make my way back to my family around the fire pit. I don't want to ruin this magical time and place for the children.

Stories of Climate Change

This is a story of climate change. It is a story about silence and denial, tempered with fear and disagreement. It is a story of family members who, despite shared life experiences, come to see humanity's place in the world in different ways, ways that profoundly affect how we engage with the issue of climate change and potential solutions to it. It is a story about how some of us grapple with climate change, while others ignore it, actively deny it, or languish in uncertainty and doubt.

This is also my story. It is the story of how I was raised in a middle-class, conservative suburb in Southwestern Ontario, a world in which environmental conservation and preservation were never discussed, and how I came to think and care about these issues. This is not a dramatic conversion story: there was no moment in which I suddenly came to see the sins of my suburban lifestyle and embraced a new environmentally-conscious way of living. Rather, this is the story of a long, drawn-out, still-on-going wrestling match, in which I have worked to connect my habits—rooted in my suburban past and the Canadian culture in which I was raised—to their impacts on the world around me. It is a story about how I have struggled to trace and dismantle my basic understanding of my relationship to nature and to the planet.

It is this struggle and its connection to the ways in which we discuss (or don't discuss) climate change as a society that I would like to explore in this essay. This exploration tells of key moments in my struggle to understand climate change and broader environmental issues in relation to my own life, and it puts these "epiphanies of the ordinary," as James Joyce calls the particulars of our stories (qtd. in Bruner, *Actual Minds* 13), together with the broader difficulties of speaking about climate change in our communities.

How should we tell stories about climate change? How might our stories about climate change disrupt our other narratives of climate change, narratives that pull us towards the status quo? How might these stories connect our personal experiences—laden as they are with affect and ambiguity—to the generalized and depersonalized scientific knowledge that informs most of our understanding of climate change? What happens when we make climate change a personal story? These are the provocations at the heart of this essay.

Little House in the Suburb

Spring 1974. I am four years old. I scramble up the mud hill in our backyard, laughing, yelling, gasping for air. My two sisters chase me, their younger, shorter legs at a disadvantage against the grasping mud. One step from the summit, my foot springs free from its boot, and I waver, my victory suddenly uncertain. The spring wind claims the plastic grocery bag wrapped around my foot; the wind is indifferent to my mother's remedy for my leaky Minnie Mouse rubber boots.

"I'm the king of the castle, and you're the dirty rascal," I shout, my white sock sacrificed for the last step to victory.

"No, you, you the dirty wascal," one of my younger sisters yells back. Her toddler logic protects her from the sting of this loss.

I survey my captured land: The backyards between the two rows of houses are not finished, and my mud world stretches from my hill along a shallow valley between ten houses. Jelly rolls of sod are stacked beside each house: pyramids of green and brown spirals ready to tame this mess that drives my mother mad. Once the machines have finished shaping our yards, the sod will be unrolled and the mud hill will be gone forever.

The sod will lie like a blanket over this soil; it will seal away the other histories of this place, pave over them with soft grass. It will help to bury the stories of the original inhabitants of this land and will vanquish the farm fields that once stood here, broken and cultivated by settlers from England in the nineteenth century. It will transform my undomesticated mud world into lawns with swimming pools, wobbly swing sets, and chain link fences. My sisters and I will turn cartwheels on its grass, our bare feet tickled, and we will lie on its soft, cool green to escape the pressing humidity of Ontario summers. The sod will fill in the empty places between the newly built houses of our suburb and will complete a story over a hundred years in the telling. This remade land, these new houses with their linoleum and shag carpet floors, their two-car garages, their sparkling swimming pools, promise a life without

the weight of history and the discomforts of survival in this place. This is it: this is the culmination of my settler ancestors' dreams for their children and their grandchildren. It is promise and prosperity fulfilled.

My four-year-old self knows nothing of the near-fulfilled ambitions of my parents or grandparents or my immigrant ancestors; I know only that I love the rawness of this not-quite-finished place, its violence married to hope. I love the mud hill; I love that my longer legs mean that I can always beat my sisters to the top, that I am always the king of the castle. It is in this place that my four-year-old self, conqueror and savage of the mud, will hold my three-year-old neighbor's head in a puddle and attempt to drown her. She will lose a silver bracelet in the puddle, a gift given to her by her grandmother. The silver bracelet, together with my memory of this event, will be forever lost and buried under the sod, a gift to my glorious mud world. My neighbor will become a life-long friend, and we will come to laugh when she reminds of me of this incident that I have forgotten but she never has. My memory of the mud world lingers, however—a vague recollection of the messy, primal, uncertain place beneath my childhood.

How Do We Tell this Story?

We don't like to tell the story of climate change in North America: it lurks beneath our green, manicured lawns, mostly silent. Indeed, the majority of Americans have rarely or never discussed climate change with their family or friends (Maibach et al.). Climate change, like religion and money, is not a topic of conversation for polite society.

Why is it hard for us to talk about climate change? The silence is not a reflection of a lack of concern (Maibach et al.); in fact, most Canadians and Americans say that they are concerned about global warming (Marlon et al.; The Environics Institute). The peculiarities and complexities of climate change, however, bedevil us. Scholars have labelled climate change a "wicked problem," a problem so unique that it defies singular and rational solutions (Hulme 333) and a "hyper object," something so large it confounds our ability to perceive it (Morton 3). It is an issue that strikes at our individual and societal Achilles' heel; it reveals our cognitive shortcomings, our ingroup-outgroup biases, and our inability to change our deeply engrained behaviors.

We struggle to articulate the vast, global scope of climate change, our human brains seemingly incapable of comprehending this threat so far beyond the local and immediate dangers that our ancestors overcame in order to survive (Gifford 291). We prevaricate and dissimulate, telling ourselves that climate change will be the problem of

other species. other generations, of people in distant lands and distant times (Maibach et al.). It won't affect us, we tell ourselves, failing to acknowledge how little attention we pay to the subtle changes that are transforming our world.

Our psychological and financial investment in our modern, urban lifestyles helps to isolate and insulate us, physically and emotionally, from the early impacts of climate change (Moser 34). Our modern lifestyles are, we often assert, the product of technological ingenuity and the hard work of our parents and previous generations. Questioning the impact of this long-sought-after prosperity challenges our belief that our behavior based on these ambitions are wholly just and good. When I ask my father to accept and acknowledge the realities of climate change, I am asking him to consider the negative ramifications of that generations-long scramble for a more comfortable life at all costs. I'm asking him to recognize the violent, primal mud beneath the lawn of the suburban home that he worked hard to afford for his family. For many, it is often easier to ignore these questions, to reject the notion that we are negatively impacting our world, and to retreat into the comfortable status quo, where we believe that our good intentions have only good impacts (Gifford 293).

When we do hear or talk about climate change, the ways in which we do may help to create and reinforce these blind spots. We are more likely to hear more about climate change from the news media than from people we know (Maibach et al.). The genres in which we most often discuss climate change—news reports, news editorials, scientific research articles—operate in what rhetorician Walter Fisher calls the rational world paradigm ("Narration as a Human" 2) or what psychologist Jerome Bruner calls the paradigmatic or logico-scientific mode of thinking (*Actual Minds* 12). Within this framework, we assume that humans are rational, that the world can be understood through logical analysis, and that argument and deliberation are the primary modes of human communication. This rational world paradigm highlights the role of the expert, and as a consequence, the news media often represent climate change as a discussion or debate between scientific experts (Boykoff 107). When discussions on moral issues are framed in rational and scientific terms and experts have diverging opinions, we—the nonexpert public—have only limited ways of participating in the debate or determining which expert may be right.

Expert testimony, technical information, and data have not been enough to convince many of us of the danger that climate change poses and the need for action (Chess and Johnson 223; Moser 38). The decontextualized knowledge of the expert does little to engage our difficulties

when confronting climate change; it does not address the limitations of our moral conceptual systems and our primary narratives about the world. To address this limitation, climate change scholars Hoggan and Litwin (46), Hulme (340), and Moser (36) suggest that we must develop new foundational narratives, mythologies which restore the emotional, cultural, and ethical to our understanding of climate change.

The suggestion that narrative may be a more successful way to communicate about climate change aligns with the work of Fisher and Bruner, who conclude that there is a form of reasoning beyond the rational world paradigm. Both Fisher and Bruner argue the narrative paradigm represents an equally important mode of communication. In the narrative paradigm, in contrast to the rational world paradigm, human communication is seen as "stories competing with other stories constituted by good reasons, as being rational when [the stories] satisfy the demands of narrative probability and fidelity, and as inevitably moral inducements" (Fisher, "Narration as a Human" 2). These stories that we tell "strive to put . . . timeless miracles into the particular of experience, and to locate the experience in time and place," as Bruner writes (*Actual Minds* 13); they compel us through "suggestion and identification," according to Fisher ("Narration as a Human" 15). Because the narrative paradigm of thought is one that is accessible without expertise, moral public arguments in this paradigm place experts and nonexperts on the same level playing field: members of the public can assess the moral implications of a story as well as an expert might. Experts become storytellers rather than authorities, and the "audience is not a group of observers but are active participants in the meaning-formation of the story" (Fisher, "Narration as a Human" 12). Within the narrative paradigm, we can all participate by listening to and telling stories, which work together with other stories to build new meaning and understanding about the world.

The narrative paradigm does not, however, negate the rational, logico-scientific paradigm but works in parallel with it. It acknowledges that values and good reasons can be transmitted through narrative, not only through deliberation and argumentation. For both Fisher and Bruner, these two modes of thinking are complementary but irreducible to each other. Bruner argues that "efforts to reduce one mode to the other or to ignore one at the expense of the other inevitably fails to capture the rich diversity of thought" (*Actual Minds* 11). Furthermore, Fisher acknowledges that stories may have the same limitations as arguments; stories may be rejected if they challenge our identities in particular ways. He observes, "If a story denies a person's self-conception, it does not matter what it says about the world. In the instance of protest, the rival

factions' stories deny each other in respect to self-conceptions and the world. The only way to bridge this gap, if it can be bridged through discourse, is by telling stories that do not negate the self-conceptions people hold of themselves" ("Narration as a Human" 14).

Telling stories may enable us to overcome our cognitive shortcomings and to engage more completely with the issue of climate as Hoggan and Litwin, Hulme, and Moser suggest. However, these new narratives must confront our old stories delicately and deliberately in order to be accepted. They must offer us a path to reconceive ourselves in a world that we are endangering.

Beneath the Green

Spring 1994. The world tilts as our bus descends into the open pit mine. I close my eyes, waiting for even ground. I'm exhausted on this third day of our tour of the former East Germany. A group of foreign students studying in the former West Germany, we are learning about the changes that have happened here since German reunification. An American exchange student and I stayed up late talking with our host family in this small city close to the Polish border. In their tiny apart-ment, our host family told us of their changing world: despair at growing unemployment tempered with hope for an improved life. They bemoan the snobbery of their new West German compatriots: "They think that they are better than us with their Volkswagens and BMWs, but the Wessis are happy to have our coal." "You'll see tomorrow," they tell us, explaining that the brown coal industry drives their region's economy.

Our bus levels out as we reach the bottom of the brown coal mine. Our group surges from the bus into an unearthly, uncanny world. We are in an immense crater, surrounded by large machinery with wheels taller than any human. The dusty, terraced walls of the pit hide any traces of the world above. We are on the moon, a distant planet, an alternate universe. There are no birds to sing, no green and yellow fields to dance in the wind, no steady hum of the nearby city. In their absence, the machinery screams at the Earth: it groans like a wraith as it rips at the brown coal.

"Whoa," says my American friend, but I cannot respond. I am shaken into silence by this underworld.

Our guide stands in front of us and beams: "As an engineer, I am so proud of this." He gestures at the machinery and the mine before us. "Those windmills," he says, referring to the meager crop of windmills that we passed on our way into the mine, "they produce a small frac-tion of this energy. They'll never replace this."

The guide's delight in this alien world wallops me, sends me spiraling into doubt. I am no environmentalist—my father's derision of the movement is too fresh a lesson. No, I am the wasteful North American who uses the clothes dryer instead of hanging my clothes to dry like my German roommates. I am the one who forgets to bring cloth shopping bags to the grocery. I pay for plastic ones and hide them in my room because I have no idea how to get rid of them—I have better mastered German grammar than I have their complex recycling system.

But here, at the bottom of the brown coal mine, I am deeply unsettled. I feel no pride in this place where the colors and sounds of our world have been stripped away: the screeching of the giant machinery fills me with sorrow and confusion instead. This can't be right, I think. Do we do this in Canada? We can't be doing this in Canada. Is this what we are doing to our world?

Our tour leader calls us back to the bus, reminding us that we have a long drive to our next destination—the famous Spreewald—where we will punt through natural canals that wind through an ancient pine forest.

"Try the Spreewald pickles!" our cheerful guide yells as the bus doors close and the bus turns to return us to the world above.

Who Are You in this Story?

The stories that we tell ourselves about the world are born in the places that we live and are given to us by the people we love. According to Fisher, these first stories help us to hone our narrative judgment and reasoning: we acquire our narrative skills as we are socialized into our communities. Through stories, Fisher argues, we learn to understand human behavior and what constitutes a good life. This learning does not happen through deliberation or debate as it does in the rational world paradigm; rather, it is oblique: stories suggest how we can represent our world and as listeners and readers, we can identify with and accept this suggestion. The stories we accept become the foundation of our worldview; they help us to organize our experiences and our memories and to produce and practice "good reasons" for our behavior (Bruner, "Narrative Construction" 4; Fisher, "The Narrative Paradigm: In the Beginning" 350).

As we learn how to interpret our world meaningfully through narrative, we enter into the stories of those who came before us and those who live in our time and place. We reshape and revise our stories about the world as we grow older, and we will leave these stories behind for others to enter into (Fisher, "Narration as a Human" 6). In the communities to which we belong, stories accrue to become histories,

cultures, and traditions (Bruner, "Narrative Construction" 18), which together with the peculiarities of our biographies and our characters, determine which stories we enter, which stories we accept, and which stories we will leave behind (Fisher, "Narrative Rationality" 24).

Any stories that we will tell about climate change will interact with the other stories in our lives, and they will be greatly influenced by the histories, cultures, and traditions of the communities to which we belong. Our attitudes towards climate change are often determined by where we live in the world and by our gender, our race, and our political views. Those of us who emit the most carbon dioxide—people living in the US, Canada, Australia, and Russia—are the least likely to be concerned about the impact of these emissions (Wike). In the United States, conservative white men are less concerned about climate change than women, people of color, and those people who identify as progressives or liberal (Dunlap and McCright 33; Heath and Gifford 64; McCright 79; McCright and Dunlap 1163–4).

As conservative white men disproportionately hold positions of power within our economic system, they are often the most invested in preserving the status quo, a status quo which is often deeply threatened by the implications of climate change. McCright and Dunlap argue that the deliberate efforts of the fossil fuel industry, conservative think tanks and media to discredit climate change science, arguments often taken up by conservative elites, exacerbate this "conservative white male" effect and drive a higher level of climate change denial in this group (1171). To deny climate change or to discount its risk has become part of the identity of many conservative white males—it is a gesture to their membership in this group—and education, facts, or information do little to shake their foundational stories about the world.

When we encounter new stories about the world, we test them against other stories from our lives that we believe to be true; if these new stories cannot be aligned with the old, we will likely reject them. To accept them would require us to alter our position in the world, to reconstruct our group membership and to realign our understanding of how we relate to the physical world around us. "Sometimes another narrative impinges upon ours, or thunders around and down into our narratives," rhetorician Jim Corder writes (18). "We can't build this other into our narratives without harm to the tales we have been telling. This other is a narrative in another world; it is disruptive, shocking, initially at least incomprehensible, and . . . threatening." Climate change thunders down upon all of us, particularly those of us in the developed Western world, but its implications are difficult to contemplate within worldviews such as the one espoused by many North American con-

servative white men. To consider the implications of climate change may threaten our membership in the groups through which we have constructed our identities.

Our worldviews, our accrued stories about the world, justify our position—our privileges and powers—in the world, and stories about climate change often challenge us to reassess what constitutes good reasons and good living. How then can we tell meaningful, valuable, vulnerable stories about climate change when these stories threaten the worldview of people who we love and care about? How can we write stories that hold the complexities of our relationships, that recognize the unjust distribution of power in our society while acknowledging the intricacies, the compassion, and the love that move all of us, even as we act within the current of broader societal forces? "What can free us from the apparent hopelessness . . . of narratives that come bluntly up against each other?" Corder asks. "Can the text of one narrative become the text of another narrative without sacrifice?" (25).

A Humiliated World

Winter 2016. "We must almost be at the end of the trail," I say as I recap the water bottle. We have been skiing for two hours, our ski strides synchronized against the snow.

My husband and I stand alone on the ski track: fresh snow has calmed the world. The pine trees move awkwardly in the cold air, their branches heavy, pregnant, with snow. The frozen sunlight flickers lazily across the endless white trail in front of us. The mountains surround us, composed and regal, against the blue sky.

These mountains always lure me, draw me to them. I breathe in their empty air, free from the commotion of humanity. In their shadows, I am insignificant, humbled, a guest in their realm. Their avalanches, hidden crevasses, or surprise landslides could claim us at a whim. Between the quiet and the danger, I exhale my modern life and dissolve into this place. Here, I am nothing. What a precious relief.

But now I have learned my mountains' secret. It jumped out at me from an unexpected place: an article on our university's news page. Speaking of the world's glaciers, a scientist at our university stated: "The results that we have indicate that after 2050, pretty much everything will be gone except at the highest elevations—And that's in the Rockies as well" (Bush, qtd. in Condon).

The glaciers in these mountains, my mountains, are disappearing, their waters running towards the cities and the farmers' fields faster than the ice can be replaced. Our adult son, our grandchildren, our

great-grandchildren will stand before mountains that are stripped naked and littered with rock-strewn paths, the humiliated remains of once formidable glaciers.

After I read the article on the university's homepage, I decided I could no longer afford to ignore climate change. I forced myself to read about it, to stare at it, to not avert my gaze. Looking directly at climate change precipitated a twisted mystical experience. I wandered through my daily life in a daze, counting all of the ways in which I am reliant on fossil fuels, seeing for the first time the deep connective tissue of modern life. The elevators of our high-rise apartment, the street lights, the trucks that deliver to our favorite restaurant, the airplanes that take us to our families in Ontario, Germany, and New Zealand. The car that drives us to the mountains, the stoves that heat the food to keep us warm while we ski, the heaters that keep our hotel room warm. What would I give up? What will I have to give up? What will our son have to give up?

For weeks after this experience, I lay awake at night, imagining summers without rain, dry prairie springs even drier, winters without snow. I imagined our son's life: humanity scrambling to put out forest fires, to reconstruct shorelines, to adapt to extreme weather. I imagined a life less certain as economic and food production systems groan and creak under the weight of the changes. In those sleepless hours, I contemplated what I could change and how I could help, and I mourned for the time when I didn't have to think about the fragility of our world.

To speak of my fears for the changing world, to give voice to my confusion about my role in the story of climate change, to mention this now to my husband before these inscrutable, untouchable mountains, seems impossible. Words feel too big and too little, too dramatic and too insignificant. So we stand together quietly, wordlessly on the ski trail, breathing in the cold air.

I hand the water bottle back to my husband.

"Onwards?" I ask.

"Onwards."

We grab our poles and snap our boots back into their bindings. You must write about climate change, I think to myself, as we reclaim our rhythm on the trail. You must write this place, I think. Write the glaciers. Write the past that brought us here. Write the futures that might be.

This is Your Story

The story of climate change begins with science. It begins with an understanding of the world that is tied to numbers, measurement, systematic observations, and generalizable findings. This scientific information

is communicated in particular genres to other scientists—conference presentations, the scientific research article, science textbooks—genres which, in turn, are taken up by other public genres, some of which like the news report and editorial, also rely upon the rational world paradigm with its emphasis on logic and argumentation. At the centre of this work on climate change, and the rational world paradigm in which it is most often represented, is the philosophical division between objectivity and subjectivity. In order for a scientific fact to be considered objective, any trace of the material circumstances of its production (the messy humanity of scientific research) is forgotten or denied—"the result of the construction of a fact is that it appears unconstructed by anyone," as sociologists Bruno Latour and Steve Woolgar assert (240).

Scientific research must therefore represent climate change in impersonal ways; the human context of the construction of these scientific facts—with their attendant cultural and ethical values—is stripped away to assert objectivity. Indeed, concerted efforts by self-interested fossil fuel industries to attack this scientific knowledge often highlight the human circumstances of its production. They focus attention on individual climate scientists, often falsely suggesting that these scientists have behaved unethically or incompetently to produce their results. In the rational world paradigm, to demonstrate the social construction of scientific knowledge is to undermine it (Hulme 94; Latour and Woolgar 31; Oreskes and Conway 211; Schneider 203).

According to scientist and philosopher Michael Polanyi, however, this division between objectivity and subjectivity, and the priority given to objective, rational knowledge in Western cultures, is deeply problematic. Polanyi argues that all knowing is personal: we cannot stand outside the universe to know it; rather, we participate in it personally, and any knowledge that we have must arise from personal judgments and intellectual passions born of this participation. To ignore the personal dimension of scientific knowledge is, according to Polanyi, to make scientific knowledge impossible. Polanyi argues that we must acknowledge the value of emotion and particularly passion in our intellectual work, suggesting that "[science] must claim that certain emotions are right; and if it can make good such a claim, it will not only save itself but sustain by its example the whole system of cultural life of which it forms part" (140). He concludes:

> This self-contradiction [that ignores the role of personal knowledge in science] stems from a misguided intellectual passion—a passion for achieving absolutely impersonal knowledge which, being unable to recognize any persons, presents us with a picture of the universe in which we ourselves are absent. In such a uni-

> verse there is no one capable of creating and upholding scientific values; hence there is no science. (149)

Anthropologist Ruth Behar picks up a similar line of argument, exploring the role of the personal in her field. Behar describes the situation of Kay Redfield Jamison, a professor of psychiatry, who revealed publicly that she suffers from manic-depression. Jamison struggled with the revelation, worried that it would compromise her reputation and credibility. "If science makes it possible for the unspeakable to be spoken, if science opens borders previously closed, why is Jamison so anxious about her revelations?" Behar asks (12). Behar acknowledges that there "there is no clear and easy route by which to confront the self who observes" (12), but she prescribes a vulnerable, personal genre of academic writing to overcome the limitations of the division between the subjective and objective. In this vulnerable writing, we should open up about the emotional impacts of our efforts to understand the world: This writing is "loss, mourning, the longing for memory, the desire to enter into the world and having no idea how to do it, the fear of observing too coldly or distractedly or raggedly, the rage of cowardice, the insight that is always arriving too late, . . . a sense of the utter uselessness of writing anything and yet the burning desire to write something" (3).

When we tell stories of ourselves, particularly as academics, we trouble the distinction between the objective and the subjective, the researcher and the research. With personal stories, we connect ourselves—our bodies, our language, our identities, our other stories—to our time and place: narratives, unlike arguments, are always bound to the local and the particular. Our personal stories restore our personal knowledge and our values and emotions to our understanding of the world; they restore our presence to the universe. To tell effective stories about climate change, therefore, is not merely about the types of stories we choose to tell but also about how we locate the teller in the telling. In the narrative paradigm, unlike in the rational world paradigm, to tell of personal experiences is often to tell good stories, stories that make sense and ring true.

Writing studies scholar Candace Spigelman suggests that personal writing brings surplus to our understanding of the world by providing "useful contradictions, contribut[ing] to more complicated meanings, and . . . provok[ing] greater insight" than one type of discourse would alone (3). Often this surplus comes from the act of telling our own stories. It is in the act of (re)telling our stories that we come to see how our relationship to the world is mediated through language and is therefore rhetorical. Barbara Kamler argues that "writing about the self becomes an invitation to identify, analyze, and critique, to under-

stand the discursive practices that construct the sense of self—which in turn offer possibilities for change" (3). When we (re)tell our stories, we also open them up; we make space for new tellings and new ways of understanding the world.

By (re)telling our stories, we learn that our identities are provisional and precarious, and in that uncertain space, we can learn to make space for others whose narratives threaten our own. As Corder writes, "We can learn to dispense with what we imagined was absolute truth and to pursue the reality of things only partially knowable. We can learn to keep adding pieces of knowledge here, to keep rearranging pieces over yonder, to keep standing back and turning to see how things look elsewhere. We can learn that our narrative/argument doesn't exist except as it is composed" (28–9). In exploring our own vulnerabilities, fears, and denial, we create an opening that may help us to bypass the instinctive, identity-affirming rejection of those whose worldview does not align with our own. We create new ways of belonging and connecting to each other that may help to override our fears of disapproval from the groups to which we belong.

Composition theorist Jane Danielewicz describes how two students in her personal writing class wrote competing narratives about their relationship to religion: one student wrote about how she rejected her family's strict religious teachings, and another wrote of her conversion to the same religion. In the "contact zone" of the writing classroom, in which various forms of personal writing were explored, the two students came to an understanding and appreciation of the other's story and left that classroom as friends. "When you write vulnerably, others respond vulnerably," Behar concludes about the power of personal writing (16).

The important stories that we need to compose and tell about climate change are, I believe, our own stories. They are the stories that, through their telling, may help us to understand how we have come to see and not see the world around us. They force us to locate climate change in our place and time and to better observe the changes in the world around us. They help us to excavate our silence about climate change and to address our fear and despair. By allowing us to reconceive ourselves as contradictory, provisional, evolving characters, they may help us to find some common ground with those who do not share our worldview.

Both writing and telling these stories is important. In (re)writing our stories, we take our own silences to task, and we dismantle and reconstruct our own relationship to climate change. This is not easy work—the silences cling like burrs. We must also tell others these hard-won stories: speak of them in coffee shops with colleagues, share them

over board games with friends, post them on the Internet, and publish them where we can. Our personal stories gain power in their telling: they open a space for other personal climate change stories while offering new ways to think about our relationships to others and to our world.

In telling my own stories of climate change—the stories that I have presented here—I have come to see how my father's impulse to build our world as an engineer is not dissimilar to my own passion for writing. Both are rooted in an instinct to create permanence, to shape the world to our liking, and to solve the problems that we see around us. I have also come to better understand what is hidden in the silent places of my life, what is buried under the suburban sod. These silences were born, I believe, from the earliest one, in which I learned as a child that our world could be remade for our benefit and that the costs of that remaking were best left unstated, forgotten, or ignored. These silences are ultimately disconnections; they are wedged between the world and me. Until I started to (re)write this world for myself, these silences often left me without the original stories of the land in which I was born and raised and without a sense of how I impact the world in which I live. The silences have carved out empty spaces in the important relationships in my life, silences often filled with confusion and despair.

The cost of this silence is, of course, becoming too great for me and for all of us. As a wicked problem with complex and contradictory elements, climate change demands what Hulme calls "clumsy" solutions. Clumsy solutions are neither elegant nor optimal; rather, they "demand . . . multiple values, multiple frameworks and multiple voices be harnessed together" (338). Telling our personal stories about climate change cannot and should not replace the scientific work on this issue, and any stories about climate change—personal or not—may still be rejected by those whose identities are deeply impacted by its implications. Telling our personal stories may, however, help us to develop and better represent a multitude of values, frameworks, and voices to add to our discussions about climate change. They may help us to create new stories from the silences and the tales that we have learned not to tell.

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