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LITERATURE FOR A CHANGING PLANET

PREAMBLE

LITERATURE FOR A CHANGING PLANET

ONE HUNDRED AND SIXTY million years ago, in the inner region of the asteroid belt, a piece of rock was separated from its companions by the subtle interplay of gravitational forces. Slowly, it drifted away, a tiny object about thirty miles across, calmly following its new trajectory through the expanse of space. After three hundred million miles of undisturbed travel at the steady speed of forty thousand miles per hour, the rock suddenly encountered resistance when an atmospheric cloud slowed its progress, transforming momentum into heat. A moment later, the rock hit water and land. In less than a second, it burrowed some twelve miles into the continental crust, before coming to a complete halt.¹

Around it, mayhem ensued. The forces unleashed by the impact were hundreds of billions of times as large as the two atomic bombs that would devastate Hiroshima and Nagasaki. The stray asteroid hit earth

near the Yucatan Peninsula in southern Mexico, where sixty-six million years later the Spaniard Hernán Cortés would land with his group of adventurers, equipped with steel, horses, and germs, destroying an entire culture. The asteroid did its work of destruction through the sheer force of impact, unleashing a tsunami that reached all the way to Florida and Texas. Large amounts of debris were thrown up into the atmosphere, where they became burning projectiles that rained back down onto earth, turning everything within their reach into an inferno. Shockwaves led to a cascade of earthquakes and volcanic eruptions across the globe.

The long-term impact was even more devastating. Acid rains and a spike in CO₂ levels led to a greenhouse effect. Worse still was the dust cloud that blocked the sun, sharply reducing photosynthesis, which interrupted the entire food chain. The bigger the animals, the higher up in the food chain, the worse off they were. When several years later plants started to grow again from seeds and roots, many of the larger animal species had already died out, all land-based dinosaurs among them.

Over the next sixty-six million years, the gravely disturbed ecosystem of planet earth adjusted. All it needed was time, time for photosynthesis to start again, time for random mutations to produce better adaptations for particular niches and for old species to move to different habitats. Life resumed but on a smaller

scale than before, favoring bacteria and mammals, which multiplied thanks to the absence of large predators. What remained of the dinosaurs took to the air, picking off small mammals from time to time in memory of their former supremacy. Over time, the trauma of the collision was almost forgotten, and even the crater, sixty-two miles wide and nineteen miles deep, filled in. It was almost as if the stray meteorite had never hit home.

Today, it's not a disturbance in the solar system that is causing a mass extinction, nor a projectile hailing from a hundred and sixty million years ago and three hundred million miles away. This time around, the disturbance is entirely homegrown: an unfeathered biped stalking the dinosaur-free surface of the earth. It doesn't look like much, this scraggly creature, but it has a few neat tricks up its sleeve. For one thing, it can sweat, which means that it can outrun any land-based life-form—even gazelles, panthers, and horses—over long distances, anything that gets hot and pants, while this two-legged runner sweats and therefore cools in the wind. Also, it's not particular in its choice of foods, eating pretty much anything, from roots, leaves, and fruits to worms, insects, and other mammals; in a pinch, it even eats its own.²

This omnivore emerged less than a million years ago, took on modern form some eight hundred thousand years later, and soon learned to use all kinds of tools, thanks to fine motor skills and opposable thumbs.

Even more important were its vocal cords, which allowed for a wide range of sounds that formed the basis for a sophisticated sound-based language, which enabled coordination on an unprecedented scale. Moving in hordes, held together by ever better forms of communication, this species fanned out across the surface of the earth, hunting and gathering everything in its path. It also liked to play with fire, not on the scale of the asteroid, but with small fires that allowed it to eat even more things, filling its weak stomach with hard roots, stems, berries, and cooked meats. Soon, it would use fire to burn down steppes to drive other animals into its traps or to create new pastures for its herds. Slowly, this vocalizing arsonist was remaking the earth to suit its needs.

The makeover of earth gained speed ten thousand years ago, when the creature got tired of running. It had figured out how to grow plants that yielded more calories and how to domesticate animals, and it was so pleased with these inventions that it decided to settle down. This was not the healthiest of lifestyles because crops could fail, and domesticated animals led to new diseases, viruses and plagues that sprung from animals to humans and decimated the settled population with predictable frequency. But the new mode of life also had advantages: intensive agriculture and cities allowed for a new division of labor, leading to new inventions such as writing, which supercharged the use of language, one of the creature's most valuable

tools. Cities spread, populations increased, and the new settled life was changing the earth again, as forests were chopped down to build houses and to generate heat.

Things were going really well for this retired long-distance runner as it accumulated the knowledge to manipulate the world ever more effectively. By the year zero, it reached one hundred and ninety million; in 1700, six hundred million. Things sped up with industrialization, thanks to energy harnessed from animals, flowing water, and increasingly from things that could be scratched from below the surface of the earth, such as coal and oil. With so much energy at its disposal, the creature needed to sweat less and less, and reproduced more and more: nine hundred and ninety million in 1900; two billion in 1928; three billion in 1960; four billion in 1975; five billion in 1987; and six billion in 1999. In terms of biomass, it was still dwarfed by earthworms and bacteria (some of them living inside its intestines), but in all other respects, it had remade the earth in its own image.

It had also made a mess of it: sedentary life, intensive agriculture, population explosion, and carbon extraction were leading to another massive species extinction caused by land-loss, pesticides, and rising CO₂ levels that began to fry the planet. As the population nears eight billion, there can no longer be any doubt that something terrible is happening: this information-hoarding settler is wreaking havoc on a meteoritic scale.

How to tell the story of humans as meteorite? The scale is beyond human imagining because of the magnitudes involved, but also because of time. A population explosion taking ten thousand years sounds very different from a projectile hitting earth at forty thousand miles an hour, but in evolutionary terms, the two are pretty much the same: they happen too fast for evolution to adjust. The problem is not change itself, for species change and go extinct all the time. The climate, too, is in constant flux, responding to forces both homegrown and hailing from the outer reaches of the solar system. If there is a lesson to be learned from the meteorite, it's that earth exists in a galactic environment from which it can never isolate itself completely.

The problem is not change, but the rate of change: sudden, in evolutionary terms, is anything that's faster than what random mutations can adapt to over hundreds of thousands of years. Yet humans learned how to outpace evolution by passing down information through language and other storage systems, transmitting from generation to generation an increasing store of knowledge; and when writing came along, it became possible to preserve, spread, and increase information within a few generations. This form of information management jump-starts a process infinitely faster than evolution; information is the fuel

that accelerates human development into something breathtakingly fast—as fast as a meteorite.

If one problem of representation is speed, the other is effect. Even though evolution is constantly changing, it produces finely calibrated ecosystems that are breathtaking in their complexity and fragility at any given time. Humans are smashing this system to pieces, creating ripple effects every bit as devastating as the earthquakes and volcanic eruptions caused by the meteorite. But capturing complexity—including feedback loops, tipping points, cascades of cause and effect that keep branching off—is difficult, and we haven't yet learned how to do it effectively.

Then, also, there is the question of agency. If we are to tell the story of humans as a meteorite, we are telling a collective history of us all. But aren't some more involved than others? The ones who used fire; the ones who invented language; the ones who stopped running and decided to settle down; the ones who switched to intensive agriculture; the ones who came up with writing and other storage media; the ones who extracted oil and coal; the ones who indulged in excessive consumption. If *we* are the meteorite, it is also true that some of us are more directly responsible than others by contributing more to the process that separated us from the rest of evolution and put us on a collision course with ourselves.

The challenges of scale, complexity, and agency are problems of narrative. Stories require that we construct

a world, the setting into which we place an agent who undertakes an action. But what kinds of stories should these be? Morality tales that assign blame, creating villains? Cautionary tales that pinpoint a wrong turn taken long ago? Stories of unintended consequences and devastating effects? Dire warnings that we are in the middle of an inferno without quite realizing it, blinded by our short lives and even shorter attention spans?

Stories matter terribly to humans because whenever these born runners slow down for just a moment, they begin to tell one another stories, stories that capture experiences that need to be passed down, stories that create cohesion and cooperation within groups, stories that articulate shared values by explaining significant events in the past. Humans are born storytellers; they want to know where they come from and who is to blame for their difficulties.

Stories are powerful motivators, and they can be terribly misleading. There is competition among stories, a competition for attention (which stories do we listen to?), for authority (which stories do we believe in?), and for survival (which stories get passed down to the next generation?), which is why it matters what kinds of stories get told and how existing ones are interpreted.

Climate scientists have woken up to the power of stories. For the past forty years, their strategy had been to do better climate science, assuming that improved

models and more accurate predictions would translate into appropriate changes in policy and behavior. The strategy hasn't worked, and now scientists are asking for stories that pinpoint agency, that capture complexity, that make ten thousand years seem like a millisecond collision. What is needed are new stories as well as new ways of understanding old ones. The power of stories—seductive, misleading, and potentially transformative—needs to be harnessed to a new purpose: mitigating climate change.³

The good news is that there is an entire discipline devoted to storytelling: literary studies. In particular, there has emerged over the past several decades a thriving subdiscipline of ecocriticism that has paid attention to everything from nature writing inspired by Henry Thoreau's *Walden*, of 1854, to Rachel Carson's *Silent Spring*, of 1962, with its powerful focus on pollution.⁴ More recently, the field has expanded to study the literary representations of the industrial revolution, the age of oil, and of colonialism, with additional attention to climate justice in the United States and elsewhere.⁵

Unfortunately, the insights of ecocriticism have not been as widely noted outside the field as they should be. This is in part because literary studies have suffered a loss in recognition and authority, along with many other humanities disciplines, as expressed in plummeting enrollment numbers and declining jobs. Yet climate change is also sidelined within literary studies.

MFA programs, important generators of stories in the United States, have traditionally been concerned more with style and voice than ideas and science, and few have included teachers who pay sustained attention to the environment.⁶ The same is true in the discipline of world literature, in which few scholars, until quite recently, have paid attention to the environment.⁷

All this is changing now as a gathering sense of crisis is putting all disciplines and areas of knowledge on alert. This book is part of a movement to bring the broader field of literature and storytelling to the looming crisis of climate change. In the process, I will make an argument in favor of large timescales as particularly important for understanding the relation between storytelling and the environment. While environmental degradation and rising CO₂ levels have steeply accelerated in the last two hundred years, the decisions and habits that set humans on the course toward climate disaster go much further back, making it crucial to study the distant past of storytelling.⁸ Such larger time spans are available through the concept of world literature and its commitment to understanding literature as a single, interrelated system, which is why the history of world literature will play an important role in these pages. Additionally, I believe that the deep history of world literature can offer writers and storytellers a much broader set of models upon which to draw when it comes to telling new stories about humans and their planet. By bringing together

insights from ecocriticism, world literature, and narrative studies, this book hopes to enhance the role of literature in the conversation about climate change, a conversation too important to take place without the humanities.⁹

READING IN A WARMING WORLD

HOW SHOULD WE HUMANS narrate our self-made climate disaster? In a sense, we have been doing it all along. All great works of literature concern themselves with a world reshaped by human hands and are therefore potential sources for understanding the process by which humans have changed their environment. The only challenge is to learn how to read these works with a sustained attention to climate change. They don't always yield to this kind of reading easily because they were not made for this purpose. Sometimes, they hide or sideline the traces of human-made climate change by defending the way of life that caused that change and by being unaware of climate change itself. Yet works of world literature can be made to yield their significance if we ask the right questions, focus on the right details, and embed those details in the larger societal processes that put us on our current, disastrous path.

To exemplify the kind of reading I have in mind, one inspired by ecocriticism, I want to begin with a source text of literature, arguably the first great work of world literature: the *Epic of Gilgamesh*. Its earliest form dates back more than four thousand years, but the work took on canonical form seven hundred years later, when it came to dominate an entire region for over a millennium. But then, some time before the Common Era, it disappeared, along with the cuneiform writing system in which it was written. By chance, the text was unearthed again two thousand years later, in the 1840s, by the restless adventurer Austen Henry Layard while he was digging for Nineveh, the biblical city once located on the Euphrates River.¹ Through luck and perseverance—and the reading of the Hebrew Bible—Layard hit upon the burnt-down library of Ashurbanipal, an Assyrian king who had collected the clay tablets that contained this ancient epic. (When Ashurbanipal's library went up in flames, the clay tablets had hardened, inadvertently preserving this masterpiece for millennia underground.)

Finding the epic was one thing; reading it, another. It took another couple of decades to decode the forgotten cuneiform script, a feat that was achieved at the British Library, whither Layard had transported the tablets.² The deciphering of this text was headline news because this oldest surviving masterpiece contained shocking information for Victorian England: a text older than the Old Testament included

an identical story of Noah and the Flood. What were Christian believers to make of this remarkable coincidence? What were the implications for the status of the Old Testament as holy scripture?

Today, the provocative potential of the story of the flood is undiminished, though for different reasons: I regard it as a key text when it comes to climate change.³

Despite the striking similarities, the two flood stories, in the *Epic of Gilgamesh* and in the Hebrew Bible, are also quite different. In the Hebrew Bible, we read:

And the Lord saw that the evil of the human creature was great on the earth and that every scheme of his heart's devising was only perpetually evil. And the Lord regretted having made the human on earth and was grieved to the heart. And the Lord said, "I will wipe out the human race I created from the face of the earth, from human to cattle to crawling thing to the fowl of the heavens, for I regret that I have made them."⁴

As translated by Robert Alter, the flood is clearly presented as punishment: humans have been violating God's commands, leading God to regret that he ever made them. He comes to view the creation of humans as a mistake that has to be undone. The mistake encompasses not just humans; all living creatures are apparently guilty by association and must be wiped out

as well. It is only thanks to Noah, the one good man, that humans, along with all the other animals, survive.

In the *Epic of Gilgamesh*, the details of survival are similar: the Noah-like Utnapishtim builds a large boat, saves his family as well as the family of animals, sends out birds to see whether the waters are receding, and rejoices when one of them returns with a twig in its beak—these were the details so strikingly similar to the Bible that disturbed Victorian England.

Yet even if the details are similar, the moral of the story is different. In the *Epic of Gilgamesh*, the flood is not part of the main story but merely an interpolated tale told by Utnapishtim to Gilgamesh toward the end of the epic. Instead of framing the story as one of divine retribution, Utnapishtim begins his tale simply by saying that the gods had resolved to send a deluge, giving no reason as to why they had done so. One of the gods reveals the gods' secret plan of destruction and instructs Utnapishtim to build a boat and safeguard samples of the world's fauna. When the ordeal is over, a goddess accuses the great god Enlil of having brought on the deluge "irrationally."⁵ To be sure, she concedes, in a purely hypothetical manner: "punish the wrongdoer for his wrongdoing, / and punish the transgressor for his transgressions / But be lenient."⁶ However, she then suggests less extreme measures that would have been more appropriate: "Let the lion rise up to diminish the human race"; "Let the wolf rise up to diminish the human race"; "let famine rise up

to wreak havoc in the land”; “let pestilence rise up to wreak havoc in the land.”⁷ The point here is not sin and punishment, but something closer to population control. The human race has grown too populous and needs to be culled. There are better ways of doing so than by destroying everything through a flood, the goddess is saying, and the epic confirms her point of view.

Despite the fact that we have now, once again, this second, earlier version of the Flood at our disposal, the biblical version continues to dominate. One reason may be that the debate about climate change tends to be charged morally with ideas of sin and punishment, transgression and retribution; another is, of course, that the Hebrew Bible is more influential than the *Epic of Gilgamesh*. Or are these the same reason? Biblical morality is shaping current thinking about the climate more than it should. True, one might argue that seeing climate change through a moral lens makes sense to the extent that human-made climate change is our fault. Perhaps we must even follow Noah and save ourselves by building a new ark (is this what Elon Musk is doing with his mission to Mars?). The question of agency and responsibility is everywhere, and the Old Testament seems to offer a powerful warning in the form of a morality tale as well as a solution.

Today, however, it is becoming clear that the religious fable of righteousness and sin is not effective in pinpointing cause and effect for human-induced

climate change, nor in mitigating it. The righteous recycler who unplugs from the grid and lives a virtuous zero-emissions life will not save humans. If a story of the Flood is useful at all—and it may be better to jettison it entirely—the one from the *Epic of Gilgamesh*, less concerned with sin and punishment, and more with population control and the relation between humans and their environment, is probably better.

Mesopotamians, unlike inhabitants of arid Jerusalem, where the idea of a flood must have come as a surprise, experienced floods on a regular basis. Living between two large rivers, the Tigris and the Euphrates, they had been able to invent intensive agriculture because of the regular flooding that brought new soil and nutrients to their fields (the word *Mesopotamia*, in Greek, means “land between the rivers”). The problem was how to control these periodic floods. For this purpose, Mesopotamians created an elaborate system of canals, something that is also mentioned in the *Epic of Gilgamesh*. It was the first attempt to control the environment by means of a large engineering project. The canals worked astonishingly well, until they didn’t, leading to inevitable flooding, which reminded humans, or should have reminded humans, that environmental engineering, then as now, had its limits and its risks. As more people settled in the fertile floodplains, more people were exposed to violent floods, beginning a high-stakes cycle that has continued to this

day. Among many other things, the *Epic of Gilgamesh* is a warning against this form of hubris.

While the flood got all the original headlines, there are other, more trenchant parts of the *Epic of Gilgamesh* that speak to how settled humans construct their relationship to the environment. The epic begins with a crisis: a wild creature has been interfering with the natural order of things. It has destroyed human traps; it has filled in pits that are meant to catch wildlife; it has helped other animals escape from humans. One hunter has spotted the creature: it has fur all over its body, including a long mane on its head; it feeds on grass alongside gazelles and joins other animals at the watering hole.

The epic's account of this wild creature is at least as significant, from an environmental perspective, as the flood. For this creature is actually some sort of a human, named Enkidu. We know this because he has been created by the gods specifically to rein in Gilgamesh, king of Uruk, who doesn't know what to do with his strength. Gilgamesh creates chaos by doing whatever he wants, which is mostly doing battle with men and raping women. Something has to change, so the gods have taken clay and molded Enkidu out of it. But for the time being, Enkidu lives with the animals and shuns human company. He is not quite human yet.

And so, the drama of how Enkidu can be brought into human society begins. He has to shave off his

beard; he has to start wearing clothes; he has to start eating cooked foods; and he has to shun the company of other animals. This is accomplished by sending out a woman who seduces him. After the seduction, the other animals reject Enkidu, and he has no choice but to throw in his lot with humans. Once he is in human society, he befriends Gilgamesh (well, first they fight, then they make up) and learns how to eat bread and drink beer. Only then has Enkidu become fully human, and the epic can turn its attention to other topics, essentially becoming an adventure story of two friends going out into the world. It's possible that they even become lovers.

What the *Epic of Gilgamesh* does here is draw a line between humans and nonhumans. Even if you are biologically a human being, you are not human as long as you live in the wilderness, as long as you graze, as long as you don't reject the wilderness and settle down, as long as you don't eat and drink the products of intensive agriculture, such as bread and beer, that have made settled life possible.

More specifically, what the epic draws between humans and humanlike wildlings isn't a line: it's a wall. Gilgamesh is famous for having rebuilt the wall around Uruk, the city over which he rules. The wall and the physical plant of the city are also what the *Epic of Gilgamesh* is visibly proud of. Before the main action begins, the *Epic* gives its readers a tour of the city:

He [Gilgamesh] built the walls of ramparted Uruk,
The lustrous treasury of hallowed Eanna!
See its upper wall, whose facing gleams like copper,
Gaze at the lower course, which nothing will equal,
Mount the stone stairway, there from days of old,
Approach Eanna, the dwelling of Ishtar,
Which no future king, no human being will equal.
Go up, pace out the walls of Uruk,
Study the foundation terrace and examine the
brickwork.
Is not its masonry of kiln-fired brick?
And did not seven masters lay its foundations?
One square mile of city, one square mile of gardens,
One square mile of clay pits, a half square mile of
Ishtar's dwelling,
Three and a half square miles is the measure of
Uruk!⁸

The passage reads like the script of an excited tour guide telling us where to look, explaining all the sights, praising what we see. It is a miracle, we are to understand, this ramparted city, a miracle made of clay. Clay is the material from which this city wall is made, kiln-fired bricks, and clay bricks are what the houses and temples are made of as well. Clay is such an important building material that the tour guide even mentions the clay pits from which this material is harvested.

This city, ramparted by clay bricks, is the world into which Enkidu has to be brought. It is here where

wheat, harvested by clay sickles or flint, baked in clay pots, and stored in clay containers, is consumed, and where beer, stored in clay vessels, is brewed from barley. The wall that separates humans from animals separates the city from the country. The *Epic of Gilgamesh* is a text that celebrates urban living and dismisses the wilderness as unfit for human habitation.

There are lots of reasons to celebrate Uruk. The city was one of the first large urban centers in the world, concentrating as many as fifty thousand inhabitants into one small space. But to my ears, the celebration of urbanism undertaken in the epic also has a tinge of defensiveness about it—a tour guide’s exaggeration. One recent scholar has suggested that Gilgamesh’s impressive city wall was built as much to keep the good people of Uruk in as to keep wildlings such as Enkidu out.⁹ It is true that sedentary life reduced the diversity of foods, exposed inhabitants to droughts and floods, and led to the spread of diseases. There is evidence that in the early days of agriculture, humans sometimes returned to hunting and gathering or to following their herds because of the significant drawbacks of agricultural life. Also, cities had to be defended against nomads whose diet was more diverse and who tended to be stronger. So perhaps there is an element of propaganda in the epic’s praise of city living. Enkidu, after all, didn’t come voluntarily. He had to be seduced into the city through cunning.¹⁰

As soon as the seduction of Enkidu, which is really an induction into urban living, is complete, the two friends leave the city again. Their goal is to kill the monstrous Humbaba, who lives far away, in a forest of cedars, which he guards jealously. This is the central episode in the entire epic and one in which the close friendship between Gilgamesh and Enkidu is sealed. Along the way, Gilgamesh is plagued by dreams that seem to foretell disaster, but each time Enkidu puts a more positive spin on them, convincing his friend to go on. Enkidu's past as a wildling is not entirely forgotten. On their trek through the countryside, Gilgamesh remembers that his friend used to live here, that the wilderness is where he originated. Perhaps this is what gives Enkidu the authority to interpret Gilgamesh's dreams.

Finally, after all obstacles, such as Gilgamesh's ominous dreams, have been cleared away, the much-anticipated encounter of the two friends with the monster can take place. Unsurprisingly, the great Gilgamesh vanquishes Humbaba in battle, which is described in some detail. Once more, the wilderness loses against the ruler of urban life. Intriguingly, Humbaba seems to recognize Enkidu as a fellow wildling, which is why he pleads with him for his life. "You know the lore of my forest, / And you understand all I have to say," Humbaba says to him, quite correctly.¹¹ But Humbaba doesn't recognize that Enkidu now denies his past and has fully sided with the city, even more so than

Gilgamesh. He eggs on Gilgamesh and convinces him to kill the monster with the zeal of a recent convert.

Their dirty work complete, the two friends begin what they have actually come to do: to fell trees. “Gilgamesh cut down the trees, / Enkidu chose the timbers,” the narrators says, and Enkidu elaborates the reason.¹² Speaking to Gilgamesh, he says: “You killed the guardian by your strength, / Who else could cut through this forest of trees? / My friend, we have felled the lofty cedar, / Whose crown once pierced the sky. / I will make a door six times twelve cubits high, two times twelve cubits wide, / One cubit shall be its thickness / Its hinge pole, ferrule, and pivot box shall be unique.”¹³ The mythical venture to the forest and the battle with Humbaba are in fact nothing but an elaborate logging expedition, extracting a resource that is crucial for building cities.

While Uruk, the gigantic city, is mostly made from clay, its doors and roofs are made from timber. And also it is not only Uruk. More and more cities have sprung up in Mesopotamia—sedentary life isn’t that bad after all—which means that there have been more and more logging expeditions leading to increased deforestation. Rulers have to bring timber from farther and farther away to feed the first urban construction boom in history. This is why the two friends have to go all the way to Lebanon, which is where Humbaba and his cedar forest are located, some seven hundred miles from Uruk. The sedentary lifestyle is remaking

the landscape and requires more and more resource extraction. It is a bitter irony: the former wildling Enkidu is now working for city dwellers, destroying the environment that once sustained him. Humbaba's is not just a regular forest: it is a sacred grove, which means that it is untouched by human hands. One might translate this into the language of botany and say that it is virgin forest, the most important, environmentally, by far. Humbaba is right: Enkidu knows all about the forest and should know better, but he no longer cares. He likes his clothes, his bread, and his beer, he likes women, and above all he likes Gilgamesh, his best friend and builder of city walls.

The episode confirms the line, or wall, drawn around humanity: those who dwell in the forest are monsters and have to be killed. The forest is not for living. It is for felling trees and bringing them into the city to build houses and to fire kilns in which clay bricks can be hardened.

Interestingly, the epic describes this resource extraction and lets us admire the two heroes who undertake it, but the epic also shows that this deed comes with a steep price attached, which takes the form of the gods deciding to punish the two trespassers. Gilgamesh is spared, but Enkidu must die. He suffers a slow and painful death, leaving Gilgamesh heartbroken and unhinged. He doesn't believe that Enkidu is dead until he sees a worm crawling out of his nose—one of the epic's most affective and touching details.

What, in this epic, does an unhinged person do? He leaves the city and roams in the wild. Gilgamesh runs from one end of the world to the other, his clothes in tatters, living on the steppes, as his best friend once did. It's almost as if he is trying to relive Enkidu's life, though in reverse, leaving the city for the wilderness.

Roaming Gilgamesh encounters Utnapishtim at the end of the world, which is where he hears the story of the flood. It isn't what he had come for. He was looking for eternal life but missed his chance; by the end of the epic, he finally returns to Uruk, having made his peace with death. The epic concludes by giving us another tour of the walls, bricks, temples, and clay pits that make the city so great. This is how an epic that defines the difference between humans and animals, civilization and barbarity, has to end: with the triumph of settled life, secured by a wall.

The *Epic of Gilgamesh* is the first important record of human settlement, the mode of life that set us on a path of destabilizing our ecosystem. For this reason, this text offers important clues about how we got here. It also shows how important it is today to read this text, and specifically to read it against the grain, with attention to how our mode of life first emerged, how it has justified itself, and therefore how it might be altered.

What we need in this situation is a new reading of this foundational story, one that does not believe in the wall and recognizes that what sustains the city inside the wall is the resource-rich environment out-

side of it. It is a reading attuned to what one might term infrastructure, in the broad sense recently suggested by Jedediah Purdy, which includes engineering and agriculture in the context of entire ecosystems.¹⁴ Translated into the terms of the *Epic of Gilgamesh*, infrastructure includes not only the city of Uruk but also the forests of Lebanon as well as the rivers Tigris and Euphrates, which sustain the city's agriculture but also threaten the city with devastating floods.

The environmental reading of the *Epic of Gilgamesh* suggested above is but one example of how the deep history of literature can be seen as so many documents that describe and justify resource extraction in its various forms of development. In fact, I believe that the entire canon of world literature would lend itself to such an investigation. Environmental reading of the kind I propose here doesn't need to cherry-pick specific texts or genres, for example those focused on descriptions of nature. Rather, the claim is that all texts and genres can be subject to an environmental reading because of literature's complicity with the lifestyle that has led to climate change. It is striking how consistently (though variously) literature draws a line between civilization and wilderness once one starts looking for the pattern. Let me provide a few more examples, chosen with a view toward variety.

Moving on from *Gilgamesh*, one might turn to another epic from the ancient world, the *Odyssey*. What comes into focus in this epic is the Cyclopes episode, with its attention to alternative forms of commerce and agriculture. The entire episode amounts to a dismissal of people who don't participate in the Greek world of seaborne trade and its particular form of agriculture.

The negative report on the Cyclopes is told, of course, by Odysseus himself, a shipwrecked sailor trying to find favor with his hosts, on whom his fate now depends. Odysseus is therefore likely to exaggerate the bad treatment he had received from previous hosts. The first description of the Cyclopes frames the episode by focusing on the strange form of agriculture these people practice. "They put their trust in gods, / and do not plant their goods from seed, nor plow. / And yet the barley, grain, and clustering wine-grapes / all flourish there, increased by rain from Zeus."¹⁵ At first blush, this sounds very much like a typical agricultural society, similar perhaps to Mesopotamia, where most of the grains mentioned by Odysseus were first cultivated, sustaining a settled life.

But there is one important difference (important to Odysseus, that is): the Cyclopes grow these agricultural products without having to work for them. This difference is immediately joined by a second—namely, that they lack the political organization typical of Greece: "They hold no councils, have no

common laws, / but live in caves on lofty mountain-tops, / and each makes laws for his own wife and children, without concern for what the others think.”¹⁶

Odysseus paints a picture of radical isolation, of individual families living by themselves without a sense of community or polity. Once again, it is city dwelling that is privileged here, the kind available in the city-states prevalent in Greece.

The final oddity, in Odysseus’s mind, is that the Cyclopes do not participate in maritime trade and instead live in (relative) isolation from the rest of the world. Upon seeing this rich island, Odysseus immediately begins to imagine what could be accomplished here by Greek enterprise, what harbors could be created, what fields plowed, what kind of trade set up. Clearly, the Cyclopes do not know what they could do with their natural resources, do not recognize the full potential of their land. Like Enkidu in the *Epic of Gilgamesh*, they are, somehow, “wild.”

With this negative framing concluded, Odysseus proceeds to recount what actually happened here. Once Odysseus and his companions arrive, they find one of the Cyclopes gone but enter the cave anyway. Now begins the riveting drama of the murderous Polyphemus, who disrespects the rules of hospitality (which Odysseus praises his audience for upholding, since his life depends on it), who kills and eats humans (instead of feeding them, like a good host would). This monstrous antihost will have to be brought down through the

cunning of Odysseus, who uses a special wine to make him drunk. Once the guest-eating Polyphemus has passed out, Odysseus sharpens a pole, heats it in a fire, and drives it into the Cyclops's single eye.

At this point, the narrative becomes particularly gory. Odysseus describes his revenge with not one but two extended similes, comparing the movement of turning the pole in the eye to a drill used in shipbuilding (again, the importance of maritime trade and technology) and then the sizzling of the injured eye to that of a blacksmith who puts a red-hot iron in a bucket of water (another technology the Cyclopes do not possess or need). This is what these two similes sound like in Emily Wilson's characteristically direct and powerful rendering:

They took the olive spear, its tip all sharp,
and shoved it in his eye. I leaned on top
and twisted it, as when a man drills wood
for shipbuilding. Below, the workers spin
the drill with straps, stretched out from either end.
So round and round it goes, and so we whirled
the fire-sharp weapon in his eye. His blood
poured out around the stake, and blazing fire
sizzled his lids and brows, and fried the roots.
As when a blacksmith dips an axe or adze
to temper it in ice-cold water; loudly
it shrieks. From this, the iron takes on its power.
So did his eyeball crackle on the spear.¹⁷

Before inviting us to enjoy this much-anticipated revenge, however, Odysseus has inadvertently provided his listeners with details of Cyclopes living that contradict his framing story. While he had originally presented the Cyclopes as lazy recipients of divine plenitude, we now learn that they actually work very hard for their sustenance. For one thing, Polyphemus is a neat housekeeper: “We saw his crates weighed down with cheese, and pens / crammed full of lambs divided up by age.”¹⁸ Everywhere is evidence of careful animal husbandry and agricultural activity, like that surrounding the best of Greek cities. Even the claim that the Cyclopes live in isolation from one another is proven wrong by Odysseus’s own words. When the blinded Polyphemus calls for help, help comes immediately. “[He] shouted for the Cyclopes who lived in caves high up on windy cliffs around. / They heard and came from every side, and stood near to the cave, and called out, ‘Polyphemus! / What is the matter? Are you badly hurt? / Why are you screaming through the holy night / and keeping us awake? Is someone stealing your herds, or trying to kill you, by some trick or force?’”¹⁹ Clearly, these are not people who live in isolation from each other but a community that rallies immediately to defend one of its members who appears to be in distress. The Cyclopes help one another out; they form a proper society.

Like the *Epic of Gilgamesh*, the *Odyssey* draws a line between civilization and barbarity. The line is similar, if not identical, to the Mesopotamian epic in that it

involves agriculture, though here we are dealing not with a grazing wildling but with the odd picture of agriculture and domesticated animal husbandry succeeding allegedly (but not actually) without labor. Equally important is Homer's emphasis on long-distance trade and shipping, the core of the Greek economy, which the Cyclopes lack. This different economic base also explains the diverging attitudes toward the institution of hospitality, which is so central to this episode and the entire epic: hospitality is particularly important for long-distance trade. As subsistence farmers, the Cyclopes do not need hospitality, which is why they are happy to violate its rules.

One could follow the representation of agriculture, animal husbandry, and trade throughout the canon of world literature. The next stop might be Homer's Roman imitator, Virgil. The *Aeneid* is yet another foundational story that revolves around the drama of burning and building urban spaces. Its narrative is like a cord suspended between two cities, beginning with the destruction of Troy and ending with the founding of Rome. To gain a fuller purchase on this epic's attitude toward agriculture, urban living, and other aspects of resource extraction, it should be read side by side with Virgil's other great work, the *Georgics*, which delves deeply into the Roman knowledge-base of agriculture from crop rotation to beekeeping as well as the infrastructure that enabled a city such as Rome to exist in the first place.²⁰ Held side by side, this

pair of texts reveals the relation between city life and agriculture without fully recognizing their interdependence. Emphasizing this interdependence is what an environmental reading would be able to do.

The interplay of an urbanized world with what now appears to be wilderness turns out to be quite important to a number of foundational epics. But there are other genres that could be opened up to this kind of environmental reading, for example the animal fable, which brings select elements of the wilderness into the human world of its readers. As writing increased in the ancient world, more oral stories were written down, especially shorter tales, animal fables among them. These tales were collected and sometimes held together with a framing narrative. Such collections became a widespread genre in the first millennium of the Common Era.

When it comes to animal fables, one the most important collections is the *Panchatantra*, a South Asian text framed as a tool for educating princes. In those fables, speaking animals enact scenes with trenchant morals for the edification of princelings destined to shoulder the burden of kingship. These stories were so successful—less is known about the success of the princelings—that they can be found in many other collections as well. Also from South Asia are the *Jataka Tales*, which are likewise based on animal fables but adapted to a Buddhist worldview with a cunning device: the tales are told by the Buddha, who himself

inhabited these animal bodies in earlier incarnations. Animal fables are also included in the *Arabian Nights*, in Aesop's *Fables* (which borrow from Eastern stories), and in many other collections as well. Reading across these texts, one can track how stories morph from one collection, and culture, to the next. Sometimes the same moral is derived, but the animal changes, according to the local fauna of wherever the tale is being told and collected.

What all these fables have in common is that they bring wild animals into the city by means of literature while also assimilating them to human life, above all by giving them speech. In order to read animal fables, we need to interpret them as so many ways of domesticating wilderness, of bringing it into the domain of human sociability, much like Enkidu. Within these stories, animals converse, debate morals, and behave in most ways like humans. More important, they enact human concerns. These concerns are particularly evident if one relates them to the frame tales by which they are held together and which give them purpose, such as the education of princes in the *Panchatantra* or the survival of the storyteller Scheherazade in the case of the *Arabian Nights*. These frame tales betray the true purpose of the stories collected within them, or rather, they impose their own, human, courtly purposes on them.

Turning from story collections to another major genre, the novel, we find that the challenge of read-

ing novels in light of climate change takes a different form. In the first great novel of world literature, the *Tale of Genji*, written by a lady-in-waiting at the Heian court around the year 1000 CE, most of the action takes place within a few city blocks of the capital, and almost all indoors. Exile is seen as the greatest possible punishment, the forcible ejection of a member into the outside world. Hundreds of years later, something similar happens in the important Chinese novel *Dream of the Red Chamber*, which is confined to the interior of a family compound. All hell breaks loose on the rare occasion when someone leaves this enclosed space for the wilderness, urban or otherwise, that surrounds it.

This emphasis of the novel on human sociability is even more pronounced in the modern era. Recently, the novelist Amitav Ghosh has taken to task the realist canon of the modern novel for being too exclusively focused on the social world while neglecting the resource-extracting lifestyle that made that world possible.²¹ In order to move beyond this narrow focus, he calls for a broadening and deepening of our reading habits.

I agree with this broadening just as I agree with this characterization of realist fiction, but I don't think this argument implies that we should stop reading realist novels. Rather, the very lack of attention to the environment that is often at work in these novels is something we need to understand through close

scrutiny, and that means through a new and different kind of reading (which, after all, is exactly what Gosh does). As with so many other contemporary challenges, what matters is not only *what* we read but also *how* we read. In this sense, environmental reading isn't so different from, say, postcolonial reading that examined realist fiction with attention to the brief moments when colonialism appeared in these works, often in passing. In the case of environmental reading, this includes attention not only to how texts view wilderness, but also to how they assume to have mastered it, not least by dividing the world into conceptual zones of wilderness and settled spaces.

Only very recently has literature sought solace in the wilderness.²² Texts seeking and praising wilderness are historical exceptions, obscuring the role literature has played in creating a sedentary lifestyle that is now devastating the planet, the extent to which literature, beginning with the *Epic of Gilgamesh*, has contributed to shoring up our defenses, to defining and defending settled living against all possible alternatives.

The conclusion that should be drawn from this argument is that there is no text of world literature which is not also a document of climate change. If we want to understand where our stories about nature come from, which narratives have occupied our minds and sense of self, we must read the entire history of literature in new ways: as texts that track our evolution into sedentary creatures; as narratives that tend to

justify the values that set us on a path toward agricultural life and resource extraction; as stories that accompany our ingrained habits of thinking and living. We need to recognize these stories in order to understand the collective choices we have made, if we are ever to shake loose from them.

STORIES FOR THE FUTURE

THE REALIZATION THAT HUMANS are responsible for the sixth mass extinction—that we are the new meteorite—is forcing us to consider not only the stories of the past four thousand years but also what stories we should tell in the future.¹ What matters now, in other words, is not just interpreting world literature in new ways, but also changing it. This is, then, the moment for me to expand what has so far been mostly a two-way conversation between ecocriticism and world literature to include those producing new stories, whether fiction or nonfiction, and that means creative writers of all kinds. What does literary study have to say to current and future creative writers, both of fiction and nonfiction as well as to poets and dramatists, and to their interest in the environment?

In the many conversations I have had with writers and journalists as well as policymakers about the shaping power of stories, they have asked me questions such as: What do you, literary critics, know about the effects of stories on readers? What do you know about

different types of stories? Which stories should we tell, and which ones avoid? It has been embarrassingly difficult to answer their questions with any degree of confidence. More than once have I found myself in a position of awkward equivocation.

In this situation, I have tended to default to what seemed like a safe bet: railing against Hollywood disaster movies. Surely, their apocalyptic endings seem to do nothing but induce paralysis and complacency, not targeted action. But this hypothesis, like so much in literary study, has not been tested. It is here that quantitative methods would be especially helpful, a wake-up call for the profession to deliver empirically tested knowledge about the effects of particular kinds of stories on readers.²

Fortunately, we now have, for the first time, tools that could be used for empirical information about the effects of stories—for example, with the user data available through storytelling websites such as Wattpad, a fan fiction company that possesses fascinating information about storytelling and reading that scholars of literature could use. The same, of course, is true of Amazon and other providers of e-readers and e-books. Fortunately, literary study has begun to make more room for this kind of empirical work.

In order to draw our new stories from the broadest possible base, what types of stories are out there that might be used or repurposed? Producing typologies of stories has been a strength of literary criticism. By

some account, it is what scholars have been doing since Aristotle outlined the rules of tragedy in his *Poetics*. The only difficulty here is that there is little consensus, but this is as it should be. One might do worse, perhaps, than start with the most telegenic of schemes, one proposed by Kurt Vonnegut in a widely shared video (just google it, and you'll find it right away), in which he deadpans his way through three story types:

1. A protagonist of above-average happiness experiences ill fortune and falls into trouble. But things don't stay that way, and through grit and with some help from others, former happiness is restored. (Vonnegut called it "man in hole," adding that it doesn't have to be a man and it doesn't have to be a hole.) The graph begins moderately high, then drops down only to rise again significantly above the point of departure.
2. This story introduces an average protagonist who experiences an episode of good fortune only to lose it all, sinking deep. But then prospects brighten, and happiness is restored. (Vonnegut calls it "boy gets girl," adding that it doesn't have to be a boy and a girl.)
3. The third story type is the most well known. Vonnegut starts unusually low, with a little girl (this time he doesn't say that it doesn't have to be a girl) who has lost everything, before edging up when,

with the help of the fairy, this girl whom we know as Cinderella dresses up, goes to a ball, and dances with the prince. But this rise from bottom to top doesn't last; Cinderella is plunged back down, and all seems lost only for her fortunes to rise again, leading to her marriage to the prince.

Vonnegut's is just one of many attempts to map story types. Scholars, often with a structuralist bent, have singled out stories of rebirth and of overcoming monsters, of journey and return, of letting genies out of bottles and of revenge, stories of metamorphosis and of fools who triumph. They have classified stories according to genres and modes, from tragedy, comedy, and satire to romance and revolt. Individual story lines and story types can be further subdivided into their

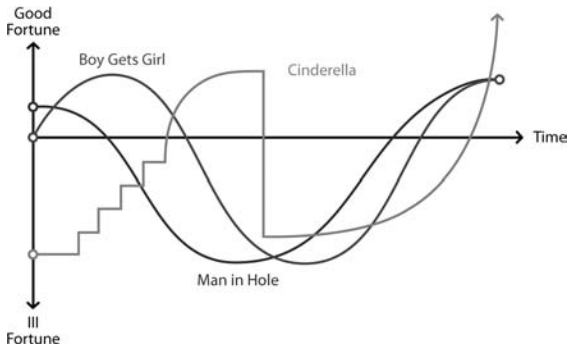


FIGURE 4. Chart showing three story types as described by Kurt Vonnegut in a lecture in 1985.

component parts, as was so powerfully demonstrated by Vladimir Propp, who identified thirty-one components at work in fairy tales.³ Should we feel overwhelmed by this growing number of classifications, we can always turn to Joseph Campbell's reduction of all stories to a single one: *The Hero with a Thousand Faces*.⁴

As varied as these and many other schemes may be, there is plenty of material to work with for those turning to literary study to seek information about story types and plots. This knowledge, accumulated in different traditions of literary study over centuries and even millennia, is equally strong in non-Western criticism, including China, where one may begin with the "Great Preface" to the *Classic of Songs* (attributed, falsely, to Confucius), or the doctrine of *rasas* in South Asia, articulated by Bharata Muni in *Natya-shastra*. Literary criticism has yet to undergo the process of expansion that world literature anthologies began in the 1950s. Perhaps there should be a truly global anthology of literary criticism. Above all, this accumulated knowledge should be made available more widely and more readily for all those engaged in individual and collective acts of storytelling about the environment.

While literary study can contribute its deep knowledge about genre and plot types, there is one particular category of storytelling that is crucial for our purposes: agency. All stories need to figure out how to get from A to B, what drives them forward, whether it be divine intervention, individual agency, the aggregate of chance

and circumstance, or some other driving force. The matter of agency is particularly important when it comes to a problem such as human-made climate change.

A vast number of stories focus on individual protagonists, on heroes with a thousand faces. To be sure, agency is usually more distributed, with other sub-agents helping along the way or hindering the path of the protagonist, and all kinds of other external circumstances playing their roles as well. But a protagonist is always a kind of concentration of agency, the ability to act on the world. In some cases, a story focused on an individual is understood to have wider implications for an entire society, as is the case with epic literature. Here, individual agents, such as Gilgamesh and Enkidu, are often located somewhere between gods and ordinary humans, enacting dramas of collective, even cosmic importance, or else they are kings whose actions radiate out over an entire nation.

For our changing planet, two questions of agency have been paramount: who is to blame, and who suffers the most. An increasing (and, to my mind, just) consensus holds that special blame should be assigned to early industrialized nations that have spent more time emitting CO₂ than more recently industrialized ones. Some might object that this is an instance of retroactive justice since early industrialized countries emitted CO₂ unwittingly, at least until the scientific consensus about human-made climate change started to coalesce around forty years ago. Does this mean

it would be better to start counting forty years ago? I don't think so, since these same industrial power-houses of the nineteenth and early twentieth centuries accumulated wealth that now puts them in a position to mitigate and take responsibility for their unwitting and, more recently, their witting actions.

Sometimes this question of laying blame on entire nations is too crude since populations profited unevenly from early as well as from current emissions. A more targeted approach might focus on oil companies, especially those that continue to explore new reserves, reserves they know need to stay in the ground. Those companies, of course, are also often responsible for deliberately sowing confusion and doubt about climate science.⁵

Because of the human predilection for storytelling, we tend to personalize agents, concentrating agency in individuals or figures. Among the figures populating our discourse on climate change are the hippie who unplugs from the grid, living a life of subsistence virtue (often depending on agriculture, though practiced on a smaller scale); the oil lobbyist who seeks to obfuscate human responsibility for climate change; the Prius-driving recycler who flies a lot; the climate scientist whose warnings are ignored by the general population; the late-capitalist consumer who does not care about the environmental cost of commodities. Depending on where you stand, these figures will be exemplars of vice or virtue.

These heroes and villains are joined by a third, equally crucial figure: the victim. The tendency to focus on victims sometimes goes by the name of *climate justice*, the focus on groups most affected by climate change, from inhabitants of low-lying island nations to the most vulnerable groups within more powerful nations, those who have the least resources for withstanding the effects of climate change.

Here, we can look back at a long history of literary victims, stories about the weak and vulnerable. That history undeniably shows that victim stories are often immensely powerful. They include the passion of Christ as recounted in the gospels, perhaps one of the most influential stories of victimhood in world literature, as well as the story of Sunjata, who grows up handicapped and must overcome this physical impediment before becoming the ruler of his land. Modern stories have introduced a whole array of new outcasts, beginning with Don Quixote, and turned them into unlikely heroes (or antiheroes).

Heroes, villains, and victims: as with all figures of the environmental imagination, the reliance on these figures is not inherently good or bad; they serve different purposes at different times. My point is simply to call attention to the power these figures hold over environmental discourse to open them up to critical scrutiny where that is warranted. (For example, victim stories tend to remove agency from victims despite the fact that victimized communities have tended to exhibit

enormous acts of resilience in the face of climate disaster. Conversely, stories focused on villains bundle all agency in the villain and disregard the extent to which villains respond to external pressures and systems.)

Another important and potentially useful figure for climate discourse is the settler, especially in societies founded by what Mahmood Mamdani has described as settler colonialism.⁶ One might relate this figure of the settler to a whole series of settlement movements, celebrated throughout world literature, beginning with the *Epic of Gilgamesh*. The move toward settlement happened in different parts of the world in different ways, but it has drawn greater and greater swaths of humanity into its vortex. In its broadest definition, the settler is the kind of animal almost all humans have evolved into through a set of collective choices made by their ancestors. Not all settlers are the same, just as not all practices of intensive agriculture are the same, but it is worth noting that in today's world, very few people live outside the regime of either, which means that almost all humans are the descendants of Enkidu, having been brought into agricultural life.

Focusing on the figure of the settler in turn raises the question of who does not fall within that category: the nomad. There has been a war going on between the settler and the nomad ever since the introduction of agriculture, settlements, and cities. Step by step, larger swaths of humans have been brought into the

settled life, voluntarily or involuntarily, but this process has never been complete. There still exist small numbers of nomadic peoples living outside settled society.⁷ Perhaps “outside” isn’t the right word, since the settler principle has encroached upon most corners of the world. Today, nomadism happens within, in the interstices of, the settled world.⁸

Different from, but related to, both the settler and the nomad is the refugee, a figure defined by being displaced from settlement and seeking shelter elsewhere. A good number of today’s political refugees, from North Africa to Latin America, are in fact climate refugees, either directly or indirectly so, and the number of such refugees is predicted to increase steeply in the coming decades. Settled societies will be transformed—unsettled—by the arrival of climate refugees, with profound consequences.

Each of these figures, from the hero, the villain, and the victim to the settler, the nomad, and the refugee, has shaped the discourse on climate change. If we want to question existing storytelling and open up spaces for new stories to emerge, we need to ask whether this particular array of figures is the right one, sufficient for the task at hand. Should new figures be added? Should existing ones be deployed differently? Questions upon questions, which I can’t answer, but at least I want to raise them.

There is another aspect to the human tendency toward personalization: the collective. For one thing is

certain: climate change is produced not individually but collectively. There is no living and breathing human being that does not contribute, in however small a portion, to human-made climate change. In the last analysis, climate change is a matter of humans as a species, as a collective agent. And just as climate change is produced collectively, it will have to be solved collectively, no matter how important it is for individuals and institutions to do their part depending on guilt and suffering, ability, willingness, and necessity. What this means is that we need stories with collective agents.

I can think of one relatively recent model that might help here, a work of world literature that I have already discussed briefly in another context and that happens to have introduced a new collective agent: *The Communist Manifesto*. One feature that distinguishes this text from many of its rivals is that it tells a grand story of human society, a large-scale history as seen through the lens of class struggle. The *Manifesto* predicts its revolutionary future based on and as a culmination of this grand history. The historical forces behind this history, the *Manifesto* explains, conspire to create a new kind of collective agent.

Previously, Marx and Engels had encountered a discourse that revolved around two figures: the greedy capitalist, always depicted with a cigar in his (mostly male) mouth; and the victimized industrial workers. Marx and Engels acknowledged the truth of these two figures but also their limitations. They took the first,

the capitalist, and depersonalized it, turning the villain into a structure (much as structural racism is shifting the discourse from individual attitudes to social structures and institutions). And they took the second, the mass of exploited victims, and turned them into a new and active agent: the proletariat.

The proletariat is not simply a group of victims who share the same predicament, such as being exploited by industrialization. Rather, the proletariat is the result of a historical process that has led to what we could call globalization—the relevant passage in the *Manifesto* ends with the invocation of *world literature*—which in turn has given rise to a new agent. While being the product of a historical process, this new agent needs to be distilled and articulated, it needs to be made manifest, and this is precisely the job of the *Manifesto*. In making the proletariat manifest, the *Manifesto* tells the story of the creation of a new agent and thereby brings this new agent into being (in the sense of making it visible *as* a new agent).

Interestingly, while thinking about how to launch their new agent, Marx and Engels begin to see the *Manifesto* as itself belonging to world literature: “Communists of various nationalities have assembled in London and sketched the following manifesto, to be published in the English, French, German, Italian, Flemish and Danish languages.” The *Manifesto*’s original language—German—is listed simply as one among many. The authors envision, or rather fantasize,

that their text will be published in many languages simultaneously.

Initially, it remained exactly that: a fantasy. There was almost no response when the *Manifesto* was published in London in 1848, and very few translations followed, especially over the next twenty years, a period in which the revolutionary fervor of 1848 gave way to a period of reaction.

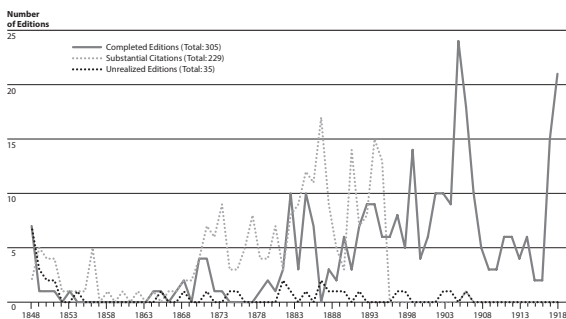


FIGURE 5. Unrealized editions, substantial citations, and realized editions of the *Communist Manifesto* between 1848 and 1918.

While the number of editions and translations was disappointing, the *Manifesto's* status as world literature could already be perceived by the fact that many translations and editions were produced in exile, often because of censorship.⁹ It was only with the Paris Commune and the Russian Revolution that the *Manifesto* became a text of global significance, finally fulfilling its goal of introducing a new agent into world history.

	German	English	Russian	Swedish
1848	London (4)			Stockholm
1849	Kassel			
1850	London-Hamburg	London		
1851	New York			
1853	Berlin			
1864	London			
1866	London-Berlin			
1868	Vienna			
1869		London	Geneva	

FIGURE 6. (Top) Places and languages of publication of the *Communist Manifesto* between 1848 and 1869.

	German	English	Russian	Swedish	French	Spanish	Czech	Polish	Danish	Italian	Bulgarian	Serbo-Croatian	Dutch	Yiddish	Rumanian
1871	Chicago	New York										Pancevo (Serbia) (2)			
1872	Leipzig (2)				New York	Madrid									
1873	Berlin					Lisbon									
1874	Vienna Chicago Leipzig														
1879					Lugano										
1880	London				Paris										
1881	London		Moscow Geneva				New York								
1882															
1883	Chicago Zürich	New York (2)	St. Petersburg (3) Koslow Moscow					Geneva							
1884	Zürich				Paris				Copenhagen						
1885			St. Petersburg Moscow Kazan		Paris Paris Riems Alorntagon Roubak Roanne				Copenhagen						
1886		London	St. Petersburg	Stockholm	Paris	Madrid (2)			Christiania (Oslo)						
1888		London (2)				Mexico									
1889										Gremota					
1890	New York	New York (2)	Moscow		Paris				Copenhagen					London	
1891	Berlin									Milan	Ruse				
1892	Bern							London		Milan			Amsterdam Hague		Isaf (2)

FIGURE 7. (Right) Places and languages of publication of the *Communist Manifesto* between 1871 and 1892.

Can we learn something from this history for environmental change? The first lesson is how difficult it is to envision a new, collective agent. In order to accomplish this goal, Marx and Engels had to invent not only a new approach to history but also an entirely new genre in which to tell it: the genre of the manifesto. Is it time for a new manifesto for environmental thinking and reading and living?

I have been struck by the extent to which recent social movements, from Occupy Wall Street to Black Lives Matter, have shied away from the manifesto as a genre. One reason, perhaps, is the discrediting of the specific story told in this text and therefore the particular agent, the industrial proletariat, as envisioned by the two authors. But the deeper reason for widespread skepticism with regard to the manifesto lies elsewhere, I believe, and has to do with the *Manifesto's* first-person plural. The “we” of the manifesto sounds presumptuous, especially to ears that have become so attuned to the dangers of universalizing particular experiences and of speaking for others. The default, today, is to encourage everybody to speak only for themselves, or for a narrowly defined group.

Here, it may be instructive to see how exactly the two authors came to use the “we.” In the *Manifesto*, Marx and Engels don't speak for themselves at all; by “we,” they don't mean “Marx and Engels.” Rather, they speak for an entity, the institution that hired them: the Communist League. In fact, Marx and Engels

didn't originally appear as authors of the published text. They didn't even sign it. They didn't speak for themselves at all. They simply produced a text for the Communist League to allow this league to articulate its own principles and goals.

The Communist League was not a powerful institution. On the contrary, it was a weak, small assortment of mostly German-speaking artisans living in London. In assuming the "we" of the manifesto, with its grand historical vision and the introduction of a new historical agent, the league was nothing if not presumptuous. Speaking from a position of obscurity and powerlessness, it assumed the voice of collective power.

Can literary scholars hoping to contribute to the knowledge of climate change distributed across our field learn something from this presumptuous audacity? I believe so. It is that speaking as a "we" doesn't have to mean "I speak for you"; it can mean that an obscure and powerless association of people can commission two of its members (or more, or fewer) to articulate a new historical agent. Something like this is possible. At least, it has happened before.

How could anyone define the collective agent that would rise up to solve climate change? Such an act would require figuring out how to tell the story of that agent, what constellation of historical forces might produce it. Finally, it would mean deciding how best to make that agent visible, what kind of manifesto

or other genre would bring it to the forefront of our understanding.¹⁰

Recently, one particular environmental disaster has emerged that has forced humans all over the world to reckon with itself as a species: Covid-19. The virus causing this illness—like other viruses—is the result of the settled agricultural lifestyle that brought humans and animals into close proximity, creating the conditions for the virus to jump from animals to humans. Its deadly effects target humans as a species since the virus has found humans, due to their very abundance, as its most effective vehicle for replicating itself. In the process, Covid-19 is changing humans on the level of a species in the sense that our bodies will change in the coming years.

This kind of species thinking is very different from the abstract (and yet, in an unacknowledged manner, culturally specific) notion of humans propagated by Renaissance humanists or eighteenth-century universalist philosophers. Acknowledging the “species” dimension in the sense of a differentiated collectivity doesn’t prevent us from seeing vast differences in how nations and groups within nations have been affected by this virus. If anything, the virus has revealed these differences all the more starkly.

I am writing these lines in April 2020, in the middle of what is likely to be only the first peak. But even at this point in time, two things are clear. The pressure and pain brought by this virus has resulted in heightened

nationalisms, with different countries blaming one another or otherwise competing. At the same time, it has become evident that the virus does not respect national boundaries and is forcing us to reckon with our existence as a species. The effects of the virus on the environmental movement are as yet uncertain. But I believe the virus has forced us into recognizing the differentiated collectivity that will be crucial for addressing other aspects of climate change. My hope is that such a collectivity will allow for the recognition of specific groups within species thinking without playing off particular groups against each other or against the species.¹¹

From an environmental perspective, humans aren't the only species that should feature in climate narratives. In fact, it is striking that the newer environmental literature focuses on other species and our relation to them. Richard Powers' *Overstory* is a recent and justly noted work of literature about trees; there are excellent narrative experiments in the species being of butterflies and mushrooms.¹² These works don't isolate the species they study but turn them into agents in an ecosystem that includes humans. (My thinking about species is also influenced by another manifesto, Donna J. Haraway's *The Companion Species Manifesto*.)¹³

But even if literary scholars, working with scientists and environmental activists, could produce an account of collective agency, who would write such a new narrative? Perhaps more so than in the nineteenth

century, there would need to be a collective process of involvement, perhaps even a collective act of articulation. Mere delegation, as in the case of Marx and Engels, would probably not be enough.

There is a type of world literature that can perhaps be a guide to a collective storytelling process: medieval story collections such as the *Panchatantra* or the *Arabian Nights*. The appeal of aggregating stories is to get away from another figure that has held a lot of thinking about literature in its thrall: the individual author. For most of literary history—to return one last time to the big-picture history of writing—literature was produced by people other than authors. Instead, it was produced by scribes, editors, and collectors who inherited texts and produced new ones according to very different principles from those prevailing among modern authors. For one thing, originality was not a prized value for much of this history. Much more important was the task of continuing a tradition and imitating cultural objects from the past while perhaps introducing subtle changes or adapting the past to present needs under the guise of continuity. Sometimes, such changes happened haphazardly, through scribal errors or else through deliberate or involuntary acts of misreading.

Such collective values arising from literary works were slowly pushed to the side with the rise of modern authors, who concocted new, original stories, laid claim to owning those stories, and sold them in the

marketplace. This type of author predated the rise of the printing press but became dominant with the mechanization of the printing press in northern Europe and the industrial mass production of literature.

It so happens that we live in an age when collecting, aggregating, and compiling have become newly central again, after centuries when individual authors claimed center stage. Curating has become an activity not just for a few highly placed museum employees but something available to many. At the same time, the term's meaning has expanded and now includes any activity that involves picking and choosing, compiling and collecting, the creation of playlists and photo albums. Can this curatorial frenzy be trained on the task of collecting stories that might bring about a better future?

There are interesting modern storytelling aggregators, including storytelling websites, that might give hints as to more collective modes of storytelling. Needless to say, this storytelling activity would have to come from all over the world. But who would host such a storytelling website or festival? And how would such a collection of stories be framed, perhaps in the manner of the frame-tale narratives of old? As important as I find it to raise these questions, I am myself at a loss for answers and hope that others will supply what I cannot.

The uncertainty about future stories is compounded by the rise of a new era of world literature. Never

before has the canon of world literature been more easily available than today. At the same time, the material conditions of literature are changing fast, thanks to new media of reproduction and dissemination. How will these transformations change the stories we read and the ones that are yet unwritten?

The new age of abundance in which ever more stories are vying for attention is relatively unprecedented. For most of its history, literary texts had to struggle for survival because considerable resources had to be spent on preserving and transcribing them from one generation to the next, while many texts were lost through library fires (such as the library of Nineveh, which housed the *Epic of Gilgamesh*) and other acts of willful or accidental destruction. An interruption in transmission for even a few generations would mean almost certain loss. Much rarer were moments when lost texts could be recovered after a significant hiatus (as was the case with the *Epic of Gilgamesh*).

Texts survived not only through their material existence but also through their significance, because they were seen as precious and important, justifying the costly education of scribes and commentators, who in turn communicated the importance of these texts to those controlling resources. These economic pressures lessened as the cost of storage dropped and the production and reproduction of literature became cheaper. Initially, this drop in costs was brought about

by the invention of paper and of print in China, creating a virtuous cycle of rising literacy rates that increased the demand for literature, the production of which in turn made literacy rates rise even more.¹⁴

Today we are living through yet another change in the underlying technologies of literature in that the cost of storage, for the first time in human history, is dropping toward zero (though not the environmental cost; even today, literature remains complicit with our resource-extracting mode of life). This means that the evolving canon of literature will be defined much less by the accidents of survival, although there are still significant dangers in relying on electronic storage. The obsolescence of electronic formats and media is an underappreciated problem, and websites need to be constantly tended and updated.

Despite these caveats, it is clear that we are living in an age of abundance, an age when a large amount of cultural objects from the past and the present are available to us thanks to cheap storage and distribution. This age places different pressures on selection in the form of filters and search mechanisms, but also in the form of education. Education means communicating significance—and nothing is more significant today than environmental change. Teaching world literature with reference to climate change is also a way of making the canon of literature newly relevant to the next generation. What we don't use, we lose, whether to the ravages of time or to the neglected

parts of the internet that will become inaccessible in less than a generation.

While literature can help us understand our current environmental crisis, the reverse is thus also true: the climate crisis brings into focus the significance of literature. The importance of literature for our changing planet coincides fatefully with the decline of the humanities. The tried-and-true methods seem to be failing, leading to widespread fears of irrelevance. Everyone has their pet theories about what went wrong and who is to blame. I myself no longer feel I know what it is that we should do, only that we can't continue as we have. We have tried that approach, and it doesn't work. Somehow, we must find new ways to win over students and their parents, climate scientists and scholars in other disciplines, university administrators, activists working in NGOs and thinktanks, as well as the general public. The climate crisis is a chance for us to get our act together. By trying to help save the planet, the humanities might manage to save themselves.

But the fate of the humanities, large as it looms to those connected with them, pales in comparison to the fate of the humans. What shall become of this resource-extracting storyteller? Will we be willing to listen to tales with harsh lessons and demanding conclusions? It has happened before. Humans have shown that they don't simply produce literature to feel good about themselves but also to face hard choices

and to engage in collective action. After all, the ability to coordinate our minds through language was what first jump-started the accelerated cultural development that set us apart from the rest of life on earth. Now the same communicative tools must come to our aid in acts of collective storytelling. Is it time for the storytellers of the world to unite?¹⁵