

THE ANIMAL LIFE

Matthew Denton-Edmundson

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Peter Graham, Committee Chair

Erika Meitner

Thomas Gardner

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Abstract

This thesis puts forward a theory for a new basis of the rights and dignities of animals. The first chapter explains how the neurobiological output / input model can be applied to animal behavior, and suggests that animals—from fruit flies to chimpanzees—and humans are most similar in their desire to experiment with the world around them. The remaining chapters explore the practical implications of considering animals through the output / input model, using literature, the author's personal experience, biological observations, and historical anecdotes. These chapters seek to prove that animals have much more to offer us than milk and meat.

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General Audience Abstract

This is a draft of a book that lays down a new basis for the rights and dignities of animals. Rather than emphasizing the intelligence of various species, their communication abilities, or capacity to feel pain, the author emphasizes the impulse to experiment, which new research suggests may be a universal characteristic of the animal kingdom. The second half of the book is a series of essays that attempts to show how this new model might change human relations with various animals.

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We do not regard the animals as moral beings. But do you suppose the animals regard us as moral beings?

– Friedrich Nietzsche

Dancers paint their exposed skin; their postures and motions are adapted from their observations. But the motions are stylized. The observer sees not an actual eagle or actual deer dancing, but witnesses a human being, a dancer, gradually changing into a woman/buffalo or a man/deer.

– Leslie Marmon Silko

THE NEW ANIMAL BEHAVIOR

There was a story in the newspaper not long ago— one of those rural county newspapers that will put a good night for the local varsity team above the fold, and the newly elected sheriff's son's first whitetail trophy kill bellow it. But this was a bigger story. “Hiker Mauled by Bear, Family Unable to Help.” “Woman Attacked by Bear While Family Runs.” “Wrong Bear Killed After Hiker Mauled.” “Park Service Euthanizes Wrong Bear Following Attack on Local Mom.” The headlines went on for several days. Everyone talked about it. The cashier at the local Dollar General told me she had a dozen people each morning asking after pepper spray.

This is Southwest Virginia, and our black bears are generally pretty mellow. People say never to get between a momma bear and her cubs, but I've done it before, by accident, and nothing bad came of it. The cubs clambered up a tree, and mom loped an arc around me and ushered them down. Our adolescent bears are clumsy, crashing through the woods, and endearing in their shyness once they catch sight of an observer. Sometimes I'll see large logs flipped on end, or a rotted hollow torn through, and know a bear's been after his favored treat: ants and grubs. As far as I hold with the notion of good omens, a bear sighting constitutes one.

So at first, I took the whole thing in with an anthropological eye. I thought critically of the people promoting the unnecessary hysteria, understanding that, in some sense, such fears serve as a justification for the human exploitation of nature. They solidify our notions that wild animals need to be tamed, that the only animals humans can live harmoniously with are domesticated ones. I recalled—as I often do—the horrifying feed lots of west Texas, where cows and sheep and pigs hardly move for the entire course of their lives; the very definition of “safe” animals. Those feedlots, I thought to myself, are what come of this kind of attitude. I remembered an article I'd read a while back, which used Foucauldian theory to critique the U.S. Fish and Wildlife Service management techniques. “There are important ways in which animals such as grizzly bears [...] are subjected to Foucauldian disciplinary techniques, as part of current management practices, to preserve and control their 'wildness,’” Sara Rinfret writes in “Controlling Animals: Power, Foucault, and Species Management.” “Wildlife managers employ techniques to ensure wild animals are indeed docile and useful bodies, controlling species / human encounters to promote economic utility” [573-4]. But for all that, I began to feel the pull of my small town's small-scale bear hysteria. I couldn't stop myself from joining in on the conversations, adding my own bear-encounter stories, and others I'd heard over the years. At the time, I worked at a local business, and because of the bear, I got to know a few of our customers better than I would have otherwise.

And looking back on it all, I'm not sure my initial response was quite fair to my friends and neighbors. I wonder if it wasn't the attack, exactly, that got people talking and worrying, not an irrational fear of the bear herself or a desire to tame everything wild, but more the circumstances surrounding the attack. The woman was hiking with her grown daughter and two sons, and was somehow left behind when the bear charged. Most newspapers stopped just short of suggesting her family abandoned her to the animal, that they ran to save themselves, and it quickly became clear that they probably hadn't, not really. But, the way most people told the story, the boys had left their mother to the mercy of the beast while they hightailed it. At the time, I worked the front counter where people liked to stop and shoot the breeze. I heard five or six versions of the story, and *this*, rather than the attack itself, was the point of greatest interest.

Writing about animals in *The Descent of Man*, Darwin comments that “terror acts in the same manner on them as on us [humans], causing the muscles to tremble, the heart to palpitate, the sphincters to be relaxed, and the hair to stand on end” [99]. Responding to the bear attack, the residents of my small town were grappling with problems of Darwinian proportions. Like Darwin, we've got a few anxieties about what's human and what's animal within us. We were, all of us I think, wondering if we might have overcome the heart-trembling and sphincter-loosening and done something braver than the two young men supposedly did. We were wondering if honor and bravery and self-sacrifice—impulses we tend to think of as particular to human beings—can trump the so-called animal instincts of flight from danger and self-preservation. Is there something within every human individual that sets him or her apart; or are we, at the end of the day, just another animal? More than this, even, I think people couldn't help but put themselves in the bear's “shoes,” to wonder what it would be like to live a solitary and wild life. Even though everyone was horrified at the event, most people seemed unable to stop themselves from admiring the bear's boldness and strength.

I'm not sure my initial response was necessarily *wrong*; I do think many people do have a fear of wildness, and that that fear undergirds the unchecked exploitation of natural resources, that it justifies our sense of superiority over other species. And, yet, in this case I believe something else was happening, too. In the modern world, most of us have limited contact with animals beyond our dogs and cats. And so we jump at the opportunity to consider animals in new and meaningful ways. Looking at animals, listening to stories about animals, I believe, is fundamental to our sense of humanness—how we think of ourselves and our fellow species-members. The bear attack allowed people to do this, to talk about the question of humanness without seeming pretentious or mushy-hearted (both high crimes in Botetourt County). Far from an academic or scientific question, this is something all of us think about, from time to time.

Since that bear attack, I've been thinking about it quite a lot. No less because a few months later, my girlfriend and a few neighbors and I started a small farm on an old property in Fincastle, Botetourt County, Virginia, which we found on Craigslist. We were lucky. Unlike most first-time farmers we had stumbled upon a vein of farm equipment—tractors, tillers, waterers, barns with stalls, and more and more as we searched through the piles of “junk” in the old chicken house, which spans the length of a football field. The owner said we could use most anything we could find. The newest of it was half a century old, and everything required some sort of repair, but we couldn't have been more excited. Three years later, we're still learning things the hard way. Last July our second tomato crop (about sixty plants) was devastated by blight and deer. Worse by far, we've had goats and sheep killed by coyotes, ducks massacred by hawks, chickens by possums. Even so, I love keeping animals. I enjoy trying to figure out what different species need to live a meaningful life in captivity or semi-captivity. For example, although goats will eat grass, I've found they're much more content when they have bushes and trees to browse on. A bit of research bears out this observation— their mouths and tongues are evolved to feel out leaves and strip branches. We recently added rabbits to our operation, and I'm still struggling to figure out how to allow them to both graze and burrow (their two favorite activities), without exposing them to predators.

But keeping animals hasn't simply been an exercise in the machinations of humane treatment. When an animal is allowed a meaningful life, it often illuminates certain things about what constitutes a meaningful life for a human being. The essays that follow this introduction work to explore this relationship as it unfolds both in life and literature, and finally in the sciences.

*

“There is a much wider interval in mental power between one of the lowest fishes, as a lamprey or lancelet, and one of the higher apes,” wrote Charles Darwin in 1871, “than between an ape and man; yet this interval is filled up by numberless gradations” [95]. In the *Descent of Man*, Darwin introduced the idea, a radical one at the time, that the difference between human beings and other living organisms on this planet is one of degree rather than kind. That is, our most intricate forms of government arise from impulses comparable to those that lead a pack of coyotes to establish a hierarchy. Our language abilities, though perhaps more complex than those of other organisms, are adaptations suited to our particular evolutionary niche as whales' calls are to the ocean. We are not, Darwin suggests, Gods among beasts, but are instead animals among animals.

Today, this idea is—or at least seems to be—mainstream. The tools of behavioral genetics have helped researchers (attempt to) tease apart how genes influence behavior in different contexts, for both humans and animals. Evolutionary psychology—studying human and animal thought patterns through an evolutionary lens—is a growing field, and many of its landmark studies continue to be conducted by people trained in animal behavior. “The principled postulation and testing of adaptationist hypotheses with explicit attention to how adaptations evolve,” write Martin Daly and Margo Wilson, in an article published in journal *Animal Behavior*, “is the remedy that can rescue [human] psychology’s functional theorizing from arbitrariness” [57]. In 1972, Richard Dawkins published the hugely popular book, *The Selfish Gene*. In it, he develops a “gene-centric” understanding of evolution, and also coins the term *meme* to describe human culture in evolutionary terms. Steven Pinker (not so scrupulous as Dawkins about the scientific basis of his claims, nor as careful with his words) goes a step further, writing that “the ultimate goal that the mind was designed to attain is maximizing the number of copies of the genes that created it.” In other words, living things are how genes reproduce themselves. Human intelligence is no different than any animal adaptation— a means to increased replication.

Darwin's idea has a current cultural form as well; I don't mean the “social darwinism” that evolved during the mid twentieth century, but instead what Steven Shaviro calls neo-Darwinism. Famously, *Stanley Kubrick's 2001: A Space Odyssey*, begins with ape-men learning to use tools and weapons for the first time; the origins of human technological advancement, which the movie goes on to paint at a fantastical height. More recently, *Dawn of the Planet of the Apes* shows another species developing complex language and culture. The message is clear— we are not as special as we'd like to believe. In *Interstellar*, Dr. Mann constantly characterizes scientists' efforts to save human kind in evolutionary terms. “Evolution has yet to transcend that simple barrier,” he says. “We can care deeply, selflessly about those we know. But that empathy rarely extends beyond our line of sight.” Plagued with something like what Nietzsche calls animal forgetfulness, the movie suggests, we are willing to protect our own loved ones, but when it comes to issues that threaten the entire species (climate change, say), we're incapable of acting. We often imagine ourselves as lords of the earth, yet from this perspective we're helpless as snail darters doomed by dam construction.

The list could go on and on; libraries could be filled with the materials of “Darwinisticism,” a phrase coined by Morse Peckham to describe work *inspired* by Darwin's ideas—or popularized forms of those ideas—but not necessarily concerned with his actual body of work. Some have gone as far to name Darwin the progenitor of science fiction. The novelist Gardner Dozois said that the genre began with the concept of evolution and geological time, that these concepts inspired the idea that the human beings (and animals) of the future might be radically different than they are today.

Yet in many spheres, this idea of Darwin's—that the difference between people and animals is one of degree rather than kind—has been rejected, implicitly, if not outright. This has been the case in many English departments across the United States, especially those dominated by rhetoric studies or by disciplines based in critical theory. I don't mean this as a criticism—there's good reason that this is so. Darwin's writings (or, more often, “Darwinistic” writings) have been used in a variety of different contexts as the “scientific” basis of colonialism and neoliberalism, race and gender discrimination. Darwin was explicit about his belief that there were no essential differences between human beings of different races and cultures. But despite this, the idea that there is nothing essentially different between humans and animals has all too often laid ground for the thought that human society would be best off if it modeled itself on “nature.” Although, as Peter Graham points out in *Darwin's Sciences*, Darwin said he believed that the “social benefits of altruism and sympathy outweigh their costs,” it's no secret that others drew different implications from his work [184]. He was cited heavily by the likes of William Graham Sumner, who wrote that, “Before the tribunal of nature a man has no more right to life than a rattlesnake.” And more famously, “A drunkard in the gutter is just where he ought to be, according to the fitness and tendency of things. Nature has set upon him the process of decline and dissolution by which she removes things which have survived their usefulness” [480].

Though more carefully worded, a few recent Darwinistic writings also call upon the natural scientist to make troubling claims about the biological basis of race. Philippe Rushton's *Race, Evolution, and Behavior*, published in 1995, is an easy example. In it, he argues that evolution has endowed different races with various levels of intelligence, sex drive, and criminality. Another is Frank Miele and Vincent Sarich's *Race: The Reality of Human Difference*, published in 2004. The authors write that Darwin led them to the conclusion that the “explanation for human nature and human differences, both between individuals and groups, [is] to be found by studying what man [shares] with other species” [79]. They also make the (unsubstantiated and baffling) claim that the “mean sub-Saharan African IQ is 70” [26]. Other contemporary scientists and writers have drawn subtler—but nonetheless disturbing—Darwinistic conclusions about racial difference. For example, in a 2002 article in *The New York Times*, the psychologist Sally Satel defended her practice of sometimes prescribing different drugs and dosages depending on race, even though she admits that “no serious scientist... believes that genetically pure populations exist.” Even so, she defends the practice, going on to give the example of a colleague, Ronald Dworkin, an anesthesiologist who claims he has noticed that black patients tend to salivate more heavily than white patients during intubation procedures.

Against these claims of racial difference, rooted in so-called biological reality, post-modern liberal-arts academia has, for the most part, come to understand and teach race (and often gender too) in the most un-Darwinistic of terms—as purely cultural and rhetorical constructs. We reject the idea of biological reality, even when it's not being used to justify racial discrimination, because we feel it does too much to support conventional ways of thinking, and because it so often has served to justify the dominance of the privileged and powerful, while downplaying other lives and other ways of life.

The “debate” I’m drawing here might be thought of as a certain version of Darwin pitted against a certain (though probably more accurate) version of Foucault. This is, of course, a radical over-simplification of complex tensions and ideological differences between disciplines, though I feel the reader will soon find it justified: While Darwin emphasized the commonalities between animals and humans while studying the “origins” of humankind, Foucault did exactly the opposite by treating culture and language rather than biology as the most important (or the only) influences on human behavior. Culture and language set humans apart from other organisms, Foucault suggests, setting them outside the bounds of Darwinian “law.” It is true that Foucault wrote very little about animals (though an interesting body of animal rights scholarship has emerged from his writings), but it’s not difficult to piece together what he might have thought of Darwin’s radical idea that the difference between humans and animals is one of degree, and sometimes only a small degree. In a 1971 debate with Noam Chomsky, arguing that scientific knowledge “transforms” rather than “develops,” Foucault said,

Take, as an example, animal and plant classifications. How often have they not been rewritten since the Middle ages according to completely different rules: by symbolism, by natural history, by comparative anatomy, by the theory of evolution. Each time this rewriting makes the knowledge completely different in its functions, in its economy, in its internal relations [26].

He here suggests that *any* understanding of difference or similarity between organisms or groups of organisms is bound to be a function of a scientific discourse that develops with regards to linguistic and cultural and economic norms, rather than as an increasingly accurate understanding of biological reality. That is, Foucault certainly does not explicitly claim that the difference between animals and humans is one of kind and not degree. Rather, had the question ever been put to him, he probably would have side-stepped it. “I’ve never concerned myself...with philosophy,” he said on several occasions [36]. He would have been more interested in the basis of the question, how the opposing ideas fit into the context of an ongoing discursive struggle. He does this most explicitly in *Madness and Civilization*, tracing the different functions of man's conception of himself as a “rational animal,” as well as conceptualizations of madness in relation to conceptualizations of animals and animal spirits.

And, yet, despite these clues, it seems important that Foucault may have never written a word about animals *themselves*. In his work, when animals are mentioned, they are always culturally mediated—that is, he's examining how *others* have conceptualized animals, how *others* have used them as metaphors, and how those metaphors have taken on different significances over time. He's not interested in animals on their own terms, even in the limited way that Chomsky is. When I read Foucault, despite my great admiration for his work, and for all the amazing work that has grown from his ideas, I can't help but think that he treats the fundamental separation of humans and animals as a given—as it were, an *a priori* assumption. When he writes that, “modern man is an animal whose politics places his existence as a living being in question,” he might simply be describing Western man's conception of himself, as it emerges from the Aristotelian tradition [*History* 143]. But I also hear a ring of belief in this, a positing of an essential humanness in the politics of self-questioning. No other species, for Foucault, can be understood through rhetoric and social relations. An animal whose politics places his existence as a living being in question, is for Foucault no longer an animal, but rather a subject worthy of study. An animal whose politics places his existence in question necessitates the tools of deconstructionism. This one particular animal was the only one that appealed to Foucault's powerful intellect. Despite all his protestations against the existence of human nature, in his culture-centric approach, and in the absence of any real consideration of animals, lies an assumption about what humans are and what they are not. They are not animals in any normal sense of the word. They are different, cultural, linguistic beings. From Foucault—and, yes, from many others, too—we find the basis of cultural criticism, a methodological underpinning for a range of critical theories, a reason *par excellence* for our belief in the importance of language and rhetoric. And, yet, almost unknowingly, using these tools, we very often exclude from consideration a majority of the world's living beings.

This may seem a small point. So what if Foucault didn't write seriously about animals? So what if he did, in a sense, believe that the difference between animals and humans was one of kind and not degree? Didn't *someone* need to push back against the foundations of so-called social Darwinism, against the basis for Eugenics and mass incarceration? What better tools than Foucault's to combat the biological undergirding of racism and sexism and colonialism? And (most damningly for a lover of animals) maybe culture and language *really do* set us apart from other living beings on this planet. Maybe Foucault's assumption—if that's really what it was—was justified.

The branch of Animal Studies that emerged from Foucault's writing contains a lot of interesting and important work, critiquing the cultural and technological and linguistic systems that reify the wide-scale mistreatment of animals on industrial farms. Dinesh Wadiwel aptly characterizes this critical approach when he writes that, “The life of cattle (or ‘livestock’ as they are aptly named) is vulnerable to a politics of ‘life and death’, where the political question returns to life itself.” I'm all for this kind of work, and the world would be a poorer place without it. But, I feel there is also something missing from it, something lost in the Foucauldian language. There is no attempt to look animals eye to eye, to consider the possibility that they have their own souls and culture and language. These scholars rarely entertain the possibility that there is no essential difference between us and them, and that therefore we might consider how animals act in deciding how we ourselves should act. Such a move, they know, could be dangerous. It could, they rightly believe, move us backward toward a time when it was more common for humans to treat other humans like—as the inept phrase goes—*animals*.

And yet, I think we're making a big mistake if we exclude so much organic life from the liberal arts. In the essays that follow, I embrace Darwin's idea that the difference between animals and humans is one of degree, and a smaller degree than we often assume. Darwin's ideas are too often judged by what others made of them, rather than what they really are—rich sources for new ways of looking at the world. I also embrace the idea that animals can help teach us how we *should* live. I do these things, though, from a new perspective. I'm no back-to-the-land-er—I do not think we should rid ourselves of technology and return to more “natural” lives. I do not think, like Dawkins and Pinker, that we share with animals an unshakable drive to dominate and propagate. I do not think that we ought to reorganize society to mesh better with the “laws” of evolution or one or another culture’s conception of “nature.” And I'm not sure Peter Singer is quite right when he says that the most important bond between animals and humans is the experience of pain (though he's on to something, I think). No. Here's what all organisms on this earth have in common, right now. Here is the most important thing we share with animals: We are all experimenters.

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Ten years ago, studies of animal behavior were almost all conducted under what's known as the input/output paradigm. That is, researchers were most interested in studying how animals responded to certain stimuli. (How will a rat react to extreme pleasure? Will it forgo food? Interaction with other rats?) The underlying assumption of this model is that animals—and other living organisms—tend to organize their behavior based on sensory information gleaned from the surrounding environment. The model emphasizes *response*. It would have us understand an animal based on how it analyzes input gathered through its eyes, ears, nose, and body, and how it uses that analysis to determine the best course of action.

Today, however, another approach to animal behavior is emerging, one that focuses on the ways that animals *elicit* responses from the outside world. There is compelling neurobiological evidence that no living organism waits for something to happen before responding, that they are constantly engaged in trying to *get* things to happen. Even the simplest of creatures, the transparent nematode *C. elegans* for example, actively probes its environment, turning this way and that, apparently randomly, in order to test its surroundings. The organism can then evaluate the resulting sensory feedback, adapt its behavior, and re-test the world around it, further honing its response. What researchers once called “random” or variable behavior, is now understood as a form of experimentation— organisms do strange or erratic things, just to see what happens, in order to learn more about the world they find themselves in. For example, the neuroscientist Bjoern Brembs has shown through extensive experiments that this kind of “thinking” is what's behind the unpredictable flight patterns of fruit flies. That is, they generate random behavior as a way of experimenting— a fruit fly's way of asking, “What happens when I do *this?*” They can then evaluate the input generated by their action, and adjust their behavior accordingly, narrowing down flight patterns that best help them find food and avoid predators, even while they continue to display a certain amount of random variation. Trees, ongoing research suggests, probe the soil in seemingly random ways, in an effort to better “understand” their habitat, pushing into soil layers even when those layers are unlikely to contain beneficial nutrients. In his blog, Brembs writes that this new output/input model—this way of understanding even the most basic organisms as active agents—may come to represent a paradigm shift in the field of neuroscience.

Although the model was devised by animal behaviorists, it's trickling into the study of human brain function. Neurobiologists long understood variability in learned motions (say, performing a cartwheel) as a kind of “mistake,” evidence of the human mind's and body's inability to learn something precisely. As one practices a certain motion, they assumed, variation declines—the movements making up a cartwheel become more precise. Learning, they believed, was a process of overcoming variation; a professional baseball player can swing a hundred swings that look exactly the same. Yet a recent study, “Temporal structure of motor variability is dynamically regulated and predicts motor learning ability,” shows that variation aids in learning. Test subjects that display a higher number of minute variations (again, “mistakes”) while learning a simple motion, end up learning that motion more exactly. Just so, though that baseball player's practice swing may look the same, time after time, without even knowing it, he's swinging a bit differently with each follow through, and those variations are helping him hone his motion, preparing him for the moment when he actually has to hit a pitch. In an article about the study, David J Herzfeld and Reza Shadmehr summarize, “a portion of what has been historically considered motor 'noise' is in fact an asset used by the brain to promote learning.” And, importantly—as Brems points out—the study rests on B. F. Skinner's idea of “selection by consequences,” which compares Darwin's theory about mutation's roll in evolution to variation—“mistakes”—during learning processes.

Living beings on this earth are by nature experimenters— both neurologically and psychologically. We are all, in our own way, curious, perhaps anxiously curious. When Søren Kierkegaard writes, “I stick my finger into existence – it smells of nothing. Where am I? Who am I? How came I here? What is this thing called the world? What does this world mean? . . . Why was I not consulted, . . . throwing me into the ranks, as if I had been bought by a kidnapper, a dealer in souls?” [61], he is describing the predicament of all living creatures. We are all—as Heidegger puts it—“thrown” into the world, and our first impulse is to use the senses we find ourselves endowed with to construct an understanding of that world, and how we might behave in it. Imagine a child sitting on a highchair, holding a spoon for the first time. The child looks down at the spoon, and slowly uncurls her fingers and tips her hand. She looks on intently as the spoon clatters to the floor, and then turns to observe her father, who had been watching from the doorway. She's testing a world she doesn't yet know much about— trying to learn something about how objects behave in different situations, and also how her guardian will respond to certain actions. Anyone who's owned a dog knows that canines do this as well— “I know I'm not allowed on the bed,” you can hear your pet saying, “but what will you do if I put just one paw up?” Despite risks to their survival, Virginia's whitetail deer will go out of their way to examine any changes in the forest; recently downed trees, strange animals, a new fence. Elephants carefully investigate and prod the bodies of deceased elephants, even ones they aren't related to. The mycelium of some fungi— evolutionarily closer to animals than to plants—“investigates” new substrates in the soil, even after it has identified them as a non-food sources. The list could go on and on. The point is that Darwin's theory isn't so brutal as it's often made out to be. It's just as well suited to being the basis for kinship within and between species as it is to being the justification for the domination of one over the other. It leaves room for curiosity and spontaneity— in fact, it *depends* on the existence of curiosity and spontaneity. It shows us that individuals, as well as species, are capable of a kind of evolution. As Elizabeth Grosz

writes in *Nick of Time*—which brilliantly combines many of Darwin's ideas and radical feminism—,“Natural selection does not simply limit life, cull it, remove its unsuccessful variations; it provokes life, inciting the living to transform themselves, to become something other than what they once were, to differentiate themselves by what they will become” [68].

“When I wrote it,” Peter Singer said of his book *Animal Liberation*, twenty-five years after its first publication, “I really thought the book would change the world... [but] all you have to do is walk around the corner to McDonald's to see how successful I have been.” I admire Singer's work greatly—nobody has made a more convincing argument for the compassionate treatment of animals. And yet, I believe, the book contains a fundamental flaw. Singer bases his argument for brotherhood between species on the shared ability of all living creatures to feel pain. “If a being suffers,” he writes, “there can be no moral justification for refusing to take that suffering into consideration... [no] matter what the nature of the being” [436]. He's right, I think. But Singer is also something of an idealist, believing—or at least seeming to believe—that if we come to accept that animals' experience of pain is not much different than our own, we will necessarily treat those animals more justly. But pain and our perception of (others') pain is, I think, more complex than Singer ever acknowledges. David Foster Wallace brings up an issue Singer himself was acutely aware of when, in his essay, “Consider the Lobster,” he writes that he continues eating animals, even though, “I have not succeeded in working out any sort of personal ethical system in which the belief [that eating animals is okay] is truly defensible instead of just selfishly convenient” [64]. That is, quite simply, people often do things without “moral justification.” And pointing out the lack of such justification to said people is no guarantee at all that they will change their ways (and where I live it might earn you a punch in the jaw).

In *The Body in Pain*, Elaine Scarry offers a deeper critique of Singer's brotherhood-in-suffering argument. She argues that pain actively separates those that are experiencing it from those that aren't:

For the person whose pain it is, it is “effortlessly” grasped (that is, even with the most heroic effort it cannot not be grasped); while for the person outside the sufferer’s body, what is “effortless” is not grasping it (it is easy to remain wholly unaware of its existence; even with effort, one may remain in doubt about its existence or may retain the astonishing freedom of denying its existence; and, finally, if with the best effort of sustained attention one successfully apprehends it, the aversiveness of the “it” one apprehends will only be a shadowy fraction of the actual “it”) [4].

Scarry argues that pain explodes language, that it is incommunicable, and therefore alienating. Not only does it distance the sufferer from those around him, it also distances the sufferer from him or herself—she calls this the “unseen sense of self-betrayal in pain” [47]. Pain pits one's mind against one's body, snatches the body away from the control of the mind. Throughout *The Body in Pain*, Scarry, like Foucault, emphasizes the linguistic abilities of human beings, locating a separation between animals and humans in this ability. Yet she makes it clear that she believes the difference between humans and animals is a matter of degree, and not kind. She specifically includes animals in her analysis of the “self-hatred, self-alienation, and self-betrayal,” brought on by extreme pain, and says she believes that pain destroys animals' communicative abilities, bringing them to a more basic cognitive level [47].

All this is to say that despite Singer's earnest hopes, "pain" probably will never form the basis of an improved relationship between the species. On the one hand, as suggested above, a human confronted by an animal's pain may be more struck by the fact that he in no way feels that pain, than by an immediate impulse toward empathy. More importantly, though, the shared ability to feel pain is a poor basis for brotherhood because pain reduces us all to our most vulnerable and least articulate state. As "reality testers," animals including humans are at their best—are most *alive*, most themselves, and have most in common with one another—when they are actively engaging with the world. It is a mistake, I think, to find commonality in a state that renders us all unable to do that. Selfhood, a sense of identity, of one's self, and the freedom to express it, is the ultimate aliveness. For Brembs, selfhood and experimentation go hand in hand, and form the basis of similarity throughout all organisms:

Distinguishing self from 'world' is the prerequisite for the evolution of separate learning mechanisms for self- and world learning, respectively, which is the central principle of how brains balance actions and responses...: by using the sensory feedback from our actions, we are constantly updating our model of how the environment responds to our actions. Animals and humans constantly ask: What happens if I do this? The experience of willing to do something and then successfully doing it is absolutely central to developing a sense of self...

By “reading” our shared biology as a life-and-self-provoking rather than life-limiting force, we may well find that animals have more than meat and milk and companionship to offer us. When animals have the freedom to test the world—including any humans they may encounter—using the specialized sensory and neurological equipment they were born with¹, they can give us a new lens onto our shared world. That is, they can suggest to us new ways of probing and testing that world. More than that, they can also give us a new lens onto ourselves, can suggest new ways of probing and testing and understanding our own souls and psychology. We could all be more like Faulkner's Dewy-Dell, who comes to understand her own pregnancy by touching and listening to an un milked and impatient cow. We could watch native trout more carefully, who react to water contamination before sophisticated equipment can pick it up. In *The Great Derangement*, Amitav Ghosh compares the threat of global climate change to the feeling of being watched by an unseen tiger; *a la* Freud, Heidegger, and the tiger, he perfectly characterizes it (the changing climate) as *uncanny*. He writes that our inability to confront climate change is tied to willful ignorance of “the presence and proximity of nonhuman interlocutors” [430]— that is, plants and animals. Working to increase the number and variety of ways in which we consider ourselves and consider the world is not an idle or academic task. Variation and spontaneity are for all living things matters of survival.

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The essays that follow are my own “probes.” They are my way of testing a world brimming with different kinds of life. And of attempting to understand my life-long love of animals.

¹ In my short time farming, taking care of ducks, goats, sheep, pigs and rabbits, I've come to believe that proper treatment of an animal means allowing it sufficient freedom to exercise its particular strain of curiosity— to use its unique sensory “equipment” to probe the world, to experiment and “reinvent” itself based on its findings. For example, the tooth-like pecten along a duck's bill have an acute sense of touch, similar to a whale's baleen, allowing it to troll through weedy water and mud, exploring an unseen world, differentiating food from flotsam. A duck that is never able to employ her bill in this manner lives an incomplete life. Special consideration must be given to each animal's character and biology when endeavoring to provide it with a decent life.

In his book, *Discognition*, Steven Shaviro argues that the human impulse to experiment—which we share with all other organisms—doesn't just play out in laboratories and during field studies.

“Among human beings,” he writes, “speculative extrapolation is not only the method of science. It is also what art in general does— and what science fiction does in particular” [14]. Art is a way of probing the world. Because it lacks the rigorous protocols of Western science, it does so more freely, using principles of association rather than causation. Shaviro is interested in science fiction because, he says, that genre probes *possible* worlds— it tweaks the fruit fly's question, turning “what happens if I do this?” into, “what would happen if the world looked like *this?*” It allows us to explore unpleasant futures, without having to actually live through them.

My interest in animals takes me in a different direction. In order to (attempt) to understand different animals, and use them as partners in looking at the world and at myself, I'll employ speculative extrapolation, making assumptions and observations and taking guesses about what it's like to be a goat in a barnyard or a moth or a horse in George Eliot's *Middlemarch*. There's something peculiar about “probing” a living creature— it is almost always actively “probing” you right back, working to understand you as you work to understand it, observing you in order to establish or tweak its own sense of self, as you do the same, guessing at your way of seeing the world, in order to enlarge its own way, even as you guess at its way of seeing the world in order to enlarge yours. This makes the task of writing about animals—even animals in literature and non-fiction—oddly reflexive. It is unclear whether Blake's tiger gets its awesome power from its creator, or if the creator derives a sense of power and fearlessness from looking into the creature's eyes— both things happen at once. In Jorie Graham's “*The Lady and the Unicorn and Other Tapestries*,” Graham is able to see herself in the act of creation from the perspective of a quail covey; and doing this she realizes that the quails' strange way of flight embodies her way of thinking and writing. My socialized (milking) goats see me as a source of food and companionship. I relate to them, at times, almost as a father. My sheep and more wild goats are less sure what to make of me; I'm half threat half curiosity. My sense of myself when interacting with these semi-domesticated animals is more complex— I confront my own largeness, my dependence on my hands' dexterity opening gates and moving water buckets, doing things they cannot. I see, also, the strangeness and absurdity of so many of my movements and purposes and ideas, which to them are spurious or irrelevant. Our understanding of animals—and thus of ourselves when interacting with them or thinking about them—does not flow in one direction. It is shaped by their understanding of us.

Thus the strange variety in the essays that follow. Some are literary, some personal or meditative, others have a scientific bent, yet others will seem simply strange. One imagines what it would be like to be a fungus. A few are versions of stories my neighbors told me about encounters with various creatures. I have tried to allow my relationship with the animal(s) concerned dictate the form. In his essay, “Why Look at Animals,” John Berger writes about the loss of interaction between people and animals, emphasizing the profundity of eye contact. “That look between animal and man, which may have played a crucial roll in the development of human society, and with which, in any case, all men had always lived until less than a century ago, has been extinguished” [28]. In each essay, I try to do my small part to help reignite it. I square up to an animal, and ask, “What happens when I think of you like *this*?”

CHICKENS

“It's hard to tell the truth about this bird,” Flannery O'Connor wrote about peacocks. The same is undoubtedly true about chickens. This, I'd wager, has something to do with the animal's strange state of domestication— somewhat like a goat, it is, on the one hand, thoroughly evolved to live and die with humans, and on the other, almost perfectly indifferent to its human companions. Here at Breckinridge Mill Farm, we have one chicken who will tolerate being handled, but she is the exception rather than the rule. Otherwise they prefer to pick unmolested through the grass and associate (sometimes tensely) with one another. Unlike a goat, however, there is nothing mystical about a chicken. In a letter to Betty Hester, O'Connor wrote that nobody'd be interested in reading about her, since “lives spent between the house and the chicken yard do not make exciting copy” [*Habit* 290].

And yet, the chicken's commonness is exactly what makes it wonderful. As the most widely used source of meat and eggs the world over, there are few cultures that are not tied tightly to the animal. The suburban mom who calls herself the Chicken Chick (<http://www.the-chicken-chick.com>) and (say) almost any rural Uzbek have at least this in common; they both deal with chickens on a daily basis. This observation seems commonplace, but it's actually profound in its humble way. There is something hypnotic about watching a chicken forage—the rhythmic movement of its head and neck, a bob and a scratch at the dirt, a careful two steps toward a new patch of grass. A chicken will do this all day, without a break in focus. When O'Connor refers to herself as a Hillbilly Thomist, the hillbilly part is undoubtedly as much a source of pride to her as the Thomist part. She prided herself on staying a chicken farmer even after she got famous. She prided herself on staying humble. The sense of calm achieved by watching a chicken comes, I think, from an unconscious letting-go of worldly ambitions. Perhaps this is why the Dalai Lama always speaks of chickens with particular tenderness, using them again and again as an example to demonstrate his support for animals' rights. In 2010 he became particularly moved for the plight of laying animals, imploring chicken farmers across the world to, “let your hens roam.” Watching chickens, it seems enough to go about your own shuffling and scraping and clucking. One even develops a notion that there is nobility in such occupations. I have to suspect that the Uzbek farmer and the suburban fowl-enthusiast understand this equally well.

I do not mean to suggest that chickens themselves are humble birds—again, it's difficult to tell the truth about chickens, and a rooster is surely proud of his tail feathers—but simply that they somehow by their simple presence encourage humility in human observers. The woodcutter in Melville's story, “Cock-a-Doodle-Do,” maintains his composure in the face of his poverty and sickness, as long as he can watch his rooster and listen to the bird's astounding call. In *As I Lay Dying*, Cora buys a good breed of hen and meticulously saves the eggs to use for baking cakes, which she plans to sell at a modest profit. When Miss Lawington makes an order but then cancels it upon delivery, Cora won't utter a word of complaint. “She ought to taken them,” Kate tells her. “Those rich town ladies can change their minds. Poor folks can't” [6]. But Cora like O'Connor is stubborn in her humble pride and won't utter a word of complaint. In his satirical bit, “To Raise Poultry,” Mark Twain makes fun of people who take chicken breeding too seriously: “I have shown the Western New York Poultry Society that they have taken to their bosom a party who is not a spring chicken by any means, but a man who knows all about raising poultry.” He misconstrues the meaning of the word “raise” in a bumpkinish manner, as “flush” or “scare off” rather than breed and tend to. And he's right to make fun of the WNYP and its like—there's something particularly funny about people who take chicken breeding too seriously. I've met one or two of them, and they're much like horse breeders. They've spent so much time thinking about how chickens *should* look that they've stopped seeing and interacting with the animals right in front of them. Those folks have grown too tall to care for grass and dirt, they've quit the mindfulness of dust bath and earthworm. But on our farm we look forward all winter to the first day in spring when our half-wild barnyard cross chickens are done molting and the weather is warm enough to eat breakfast on the porch and watch them make their rounds. “Let others put on airs,” writes Keven Young in his poem, “Ode to Chicken,” “Pig graduates / to pork, bread / becomes toast, even beef / was once just bull / before it got them degrees” [44]. But chicken is chicken, he points out, nothing fancy, but a solid meal. Even as ta-

ble fair, the chicken continues to inspire humbleness.

In Gabriel García Márquez's story, "A Very Old Man with Enormous Wings," an angel—a dirty man with large wings—comes to earth and is abused by the townspeople. He is kept in a chicken coop. The town priest says he's no angel because he can't speak Latin. But the angel makes himself content to share the hens' abode for a few months, patiently enduring the town's ignorance. When I see the sixteen wheelers carting factory chickens down I-81 in hundreds and hundreds of 2x2 cages, I think of this story, and I despair for our world. It is an impoverished people that can't see the holiness of a chicken, who expect angels to come down in shining, silver-tongued glory, and overlook the many prophets already living among us.

HORSES

I've never been a horse person—I've got this memory of falling off a pony as a child, though my parents claimed it never happened. Even now, I'm apprehensive around them. When I go to visit with our neighbor's horses, they can sense my unease, and they sidle away. But I'm also fascinated by the animals. Sometimes, working in one of our gardens, I can feel their hooves pounding as they jog around their enclosure. There's something thrilling about that. When McCarthy writes about John Grady that what he “loved in horses was what he loved in men, the heat of the blood that ran them,” I'm thrilled by that thought too [6]. But what I love in horses is something quite different. I've come to love them second hand, listening to people who've spent a lot of time with them. Reading about them in novels and history books. Trying to untangle why—in an age when animals are kept and coddled, made the stars of silly videos, raised and slaughtered by the millions without ever glimpsing the sky—horses alone are so respected.

*

At the height of his despair, having searched several long and fruitless weeks for his runaway daughter, Squire Western's spirits are unexpectedly lifted. Riding down a dusty road, the Squire's ears and the ear's of the Squire's horse prick to a far off sound— hounds. He claps his spurs to the beast, “who little needed it, having indeed the same Inclination with his Master,” and the hunt for Sophia Western turns into a fox chase [548].

The scene is funny, I think, because of Western's broguish caprice. He loves his daughter, wants nothing more in the world than to find her and drag her by the collar toward a proper bath and a waiting husband. Her escape, and her insolence hurt his pride. Yet despite the offense he cannot resist the impulse to give chase to the “little animal” (the fox not the girl). Without hesitation, the nobleman pursues his caprice, on the back of his thoroughbred.

Without the horse, of course (of course), this wouldn't be possible. The animal allows Squire Western to change directions quickly. Astride the animal, he's able to spur off the dusty road into the autumn woods without thinking twice. In contrast, when the book's hero Tom Jones comes to the same crossroads, on foot, despite his friend's insistence that he reverse course and return home to his father, or at least go the direction most likely to have an inn, Jones insists that there is no choice but to keep steadily onward.

Horses are everywhere a symbol of aristocratic status. Today, a house with a horse stable and fields maintains an ethos of stiff propriety and mannered wealth. Even horses outside trailers in Appalachia, the ones with the grazed down fields and pallet shelters, have an air of old and monied blood, or at least a sense of tragic romanticism. Both these sorts of homes are part of a long tradition. Time and time again Jones is seen as a rogue rather than a nobleman because he goes on foot. Regaining a horse, he returns to his “rightful” place. In *Middlemarch*, Fred Vincy wants to be an Oxford man, despite his family's lack of status, and it gives him no end of grief that as a gentleman-in-the-making he doesn't have a proper steed. He should, he feels, be able to go where he likes, whether for appointment or by whim. But by the novel's end horses begin to take on a slightly new meaning, pointing to a new order, based in a nobility of heart and spirit rather than blood and family. In McCarthy's *All the Pretty Horses*, we find Vincy's romantic impulses reach an apex in the young John Grady. But *Blood Meridian* shows the disturbing underbelly of the essential American myths of west-going romanticism, rugged individuality, and the freedom offered by wide-open landscapes. The animals' beauty and strength are the esthetic counterpart to a world in which the man controlling the best horses can impose his will—however capriciously—on those around him. McCarthy highlights the moral ambiguousness of horses, who are at once part of human culture and indifferent to its laws of right and wrong. Finally, Sherman Alexie's collection of poems, *I Would Steal Horses*, embraces McCarthy's reading of horses as complex and fraught figures, but does so from a slightly different angle, managing somehow, despite his people's histories, not to drain the animals of all romanticism.

*

Tom Jones, nobleman not by blood but by adoption and by heart (or so it seems), has most of his adventures on his feet. Healed of the injuries got at the hands of the solidier Northerton, Jones sets out with Partridge, forced to leave all his belongings behind, for lack of a horse to carry them for him. At almost every inn the pair come to, there is some reason or another that horses won't be available—a band of noblemen have taken all available, the innkeepers see Jones and his companions as vagabonds, unworthy of steeds. When one innkeeper treats him with particular disregard, Jones reflects that it was due to his (Tom's) “want of horses; a sort of animals which, as they dirty no sheets, are thought in inns to pay better for their beds than their riders, and are therefore considered as the more desirable company” [267]. Tom's upbringing might well have left him keenly feeling his lack of a horse, after Allworthy's disavowal—he was a skilled rider, a skilled hunter; when Sophia falls from a horse and Tom comes to her rescue, Squire Western offers him all the horses in his stable (save one or two of the old man's favorites).

But if horses are an outward sign of nobility and prosperity for most, Jones's character suggests that there is more to nobility than nobility's trappings—indeed, that nobility is something beyond a sleek haunch and a good pedigree. Tom's “nobility” comes from a mix of high and low; his skill on a horse's back is matched by his willingness to get off and walk. He likes riding, but doesn't seem interested in owning any horses of his own; he quickly declines Western's offer, saying of the horse that threw Sophia, “I would have given her to the dogs” [126]. And, when Allworthy gifts the young Jones a pony, Jones doesn't think twice before selling it. When caught, he at first refuses to divulge the reasons for taking the animal to market, but Allworthy at last draws it out of him. He was raising money to give to the family of the disgraced gamekeeper, Black George. Even though Allworthy gives the boy a stern talk, it's clear he isn't displeased with what he sees as his son's altruism. Allworthy is, if nothing else, a moral, worthy man.

But Tom is something slightly more complex. He's what nobody else in his time could claim to be— both a rider and trader of horses, a new model for nobility, looking forward to Fred Vincy's romanticization of the horse trader, and John Grady's love for open plains, wild ponies, and a vagabond lifestyle. Though Tom has got his adopted father's heart, he's also a bit of a wheeler-'n-dealer. His interest in keeping Black George's family happy, wasn't, perhaps, as pure as he made it out to be for Mr. Allworthy. Black George, after all, is the father of Tom's peasant lover, Molly. Square isn't exactly telling the truth when he asserts that Tom, “supported the father in order to corrupt the daughter, and preserved the family from starving, to bring one of them to shame and ruin” [111], but he's not totally off the mark either. The narrator himself throws a shadow of doubt on Tom's intent, calling the reader's attention too another passion, besides pity, “[representing] the girl in all the amiable colours of youth, health, and beauty; as one greatly the object of desire” [129]. And indeed, unable to resist this “object,” believing he has fathered her child, Tom knows he's better off to keep his lust a secret, as he turns his romantic attentions toward the “more worthy” Sophia Western.

On horse or on foot, with Black George's "strumpet" daughter or Squire Western's princess, in lust or in love, Tom is equally in his element. He moves between these worlds with ease. When Allworthy disowns him, Tom spends only a little time bemoaning his fortune, before he resolves to set out for the sea (though he never makes it there). He understands, and is sympathetic to, both moral uprightness and (at least certain kinds of) vice. In the last pages of the book, Allworthy, while bestowing forgiveness on the wayward son, admonishes, "you carry [your] forgiving temper too far. [M]istaken mercy is not only weakness, but borders on injustice, and is very pernicious to society..." [631]. But Allworthy is a member of the old guard, an inflexible model of nobility, a man who never (knowingly) sins, and so can never *really* be sympathetic to sinners, though he may forgive them out of his own piety. Tom, on the other hand, knows what it's like to walk and lust and be spat upon, and so genuinely sympathizes with highwaymen and whores and even his spoiled brother. He is, I think, a more democratic breed of nobleman, Fielding's hope for the improvement—and continued survival—of the European aristocratic system².

² I use this term—"the aristocratic system"—to refer not only to the titled aristocracy (from dukes down to barons), but also to the lower echelons of gentlemen and esquires, of which Tom Jones is a part. Although Jones is not an aristocrat, his social position as a gentleman is determined within the context of a system largely controlled by actual, titled aristocrats. In other words, Blifil and Tom are here considered part of the larger aristocratic system, even though they are by no means aristocrats.

Fielding, of course, is no Robespierre. His narrator seems to find even the Jacobins slightly repugnant. Partridge, while at first perhaps endearing, end up being bumbling and drunken and pompous, quickly wears upon both reader and Jones— and is staunchly for the rebels of the Forty-Five uprising. Jones himself is more of a classic nobleman than at first is apparent. He's honorable in the extreme; during an attempted robbery, for example, he throws a highway man from his horse, and after subduing him gifts him with the very money he attempted to steal. His penchant for forgiveness and mercy, while perhaps rooted in sympathy, always end up benefiting him in tangible ways. In Fielding's moral world, it is “no unusual thing for both parties to be overreached in a bargain, though the one must be always the greater loser, as was he who sold a blind horse, and received a bad note in payment” [500]. That is, attempts to better one's self immorally almost always backfire— and, conversely, a certain kind of altruism is the best policy if one wants to end up on top. Later, the “highwayman,” who turns out to be poor but respectable, Mr. Anderson, helps Jones on several fronts, sticking up for his character such that Allworthy reassess the status of his adopted son. Jones has the kind of good luck not usually associated with an orphan. He's the guy *everybody* envies; while being sympathetic to all those around him, a good-hearted guy, he also somehow ends up getting it all— the girl, the money, the manor, and nothing he might lose a moment of sleep over. Most troubling of all to a reader who wants to see Jones as a man of the people as well as a steed-ed nobleman, it turns out that Jones doesn't have the common blood Allworthy always believed he did. In the last pages, to the delight of all characters and the narrator (but definitely not this particular reader), Tom is discovered to be Allworthy's nephew— the disgusting Blifil's half-brother.

It bothers me that Tom was full blooded nobility all along. Admittedly, Fielding doesn't exactly romanticize the aristocratic system, as Blifil is certainly noble-blooded, and doesn't have a single admirable attribute. And yet, the narrative seems to suggest that Jone's blood *is* very important, securing as it does his "rightful" place in the world, allowing him to marry Sophia, and inherit his father's estate. He takes the news of these developments calmly, as if he knew all along they would be his fortune. He even bestows magnanimity on his undeserving half-brother. Rather than a model for a new kind of nobility, by the book's end Tom Jones is a beacon of hope for a system that, in Fielding's eyes, can continue only under the wise and just administrations of a single breed of men.

Putting the unwieldy book down, I felt a bit cheated. I lost a night or two of sleep over it (although, admittedly, sleep doesn't ever come easily to me). Here was someone I looked up to; I aspired to Jone's compassion, his selflessness and optimism, and—yes, okay—his effortless ability with horse and gun and his good luck in the face of poor odds. But then, to suspect that Fielding saw these traits as ones carried, at least in part, by lineage and not by heart or soul or spirit was disheartening. What of us rural men and boys, of an intellectual bent, who aspire to ride and hunt and comport but not rule like nobility?

Perhaps, though, such intentions are ill guided. Perhaps, in the thicket of today's complex social and political relations, it is not possible to plum-pluck the best aspects of a way of life now over a century dead. At least not without dragging along a few of the old-guard's more distasteful turns— a hint of Squire Westernish misogyny, say, or a twinge of Allworthy's high and holier-than-thou moral superiority. Or, perhaps in pursuing such a thing, one runs the risk of becoming like Fred Vincy before his transformation— entitled, whiney, frustrated at every turn (although often managing still to be charming). Or much worse, like one of Glanton's paramilitaries, even the best of whom are chilly-blooded killers.

But even for my hesitations, *Tom Jones* sets the stage for a deepening of the relationship between equine and hominid. An animal that once emanated the nobility's caprice and privilege slowly becomes a symbol of the aristocratic system's fall. Horses, it turns out, couldn't care less about lineage or status. They privilege only a firm hand, a skilled rider, and open spaces to push forward over.

*

There are three kinds of horses in George Eliot's *Middlemarch*. The first are those owned by the landed aristocracy. Sir James's "well-groomed chestnut horse," which usually appears flanked by two "beautiful setters," is one of these [18]. Captain Lydgate's sleek but finicky "gray," which frightens Rosamond and perhaps causes her to miscarry, is another [409]. Between members of the aristocracy horses are freely lent and borrowed. Sir James offers to bring Dorothea his horse, Corydon, every day, if she will only "mention the [best] time" [10]. She tells him that she's given up riding for pleasure, but he makes it clear that the invitation is open ended. Likewise, Captain Lydgate's willingness to lend Rosie his horse is an aristocratic curtesy, although Rosie does not have noble blood. The fact that she allows the horse to frighten her, and the wildly disproportionate consequences of doing so (she loses her pregnancy), remind us she's out of her league, an upper-middle-class girl that mistakenly believes she can behave like an aristocrat. Dorothea is a much more confident and relaxed rider than Rosamond, secure in her sense of nobility. "I should never correspond to your pattern of a lady," she tells Sir James when he presses her to ride [12]. But later, when a servant announces that the horses are ready, she dismisses him with a curt, "presently." Even when she is not herself riding, Dorothea is brought hither and thither in a carriage by a team of horses. Like Squire Western's horses, the horses of the landed aristocracy bordering Middlemarch allow their owners to more easily indulge their whims, moving quickly and easily between towns and estates. The animals are so obedient that most of the time they're invisible— until, that is, someone of the wrong class attempts to mount.

The second kind of horse in *Middlemarch* is the work horse; the “cheap hack” that Lydgate resolves to replace his own horse with when money is tight [466], Mr. Solomon's slow horse, Hiram Ford's wagon team, Pegwell the corn-factor's horse, which Bambridge calls a “wind-instrument,” and a “penny trumpet” [164], and Fred's “broken-winded horse,” worth less than thirty pounds, which Fred is ashamed to be seen riding [162]. These are the animals used by the lower classes. They are even less visible than their upper class counterparts, so common that most of the time they're barely remarked upon, but nonetheless a notable change from the world of *Tom Jones*, where very few people of lower classes even own a horse.

And finally, the most visible and flashiest horses in *Middlemarch* are those that are for sale. Although the animals were surely used for hunting and racing and jumping during this time—by the aristocracy, the gentry, and the middle classes alike—in Eliot's novel they are most exciting, most *alive* when they're under the critical eye of a horse trader or pacing in the auction ring. At least, such would be the opinion of the young Vincy. Having gone to university, Fred believes himself to be minor nobility, and knows that a good horse is vital to his image as a high-blooded fellow. Deep in gambling debts, Fred is devastated at the prospect of having to give up his means of transportation, and conserves little breath whining about it. But despite all this, he seems to enjoy his ill-fated adventures trying to recoup his debts through horse trading, seeing in those exploits an alternative to a nobleman's life (which he probably wouldn't be able to live, anyway). As he carries through his reckless purchase of the ill-mannered dappled gray, he creates for himself a wildly romanticized image of the horse dealer, Mr. Horrock:

[He had] an apparent unfathomableness which offered play to the imagination. Costume, at a glance, give him a thrilling association with horses [...] Nature had given him a face which by dint of Mongolian eyes, and a nose, mouth, and chin [...] gave the effect of a subdued unchangeable skeptical smile [...] likely to create the reputation of an invincible understanding, an infinite fund of humor [...] It is a physiognomy seen in all vocations, but perhaps it has never been more powerful over the youth of England than in a judge of horses [163].

We have a glance here of a new order, one just beginning to touch provincial Middlemarch, but which will catch fire in the American West. Presumably, the “youth of England,” are Fred's wealthier classmates, boys working on degrees at Oxford and Cambridge, and unlike Fred probably graduating. They are urban nobility and aristocracy, pale, sometimes studious, profligate within the generous bounds set by their parents. And yet, some part of them yearns to have the rugged dark features of a Mongolian, the independence, laconic attitude, and wiles of a horse trader, as well as the accompanying lack of funds, family, and moral duties. They fetishize this kind of life, and in doing so acknowledge the power of vagabond values in shaping the future. The petering out of the aristocratic system's dominance was not due simply to the arrival of new economic order, a long time in the making, but was in the end catalyzed by cultural and psychological forces— the romanticization of unmonnied and poor-blooded adventurers no small factor among them.

The train tracks being laid through Middlemarch in the book's final chapters are symbolic of more than the “march” of the middle class. Many critics have cast Eliot as a critic of the forces of “modernization,” represented by the new railway. For example, Jessie Givner makes a convincing argument that the gruesome death of William Huskisson, who was crushed under a railway car (mentioned in the novel during one of Mr. Hackbutt's speeches), evokes the fate that awaited anyone who got in the way of “middle-class emancipation, [and] also the revolution of industrialization” [223]. And it is true, I think, that Eliot is a bit ambivalent about the unstoppable rise of the middle class. But she also has an unflinchingly adventurous spirit. I believe she sympathizes deeply with the English youth's impulse to romanticize the proletariat horse trader. In my reading, the mention of Huskisson's death adds to the aura of newness and adventure surrounding railways. Not only would the tracks serve to partition the land of local aristocrats, decreasing their power and wealth, they would also attract the attention of young men and women looking for a more exciting and dangerous life, those willing to risk limb to travel to previously inaccessible places. Such is the case with Fred Vincy, whose first contact with the railroad resembles a scene from a wild west film—tellingly, the event plays out on horseback. Fred rides up on a group of workers in “smock-frocks with hayforks in their hands,” threatening a group of railway agents who are working with Caleb Garth [386]. The men are drunk and are opposed to the railway, the narrator tells us, because of a general suspicion of any kind of change. They knock Garth's young assistant to the ground and are chasing down the rest of the workers, when Fred arrives on his horse and routs them to a standstill. When one of them challenges Fred to a fist fight, Vincy is ready to engage, though Caleb eventually holds him back.

After his failed venture as a horse trader, Fred comes to himself in this moment. The exploit seems to snap him out of his childishness and his aristocratic pretensions both. He feels, for a moment, the grip of a different kind of life— one spent on horseback, working with his hands. In the end, he makes himself into something of a cowboy. Even though he settles down with Mary, he works managing properties and cattle, even writing a book about “green crops” and livestock feeding systems [678]. The people of Middlemarch, however, are too provincial to understand this new kind of man—neither working class nor nobility, but some strange combination of the two—and assume his wife wrote the book (conversely, unable to imagine Mary's intellectual abilities, they assume Fred wrote her book, “Stories of Great Men, Taken from Plutarch”). Fred is, all things considered, content; the narrator is careful to mention, however, that he still can't help himself from trying to deal in horses now and then.

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Despite his whininess and immaturity (admittedly downplayed in the above analysis), I've always felt a kinship with Fred Vincy. If many rural boys want to be like Tom Jones, in reality most of us probably have more in common with young Vincy. My partner, Anna, can tell stories about how I've paid too much for livestock, and have bought or adopted more animals than we're really equipped to handle— and the impulse comes from Fred-like optimism, the (privileged) assumption that everything will work itself out.

Horses more than any other animal are an essential symbol of New World optimism, which is related too but distinct from the gentleman's caprice. They give riders the *feeling* that they can do as they wish, although disconnected from the aristocratic system this may not be the case. Experienced horseback riders talk about sharing the animal's enormous power while they're riding, feeling it flow through them. "God's lioness," Sylvia Plath writes about riding, "How one we grow, Pivot of heels and knees!" The normally pessimistic Plath feels the world's potential through the animal. Even Darwin sees horses with a romantic eye when he writes, in *The Voyage of The Beagle*, about a gaucho stripping off his clothes and skillfully riding through a river. "a naked man on a naked horse is a fine spectacle," he declares. "I had no idea how well the two animals suited each other" [139]. In *All The Pretty Horses*, John Grady hopes ardently to return to a way of life organized around horses. In Phillip Myer's *The Son*, vaqueros talk about breaking horses to the saddle without breaking their spirits [456]. Vincy's optimism, *Middlemarch's* narrator makes clear, isn't in the end a disguised need for wealth or power [579,] but rather a belief that a spirited life is worth more than a noble one.

*

The idea of a new-nobility, founded on spirit rather than blood, is celebrated in countless novels of the American West, from *Riders of the Purple Sage*, to *All the Pretty Horses*. The shoot-em-up violence in both these books and many others is portrayed as a byproduct of spirited life, the result of every mounted individual's impulse to live life as he or she feels fit, and to do so unapologetically. Fred Vincy's romanticized image of the horse trader becomes gospel in the American West— the chisel-faced man of few words is today a genre staple. Unlike Fred, of course, these men are depicted as confident in their trade, as with "the Texan" in Faulkner's story "Spotted Horses."

McCarthy's western masterpiece, however, is not *Pretty Horses* (little more than a skilled exercise in genre fiction), but *Blood Meridian*. The novel suggests that violence was an *essential* component of New-World optimism, and continues to underpin modern life. It follows the Glanton gang, a brutal paramilitary force sent out by Texas authorities in the mid-nineteenth century to murder as many Native Americans as possible, peaceful and warlike tribes both. It focuses on two characters in the gang, Judge Holden and the Kid, who eventually become enemies. Horses are a constant presence. But these are not the ponies of *Pretty Horses*. They are tied inextricably to the narrative's ceaseless violence. With good horses, the gang is able to move quickly, striking unsuspecting encampments and then disappearing into the hills. In several battles, horses are used as living shields as Indians and gang members fire upon one another. In one instance, they are used as actual weapons, stampeded toward unsuspecting rivals. Just as often, the animals serve to dramatize the chaos and confusion of battle. In the midst of his first skirmish, the gang blinded by the smoke of their own guns, the Kid sees a "little whitefaced pony with one clouded eye [lean] out of the murk and [snap] at him like a dog" [49]. A few minutes later, the horses owned by the dead and injured begin stampeding, "eyes whited with fear like the eyes of the blind" [50]. The animals express the terror the men feel, but are expected to keep under wraps.

Over and over, McCarthy highlights the inextricability of human and horse. He knows intimately what Darwin glimpsed watching the gaucho cross the river. At one point, the Kid watches his shadow merged with the horses shadow “painted upon the fine white powder in purest indigo” [106]. When they pass through Mexican towns, kids on the street shy away from the gang “like little horses” [187]. Coated in dust, the gang “rode an army of graybeards, gray men, gray horses” [245]. In a memorably gruesome description, the trappings of the ruffians' horses are “fashioned out of human skin and their bridles woven up from human hair and decorated with human teeth” [71]. Harold Bloom writes that such descriptions in *Blood Meridian* have a morally ambiguous grandeur to them [6]. The horses' indifference to their ghastly trappings and gruesome tasks parallels the men's disconnect from the traditional bounds of human morality. Wonderfully free, given the “romantic” life that Grady dreams about living, they discover in themselves a bottomless capacity for brutality.

New-world optimism undergirded the American experiment in so many ways, and it would be fruitless to attempt enumerating them here. Alexis de Tocqueville observed that Americans had “a lively faith in the perfectibility of man... [and] all consider society as a body in a state of improvement, humanity as a changing scene, in which nothing is, or ought to be, permanent” [439]. But *Blood Meridian* exposes the ugly underside of these beliefs. The Judge—by far the most murderous of a bad bunch—makes “the perfectibility of man” into an individual project, casting human morality as a burdensome constraint, claiming immortality for himself, cataloging natural phenomena in a journal in order to establish his dominance over it. “Whatever in creation exists without my knowledge,” he proclaims, “exists without my consent” [195]. The desire to leave behind the constraints of aristocratic society, becomes in the American West a desire to leave behind *all* constraints. “That man who sets himself the task of singling out the thread of order from the tapestry will by the decision alone have taken charge of the world,” the Judge continues, “and it is only by such taking charge that he will effect a way to dictate the terms of his own fate” [195-6]. In *Blood Meridian*, the optimistic thought that nothing is permanent and therefore everything can be improved upon, becomes an obsession with death as a means of improvement *par excellence*—“savage” tribes systematically eradicated in the name of “advancing” society. The gang member's horses are party to this perversion of classic American ideals. Here, they are described with their riders leaving the site of a massacre:

They rode out on the north road as would parties bound for El Paso but before they were even quite out of sight of the city they had turned their tragic mounts to the west and they rode infatuate and half fond toward the red demise of that day, toward the evening lands and the distant pandemonium of the sun [180].

At first the party seems to be moving toward a population center; toward human civilization with its laws and mores. The horses rather than the men are “tragic,” understanding better than the men the danger and terrors of the wilderness. Elsewhere in the book, the horses are described as watching “out there past men's knowings” [296]. The men's willingness to continue on however—with the Judge as a possible exception—is based in Fred Vincy-esque optimism, ignorance of the ways of the world. The words “infatuate” and “half frond,” apply to both men and animals. They are all drawn away from the original path by some unyielding force toward the sun, Icarus-like, doomed by their obsession with the possibility of unbounded freedom. Bloom reads “half fond” as half mad, but the word “fond” also has a biblical association with temptation, the desire to test the bounds of God's rule. It also suggests a semi-hypnotized state; nobody gives the order to change course, the men and the horses turn toward the sun almost unconsciously. McCarthy uses the word “pandemonium” twice more in *Blood Meridian*, in both cases to describe running or stampeding horses. In other books, the word is almost without exception associated with animals; horses and wolves in *The Crossing*, pigs in *Outer Dark*, dogs in *Child of God*, birds in *Suttree*, men in *No Country for Old Men*. In most westerns, sky and horse evoke freedom (wide open space and the means to move beneath it) and optimism (rugged individuality, faith in one's self). Jane Tompkins writes of the genre's ideals in *West of Everything*: “The desert light and the desert space, the creak of saddle leather and the sun beating down, the horses' energy and force, these things promise a translocation of the self into something purer and more authentic, more intense, more real” [4]. But in *Blood Meridian* the sun is a wound in the sky—its “red demise”—and the horses bind the men to enter into a torturous and chaotic unknown, where freedom is nothing more or less than death.

*

I've always found it difficult to defend my love for *Blood Meridian*. Many readers are nauseated by the violence, and rightly so. Other are upset by the lack of sympathetic representation for women and Native Americans, and again, rightly. Women in the novel are whores or degenerates. Natives are brutally warlike or weak and diseased. And yet, I cannot shake the feeling that there is a dark truth to the novel— not in the accuracy of its representations, but as a dramatization of the violence inherent in our most basic national myths. *Blood Meridian* does not shy from the ugly truth of our nation's origins, but rather highlights it by pumping it full of biblical grandeur. The book revels in its own lack of moral compass, neither condemning nor celebrating Glanton's men. McCarthy refuses to engage his modern perspective or sense of morality, as he does, for example, in *The Road*. To condemn the gang, or even to paint a sympathetic image of their victims, would be to suggest that the violence of the 19th century American West is well behind us— that we've achieved an enlightened state from which we can (somehow) understand and thus push aside the sufferings of persecuted peoples. Such a move risks denying that violence is still alive in our national myths. Bloom writes that the book, though set in a historical past, “does not have the aura of historical fiction, since what it depicts seethes on, in the United States, and nearly everywhere else, well into the third millennium” [2]. Steven Shaviro writes that McCarthy aestheticizes violence in order to expose the reader's capacity to enjoy bloodshed. I like to think of myself as a basically moral person, yet *Blood Meridian* forces me to reexamine that conception, to face the possibility that my prosperity would not be possible without the continued exploitation of people the world over. After reading the novel, I glimpse violence in places I otherwise wouldn't have. Shaviro argues that, no matter our moral declarations, *Blood Meridian* suggests that society as we know it continues to depend on violence. The American dream of “manifest destiny,” he writes, is being “repeated over and over again ravaging the indifferent landscape in the course of its lemmings' march to the sea. Our terrible progress is 'less the pursuit of some continuance than the verification of a

principle, 'an obsessive reiteration" [57].

I think about these sentences, now, most every time I drive past a house with horses— especially the would-be Jeffersonian McMansions with the whitewashed fences and the glossy stallions. I can't help but imagine one of those animals carrying Glanton or the Judge into a Mexican village, where they will leave nobody alive. Horses, first a symbol of the nobleman's caprice, then of the possibility of a new order dictated by merit and boldness rather than family ties, become in *Blood Meridian* an animal of supreme moral ambiguity. They are equally capable of carrying the paramilitaries to rape and pillage as they are of providing weekend of diversion for a banker's family. And, yet, the animal's potentialities reflect a human reality— an America in which all thought of violence is safely relegated to “history,” to other less fortunate countries, or less fortunate people. Where any hint of violence by (say) African Americans protesting racism, or Natives guarding their land and water, is met with condemnation from all sides. Our horses show us as hypocrites.

*

In his second book, *I Would Steal Horses*, Sherman Alexie begins the daunting project of responding to a culture whose founding myths are tangled in *Blood Meridian*-like violence, during a time that so many of us consider ourselves moral, wielding the rhetoric of non-violence as a well honed double standard.

Horses came to North America with the Spanish in the early 16th century. The first Natives who rode them were likely tribes surrounding modern-day Santa Fe, New Mexico. It is possible that the Spanish turned out surplus horses onto the plains, where natives found them. But early settler documents suggest otherwise; one of the first ordinances passed by the Spanish in Mexico City prevented Native people from riding. But ultimately the colonialists wanted people to tend to the livestock. In many places they indentured, employed, or forced Natives to do this work. Once they had learned the necessary skills, the dissemination of horses among North American tribes was inevitable. The animals were traded for or commandeered, outright or during battle. They were small, no more than four and a half feet in high, stocky but quick on their feet— they were not what horse breeders today would consider impressive, but they were tough and effective on the harsh plains of the West. Before the introduction of horses, the most famous of the plains Indians, the Comanche, lived in the Wyoming mountains. Nearby tribes (the Missouris, Omahas, Pawnees, among others) looked down on them for their lack of agriculture, warrior society, and priest culture. They lived a difficult existence, subsisting mostly on berries and small game. Then the horse came, and by all accounts, the Comanche took extraordinarily quickly to the animal, and within just a few years they'd made themselves the dominate force of the American West. S. C. Gwynne describes the horse in Comanche hands as an “astonishing piece of transformative technology that had as much of an effect on the Great Plains as steam and electricity had on the rest of civilization” [28]. The Comanche amassed power in the form of horses, stealing them, breeding them, trading them, and using them to wage brutally effective war on rival tribes, American civilians, soldiers, and paramilitary units. For many plains Indians, the horse became an intrigal part of not only warfare, but also culture, religion, and daily life. In one of his poems, “What the Orphan Inherits,” Alexie writes “For bringing us the horse / we could almost forgive you / for bringing us whisky.”

The conditional in the title of Alexie's book (*I would steal horses*) suggests a complex relationship with the history of horses and horse stealing in North America, as well as the current social and political climate. Horses for Alexie are as they are for McCarthy—a symbol of moral ambiguity—but for different reasons. Brought by both Spanish and English colonialists, used by Americans in the systematic removal of Native Peoples, the horse cannot but remind him of his ancestors' stolen land, the violence they suffered. But the animal also provided a means of resistance for many tribes, giving them the ability to fight and also to allude, outrun, and hunt greater distances from their homes. The horse was quickly integrated into their cultures and mythologies. The Pawnee, for example, have a story about a woman who slowly changes herself into a horse, which beautifully demonstrates how important horses were to Western Native identities during the 18th and 19th centuries. In Alexie's story “A Drug Called Tradition,” Victor imagines himself stealing a black pony, and riding him across the open plains, “in moonlight that makes everything a shadow” [*Tonto* 15]. A few pages later, he muses, “Indians make the best cowboys” [18]. In another story, “Crazy Horse Dreams,” Victor tells a young girl that the Plains Indians had “women who rode their horses eighteen hours a day. They could shoot seven arrows consecutively, have them all in the air at the same time. They were the best light cavalry in the history of the world” [39].

Alexie's portrayal of horses is further influenced by the place of Native American history and culture in contemporary America. The horse-stealing reverie in "A Drug Called Tradition" is drug induced, a fantasy, and Victor hears his ancestors laughing at him from the trees. Victor is (and, indeed, more than a few of Alexie's characters are) a modern day John Grady Cole. Victor is nostalgic for a time he never knew—the days of horse stealing, of powerful Native tribes dominating the plains. And, yet, unlike Cole he does not have the option of riding across a border to find that world. He glimpses it for split second during a drug trip, but that is the best that modern life has to offer him. In "This Is What It Means to Say Phoenix, Arizona," Victor's friend Thomas tells one of his ubiquitous stories:

"There were these two Indian boys who wanted to be warriors. But it was too late to be warriors in the old way. All the horses were gone. So the two Indian boys stole a car and drove to the city. They parked the stolen car in front of the police station and then hitchhiked back home to the reservation. When they got back, all their friends cheered and their parents' eyes shone with pride. You were very brave, everybody said to the two Indian boys. Very brave" [63].

This is the only way the adolescents can think to express their Grady-esque adventurousness, their Vincy-style romanticism—breaking the laws of the society that replaced the one they long for. And yet even this kind of adventure is out of their reach, a mere fantasy. They both know that they wouldn't be called brave for stealing a cop car, that they might be prosecuted or worse. Instead, later on in the story, the boys get into a fistfight with one another. There is little hope in *The Lone Ranger and Tonto* of any kind of return to the dignity and power of the Western Plains Indians, a power both made possible and represented by horses. *The Lone Ranger and Tonto* is, in its humorous, unflinching way, a suitably bleak book. Like *Blood Meridian*, it refuses to allow its readers a chance to relegate violence and moral ambiguity to the past. Another of Tomas's stories is narrated from the perspective of a horse in the midst of 800 others, toward the end of the 19th century. Because the animals are “the entire wealth of the Spokane chief Til-co-ax,” Colonel Wright of the 9th Infantry of the United States Army resolves to slaughter them. “It was a nightmare to witness,” Thomas (as the horse) narrates. “They were rounded into a corral and then lassoed, one by one, and dragged out to be shot in the head. This lasted for hours, and all that dark night mothers cried for their dead children. The next day, the survivors were rounded into a single mass and slaughtered by continuous rifle fire” [97]. In the story “Distances,” likely set on a reservation in the 1970s or 80s, the narrator dreams night after night about watching television and every time wakes up crying. “While I lie in my tipi pretending to be asleep under the half-blankets of dog and cat skin,” he says, “I hear the horses exploding. I hear the screams of children who are taken” [109]. Historical violence and the newer and subtler cultural violence—evoked here by the television—are so intertwined here that Alexie's world seems not so different from that world described by McCarthy's judge, where “all other trades are contained in that of war” [246].

Alexie's poetry, though, sometimes puts a more hopeful spin on the horse and its evocation of moral ambiguity. The phrase, "I would steal horses," like the story "A Drug Called Tradition," suggests an inability to participate in even a paltry version of a romanticized past. But it also (at least potentially) leaves room for an alternative. "I would steal horses, but instead I'll..."

The collection's title poem continues on into the first stanza with the words, "for you, if there were any left, / give a dozen of the best / to your father." These first few lines dramatize the speaker's stuckness—again, the humiliating awareness there are no horses left, at least none in his power to give. This time, their absence is felt as an inability to gift them as a tribute, a traditional practice for several Plains tribes. Metaphorically, they suggest not simply Grady-esque nostalgia for the days of the old West, for the romanticism of adventure, but also a sense that romantic love can no longer be what it once was. Alexie is playing with a pastoral trope, taking on the role of the bard who does not have the wealth to give his true love what he feels she deserves, and so instead offers a poem. The first rhyming couplet evokes the genre, and even though the rhyme scheme doesn't continue, the opening two sets of quatrains continue to engage with the pastoral tradition. As the love poem moves forward, though, it neither dwells on a romantic past nor presents a romanticized conception of nature. This quickly becomes evident as we learn more about the beloved's father, "the auto mechanic / in the small town where you were born / and where he will die sometime by dark." Present worries sweep away the speaker's thoughts of his people's tangled history. He muses on his fear of and respect for the dying man, who is no mystic or warrior but non-the-less is dignified and mysterious, spending his days resurrecting broken machines— "the small parts of this world."

But the speaker knows he would be unable to focus on fixing small things. Like Fred Vincy and John Grady (and even the Kid), his romantic impulse isn't easily subdued, and as a romantic he can't help but yearn for a better world, even suspecting that such a world is not to be his inheritance. In the last two stanzas, he returns to thinking about the past, this time without a rose-colored lens, but also without allowing the poem to stop being a love poem. The effect is disconcerting:

I would sign treaties for you, take
 every promise as the last lie, the last
 point after which we both refuse the exact.

Here, the promises of lovers to one another get tangled with the historical fact of the U.S. government's many broken and dishonest treaties with Natives. In the second and third line, these “lies” are compounded by another, a kind of lie often told by lovers—the fantasy that they will ever be able to take a stand against the exactions of their oppressors. The word “exact” also reminds us of the father's meticulous work, subtly implicating (or perhaps simply including) him in the speaker's sense of stuckness, despite his profound respect for the man. Finally, it evokes the wars of exaction (that is, attrition) between the Plains Indians and American paramilitary units, the battles whose winners were gauged not only by the number of enemies killed, but also by the number of horses captured.

And, to be sure, the poem's final image is macabre enough to be straight out of *Blood Meridian*:

I would wrap us both in old blankets
 hold every disease tight against our skin.

The stanza, of course, refers to blankets infected with smallpox traded—intentionally or not (the matter is debated by historians)—to many Native American tribes. The sentiment is fatalistic; the speaker cannot escape the sufferings of his ancestors. There is no way for him to resist the forces that continue to do violence against Native culture and people. His fate, it seems, was sealed long before he was born, perhaps when Glanton and his paramilitaries cast bullets over fire, hissing “as if the fate of the aborigines had been cast into shape by some other agency altogether” [168]. Or else when the first infected blanket was traded to one of his forefathers, or when the first herd of wild horses was mowed down with an early model machine gun.

And, yet, there is a Sisyphean affirmation in these last lines. Saddled with the unalterable, violent, and tragic past of the Western expansion, a history which will no doubt kill him, in one way or another, the speaker's anger and frustration is nonetheless streaked with love. This is not “non-violent” love (today so often championed by the dominant culture), not love or forgiveness for his people's oppressors, but is unflinchingly romantic. The poem is directed at his unseen lover, whose form we can only imagine beneath the deadly blanket. The moment's passion, though only imagined, is increased a hundred fold because it comes in the last moments of two lives. The situation recreates the splendor of the Quahadis Comanche—who refused to ever sign a treaty with the American government—in their fated but glorious final years on the Plains. The speaker may not have horses to give his amour or her dying father. He may not have the earnestness and innocence or nativity necessary to write a classic pastoral. But he does have fierce passion— all the more so because of his people's complex and turbulent history, all the more so because of their continued oppression. He does with the romantic impulse (seen also in Fred Vincy's optimism, and John Grady's adventurousness) the same thing his ancestors did with Spanish horses; channeling its wildness and moral indifference into something greater than himself.

TROUT

Much has been written about trout, and little of it is worth while, focusing as it so often does on the act of catching the fish rather on the fish themselves. Many writers describe trout—to borrow the words of Richard Brautigan—as if they were a precious and intelligent metal. “The trout hung heavy in the net,” Hemingway writes. “Mottled trout back and silver sides in the meshes” [176]. Outdoorsy writers tend to treat trout like trophies; thus the ubiquitous use of words like “shining” and “gleaming,” “golden,” “silvery,” and on and on. A silly sense of masculinity clouds most fishermen's ability to really *see* the troutiness of trout. We're probably all a bit like Eliot's Mr. Brooke, an avid trout fisherman who constantly uses the phrase, “*you know*,” but shows himself at every turn to know very little.

Here it goes anyhow— I'm going to attempt to write (briefly) about trout, though I quiver at the thought of Eliot's derision. Having fished many a stream, I've found that trout are least of all trout when they're pulled from the water. Hanging just under the surface of a mountain stream, the fish native to the east coast (*Salvelinus fontinalis*, brook trout) don't have even a dash of silver on them. Hemingway, trophy fisherman that he was, knew only rainbow trout fattened by the state-run hatcheries, large in size and shine but small in presence. Our east coast natives are modest when held in palm but hefty indeed when held in thought. My favorite days on the stream are days when I don't get the rod out at all, when the mayflies are thick enough that all I've got to do is stand by the bank at watch the trout snatch them up, sometimes jumping clear out of the water.

Cormac McCarthy's *The Road*, ends with one of the few worthy trout paragraphs in all of literature. He clues us into the central conundrum of brook trout— they are both unimaginably ancient and incredibly sensitive to environmental disruption. The fish are described in their absence, long after humans have destroyed their habitat. “Once there were brook trouts in the streams of the mountains,” the paragraph begins [241]. The voice is geological— if the fish are absent so is any idea of a human observer, much less any fisherman. The voice addresses the reader, describing to us what's been lost, describing something we can no longer see for ourselves. “You could see them standing in the amber current... They smelled of moss in your hand.” Brook trout are one of the first barometers for water and air pollution, as their populations begin to suffer before other species. Acid rain was first discovered to move long distances when matter from coal powered plants in southwest Virginia was found to be killing trout in Saint Marry's river, six hours northeast. I've seen trout floating dead in Calfpasture river— an image I won't forget. When trout are dying, it means we're killing ourselves too, little by little. Whenever I think about climate change, those floating fish inevitably come to mind. Dead brook trout *do* get a silver sheen on their white bellies, an oily film produced by the degrading pores of their delicate skin.

Despite being very sensitive to environmental changes, brook trout are ancient animals, having evolved in North America's glacial runoff. This is apparent in the way they stand still in a current, hardly moving, with unblemished patience (I've always thought that the claim that fishing teaches patience was wrong, that it probably grows out of our envy of the fish's supreme calm). Most brook trout in Appalachia almost exclusively eat mayflies, which is part of one of the oldest insect groups, Palaeoptera. "On their backs were vermiculite patterns," McCarthy's geological voice continues, "maps of the world in its becoming." Watching these fish through the shifting surface of the water is like looking back on the origins of the world. The final tragedy in *The Road* is not the destruction of human civilization but that of older organisms, who weathered a difficult existence for hundreds of thousands of years, before the selfishness and shortsightedness of humanity did them in. In the last pages, *The Road* becomes ecofiction. Trout, even in their absence, become a symbol for a world of uncountable secrets that died untemplated and unappreciated.

The last sentence of *The Road*, reads, “In the deep glens where they lived all things were older than man and they hummed of mystery.” Anyone who’s seen a brook trout emerge from her deep glen knows that they really do communicate a sense of mysticism, of a knowing that extends beyond human knowing. This aspect of the fish has been lost in the commodification of fly fishing and the glorification of the bigger-the-better mentality. Things weren’t always like this, however. The first book written on fly fishing dabbles in black-magic— an art much more in line with the animal than the corporate “art” of bug-repellent vests and carbon fiber rods. The book, even more importantly, was (if the lore is correct) authored by the prioress of the Sopwell nunnery, Juliana Berners, born in the year 1388. Many of the processes she describes for making lines and flies sound like something from James of Scotland’s *Daemonologie*: “take the blacke blood in y herte of a fhepe and floure and hony, and tempre theym all togyder fomdeall fofter than paaft : and anoynt therwyth the redde worme” [79]. The prioress understood, intuitively, that fishing for trout is half science and half magic, only to be undertaken while cultivating a respect for the limits of rational thought, and a willingness to embrace intuition and ritual.

Preparations for fishing have remained superstitious. Even in our modern day of fish-finding GPS units and iridescent, chemically scented lures, most fisherman have particular habits and rituals that they feel sure bring them good luck; a pair of socks, an overly complicated knot, a dash of yellow added with a Sharpie to the belly of a fly, a prayer to a river God, four IPAs (but no more!). These rituals are not unlike the rituals a writer performs before she sits down to work; the right window, chair, a lukewarm (but not cold) cup of coffee, the exact right time of day or night. The parallel between writing and fishing is made so often in fly fishing literature that it's become tedious, but there's still a core of truth to it. Ritual is a way of summoning an otherworldly being— a muse in one case, a trout in the other. It's no accident that Theodor Roethke's muse in "The Visitant" takes for a brief moment the form of a fish. Trout are at least as ancient as the muses. They are equally as mysterious and uncountable. Both are beyond the means of science to fully understand. Fishermen's and fisherwomen's superstitions are a reflection and acknowledgement of these facts. In "Walk on Water for Me," Lorian Hemingway does the animal more justice than her famous grandfather could have on his very best day. "This is my body," she tells a trout, watching it hold steady in a current. "Eat of it. This is my blood. Drink. I imagine this reverence is what they want of me" [7].

Wild Turkeys

Turkeys have a bad rap. Many farmers claim that juvenile domesticated turkeys will stand out in the rain until they drown. The phrase, “you really are a turkey,” is the ultimate accusation of clumsiness, uncoolness. The word has been used as a racial slur. The Virginia Tech mascot is bumbling and cartoonish in a way that most college mascots aren't. Wild turkey populations were brought dangerously low during the last century, because hunters found that on moonlit nights, whole flocks could be shot out of trees, one animal at a time, as the rest awaited their fate. Even while touting the turkey's virtues over the eagle, Benjamin Franklin called them “a little vain and silly.”

And yet, wild turkeys are much more than we've made them out to be. If you don't hunt them at night (which is now illegal) they're notoriously difficult to kill. They're wily and have got sharp hearing and even sharper eyesight. In recent years, turkey populations are making a comeback. And so, it's time they made a moral comeback as well. I've started, here, a list of the birds virtues. I encourage anyone who's ever seen a wild turkey to add to it:

They create excellent snow angles. Many writers and naturalists have commented on the awkwardness of turkey flight, especially during takeoff. And yet, evidence left in the snow suggests grace in takeoff. Last winter these prints were everywhere on the hillside above our house. The explosive noise their wings make when they take flight serves to ent predators—perhaps it has disoriented us as well, obscuring from us the care they take with their movements.



They try several different social configurations each year. In the spring, they form male-female pairs for a short time. Then, they nest singly, isolating themselves in dense thickets until their eggs hatch. Or else, in some years, for inexplicable reasons, they form nesting groups, a few females sitting on the eggs while others patrol for threats. In the fall they form bands, the adult males forget their territorial impulses, and wander together. The females and juveniles band up too, foraging and roosting together. Each year the groups are formed of different individuals, and the hierarchy must be reestablished. The lead hen's most important job is to make sure that none of the poults go missing, not even her rival's. I don't suppose us humans are capable of such flexibility— perhaps some day.

They leave their feathers everywhere. I've never seen a wild turkey in the barn, yet they come through several times a year, leaving a trail of feathers. I love imagining them strutting silently through the rusted cars and piles of scrap wood and old mill parts. The barn is really an old chicken house, about a hundred yards long, and sits at the outer edge of their territory. I imagine it is to them, as the closet is to the children in the *Lion the Witch and the Wardrobe*. I loved the book as a child, and never caught wind of the rather dogmatic religious overtones. I hope the turkeys are able to enjoy the strangeness and grandeur of the chicken house without guessing at its history— the thousands of birds who lived out their short lives there in 3x3 cages.

We put the feathers we find in a cup on the mantel, a great piece of cheap-man décor. A surprisingly strong glue can be made simply by boiling the feather shafts down to a thick paste. They also make excellent arrow fletching. The Priests of Tezcatlipoca sometimes wore turkey feather headdresses.

They stage beautiful ritualized fights. I can find no accounts of this practice, but I've witnessed it myself. A group of male and female turkeys in the early fall, circled around two contestants, who call and circle and beat their wings at one another. There remains much to discover about this animal.

They have a complex language system. Anyone who's hunted turkeys knows that they have a large variety of calls, each with its distinctive meaning. Like whales, groups have their own local dialects, and hunters must learn how to “speak” like the local population, if they are to be successful. In *The Voice and Vocabulary of the Wild Turkey*, Lovett Williams documents twenty eight distinctive, but says that in actuality wild turkeys probably use many more calls than that. He also writes that they understand subtle meaning shifts when the pitch or rhythm of a call is changed just slightly. For example, the “putt” call they sometimes use to sound an alarm, can express excitement if the cadence is slower and the call softer. They use various squeals, whines, and “purrs” to express contentment, and I have no doubt that each applies to a different sort of contentment.

Turkeys are the only domesticated native North American species. Well, almost. There's also the domesticated skunk. Turkeys were first domesticated by ancient Mesoamericans living in the late Pre-classic period (300 BC-100 AD). In, “Turkey husbandry and domestication: Recent scientific advances,” Erin Kennedy Thornton suggests that these early domesticators probably allowed their flocks to continue interacting and breeding with wild birds, thus enlarging the breed's gene pool and giving their birds superior foraging and survival abilities. Considering the state of most domesticated turkeys these days (in fact, poults really can drown because they stand in the rain with their mouths open— I've seen it happen), who are bred only to put on weight quickly, we might consider adopting a few of the Mesoamericans' strategies.

ANIMALS AS GOD

I CAUGHT this morning morning's minion, king-
 dom of daylight's dauphin, dapple-dawn-drawn Falcon, in his riding
 Of the rolling level underneath him...

Whenever I see a hawk over the hill in front of our house, I think of Hopkins's windhover.

When I see a red tail perched on a power line on the way home from work, I imagine it floating this way and then that way in a current, framed in the sunset, and finally folding its wings and dropping toward its prey, making in the sky the lines of a blazing crucifix. Once, a year or so back, a malnourished cooper's hawk tried to kill one of our chickens, and injured himself in the process. We put a blanket over the bird and brought him to the kitchen table. His legs shook, and I couldn't help but think of "The Windhover" again, and then, for some reason, Nietzsche's phrase, "the death of God," though I've never quite been exactly sure what it means. While I awaited the wildlife rehabilitator's return call, I read Robinson Jeffers's poem about having to put down an injured hawk. "I'd sooner, except the penalties, kill a man than a hawk," he writes. I'm not sure I totally agree, but with the bird in the next room, I saw his point. Anyone who's seen a hawk that close, knows there's something Olympian in birds of prey. Their "implacable arrogance," as Jeffers puts it, is the arrogance of a God. A hawk has a Divine Presence, no doubt about that. As Hopkins puts it: "Brute beauty and valour and act, oh, air, pride, plume, here / Buckle!" What more is there to say?

When I try to imagine feeling this presence from (say) a butterfly, I know I'm beyond myself—but Hopkins does, I think. He really, truly sees all living creatures as manifestations of God. This is more of an accomplishment than one might think. As an undergraduate, I tried to write a post-Darwinian version of “The Windhover,” which featured a bower bird. One of my professors pointed out that Hopkins was quite aware of Darwin and his work. I hadn't even considered the possibility that the poet *could* have read Darwin; they seem like figures from different ages. My professor, of course, was right. Hopkins wrote quite articulately about *The Origin of Species*. In a letter to his mother, for example, he says, “I do not think [...] that Darwinism implies necessarily that man is descended from any ape or ascidian or maggot or what not but only from the common ancestor of ascidians, common ancestor of maggots, and so on [...]” [128]. What strikes me most here is Hopkins's casualness. In no way does Darwin's theory appear to threaten him. He seems quite sure that the notion of evolution will turn out to be compatible with his ideas about God and poetry and nature. Of course, most Catholics would have seen the matter quite differently, even those open to some of Darwin's ideas. St George Jackson Mivart, for example (whom Hopkins mentions in the same letter), argues that, though its processes may appear random to the mortal eye, God is steering evolution. Mivart also claims that man, as God's chosen species, is exempt from all forms of natural selection [27, 249].

It's unclear exactly what Hopkins thought of Mivart. He doesn't say one way or the other in the letter. But for my nickel, at least, Hopkins's most convincing critique of Darwin is something quite different, and it's to be found only in his poems. For Hopkins, God does not “steer” animals or evolution. God *is* animals, participating fully in whatever forces drive change and death and new life in nature. At the end of the first stanza of “As Kingfishers Catch Fire,” the bird seems to take voice, “Selves — goes itself; myself it speaks and spells, / Crying What I dó is me: for that I came.” The voice is at once that of animal, poet, and the Son of God who came to earth. *What I do is me*— Hopkins sees the kingfisher not as a symbol, or a stand-in for God, but instead sees God in the animal's *doing*, in its flight. God is what animates, is the part of all creatures that *lives*. Hopkins begins the poem “Pied Beauty” with “Glo-ry be to God for Dappled things,” for the “brinded cow,” for “rose-moles all in stipple upon trout,” for “finches wings.” But by the end of the poem, the movement of the various animals, their emergence from the dappled landscape, becomes indistinguishable from God's appearance. The adjectives apply simultaneously to landscape, animals, and divinity: “With swift, slow; sweet, sour, adazzle, dim; / He fathers-forth whose beauty is past change.” In “Hurrahing in Harvest” Hopkins sees God as a ridgetside across which a horse is pulling a plow: “And the azurous hung hills are his world-wielding shoulder / Majestic—as a stallion stalwart, very-violet-sweet!—”. In “Thou art indeed just, Lord...”, Hopkins watches birds making their nests in spring, writing, “birds build – but not I build; no, but strain”— in the poem's conceit, the birds are God, able to create freely, without hesitation, unlike the troubled poet.

My teacher Gregory Orr once said he loved all of Hopkins' poetry, but could have done without the last stanza of almost every poem, where Hopkins invariably lays "himself" at God's feet. Orr didn't like that Hopkins seemed to turn nature into a symbol for God, gave God "credit" for the divinity of nature. Orr sees a standard Christian metaphysic in Hopkins's work; God the creator evoked in the poet's eyes by his (God's) creations and creatures; a metaphysic that runs counter to Darwin in almost every way imaginable. Yet, in my reading, Hopkins rarely if ever uses metaphor or simile. He is never being symbolical. In his poetry, nature's workings—including, it seems, natural selection—sustain God in the way that a variety of bodily systems and functions sustain human beings. When the falcon in "The Windhover" draws a cross in the sunset, it's not the bird drawing the symbol of Jesus Christ, but the finger of the unified God making its mark in the poet's mind:

Brute beauty and valour and act, oh, air, pride, plume, here

Buckle! AND the fire that breaks from thee then, a billion

Times told lovelier, more dangerous, O my chevalier!

The first phrase evokes the terrible power of the Old Testament God, while echoing Psalm 27:4, affirming the desire, “all the days of my life, / to gaze on the beauty of the Lord.” The word “act” suggests the falcon's independence, her ability to do something without having to think, unconflicted as a god. When falcons dive they do so suddenly, holding their wings and feet tightly against their body and falling at speeds up to 200 mph— the second fastest moving animal on Earth (humans in airplanes being the first). I've watched them fish over the ocean in the Everglades, and there is no better word than “buckle” to describe that unforeseeable moment in which a bird chooses to drop. In the poem, the word marks a sort of breaking-through the fabric of the world as humans are normally able to experience it. Hopkins sees unmistakably that there is much more to the bird than usually meets the eye— the fire that breaks from the plummeting animal reminds the reader of God in Exodus 12:21, when he manifests as a pillar of fire in order to guide the Israelites, and also the bush where the Lord's angel appears to Moses, which burns brightly but does not burn up or turn to ash. Confronted with his God, Hopkins cannot find words. The sight has been “a billion times told lovelier,” he writes. I do not think he means it has been better-told by other poets, but rather by a billion other falcons that have fallen in just the same way. It is not, as others have suggested, that the falcon cannot perfectly represent God, but rather that the poet feels his poem falls short of doing justice to the falcon, and therefore that it falls short of doing justice to God. The last phrase confirms this reading. “His” chevalier, his knight, is Jesus, who is inextricable from the animal, the bird's ferocity in flight a new manifestation of Jesus's radical—fierce—compassion; a way of understanding divinity that does not exclude the majority of the world's living creatures. The bird ends its flight at the bottom of its flight pattern's crucifix, where we may at once press our lips to the Savior's feet and witness the Darwinian moment of a hawk digging into a mouse.

WORDS AS ANIMALS

In his poem-story “Six Fictions,” Derek Walcott watches

...dragonflies drift like a hive of adjectives loosened
from a dictionary, like bees from the hive of the brain,
and as time passes, they pass, their number is lessened
and their meaning no more than that they come after rain.

For Walcott the stereotypical divide between language and nature does not exist. Words move as animals. Ideas are woven into food webs and biomes. Teju Cole writes that Walcott is a “natural” poet in all senses of the word, “concerned with landscape, flora and fauna... [and also] unforced and fluent” [58]. Walcott's fluency as a poet comes directly from his experiences with nature on his home island. It is something he never could have learned from his studies in classical and European modernist poetry, which are clunky in comparison.

In the first phrase of the above poem, the dragonflies help Walcott to pry words from the dictionary, a place where they are made inflexible, where they are kept separate from the natural world. Samuel Johnson suggests that dictionaries help protect words from the decay of “sublunary nature” [105]. Even modern, cutting-edge “descriptivist” dictionary projects are apt to characterize their work as, for example, documenting the “uniquely human system of linguistic communication” [Par. 3]. Both these ways of understanding language would have limited Walcott's means of expression, and so he allows the insects to remove descriptive words from any context of human-imposed definition. There is a beautiful recursivity in this small phrase. Dragonflies are “like” adjectives. The words of the simile describe dragonflies at the same moment that the dragonflies characterize the simile itself. From the first moment of the poem we feel how tangled and inseparable are words and animals.

Once freed from the dictionary, the dragonflies become bees, a transformation foreshadowed by the use of the word “hive” in the first line. Thus liberated animal and poet become more intimate—his brain becomes the hive that receives the bees' nectar and in return shelters the animals' colony. The move enriches Richard Wilbur's metaphor in the poem “Imagination” of the mind as a bat, whose “graceful error may correct the cave.” Here it is not simply the poet's mind that is able to tweak nature; nature also undertakes to tweak and supplement the poet's mind. Bees “feed” the poet's mind with flower-nectar and then, during the rainy season (or the winter), return to their nest to subsist on honey. The changing of the seasons mirrors the poet's life—spates of creative output followed by intervals of stasis and contemplation. Walcott elsewhere compares his ability to use language with the seasons, as in “The Prodigal” when he writes that “the dialect of the scrub in the dry season / withers the flow of English” [540]. More than this, the bees become words because, like words in a poem, they give the overall appearance of a swarm—of a cohesive whole—but also have their own particular duties and abilities that contribute to a complex, ever-shifting and self-revising system. “The bee colony superorganism,” writes Jurgen Tautz—whom I like to think of as Heidegger of the bees—“is more than the sum of all its parts. It possesses properties that one does not find in single bees, although many of the properties of single bees determine and influence the entire colony, within the framework of its sociophysiology” [249]. The same might be said of poems, and Walcott's poems in particular. Understanding the colony as a poem and the bees as words, we know without a doubt that a good poem is somehow—almost magically—much more than the sum of all its parts.

In the next section of the above lines, Walcott connects words with nature's constant state of flux. Time passes and the bees disappear, nothing more or less than a marking of the end of a storm. He cannot allow the bee or dragonfly simile to stand, because to do so would be to limit both language and animals. He wants to make it clear to his reader that he is not simply writing an alternative dictionary, he is rethinking the “nature” of the relationship between words and phenomena. By allowing the bees to drift away, he opens the possibility—the promise even—of new associations of language and animal. What's more, these lines suggest that a poem's meaning can only be grasped while one is *experiencing* its words. Walcott anticipates A.R. Ammons, who taking a walk on the beach and observing the shifting shoreline, writes in “Corsons Inlet,” “I allow myself eddies of meaning.” Once the last line is read, the poem drifts away, and one may turn to a new poem, or even read the same one over again, and experience a new meaning in it. The essays in this thesis project cohere around a similar premise— we can only really relate to animals by interacting with them, both in actuality and in thought, mediated through literature or experience. And each time we do so, both human and animal glean a new understanding of themselves from one another. Walcott does the very same thing (though with infinitely more expertise) with words. It happens over and over in his poetry, and each time I see it I have trouble containing my excitement. Here's another favorite:

I fly like the slate heron to desolate places,
to the ribbed wreck that moss makes beautiful,
where the egret spreads its wings lest it totter
on the aimed prow where crabs scrape for a perch.

The connection here between words and animals is subtle in excerpt, but is obvious when one is in the midst of “White Egrets.” Elsewhere in the long poem Walcott makes the connection explicit. “Watch those egrets / trudging the lawn in a disheveled troop,” he tells his reader, “white banners / [... like] printed stanzas / showing their hinged wings” [49]. The urban egret troop is the poet unable to wield language to his own satisfaction. They spread their wings, it seems, for no real purpose, have nothing of consequence to say. Their feathers are tattered from the flightless life lived by birds that depend on humans for their food, who do not know what to make of themselves, who spend their lives in a yard next to a concrete lined pool with a fountain at its center that always beats out the same rhythm. The wild heron, however, is the poet's language transcendent. It flies to desolate places— that is, places at the edge of language. This is where the poet rediscovers forgotten meanings, uncovers obscure functions of grammar and rhythm, achieves a symmetry that can only exist in the wild and among animals, where words eat fish and a man steers his arc through howling and squawking stanzas.

GULLS AND CROWS

I never paid much attention to crows until hawks started killing our ducks. Ducks inspire in me a childish delight. I can't write about them because I'm afraid it will spoil the pleasure of watching them parade to their pond every morning, after they've had their grain ration. But, suffice it to say, I hated losing ducks— the hawks seemed to have a knack for picking my favorite one; the strangely upright one, the small one with a white heart on her chest. I couldn't shoot a hawk. Robinson Jeffers suggests that doing so is more or less as heinous as killing a person, and maybe he's not too far from wrong. The compact CDs that we strung up over the duck pond, which are supposed to confuse the hawks, weren't working. The mock owl on a branch wasn't working. Then the crows came.

They made their home in a hollowed out box elder near our herb garden, spotting the rosemary and motherwort with their scat. It turns out that crows won't allow hawks anywhere near their nesting area. Shortly after they moved in, I saw five or six of the heckling a red tail, a big strong bird. The crows drove him back and forth across our field, picking at his tail and neck feathers. When he tried to go high they'd go at him from above, when he swooped down low they'd go lower and drive him up again. I cheered. The hawk circled the house, knocking a heavy wing against the wind vein, bounced off the roof and crash landed in the yard under a black walnut. The crows landed on all sides of him, watching with those black eyes they have, their heads jerking here and there, which I think is their way of expressing curiosity. Finally, one hopped forward and plucked a silver-red feather from the grass, and flew away back toward the nest.

It was this last little move that struck me most. It brought to mind a book I loved when I was a kid— *Carmine the Crow*. I don't remember much about it except the first page, which showed the inside of Carmine's "very old tree," which is gnarled and hollow exactly like our box elder. Carmine had it hung with all sorts of things he'd collected; utensils and tools and bits of tinfoil, buttons and watches; "anything with a glint of a glimmer." A lifetime's worth of invaluable junk. Watching that heroic crow settle on the lip of his nest, I couldn't remember the storyline of *Carmine*, but I could recall in great detail that first wonderful illustration. Here it is:



I skimmed through the rest of the book, but wasn't impressed. For my nickel, crows are quarrelsome, highly intelligent creatures. Discounting his impressive collection of junk, Carmine is too simple and kind to accurately represent the species. He's kind to predators of all kinds, giving away his magic powder, and it's hard to picture him participating in any hawk-heckling. But still— that first picture is so spot-on; I love the sense of junk *feng shui*, the unaccountable aesthetic ability evident in the slews of boxes and piles. Better than any other animal, crows understand the lives of objects. There's a good reason the old “Counting Crows” rhyme focuses on moments of ritual gift-giving; “Three for a wedding / Four for a birth, / Five for a christening,” as well as symbols of wealth; “Nine for silver / Ten for gold,” and finally on an indelible sense of ownership and privacy; “Eleven for a secret that will never be told.” In the Bible, God sends crows or ravens to feed Elijah during a drought, implicitly expecting the man's faith and obedience in return. In the Greek myths, princess Arne's love for gold objects results in her being turned into a crow. In Native Australian mythology, a crow steals fire from the gods. In some forms of Tibetan Buddhism the physical form of the Dharmapala, Mahakala is a crow. The Haida people of British Columbia—as well as several other Native American groups—believe that a crow (or a raven) was the original “maker of things.” Humans in cultures the world over have understood that crows can offer insight into our relationship with the material world.

*

We manage a property (also our farm) owned by a crow-like man, Mr. Taylor. Mr. Taylor is a self-proclaimed hoarder, but he's also a self-educated architect. He renovates the interiors of the many historical buildings owned by his family, using wood from old barns, reclaimed windows, scrap granite to make them look like rustic Manhattan flats. The barns and sheds on the property, however, are overflowing with junk of all kinds, sorted and piled under the auspices of an obscure logic. When he needs something, he searches through it with crow-like intensity. “I knew these scissors would come in handy someday,” Carmine declares when he needs to cut a swan free from a hunter's trap. Mr. Taylor always exclaims something similar when he pulls some strange (but suddenly important) object from a drawer or shelf. He does not have a similar appreciation for human beings, whom he often views with distrust, but *things*—especially those things that most of us would consider lowly; old cars, rusted bicycles, the gears and cogs of Civil War era mills—he has a special compassion for. There's a touching moment on the TV show *Hoarders*—which I caught in the waiting room of a muffler shop in Roanoke (I swear!)—in which a defeated woman says of her “collection” of stuff, “It's always there, and my family isn't.” Both crows and hoarders have an unflagging faith that all objects have their place and use in the world, that even worn-out or everyday objects must be appreciated for some as-of-yet unknown power, that they deserve to be honored for that potential, never discarded or disrespected.

It bears noting here that crows aren't really hoarders. The myth that they collect shiny things probably grew from amateurs' observations, like my own. Crows are curious, and will often pick up objects they're interested in, and even fly off with them, but don't usually keep them in their roosting areas. We've romanticized them (in many books, children's and otherwise) inventing their hoarding impulses, in part I believe as a way of exploring our own relationship with the world of phenomena. Seeing crows as hoarders helps us distance ourselves from, and then examine the human impulse to keep and to have. Studies in corvid behavior justify this impulse. Crows have a much different relationship with the material world than most animals—they recognize in it a symbolic dimension. They get to know different cars in a given neighborhood, remembering which ones contain humans who are likely to offer them food, and following them, sometimes to great distances. They also associate different objects with danger, including the human facial structure. A recent study by John Marzluff showed that they'll remember a human associated with a crow's death, and, even more than a decade later, mob him on sight. When an object, such as an exposed power-line, is dangerous, crows will learn from other crows' negative experiences. This may seem like a basic form of learning, but it's actually quite rare, even in “higher” mammals, who are only able to learn from first hand experience (my experience with most human beings bears this out). Finally, there are thousands of documented instances in the United States of crows “repaying” people who feed them, bringing trinkets and shiny objects, leaving them and taking the food as payment. Researchers still don't know why they do this, or not exactly. My theory is that they're “fishing,” using the trinkets to attract the attention of people, who will then be more likely to feed them. Because groups of crows learn from one another so readily, it's possible that one happened to be carrying a trinket, and attracted the increased attention of some urban corvid feeder, until the birds saw that they two could earn more bread by carrying something shiny. This may sound unlikely, but so do other things that crows do: Corvids in the UK have learned to use scraps of bread to

lure sunfish to the surface, where they can be easily caught. Sometimes they'll ferry crumbs halfway across a city in order to fish. Many groups of crows contain “cliques” or subgroups. An individual will notify the others in his clique of a new food source, and expects the same in return, insuring himself against a day of unsuccessful foraging. These animals, in other words, understand the golden rules of materialism— “you never get something for nothing,” “everything has its price,” and “plan for a rainy day.” Perhaps “my” crows accepted that hawk's feather as payment received for whatever sin he'd committed, a token of promise to stay away. In Adulou Huxley's wonderful kid's book, *The Crows of Pearblossom*, Mr. and Mrs. Crow are good economic citizens, buying their groceries from the store, rather than stealing as both the rattlesnake and the owl do. On the last page, Mrs. Crow hangs her family's laundry on the snake while he's helplessly knotted in a tree, lecturing him about “the wickedness of eating other people's eggs.”



Whether hoarding or trading, saving or spending, or espousing the morality of private ownership, crows reflect and recontextualize our own economic impulses. They suggest to us that these impulses do not have to be expressed as greed—as they so often are in modern day capitalism—but can take wing as curiosity, as respect for the latent value of unsentient “beings” the world over.

My grandparents used to own a house in Nova Scotia, which we visited when I was young. Gulls there are as common as crows are here in Appalachia. Despite some superficial similarities—they both thrive in areas of heavy human development, both draw the attention of picnickers with spare bread scraps, will both flock and on occasion mob—they are very different birds. The gulls in Nova Scotia spend their days standing stock still on the rocks or on the handrails of piers and motorboats. Rather than actively seeking out food, as crows do, they wait meditatively for something to pass their way; a school of perch, shellfish in the low tide, a boy with pockets full of sunflower seeds. Even when circling over the water or beach, they use their wings infrequently, riding wherever the air currents take them, waiting for something tasty to present itself.

There are certainly good children's books about seagulls— Elizabeth and Gerald Rose's *Old Winkle and the Seagulls* is one I remember fondly from childhood, and I'm told there's a popular series called *Gully* that's not bad. But there's something, it seems to me, less American about a seagull story. Taking your lunch or your scraps, they seem not *unthankful*, but perhaps humbly entitled (an oxymoron? Maybe not). At least, this was my experience of gulls as a kid, during our many trips to the rough Canadian beaches. A gull would never consider offering you a trinket for a meal, though research suggests he's just as intelligent as any crow. I loved seeing the loons on the water in the bay outside my grandparents' house, and even the grotesque cormorants, but I never cared much for the gulls. I found Carol Vredenburgh and Laura Appleton-Smith's *Lin-Lin and the Seagulls* disturbing on multiple levels, and wouldn't think of asking to have it read before bedtime.

The seagull is an animal better suited for adults. It's a favorite of bird watchers, who will pompously inform any plebe who uses the word "seagull," that there is no such bird. "Seagulls" are at best a polyphyletic group, characterized by similar traits that don't represent similar evolutionary paths. Your average sun-lotion-slathered beachgoer doesn't know the difference between a tern (of the family *Sternidae*) and (say) a ring-billed gull (of the family *Laridae*), though they're only very distantly related, because they've got confusable shapes and markings. In contrast, although there are many species of crow, the common name generally isn't used for birds outside the genus *Corvus*. There are probably hundreds of species of birds in many different families that get called "seagull," and even amateur ornithologists find this state of affairs disturbing at best, and at worst a cruelty to the birds.

It's not just its difficult classification that makes the gull an "adult" bird. It has come to have a symbolic power that crows don't; witness the "children's book," mentioned above, *Lin-Lin and the Seagulls*, which puts a small child in a very difficult situation, pitting her loyalty to an old woman and her loyalty to nature and animals against one another. Though all turns out well in the end, the book presents ecological issues with a complexity that's difficult for me to untangle now (and far outstrips most news organizations's coverage of environmental issues), much less as a small child.

Western lit is strung through with gulls, whereas crows are largely absent. In *The Odyssey*, a gull flying overhead is a sign to take to sea, to leave home. Odysseus's ship flies "lightly over the waves like a gull" [78]. The birds that feed on the fallen heroes in the opening lines of *The Iliad* are, considering the battlefield's proximity to the ocean, likely gulls of one kind or another. In more recent poetry gulls are often overtly symbolical. Despite Stephen Tapscott's—largely accurate—characterization of William Carlos Williams as an anti-symbolist, in his poem "Gulls," the birds function as a standin for a muse. In her wonderful short poem "Talisman," Marianne Moore's gull is a death-angel for sailors lost long ago. Walcott treats gulls as kinds of angels too, most notably in "The Schooner Flight," where they usher in bright weather after a storm. In Chekov's *The Seagull*, the bird is at the center of a controversy about the very function of symbolism in drama, fiction, and poetry.

In all these instances, however, gulls have nothing *more* than symbolic importance. There is no real sense of the gull, no attempt at delving to understand its existence, or the writer's own existence in relation to the animal. There is no thought of the many extra-literary ways (that is, personal or every-day ways) a person might relate to the winged creatures. There is, in my mind, however, one notable exception. Despite all its well-known hyper-literary pretensions, there is a moment in Joyce's *Ulysses* that is profoundly every-day— walking past a wharf on the Liffey River, Leopold Bloom remembers the gulls, and in doing so articulates a common man's philosophy of compassion:

Wait. Those poor birds.

He halted again and bought from the old applewoman two Banbury cakes for a penny and broke the brittle paste and threw its fragments down into the Liffey.

See that? The gulls swooped silently, two, then all from their heights, pouncing on prey. Gone. Every morsel.

Bloom's compassion is different than that taught by Buddhism or Christianity. Both these religions teach escape from the mortal body and all its desires, which are either sinful or distracting. The ravens in Kings 17:6 keep Elijah's mortal body sustained with bread and meat, allowing him to focus on his heavenly-mandated duties. Elijah gets God's protection and secures his afterlife in exchange for his faith and obedience. But before feeding the gulls, Bloom tosses a Christian pamphlet into the water, which reads, "Elijah is coming," implicitly rejecting the values and faith-system evoked by the story. The birds, too, ignore the pamphlet, which they know right off isn't food. *Their* religion is universal—the high church of calories and carbs. It doesn't care for deals or promises. Instead, Bloom's form of compassion depends on lust and hunger. He understands keenly that these desires are held by every living creature, and therefor form the basis for an empathetic way of seeing the world. The biblical corvids function only to make a transfer of food product. They are not portrayed as beings with needs and desires of their own. The gulls on the other hand are hungry, as Bloom often is, and more than that they are gluttonous, devouring the bread in just moments. Who does not sympathize with something as simple as the need for a good meal?

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Later on, during the strange reverie of "Circe," Bloom reflects on gluten; "Eat [and] get all pig-sticky," he thinks. "Absurd I am." Moments later he sees "*A covey of gulls, [rising] hungrily from Liffey slime with Banbury cakes in their beaks.*" The gulls speak of cake and Bloom responds reflectively:

THE GULLS: Kaw kave kankury kake.

BLOOM: The friend of man. Trained by kindness.

But if Bloom is training the gulls, it is equally true that the gulls are training Bloom. While he's watching them circle, the refrain echoing in Blooms head goes: "*The hungry famished gull / Flaps o'er the waters dull,*" but later on, thinking back on the birds it changes to, "*The dreamy cloudy gull / Waves o'er the waters dull.*" Such a line is as close to a earnest prayer as Bloom would ever utter. The gulls become angelic figures in his eyes *because* of their hunger and greed and thanklessness. They become a means for Bloom to articulate the relationship between compassion and the drives of the mortal body — they justify both his "immorality" and his kindness. As the lust filled reverie continues, Bloom vindicates himself to nobody in particular, saying, "I am doing good to others."

Unlike the crows of children's books, the seagulls in *Ulysses* want something for nothing. Compassion in organized religion must have its reward— heaven or transcendence. But Bloom expects nothing for his. “Lot of thanks I get,” He thinks, after the gulls have finished the bread. “Not even a caw.” He says these words to himself, I believe, half out of admiration for the birds. He understands all too well the desire to take without giving back. How else to read the famous masturbation scene on the beach? Bloom takes the satisfaction he craves without having to offer so much as a word in return to the young girl. And yet, despite the grossness of the act, such moments form the basis of his ability to see the world from almost anyone's eyes, including the “cunning” bead-like eyes of the gulls. The tangled strangeness of Bloom's brand of compassion becomes most apparent when his kindness toward animals merges with his love for the flesh and organs of animals. Watching the birds eating greedily, Bloom's thoughts turn toward food, and he reflects on the nature of sea-bird meat; “Fishy flesh they have.” And yet, the thought of eating the gulls seems to make Bloom more gull like. Their flesh is salty because they eat fish, he thinks; flesh becomes what it consumes. “If you cram a turkey on chestnut it taste like that. Eat pig like pig.” Bloom, of course, enjoys both turkey and pig meat, and sees himself, therefore as part-turkey, part-pig. The transformation of one being's flesh into another being's satisfaction and sustenance—and eventually *their* flesh—is a kind of every-day miracle that surpasses that of blood into wine and flesh into bread. Whatever one thinks about Bloom's eating habits (it's tempting to call him a hypocrite), it's certainly the case that those habits somehow motivate him to treat living animals the city over with great kindness. What's more, the contradictions inherent in Bloom's “philosophy” of compassion make the philosophy more every-day, more available for men and women lacking the wherewithal for the inflexible rules of organized religion.

Bloom, of course, is not without his crow-side. There *is* part of him that's bothered when the gulls don't give him anything in return for the cakes, on which he spent a penny. After feeding the gulls, his mind turns quickly to assessing the cost of an advertisement printed on the side of a boat. And, yet, Bloom is very far from a the stereotype of the miserly Jew. He throws out the religious pamphlet referencing Elijah, implicitly rejecting both (the Jewish) Old Testament and Corvid materialism. More often than not, Bloom is decidedly un-crow-like. At one point, he looks on derisively at “the crowd bawls of dicers, crown and anchor players, thimblerriggers, broadsmen. *Crows* and touts, hoarse bookies in high wizard hats” [emphasis mine]. And he is, in fact, rather inept at economic negotiations. His attempt to wheel-and-deal with advertisers in “Aeolus,” is half-hearted and ultimately a failure. Bloom is an outsider, not a Jew quite, but excluded from Catholic Dublin's society and business. It is particularly his exclusion from economic relations that allows Bloom to identify so readily with the gulls (and other animals, too). Again, from “Circe:”

BLOOM: (*Desperately*) Wait. Stop. Gulls. Good heart. I saw. Innocence. Girl in the monkeyhouse. Zoo. Lewd chimpanzee. (*Breathlessly*) Pelvic basin. Her artless blush unmanned me. (*Overcome with emotion*) I left the precincts. (He turns to a figure in the crowd, appealing) Hynes, may I speak to you? You know me. That three shillings you can keep. If you want a little more...

Here, we see Bloom's mind move from the gulls, to sexual desire, positioned as an animal drive, to his exclusion from Dublin society (suggested by his desperate appeal to the half-imagined court), to his rejection of the rules of economy. He tells Hynes to keep his money (the three shillings Bloom previously lent him), and even offers him more. By doing this, Bloom is trying to defend himself, to show that despite his baser drives—his gullish and chimpish behavior—his redeeming quality lies in his compassion, his kindness toward the gulls and dogs and other creatures, including human beings. It is the gulls that Bloom returns to over and over again, in order to nail this point home. “*The dreamy cloudy gull,*” he thinks several times more before the book's end, “*Waves o'er the waters dull.*” The dull waters are a stand-in for conventional ways of thinking and doing, conventional economies. But the gulls, in their common way, not despite of but *because* of their gluttony and thanklessness, inspire in Bloom—and, perhaps in his readers too—a sense of every-day kindness for any living being that happens to be around.

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In my eyes, crows show the best side of the capitalist mindset, and seagulls, the possibility of allowing economic sense to lapse into a loosey-goosey (-gully?) kind of compassion. On the one hand is a profound respect for the world of objects (even those that *seem* to have no value), and on the other a desire to pay tribute to the great diversity of sentience found in our world. I do not think that the two are necessarily exclusive of one another. That said, I must admit that I've always enjoyed the company of crows better than seagulls. Perhaps this is simply a result of the books my parents read me as a small child— a surprising number about crows, and only one about gulls. But, then again maybe my affinity for corvids means more than that. I greatly enjoy wandering around the heaps of “junk” that fill our barns, finding things that may (or may not) prove useful for a certain project. The box elder with the crows nest was toppled in a recent storm, and they've since moved elsewhere. I miss their raucous company. But we still haven't had a duck killed by a hawk in a long while (knock knock on wood), and I can't help but wonder if the crows struck a bargain with the red tail in our behalf. If so, I owe them one, and resolve to undertake this very week to pay my debt.

CATS, DOGS, AND GOATS

In honor of May

Owning goats is superior to owning a cat or a dog. Why? A goat appeals simultaneously to three distinct parts of the human soul—the part that wants to love cats, the part that wants to love dogs, and the part that doesn't want to love anything at all.

You might be thinking: what part of the “human soul” loves *dogs*? Or, how can *just part* of a person—or, for that matter, part of a person's *soul*, whatever that is—love cats? You might say to yourself: surely there are dog lovers and cat lovers among us, yes, and it is true that most people in the Western world profess allegiance to one or the other, but so what? And then, finally: what have goats got to do with any of this?

Please stick with me, I won't take up too much of your time.

It all starts with a dog named Pipkin. He was my childhood dog, named for the gentle but adventurous rabbit in *Watership Down*. Pipkin was got as a border collie from a local shelter. He was a beautiful pup. I was myself ten or twelve, that age when parents have finally become weary of saying “No.” We doted on him and fed him grain-free dog chow, and as the weeks went by we noticed that he was growing— yet he was not growing much upwards. Instead, his length was increasing, his forepaws getting further and further from his hind ones. “I believe,” my mom said, “that some dogs grow out before they grow up.” I wasn't sure if she was joking or not. In any case, he did grow up— but not very much, and he continued to get longer. Over the years, we spent a lot of time laughing at the guy (whatever he had in him, it included a hardy contribution from a dachshund and a terrier, and no collie was ever evident). We laughed when he used his long torso to reach from the stairs onto the kitchen counter to snag an unguarded asparagus spear. We laughed when his belly dragged in the grass. When he chased his tail around and around in the yard, my father, playing the earnest academic, said, “When the Gods look down on us, I wonder if they see us as we see him.” At this too, we laughed. We had not the pride of some dog owners, but we had the constant privilege of watching an animal who, though he believed himself to know much, was limited in his cognitive capacities. We saw and pitied his plight, when, caught between a scrap of chicken offered as a bribe, and a helpless animal he'd barked into some hole, he was unable to help himself from the chicken and spent countless hours afterwards staring out the window, one paw poised, apparently still under the impression he was dominating the vole or mouse or whatever it had been. We snapped pictures when he posed nobly, head thrust to the wind, on a compost pile, hilariously ignorant of his ignoble stature. In short, we enjoyed owning Pipkin, albeit not in the ways my pre-teen self had imagined. There was no hope of Frisbee and he did not play fetch, and he disdained head scratches, but to see him bark a car down the street, and return trotting, chest thrust forward victoriously— that was entertainment!

The part of the human soul that loves to love canine, I think, is the one that revels in its own *knowing*, that wants to feel itself wise; the part that wants to be lord (and protector, too) of other things. We liked owning Pipkin because it was so easy—and so funny—to see through his inflated sense of himself. We felt like Gods looking down on proud but misinformed mortals. I think other dogs give people this satisfaction, too, albeit in different ways. The guy whose collie can pluck a frisbee from the air feels a bit of what the Roman Emperors must have felt when their minions brought trained animals into the arena to preform tricks and entertain the masses. The animal is skilled, to be sure, but that skill is ultimately under *his*, the owner's, directive. Bringing up a puppy is a pain— but many among us are charmed by its complete dependence on our kindness and care, and later on in the dog's life, our approval. The most extreme example is the German Shepherd breeder, who enjoys issuing sharp commands and enjoys even better seeing those commands unhesitatingly followed. Those of us who are dog lovers should face up to our love: we love being in control, we love knowing better and knowing more, in parceling out rewards of affection and treats as we happen to see fit, we love an animal that follows, that sticks by our side— we are main men and women, and what we desire most of all in a dog is a sidekick.

Before Pipkin, there was a cat we called Meowy. Meowy wasn't "our" cat, not really, even though more often than not she ate dinner and breakfast at our house. Meowy wasn't anyone's cat. she was herself, a mangy Main Coon that appeared one night from the woods. I was seven or eight. I still remember how it felt to put my fingers through her thick and soft fur— when I came to a burr or tangle she looked at me from out of those green eyes, saying, "you wouldn't dare pull on that," without having to say anything at all. Petting her was a bit like what I imagine petting a tiger cub is like, an experience totally different than petting a dog, which is often calming. I'd watch Meowy go stealthily through the long grass at the bottom of the hill, and disappear into the woods. Sometimes she'd be back the next morning, but often it would be days before we'd see her again. I'd ask my mom where Meowy went and why she didn't stay, why we couldn't keep her, and my mom told me that Meowy was only part way tame, that the things she did while she was away were a mystery. It's not hard to understand why the ancient Egyptians revered them as sacred, why their God Bastet often appeared as a feline. Cats know things that we humans can't— their detachment, their aloofness is their way of showing that they're keyed into the universe in a way we aren't. They are closer to Nature than we are, closer than our canine friends. Like many cats, Meowy would sometimes leave us presents of voles and mice on the doorstep, her way of saying, "look, I could take care of myself, if I wanted." There was so much more bobcat in Meowy than there was wolf in Pipkin. The idea of comparing the bumbling, self-important Pipkin to a wolf or even a coyote is laughable. But Meowy—whom I loved dearly anyway—was about as tame as a lynx, her self assurance as implacable as a leopard's.

Of course, not all cats are as wild as Meowy was (she disappeared one night, and never returned)—my brother has a wonderful, well-groomed cat named Sasha who never leaves the house and whose nails are kept short. Yet, there is still something dauntless in his narrow pupils. Even while purring he maintains a slight air of indifference. And I believe no cat owner would have it different—we enjoy the unknowable. We find it stimulating to be around an animal that knows (or at least pretends to know) about things that are beyond human comprehension. People who call themselves cat lovers don't want to be gods, as dog lovers half-way do, they revel in the presence of mystery. They like “owning” an animal that's never quite totally theirs, that they can't always control or manipulate or understand. The most extreme example is the trope of the cat lady, who lives alone with hundreds of cats, who's lost her wits a little, become a bit wild or witchy herself (maybe the cats have shared a few of their secrets), whose life is both dedicated to and overrun by the creatures.

So. There is a part of me that loves to know (the dog lover), and a part of me that revels in mystery (the cat lover). A part that needs to dominate and a part that yearns to relinquish control. Asking myself a simple question—do I prefer the company of dogs or cats?—I learn something about which part of myself is ascendent. I learn, perhaps, a bit about my calling in life; do I have managerial chops; would I enjoy running a farm or a cafe or a bank? Or am I more comfortable wandering, never knowing where I'll spend the next night? Perhaps I'm fit for a certain kind of seminary school, or would like to confront the mysteries of the universe and study astronomy or astrophysics. For someone who doesn't yet know where they're headed in life, there are worse places to start than the question, “do I prefer cats or dogs?” And to all those who ask this question of themselves, and answer, “but I like both,” as I do, I say to you, *you will like goats even better. Goats are the answer.*

Why?

A goat contains elements of both cat and dog (and, I'll argue, something else important besides). That is, they engage the two parts of us that, conversely, long to dominate and to be dominated, to know everything and to bask in mystery. In the Old Testament, the domesticated goat is a symbol of man's dominion over the animals, and also—by its sacrifice—of man's subservience to God. In Buddhist and Confucian texts, most notably in the *Lunyu*, goats are the center of a debate about ritual and compassion; their blood makes a particularly fit offering to one's ancestors, but there's grave risk in showing anything but kindness to a goat. In the *Divyavadana*, a man who sacrifices a goat is reincarnated over and over as that goat, to be sacrificed hundreds of times— a stranger version of the belief that cats have nine lives. The goat was domesticated by homo sapiens perhaps as many as 8000 years ago, third after cats and dogs. It is unclear if the Greek word for tragedy, literally meaning “goat-song,” is due to goats being offered as rewards at performances—as Horace suggests—or because—as Aristotle claims—the Greeks saw the animal as embodying the tragic ethos. Perhaps it was both.

A domesticated goat will beg for its food the way a dog does. We have three dairy goats here at Breckinridge Mill farm (and more on the way now!). When I walk into the barn in the morning they are already lowing for their grain, and when the dog (a Pyrenees, their guardian) gets fed first, they look at me piteously from over the stall door, sometimes whimpering. They seem to be as dependent on us as any dog is upon his mistress. I can walk out into the field at any time during the day, and call, and no matter how far they have roamed they will come clippity-clopping and press their noses into my side, wanting to be scratched in the sweet spot where the neck meets the shoulder. I get from them—albeit in smaller doses—the same pleasure my family got from watching Pipkin. They'll clamber up onto a plastic barrel only to have one hoof slip, and go whirling down to the ground. While one is getting milked, the others will stick their long necks under the stall door and move their lips in gestures of helpless frustration. If the Gods do not laugh at human folly with the same knowing pleasure that I laugh at a goat's clumsiness, I'd be very surprised. And then, goats can be nearly as companionable as any dog—we've taken ours on numerous hikes, and they follow faithfully behind us. There are books dedicated to training goats to carry packs and pull children's carts, just as there are to training dogs to pull sleds. People care for goats as if they were their own children, bringing the newborns into the house to bottle feed and dote upon. In *Goat Song*, Brad Kessler describes goats outside the city of Jaisalmer in India, who wander in a herd during the day, searching for grass and shrubs, and then split up at night, each animal returning to its owner's home to be milked and fed and bedded. The part of us that loves dogs and loves owning goats is itself domestic; we take calm in knowing we are safe, that we have ensured that our loved ones and our animals are safe and comfortable, that everything is perfectly under control. The cornucopia, the horn of plenty—a symbol of lush domesticity—is a goat horn filled with nature's bounty, set out for human enjoyment. It is the broken horn of the goddess Amalthea, who protected and nurtured the young baby Zeus.

But, of course, Nature is never really ever under control and is always beyond our complete understanding. There is something otherworldly (some have describe it as demonic) in goats, which can't be bred or trained away. A dogs eye is much like a human's eye— the pupil expands and contracts but always remains circular. But both cats and goats have a pupil that contracts into an ellipses or rectangle, the shape horizontal within a goat's sclera and vertical within a cat's. The slitting of both cats' and goats' eyes helps the animal to filter out bright light from an eye that is otherwise adapted to see in the dark. There is something disconcerting about the ability to see in the dark— as if the animal can comprehend goings on that we can only imagine. They are acquainted, I imagine, with those uncertain forms that once in a while you glimpse flicking just beyond the reach of your headlights as you round a corner on a country road at night. People that have spent a long time around goats know that they have an air of ancient knowledge about them— now and then for reasons known only to themselves, they'll refuse a scratch or a treat and turn one eye to look a long way away, toward the mountaintops or an oncoming storm.

Much has been written about the male goat— they are striking because of the expressiveness of their desire (though they come into heat rarely, unlike most mammals for whom the female determines breeding seasons). They have a distinctive sweet fermenting odor when they are ready to breed. Presented with a doe, they'll lift their lip over their top teeth, turn to the sky like a wolf howling at the moon, and bellow, rearing then and hoofing at the ground. Watching this performance, it's hardly surprising that goats have long been a demonic symbol. Though the moves may sound absurd, at best they produce anxious laughs from a modern human audience. It all has a bit of the chilling effect of a bobcat's menstruating call, and little of the hilarity of Pipkin posturing on the compost pile. The Greeks often cast male goats or satyrs as comedic figures in the tragedies— but Camillie Paglia calls the satyr plays “obscene comic burlesque[s]”, and says this brand of comedy is meant to show that “Nature is always pulling the rug out from under our pompous ideals” [6]. That is, the goat's intensity of desire was funny to the ancient Greeks, and is anxiously funny to us, because it undermines certain ideals— many of those associated with dog ownership; domesticity, knowledge, dominion over beast and fowl. Dionysus's band of satyrs don't own much of anything at all, are always wandering and pursuing, are never content with the same partner two nights in a row, are ruled not by their heads but by their reproductive organs.

Goats like cats are closer to nature than most domesticated animals in the sense that they go feral easily (domesticated dogs, on the other hand, are rarely able to reacclimatize to wild life). Appalachia is full of stories of escaped goats living on cliffs. There is a billy goat on House Mountain, just an hour north of Roanoke. And, recently, a band of Boer goats was rounded up off the Blue Ridge Parkway. It took the Park Service several weeks to successfully catch the animals. I worked on a farm in the wildlands of New Mexico, where forty five goats were let out each morning to roam several thousand acres. When the moon was full they'd stay out all night, sometimes for several nights in a row, returning as if nothing had happened.

What does all this mean, practically speaking? Goats are animals best owned by the ambivalent; people who are enthralled with the natural world on its own terms, who enjoy its rawness, lustfulness, and its mystery, who will bend to its superiority as the maenads to Bacchus, but that want also—contradictorily, perversely even—to assert control over nature, who take pleasure in ownership perhaps more than they'd readily admit, who enjoy domesticity despite of themselves, who are discomfited by uncertainty and emboldened by knowledge. This strange configuration of desires is not limited to any class or type of person— this is why you'll find suburban moms who dote on their Lamancha's “gopher ears,” New Age farmers employing rotational grazing for their mixed breed herd, poor rural folk who breed pedigree Nubians and feed their animals top-notch organic feed, a banker's wife that won't eat meat she hasn't killed herself, a Vietnam vet that just enjoys the animals' company, a high school chemistry teacher who keeps goats in his back yard because that's what he's always done. But despite such apparent differences, I've always felt there was something similar in all of us. “Don't romanticize goat ownership,” advises the *Essential Urban Farmer*. “Goat ownership is not for everyone.” Goat people are a weird bunch, a ragtag crew. We are, perhaps, not as straightforward as most other people. Our needs and desires are contradictory. Our animals reflect and soothe these mixed impulses.

I suggested above that there was one final thing that sets goats above cats and dogs. Here it is: milk. Besides the soothing ritual of feeding and brushing and milking each doe every morning, while the finches and bluebirds balance on thistle nearby, there is the unparalleled taste (think hints of pine and honeysuckle) of minutes-fresh goat milk. Ahhh.

STARLINGS

For a short year I lived in a second floor garage apartment in Texas. Three or four days a week I got up before first light to work at a chicken and duck farm and came home after dark. The other days I sat at the kitchen window and tried to write. The window had a good view over five yards. One had a smoker and a wood cross on the side of the house, was owned by the grandparents of kid who celebrated his eighteenth birthday as I moved in. He joined the Marines a few days later. When he was gone his grandmother made me tamales and left them on the steps weekly. Next door, right under my window, was a house shared by a few young professionals—you could tell they were by how they dressed and typed at their phones. Soon they had a high fence built and put in a fire pit and planted saplings and spread pea gravel. My window was higher than the fence, though. My downstairs neighbors piled their beer cans against the tastefully stained oak slats.

If I stuck my head outside, I could see the flower lady. Her face was always blocked by the fine mist of her sprinkler. She yelled hello if she saw me, and it was hard to say if English or Spanish was the language of her household. She seemed young. The yard was spiky and lush. If I craned the other way, I could see the three block houses owned by Mr. Martín. He co-owned a small roofing business, sometimes driving over ten hours for a single job. But he supported three generations of family in those

houses. Then, across a narrow street, over the young professional's yard, was the house of a mid level gang leader— that was the rumor anyway. On holidays he put barricades at either end of the street and filled it with hugely booming fireworks. The whole neighborhood came out and drank beer from a keg on his steps and cheered. There were never any police.

I did less writing than watching that year, up on my window perch. Birds especially. For weeks I followed a crow as she pulled apart a mop that was leaned up next to the 2x4 cross. She used the tassels in her nest. I watched the robins that scratched in the dirt under the smoker where my young acquaintance's grandmother cooked the tamales. Over the top of my computer screen, I tracked the goldfinches and tanagers that came to the young professionals' feeder. But most of all I enjoyed the starlings, who sometimes took over the branches of the large poplar that grew up next to the window, checkering the sill with their poop. Later in the day I'd walk to the gym, detouring to go through the park by the river, where the starlings scattered and settled, disbanded and swarmed. They did that all day, it seemed. Walking back they'd still be there usually, and in the summer the bats would be there too, streaming from their bridge-home near downtown, a mile distant. The patterns they made in the air were like the starlings' patterns, but without the pauses— intertwined currents, not geyser eruptions. Back then, I thought I was interested in entropy, in the patterns made by groups of animals. I'd read Ammons's poem "Corsons Inlet." In it he describes a congregation of sparrows "rich with entropy: nevertheless, separable, noticeable / as one event / not chaos." I loved those lines. I wanted to write something like that.

But today, a few years later, when I think back on the starlings and all, Hayden comes to mind before Ammons. Hayden knows those birds better than anyone, maybe.

On Sunday evenings I'd sometimes get an espresso and a beer at a nearby Brazilian Cafe. I'd watch city maintenance crews disturb grackles and starlings with special laser pointers, keeping them

from roosting on the telephone lines over sidewalks and above office building doorways. They always had their hands full, though they did usually manage to keep the birds at bay. In Hayden's day, though, they dealt with such problems more brutally. "Evenings I hear / the workmen fire / into the stiff / magnolia leaves," he writes, "routing the starlings / gathered noisy and / befouling there."

For the first two stanzas Hayden is standing at a distance, watching. Ammons sees in nature constant change, continuous flux, but (for now at least) for Hayden, death is indisputably final. The birds "fall / to ground rigid / in clench of cold." There is movement and then there is not movement, a fact brushed over by many "nature poets," whose distance from social turmoil and urban poverty, probably makes it easy to see death as part of a natural, regenerative cycle. For Ammons, our aversion to stink and death—to the "dark work of the deepest cells"—can "calmly turn to praise." But Hayden does something more complex, intermingling praise and critique. The most striking moment of Hayden's poem is when the starlings re-settle in the magnolias:

The spared return,
 when the guns are through,
 to the spoiled trees
 like choiceless poor
 to a dangerous dwelling place,
 chitter and quarrel
 in the piercing dark
 above the killed.

Here the starlings become the minority populations of "Paradise Valley," in Detroit, where Hayden grew up, and of Nashville, where he later taught university students. "The spared return," he writes — the birds seem oblivious, even stupid, for doing so. They're returning to a place where violence

might again be inflicted upon them. It's not even a nice place, not worth the risk it seems, as the trees are spoiled and ragged from the gunshots. But then comes the poem's turn— the birds are like choiceless poor. There is something that binds the birds to patterns of flight and resettling, despite danger. Likewise ma family lacking spare money is bound to tedious jobs, to schools with too few teachers. And most of all to violence, violence that—by the inexorable machinations of power and norm—they sometimes seem complicit in.

Hayden's writing about urban people. Had I looked more closely, I would likely have seen his metaphor playing out in Austin. There aren't many violent neighborhoods in the city, but there are one or two rough ones not far from where I lived in East Austin. The city maintenance crews don't spend time there chasing starlings with fancy laser pointers, and the birds seemed to take refuge en mass on the East Side. It wasn't until I moved to rural Botetourt county, where starlings are much rarer, that I started thinking hard about Hayden. The Republican party is the magnolia tree of many cash-strapped Appalachians. To my liberally biased eye, these people seemed irrational, even masochistic. With each new violence—jobs shipped overseas, broken unions, pay cuts, exploitative loans—they resettle into the same calls for weaker government, tax breaks for large corporations, privatized healthcare. But Hayden helped me construct a more complex and sympathetic understanding. Much like the poor of Nashville and Detroit, many of my neighbors here are bound to their resettlings— to opioid addiction, to resentment, to violence.

In the next stanza Hayden walks to work, and the birds' bodies are scattered on the streets and on the campus lawns. He describes the bodies as “frost salted.” They're still troublesome, he reflects as he carefully avoids tripping over one— but here the word troublesome takes on a second meaning. Before, the birds were simply a nuisance, but now they trouble one's soul as well as one's step. Maybe Hayden had in mind the Kent State shootings, in which four students were killed while protesting the

Vietnam War, and nine injured, at least one by birdshot from a national guardsman's twelve gauge. Today, almost half a century later, reading this poem it is impossible not to think of the young black men killed by police officers, both in recent months, and before the media's attention was peaked. It's impossible to see the sheriffs in riot gear, backed by armored trucks and submachine guns, and not think of Hayden's workmen, prodding their weapons into the bushes, ready to shoot whatever—or whomever—flies out.

I also see my Botetourt county neighbors in the poem— most of them white, working class. The presidential elections only a month off, I watch as more and more Trump signs appear in their yards and on their fences. I remind myself that Hayden asks us to interpret his poem broadly; carcasses are still on his mind, he writes, as he heads to class to lecture on what Socrates, “the hemlock hour neigh, / told sorrowing / Phaedo and the rest / about the migratory / habits of the soul.” In one sense, Hayden is here looking forward to the “season” when the birds—when the choiceless poor—don't resettle to be shot at the following day, when they take to the sky, winging for a better place. Of course, though, the philosopher actually *is* headed to his death. The police dawn their riot gear another day. Jobs pay less and are harder to find. The social pressure to be economically self-reliant mounts. The poem is not all that hopeful about change in the real world. The migration Hayden is talking about happens post-mortem— the birds' souls become the souls of oppressed people, past, present and future. The poem advances a grassroots mysticism. It's metempsychosis for those of us who care little for the great martial heroes of Greece and Rome, who feel our plight more clearly reflected in the black eyes of lowly birds.

ON KILLING

In a poem about hunting beavers, John Casteen says, “How strange, to hope / to see the signs of motion, to make an end...” He gets something about hunting not much talked about; the strange relationship between the desire to behold life and movement, on the one hand, and the desire to end it, on the other— to kill.

For me though, the poem, “Night Hunting,” has always also been a poem about reading, and more specifically, reading about animals. Interpreting them through lit. There's not much I can point to in the poem to support this interpretation. There's the black letter “V” behind the swimming beaver, sure, and one might fish up any number of Casteen's poems that clearly are about reading. But I think, maybe, it has more to do with me, as a reader, than the poem itself. It took me months to understand these lines on my own terms:

...A weed is what might grow
where you don't want it; a dahlia could be a weed,
or love, or other notions. The heart can't choose
to find itself enchanted; the hand can't choose
to change the shape of water...

But when I did, finally (understand these lines), the poem abruptly took on a new significance. Casteen is suggesting, I think, that his desire to kill is unchangeable in him, even though part of him views that desire as a weed, a black mark on his moral character. While hunting, he is enchanted with the prospect of taking an animal's life, his intellect as powerless under this desire as a hand is under a brain's neural-electric command to hold still. I've only recently started hunting, though I've fished trout for several years now. I ate meat for the first time at twenty two years old. Reading, reading of all kinds, but especially about animals, has been important to me for far longer a time than have hunting and fishing. But "Night Hunting" lead me to see them as one in the same, almost. To understand that they have, at root, the same appeal, for me, hunting and fishing and reading. As a reader I am all-powerful—a man with a gun and bullet or rod and fly, or pen poised against the margin—and, when the poem or book or whatever is good, also unhinged from myself, at the mercy of someone else's or some other creature's words and movement. That is, the contradiction that Casteen experiences hunting beavers in the early morning is one for me inherent to reading.

This essay is for me to unravel this connection. Put bluntly: what is it about reading and killing? Why do I feel sure that they are—at least in my head—paired or chained or twinned or inoculated or however related?

There's an adage that *it*—life or a journey or an undertaking or what have you—isn't or shouldn't be about the “kill,” but instead about “the hunt.” Pure experience of a moment trumps the moment's completion. The road trip leads to life-changing wisdom, which is not (the life-changing wisdom), as expected, waiting at the destination. It's possible to read Melville's *Moby Dick* in this way; Captain Ahab is driven mad by his desire to conclude his grisly revenge, while Ishmael treats the *Pequod*'s voyage as an opportunity for self-reflection, for indexing the penchants and impulses of his fellow men, for meditating on the strangeness of the universe. The book becomes a parable of the “man of action,” and the “man of reflection,” one surviving and the other perishing. Ishmael's position as narrator further reinforces this reading; he's looking back on his experiences during the whaling expedition, charting his personal growth over the course of so many nautical miles. At times, his preference for “the hunt” or “the journey” over “the kill” or “the destination” seems almost Buddhist. When he stands masthead, his spirit “ebbs away to whence it came; becomes diffused through time and space.”

But to pitch Ishmael as simply reflective, as “in it for the experience,” isn't right. Ahab may be a cartoonish or flat character—I certainly find him almost utterly boring—but Ishmael isn't. The young man on board the *Pequod* has got more of Ahab's and Bulkington's killer instinct than the older Ishmael, the narrator, would probably care to admit. We confront Ishmael's darker side in “The Try-Works,” when he half-consciously pilots the whole boat toward its doom, only righting its course at the last possible moment. I see it again in his stubborn blindness to the ecological impact of over-harvesting whales in “Does the Whale's Magnitude Diminish? Will he Perish?” But nowhere are Ishmael's complexities more in evidence than during the ending— the attempted killing of the White Whale:

Ahab was fairly within the smoky mountain mist, which, thrown off from the whale's spout, curled round his great, Monadnock hump; he was even thus close to him; when, with body arched back, and both arms lengthwise high-lifted to the poise, he darted his fierce iron, and his far fiercer curse into the hated whale. As both steel and curse sank to the socket, as if sucked into a morass, Moby Dick sideways writhed; spasmodically rolled his nigh flank against the bow.

The Whale's antagonist is ostensibly Ahab. The Captain throws the lance whose tip's barb holds in the beast's flank. It is Ahab whose monomaniacal obsession will lead ship and crew to Davy Jones. Only Ahab has a blood vendetta; the Whale took his leg. It is his anger that drives them so perilously close to the huge animal. If there is a born hunter in Moby Dick, it is Ahab.

But this passage can be read more complexly. The language here is not the Captain's but Ishmael's. The rhythm of the phrase “smoky mountain mist,” doesn't come from the mouth of gruff and dim-witted Ahab. The boat goes into the mist and when it comes back out, Ishmael is, for a moment, in Ahab's seat. The “Monadnock hump” is a reference to Ralph Waldo Emerson's poem and looks forward to Thoreau's Walden; references only Ishmael would be capable of making. He equates the ferocity of the Whale to the majesty of Emerson's mountaintop— both, in a sense, must be conquered. As Ishmael hurls the lance and curse at the animal, he is trying out Ahab's killer instinct. In this moment he wants the Whale's death as much as the Captain does.

Of course, we find out later, Ishmael isn't in the midst of the action. Even as he imagines himself in the Captain's boots, he's floating just clear of danger. When the ship sinks, he grabs hold of Queequeg's coffin and floats to safety. Ishmael is, almost literally, buoyed up by the death of his friend, the cannibal and ferocious whale hunter. The book ends with Ishmael declaring his orphanhood— not quite a writer, not quite a reader or intellectual, but not a full-blooded hunter either.

As a reader—and a hunter—I am often Ishmael. That is, I'm there, in the midst of the action, and I'm also not. At times I read only with an eye toward the destination, “the kill,” the story's last breath. At other times I read slowly, absorbing language and rhythm and ethos. I'm detached, reflective, and then wholly engrossed, forgetful of myself, enchanted or gripped. Both reading and hunting can be ways of engaging these conflicting feelings. Both throw me into the eddies of my own ambivalence.

Elizabeth Bishop grew up with Nova Scotia, along a coast that once docked many whaling ships. I like to think of her poem “The Fish” as a *Moby Dick* for an age of ecological decline. Despite Ishmael's claims that the “whale will never parish,” many of its species have been hunted to the brink of extinction. Where Bishop casts her line, many of the fish have already been hooked once or more. They've survived the onslaught of industrialized overfishing, it seems, only by determination and ferocity, which run thin all too quickly. Years ago, the White Whale shrank, and now his fighting spirit has shrunk too: “He didn't fight,” Bishop says after pulling her fish over the edge of the boat. “He hadn't fought at all. / He hung a grunting weight, / battered and venerable / and homely...”

The problem facing Bishop as a modern day huntress / fisherwoman is that her prey isn't equal to her—there's no leviathan. The world seems known and tamed. Even the venerable fish strikes her as—quite literally—homely; its skin like peeling floral print wallpaper. Killing this fish would be no great thrill. Bishop has a true hunter's moral instinct— an easy kill is always an immoral kill. Thus, holding the hooked fish, she must devise another means of achieving victory. The hunt and kill and cleaning take place as an exercise of mind rather than force:

I thought of the coarse white flesh
 packed in like feathers,
 the big bones and the little bones,
 the dramatic reds and blacks

of his shiny entrails,
 and the pink swim-bladder
 like a big peony.

The phrase “packed in like feathers” so perfectly captures the flesh of a newly killed fish. The peony is a striking metaphor for the float bladder. Bishop knows the creature's insides without ever having to put her knife to its belly. She sees through its skin. This isn't enough for her, though. She continues, trying him out again as a mere object, his eye's irises calling to mind the foil-bundled flowers for sale in an airport gift shop. Then, still not satisfied, she construes him as a war hero, the hooks stuck in his mouth like medals of honor. The final lines of the poem confirm my first impulse toward an ecological reading. “Victory” fills up the boat as oil runs around the rusted engine and oarlocks, until, she writes, “everything / was rainbow, rainbow, rainbow! / And I let the fish go.”

Importantly, it's not the fish's scales that glint technicolor—it's probably a shad or striped bass, not a rainbow trout, which are not native to Nova Scotia (though rainbow trout are euryhaline and today live in NS's lakes and salt water bays)—but the oil. The poem can be read as an angler's struggle with habitat degradation. How does one, in good conscience, continue hunting and fishing in areas that no longer support wildlife as they once did, and perhaps will soon support few animals or none at all? Bishop's answer is somewhat ambiguous. On the one hand, it certainly involves different ways of seeing, involves understanding an animal in different ways, never simply as one thing or another. But the poem also puts forward the possibility that some kind of beauty might be pulled from degradation—rainbows from oil slicks. To me, the poem suggests that beauty can emerge from the moral struggle, the self-questioning and perspective-shifting that inevitably follows—say—an oil spill, or global temperature change, or the catching of sick fish.

The poem is about reading, too, at least for me; grappling as it does with questions of interpretation. If the poem asks, “how can one fish in an age of ecologically degraded oceans?” it also asks, “how can one read in an age of moral uncertainty?” How do we read, knowing, for example, the important role of literature in colonial imposition? What to make of Heidegger's or Pound's Nazi sympathies? Kipling's bureaucratic complicity? Twain's racial condescension? The poem challenges me as a reader just as it gives me pause as a hunter. Bishop pushes us to cast books and poems and plays in a multiplicity of lights, to see them as beings with several existences. The bleak alternative is to “kill” a text, to mire it in a single interpretation. Bishop asks us to wrestle with moral ambiguity, to try, whenever possible, to force something beautiful from its ugliness. I can't claim to be this kind of reader all the time, but perhaps every now and then I'm able to say “rainbow,” or blackberry, or Monadnock! and let the fish go.

Of course, sometimes I keep the fish. This winter I found a turkey at the end of my barrel I wasn't able to shoot. I long ago stopped being able to put a knife to Virginia's native brook trout. But, more often than not, I go through with the kill. A few days back I took several good-sized rainbows from the stream that runs by my house. Laying them out in the grass, which was dry for this time of year, I couldn't help but think of little Vardaman wrestling his huge dead fish in the Yoknapatawpha county dust. “My mother is a fish,” I've long thought, may be the greatest chapter in American literary history.

When Vardaman first catches the big fish, it's a trophy, proof of the boy's manhood. He spits over his shoulder, he straddles it and curses it. He demands that Dewey Dell clean it. But then the adrenaline of the kill begins to fade. Anse tells him he's got to clean it himself. He makes a bad job of it, so that by the time he's called in to witness his mother's final moments, the fish is hacked and bloody. "My mother is a fish," is Vardaman's way of trying to untangle death: "Then it wasn't and she was, and now it is and she wasn't," he thinks or feels. The complexities of life and death—what it means to be a body which once had life but no longer does—spin the boy's head around, and mine too, as I read. But thinking of his mother as the fish, things seem somewhat clearer; after he kills it, the fish is no longer a fish, but simply an object, a body which must be dealt with— must be gutted and then filleted and cooked, as the body which was once his mother must be hauled to Jefferson.

But if Vardaman is trying to understand what it means to die, he's also trying to understand what it means to kill. The distinction between death by accident or sickness and death caused by another being seems obvious to most adults. But it doesn't to kids under a certain age. My landlord's son, who's four now, recently asked me about the difference between "getting dead" and "getting killed." I struggled to give him a good answer. Afterwards, I thought again about Vardaman. How he wants to blame Peabody for Addie's death. He knows the fish didn't die of its own accord, knows that it took a little boy with a fishing rod to do that. I wonder, rereading Vardaman's chapters, if when he blames Peabody he's really blaming himself— worrying that he somehow caused his mother's death. It follows, that if his mother is a fish, a boy with a rod is her killer, not the doctor, who's too busy to spend his hours digging worms and searching out shady creek holes. "You're fixing to make yourself sick," Dewey Dell tells Vardaman when she finds him crying in the barn. I wonder if she knows he's blaming himself. She sends him up to the house to eat his dinner— the fish (an act of mercy on her part, albeit a strange one, I'll soon argue).

Vardaman, I think, is on to something when he assumes that getting killed and getting dead are the same. At least, I think it's maybe impossible to understand death (as far as anyone can really understand death) without having purposefully killed another sentient being. Unless one has Bishop's x-ray eye, it's necessary to open up an animal in order to experience the body's "thingness"— to realize that one's own organs and flesh are not much different than an animals organs and flesh. And then, also, to understand that there is something in all sentient creatures that is not body, but which irretrievably disappears when the body is pierced or hacked. Put more simply, life is most memorably felt as it ends, when its gone. Its fragility can only be comprehended when one breaks it in another creature.

Vardaman isn't done with the fish, though, even after his mother is dead. Dewey Dell sends him up to kitchen, where the fish is "cooked and et, cooked and et." At first this seems almost cannibalistic. It's impossible not to think of the fish's flesh as Addie's flesh. And, in a sense, they are one in the same, though the eating becomes a metaphorical act. Vardaman's sister, I believe, sends him up to the house to begin the difficult work of "digesting" their mother's death. The cooking and eating of the fish becomes a way for the boy to conceptualize grieving, to begin the grieving process. The mind has to digest complex feelings of guilt and sadness and regret after a death, as the body does protein and carbohydrate after a meal.

Again, “My mother is a fish,” becomes, to me, a parable of reading. The eating of the fish becomes the digesting of loss and grief becomes the absorption of text. What does it mean for a reader to “kill?” It’s the inverse of Bishop’s impulse to “let the fish go”—that is, her impulse to allow a text (or animal) to live continuously by never pinning it to a single interpretation. I do not think this way of reading is always the best one. Sometimes, like Vardaman, we have to attempt to say that something is, rather than—to borrow the language of “The Fish”—that something is like. For example, I will always see G.M. Hopkins’s *The Windhover* as a basically unreligious poem about the relationship between beauty and ferocity. No matter how many differing interpretations I hear (inscape, Jesus, the afterlife and the rest) this is, over and over again, the way in which I experience it. The poem, for me, never changes. I think many of us do this to our favorite works. Is it dead? Did I somehow unknowingly “kill” *The Windhover* by pinning it to a single meaning? In a sense, I think maybe I did. But by “killing” it, I also experienced its life blood more intimately than I could ever have hoped to do otherwise. Bishop’s way of reading keeps me at arm length from a poem or novel— never lets me put my hands into its guts, never lets feel its most vital palpitations (I can imagine these palpitations, but not feel them). When the intellect is constantly engaged in the action of imagining a multiplicity of interpretations, the heart is left out of reading.

What happens after this textual “death” or “killing?” Digestion, processing, integration. In *Housekeeping* Sylvie says you feel loved ones most when they’re gone. Eight years after first reading *The Windhover*, its flesh is in a sense my flesh. More often than I’d like to admit, I find myself walking to the poem’s rhythm. Sometimes I’ll wake up in the morning and its first line will be my first thought.

Jorie Graham's "The Lady and the Unicorn and Other Tapestries," is, like the Windhover, about flight and falling and contradiction. It is also about killing. It is to me also about reading. The few times I've been forced to visit New York City (the place overwhelms and exhausts me in all ways), I've taken refuge in the Cloisters. I love the gardens there, the espaliered trees and obscure herbs. The medieval tapestries are also somehow comforting— they put stillness into the most chaotic scenes. There's one of particular interest; men bringing a dead unicorn back from a hunt, slung over the back of a white horse. I've always thought it strange that the weaver imagined the hunting and killing of a mythical creature. I can't help but think it says something about our need to undo the mind's creations. To prove to ourselves that we have made life—or something very close to it—by making death. The last tapestry of the Unicorn series is also interesting; the beast pastured, circled by a fence, alive once more and tame. Again, I understand the image as a parable about creativity. We kill or cage our wilder impulses (or perhaps, kill, resurrect, and then cage), our most bizarre imaginings. Then we call it Art.

Graham's poem isn't really about the tapestry, The Lady and the Unicorn, though my reading of the poem is inevitably colored by my experiences with the tapestries in the Cloisters. Graham doesn't describe the image or meditate on it— she grabs a detail and runs wild with it:

...the quail

over the snow

on our back field run free and clocklike, briefly safe.

[They] rise up in gusts, stiff and atemporal, the moment a game they enter,

held in place, as prey,

by goodness,

by their role in design...

The quail's role in design is their place as the subject of the poem, Graham's recentering of the tapestry's focus. She draws a frame around the image which has seized her imagination. She is also setting up for the hunt— even during the Middle Ages, quail usually required extensive habitat modification in order to grow to huntable populations. Today, quail cannot be hunted outside a meticulously managed area. Graham is an un-Ahab-like poet, never simply rushing in. Her language is precise and intently purposeful if somewhat strange. She delicately preps her subject before going in—here, metaphorically and literally—for the kill.

In the next stanza, the poem introduces a contradiction, not unlike the one in Casteen's "Night Hunting." When the quail fly up to the branches of a fir tree, they seem, strangely, also to fall. I think I understand what Graham is seeing here— turkeys do something similar. When they fly up to a roost, as long as they're not panicked, their wings seem almost to drop their bodies. It can be strangely dizzying to watch, like, I've lost track of up and down. Graham's genius is that she's able to see herself in the act of creation and to realize her cinematographic eye frames its own flight and fallenness at the same moment that it frames the flight and fallenness of the animals. The poem's first move is to shift focus toward the tapestry's edge, and now we understand why— the speaker saw herself there (as Dickinson sees herself at the outer limits of language and sanity), saw the contradiction of hunting and the contradiction of art implicit in the quail's upward flutter.

What is this contradiction? For Casteen, the central contradiction of hunting is the desire for movement against the desire to end movement. Here, it's an impulse to tame or kill against an impulse for wildness, for unweighted, unlanguageed, combustable, fluctuating existence: "[It's] our best lies that make what's absolutely volatile / look like it's weighted down." Graham is no romantic; not here, at least. For her, the imagination does not make the world exciting and meaningful, but instead takes the world's volatility, its inherent intensity of meaning, and puts it neatly on a platter, makes it palatable. She has, almost, a Cherokee understanding of Nature's power— and, as in the lore of Native American hunts, the animals seem to participate in their own killing, to sanctify it. Preening, their faces are like thread and needle

starting to

pull in the simple

fear, it is an ancient tree their eager eyes map out—

playful and vengeful and symmetry-bound: where out of love the quail are

woven

into tapestries, and, stuffed

with cardamon and pine-nuts

and a sprig of thyme.

The tree is reminiscent of the tree of knowledge of good and evil. A biblical reading is possible, but I see the ancient tree, mapped out by the birds, as evidence of the human mind's limitations when faced with chaotic and volatile nature, and animals in particular. The mind latches onto that raw power, and without understanding it, pulls it down, boxes it or shoots it. Makes out of it something comprehensible or useful. It is not an unloving act, this kill— life, in death, can be made into something undeniably attractive—here, appetizing—or even meaningful (though I tend to think Graham is more interested in attractiveness, framed-ness, symmetry, than meaning). The hunt and kill and cleaning and cooking of the birds are, for her, much like the act of writing a poem.

There is a feeling I've had before, when I kill an animal, that I have done something whose significance alludes me. That I've put a stop to something I didn't even understand. And that because of this, I start to suspect—strangely—that the animal died more of its own volition than mine. The feeling is at first disturbing and then, somehow, awe-inspiring. Another way of articulating this: the significance of a kill has more to do with an unnameable power or volatility in Nature than it does a power or volatility in the hunter (the artist and the hunter, despite reputations to the contrary, are both tamers and not wildmen and women). Another feeling, related: the excitement of a kill comes from death being a more comprehensible state of being than life. I have taken something incomprehensible and made it lie still long enough to start making sense. Vardaman's fish gets this way once its cleaned of its vital organs— a thing to be cooked and et. A deer head mounted on the wall is an aesthetic event, markable, analyzable, a mere object. A living deer has got something inarticulatable about it— what we've come to call spirit or life blood. It's not art, but the stuffed head, in a sense, is.

Graham isn't suggesting that any of this makes art less worthwhile, I don't think. It's just that she wants to set the record straight— power resides without. It resides in *other* living things, animals in particular. Human consciousness is incapable of understanding life by simple introspection. As artists and hunters we ground the volatile and the transcendent in the outer world, assign Nature language and beauty and purpose, ground Her. And, strangely, come to value unbounded Nature all the more for it.

The first deer I shot, less than a year ago still, was with a bow and arrow. It appeared so quickly and so close that I drew and fired before I even had a chance to think. The first thing I remember was wishing I hadn't done it. Later, when I'd finished cutting and packing the meat, I was glad— but in that moment I have no doubt I would have brought the animal back to life, if such a thing was possible. I remember this feeling, sometimes, when I'm occupied reading or writing. I think about Graham's poem. If art is, in some sense, life made dead, I know that I badly want life still alive too. Quails that have weaved themselves and plattered themselves in a poet's cinematographic eye aren't enough— I'd like the real thing as well. The quails themselves, unlanguageed, existent. Like Casteen, I have a desire to still movement. But poems and novels—the stillest sorts of movement—, and particularly those that take animals seriously, over and over remind me that unstilled movement is so much more valuable.

STROPHARIA RUGOSA ANNULATA
(And the Human Animal in the Networked Society)

Mushrooms pull me back into my senses, not just— like flowers— through their riotous colors and smells but because they pop up unexpectedly, reminding me of the good fortune of just happening to be there.

[...]

Anthropologists have become interested... in how subsistence hunters recognize other living beings as “persons,” that is, protagonists of stories. Indeed, how could it be otherwise? Yet expectations of progress block this insight: talking animals are for children and primitives. Their voices silent, we imagine well-being without them. We trample over them for our advancement; we forget that collaborative survival requires cross-species coordinations. To enlarge what is possible, we need other kinds of stories— including adventures of landscapes.

– Anna Lowenhaupt Tsing

This final essay is about the human animal. It is also about the mushroom, *Stropharia rugosa annulata*, whose mycelial mats resemble the neural pathways of the human mind, as well as the information sharing systems that make up the Internet. Throughout the previous essays, I've relied on the idea that an animal is a being that experiments. I've tried to take advantage of each of these “encounters” to do some experimenting of my own, “probing” different animals and different renderings of animals, in order to get to know myself and this world just a bit better. Here, I'd like to attempt what Anna Lowenhaupt Tsing does so wonderfully in her book, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. That is, attempt to reach further, confronting an organism that—although it is not normally considered an animal—undergirds and predates all plant and animal life on this planet. Fungi are essential to the ecology of what Lowenhaupt Tsing terms an “assemblage,” “entangled ways of life,” which humans only imagine they are no longer a part of.

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In *A Thousand Plateaus*, Deleuze and Guattari develop metaphors for two different ways of understanding the world. The first way they term “arborescent.” Emerging, in D&G's account, from Western philosophy's collusion with the State and justifying the State's oppressive tactics, arborescent thinking treats ideas and objects as disconnected and self-sufficient, trees standing alone on a great plain, masculine, self-deluded. The second metaphor is that of a rhizome, represented by crabgrass (one of the common names for grasses in the genus *Digitaria*). Crabgrass or couch grass spread over a plain, the authors say, despite its clumps and many blades, is a single organism. Considering the world through the perspective of crabgrass, we come to see that everything is interconnected; that even the most disparate ideas and objects are interdependent, that nothing is truly self-sufficient, and—even more importantly—that nothing is simple. Rhizomatic thinking is non-hierarchical, associative, wide-ranging.

I find these ideas exciting, even as I cringe at the flawed metaphors. It so happens that no grass in the *Digitaria* genus is actually rhizomatic (though some other grasses are), but instead just have thickly bunching roots that often tangle into one another. And, what's more, many trees *are* rhizomic; poplars, for example—which include the species *trichocarpa*, the first organism to be completely genetically sequenced—spread through colonies of interconnected roots, and sprout easily from tissue cuttings. The metaphor falls short in other ways too. While rhizomatic roots connect to one another, branching and forming great mats of root fibers, they don't attach themselves to microorganisms or the roots of other plants. That is, they are, in their own way, almost as isolated as an oak tree in the middle of a cow field. They don't adequately represent the networked society.

I propose, instead, a new metaphor—the mycelial mats of dirt-loving fungi, such as *Stropharia Rugosa Annulata*. The SRA actively forms important relationships with micro bacteria, other fungi, and a wide variety of plants, attaching itself to these foreign organisms and trading accumulated nutrients for minerals it's unable to digest on its own. Now and then, the fungus gathers energy and sends up its reproductive organ, a mushroom, which houses both male and female reproductive cells. Once its spores are released, it quickly degrades back into the earth, where other fungi and bacteria will recycle the leftover nutrients.

Fungi are probably more closely related to animals than they are to plants. Sometimes it is not possible to tell if an organism is fungi or animal simply by observing it. Even with DNA sequencing, for example, it's unclear how slime molds should be classified. Amoebidales, which parasitize certain insects and arachnids, were recently thought to be trichomycete fungi (one of the most common types of fungi) but are now treated as protozoan animals. Most striking of all are the similarities in the way fungi and simple animals “eat”—fungi “absorb” externally digested nutrients while animals “engulf” and digest. In practice, it is often very difficult to tell the difference between these two processes. Although fungi were once classified as plants, the photosynthesis process is a radically different way of taking in energy, and with a basic microscope it is very easy to distinguish plants from other types of organisms. The hyphal growth of mushroom mycelium functions similarly to the developing blood vessels, lung ducts, and kidneys of mammals.

Although it doesn't have a brain, the common fungi *Stropharia rugosa annulata* performs experiments. It grows in a distinct pattern, exploring its environment with rapidly growing, sparsely branched hyphae, which probe through various layers of the soil, until it encounters a readily absorbable food source. But rather than signaling the rest of the organism to seek out this particular source elsewhere, it uses the newly acquired energy to send out new branching hyphae into different layers of soil and leaf litter, testing other potential sources for nutrient content and absorbability. Even when the organism finds an extremely good substrate, the edges of the mycelial colony practice hyphal avoidance, which allows it to explore more efficiently, even though it would have more to gain in the short term by forming a dense mat of mycelium through hyphal fusion, in order to take full advantage of the good nutrient source. In other words, this fungus behaves as many animal individuals behave, prodding the environment and then assessing the environment's response, in order to hone its own behavior, privileging experimentation (and the possibility of long-term gain) over homeostasis and short-term flourishing.

But this fungus has less to tell us about ourselves as individuals than it does about ourselves as a species. In the networked age the human species has come to resemble a single interconnected organism with many functions but without a unified or central control mechanism (a brain). For example, we know that the global economy is a function of the relationship between many human individuals and institutions, and yet no single person or organization can predictably influence its machinations. Similarly, SRA moves as a concordance of individual cells, yet no single cell or group of cells appears to have control over the organism as a whole— a branching hyphal cell at the center of a mycelial network, for example, fulfills its own function, fusing to nearby branches, increasing its own absorptive efficiency, but has no control over the reaching filaments at the colony's far edge, even though both cells contain identical DNA. The fungus's behavior is determined by a vast number of variables, which the organism is not equipped to control or modify. A single cell is helpless to influence the organism's next move, in the same way a single human individual cannot expect to meaningfully change the historical trends which determine or at least shape his or her actions. Writing about the 2008 recession, Manuel Castells says, “no one could do much about it because the global financial market had escaped the control of any investor, government, or regulatory agency. It had become...a 'global automation' imposing its logic over the economy and society at large, including over its own creators” [xxi].

But SRA is probably better adapted to its “networked” existence than human beings are. It's not quite an automation, because it interacts so dynamically with its surroundings. For example, it partners with *Trichoderma* species and other fungi, which stimulate its SRA's mycelia growth, and brings *Trichoderma* spores into contact with plant roots, improving nutrient uptake for both organisms. It destroys many microorganisms that are harmful to plant life, including the pine wilt *Bursaphelenchus Xylophius*. It increases the number of mycorrhizal fungi in the soil, which benefits the growth of many commercial crops. It forms little-studied partnerships with certain bacteria that are necessary for the fungus to send up fruiting bodies. When SRA “explores” its surroundings, it's not only looking for nutrients, it's also looking for new and better partnerships with the organisms that live around it. In this sense, it maintains an “awareness” of its own networking abilities, not simply between its own cells, but also between itself and other living things. In contrast, we humans tend to see our networks—the global economy, the internet, political parties—as existing independently from other systems and other organisms. We wouldn't generally think to consider SRA as part of the global economy, for example, even though it has probably boosted the sales of millions of dollars worth of tomatoes last year, working unseen beneath the soil. An economist in (say) the field of agricultural industries may know all about beef transportation and markets, but probably doesn't spend enough time talking to farmers to know that the chemicals we use to rid these animals of harmful parasites are yearly becoming less and less effective. His hyphae—unlike those of SRA—are prone to branch readily, sucking the nutrients out of his area of expertise, without allowing for exploration of new but related areas. Scientists in physics and astronomy and biochemistry, who long kept themselves aloof from politics, are realizing as they face the Trump administration that they might have profited by exploring relationships with local and state and national representatives. SRA serves as a reminder that the networked society extends far beyond the internet, far beyond global currencies, far beyond our species. It is the food we eat, the ani-

mals that live in our gut, the fungi crawling between the bricks of our greatest buildings, the algae in the oceans, the leopard who will neither see nor be seen by a human being.

There has been much recent research into SRA as a remediation organism— Paul Stamets and Tradd Cotter independently discovered that the *Stropharia* species's mycelium, when packed with sawdust into burlap sacks and placed in a waterway, would clean harmful nitrogen (from chemical fertilizers and cow manure) out of the water, preventing algae blooms downriver. As the water is pressed through the dense mycelial growth, the organism absorbs and sequesters liquid nitrogen, and acts as a strainer to catch microscopic bits of solid nitrogen. Other mushrooms, including those in the closely-related *Gymnopilus* genus can absorb and hasten the deterioration of radioactive material. Still others, including many in the genus *Pleurotus* can extract oil and other harmful substances from the soil after chemical spills, even when those substances harm the organism. SRA is a particularly interesting case study, because of the way it spreads harmful substances throughout its mycelium, and slowly cleanses itself by sending up fruting bodies with trace amounts of the substance. In other words, it breaks down a harmful compound as far as it can, and then spreads it throughout as wide an area as possible, diluting it to levels tolerable by most other organisms. I have long thought of the mycoremediation application of SRA and other fungi as a metaphor for both the problem and potential of intersectionality in the networked age.

Those with overlapping, many-branched identities too often absorb the noxious waste products of the rest of society. This is true both literally and figuratively— to this day, many lower income urban areas, particularly those housing people of minority races and religions, remain zoned for water treatment plants, dumps, coal-powered plants, and chemical manufacturing plants. They sequester the harmful elements of polluted air and water in their bodies, while those responsible for the pollution, as well as many with fewer-branched identities, live in neighborhoods zoned to exclude such facilities. Groups with multiple underrepresented identities “catch” much more of society's ugliness— the shit and bigotry alive in the current. And yet, as a species, we are only just beginning to figure out how to dilute— how to parcel out an share levels of it tolerable by each individual—the many and various kinds of discriminatory pollutants. “Groups subject to multiple, intersecting discriminations,” writes Kimberlé Williams Crenshaw, “not only face forms of oppression others in their class might not, but these forms are frequently marginalized, distorted, or wholly erased by the resistance politics of the very groups claiming them as constituents” [46]. The effects of institutional and every-day discrimination are still concentrated in their areas of origin. They have not been adequately shared and diluted by the networked society, though the pathways to do so now exist.

It is beyond the scope of this essay to theorize about how society's “ugly” impulses—discrimination based on race or class or any number of other identities and labels—might be shared and mitigated. It is beyond the power of a single metaphor to suggest a means of confronting such difficult and complex and long-abiding problems as racism in America. And yet, I think, SRA can make a small contribution to this ongoing project. It has, after all, evolved for hundreds of thousands of years to function as a *network*. Human beings are much more recently a networked organism. We're still not all that good at it, and so we've got much to learn from organisms that are. Most importantly, SRA responds to highly toxic environments—particularly after a sudden introduction of harmful chemicals—by rapidly increasing mycelial branching. At first this seems counter-intuitive; greater mycelial mass means that the substance will be absorbed at a higher rate. What evolutionary benefit could the organism possibly receive by increasing uptake of non-nutritious and noxious substances? The answer lies in the important relationships the fungus maintains with countless other organisms in the soil. Even if SRA won't be directly harmed by a given chemical, that chemical could wipe out a large swath of microbacteria, decreasing SRA's nutrient absorption and ability to fruit and reproduce. By absorbing and defusing a harmful substance over a wide area, SRA protects its relationships with these organisms.

The first suggestion here offered by SRA about networked existence is that harm to one group is harm to all groups, even to those that appear not to be effected. SRA grows without its microorganism partners, but does so feebly. We are showed early in school how small changes in ecosystems can ripple into big changes—the removal of a “pest” species resonating throughout a biome web—but rarely apply this lesson to other areas of life, assuming (as biology teachers too often allow us to do) that humans are except from Darwinian laws. But food webs are excellent models for productive social networks. SRA reminds me, in many ways, of Ashis Nandi's analysis of the colonial mindset in English India, which he traces through both oppressors and oppressed. “Its sources,” he writes, “lie deep in the minds of the rulers and the ruled” [3]. He is not, of course, suggesting that those in power suffer as much as those the exploited— and neither am I. The point is rather that various “strands” of oppression³ run through and alter the minds of both parties. Nandi uses Rudyard Kipling as a case study, suggesting that his ability to think and write were slowed by his bureaucratic position under the British Raj, his role in the subjugation of the Indian culture that in many ways inspired him. Of course, I should be careful to note that Nandi finds Kipling interesting precisely because of the interweaving of his artistic impulses and bureaucratic functions, which demonstrate the complexity and contradictions of the machinations of colonialism. But Nandi also uses Kipling to measure the damage done by colonialism to the colonists themselves. “Kipling's dilemma can be stated simply,” Nandy writes. “He could not be both Western and Indian; he could be either Western or Indian.” He continues:

³ I think of these strands as the aggressive “rhizomatic” stands of the honey mushrooms of the *Armillarias* genus, which can rapidly destroy whole forests of oak trees, and which SRA and other beneficial fungi can help protect forests from.

Colonialism tried to take over the Western consciousness, to make it congruent with the needs of colonialism, to take away the wholeness of every white man who chose to be a part of the colonial machine, and to give him a new self-definition which, while provincial in its cultural orientation, was universal in its geographical scope [71].

Nandy is here describing colonialism as a failed network society, because while it allowed Indians participating in the Raj to be in a sense both Indian and English, it prevented the colonialists themselves from embracing Indian culture, forcing them into an either-or (binary) understanding of identity. Again, I'd do well to note that this isn't a justification for colonialism, or an attempt at victimizing an oppressive regime, but rather a way to understand colonialism's failures with a Darwinian eye. Even critics of colonialism (which, aren't we all nowadays?) sometimes seem to assume that colonialism, though a moral failure, largely benefited the Western world. But Nandy argues that things are more complicated, that while the Raj may have benefited the English materially, it took a serious psychological toll on them too. Instead of seeing colonialism as a story of "animal" (that is, Darwinian) success and human (that is, moral) failing, I believe it is more provocative and progressive to understand colonialism as an evolutionary failure, hampering the ability of individuals within the species to grow and thrive, *as well as* a moral debacle of unparalleled seriousness. As a species "evolving" toward a networked society—a society in which many different cultures and people come into contact with one another—colonialism was a dead end. For example, Nandy writes, it depend Kipling's anxieties about his own masculinity, which eventually became crippling, rather than assuage them, as the "androgynous" Indian culture might have done [99]. Nandy uses Kipling to demonstrate how the flow of "nutrients" (psychological as well as material) between both individuals and cultures was inefficient and unbalanced in the Raj, and that this fact doomed the colonial system from the very beginning.⁴

⁴ Monoculture / poloyculture

Nandy's observations about British masculinity and Indian androgyny—spun by the binary colonial mindset as femininity or childishness or both—are particularly important to the development of a networked society on the model of SRA. Stropharia species, and ascomycota fungi in general, “reproduce” both sexually and asexually. An “individual” fungus (that is, mycelial matter capable of giving rise to a fruiting body, genetically different from other members of its species) is strictly speaking neither male nor female. The branching hypha of ascomycota fungi produce microscopic spores inside long sacs, which can be carried away by wind or animal or flooding, and are capable of creating genetically identical “individuals” elsewhere. If the parent organism ever meets with its offspring, they are capable of rejoining into a single organism through a complex and only partially understood process, contingent on a form of chemical communication called the “ping-pong mechanism.” Sexual reproduction in ascomycota fungi is better studied, and in the case of SRA takes place on the ascocarp or fruiting body—the thing we most commonly associate with mushrooms. The ascocarp, unlike the mycelia mat, contains millions of fertile hyphae, which pave the way for mitotic division in hundreds of oblong capsules called asci. A single fruiting body ejects millions of spores from its asci, each capable of growing into a genetically different organism.

The point I wish to make here is simply that, within an “individual” fungus there (co-)exists a number of different sexual impulses. Depending on both genetic and environmental factors, one or another impulse can become an organism's main reproductive strategy, even though the other impulses still exist in potential. This might be read as an example for human sexuality— a counter-theory to the “Darwinistic” claim that only heterosexual relationships are “natural.” Sexuality is complex, particularly in the networked age, when people's incredibly various desires form the basis for virtual communities, and the object of (sexual) desire is not limited to physical location. Nandi argues that Kipling's desires (his sexuality and his creative drive) were inspired and provoked by the variation and androgyny inherent in Hinduism and in Indian culture, but that having glimpsed the possibility of Indianess, he was all-the-more damaged by the restrictive colonial mindset, and the reductive reading it placed over Indian androgyny. Today, through digital networks, we are, similarly, all confronted with the diversity of desires held by individuals the world over. By denying that similar variation also exists within individuals—at least potentially, and more often actually—we find ourselves in Kipling's predicament, cut off from ways of thinking and being that might have helped us thrive⁵. SRA is a prime example of the power of variation, both within an individual organism and within a network.

⁵ Again, I don't mean to “victimize” those arguing against LGBT rights, but simply to suggest that 1) such discrimination cannot accurately be couched in nature, and 2) discrimination is not an ecologically sound principle, often harming those who engage in it— *particularly* in the networked age, when the great variation in human culture and sexuality are so apparent.

In *The Rise of the Network Society*, Manuel Castells writes about a disconnect between what he terms “the space of flows” and the “space of places.” He’s pointing to a literal and figurative separation between local communities, on the one hand, and global economies of information, money, and power, on the other, which increasingly play out over decentralized systems and networks. “Cultural and social meaning,” he writes, “is defined in place terms, while functionality, wealth, and power are defined in terms of flows. This is the most fundamental contradiction emerging in our globalized, urbanized, networked world: in a world constructed around the logic of the space of flows, people make their living in the space of places” [xxxix]. Castells describes a modern “colonial” system that in many ways resembles Nandy’s rendering of the British Raj, exceeding it only in complexity, and the subtlety of its machinations of oppression. The spaces of flows maintains unseen sway over the material and psychological realities of those living in the space of places; both oppressors and oppressed and those who are sometimes one and sometimes the other. The problem, as Castells describes it, is not that local communities have failed to keep up with changing times, or that networks (economies, information systems, etc) have unfairly left local communities behind, but rather that for a variety of reasons each vector “strives” to keep itself separate from the other. Nationalists blame global markets for the poverty in (say) former steel towns in Appalachia, while (again, say) liberals in the IT sector blame the residents of those ex-steel towns for hampering the flow of cultural information across literal and metaphorical borders. Castells would probably say that both parties are thinking and talking in arboristic terms, glossing over the incredible complexity of the situation. In *The Power of Identity*, he argues that, though we (almost) all live within the networked society, we still think and act under what’s essentially a pre-network ethos. This is true even of those IT gurus who spend their days working on and with networks of various kinds. They may intimately understand how web users or apps are linked in intricate webs, but this doesn’t mean they necessarily approach the everyday functioning of politics or psy-

chology or language or local communities with the same eye for connectedness. The problem, as Castells frames it, is how to link the space of flows and the space of places in a meaningful way, such that we *always* speak and reason as networked organisms.

SRA and other fungi lay a template for the universality of networks— networks are everywhere, not just online. In *Mycelium Running*, Paul Stamets argues that mycelial networks are not simply a means of absorbing nutrients, but are also “maintained” by ecosystems as a kind of information technology. Some species of mycorrhizal fungi alert their partner trees to environmental changes, before the tree would have been able to sense those changes on their own. There is even anecdotal evidence that many kinds of fungi “record” and “transmit” records of soil disturbances, even ones as gentle as footsteps. In the case of major disturbances, this information can serve to protect other plant and fungi (and even, perhaps, animal) species. Using radioactive carbon to trace this communication, Suzanne Simard has done extensive research about how trees establish fungal networks; she found that a “mother tree”—similar to a network server—serves to “infect” new saplings in its ecosystem with its own strain of mycorrhizae fungi, shared by all or most plant organisms in the area. These fungi “alert” trees when their roots are growing too close to one another, so that they can change their growth patterns without waisting the effort of pushing into an area already well occupied. Simard also found that mother trees reduced root growth when alerted by a fungal network to the presence of a nearby sapling, giving the young tree a chance to thrive. In *The Secret Life of Trees*, forester Peter Wohlleben writes that a tree cut off from its fungal network almost always attracts harmful insects and is among the first in its ecosystem to suffer from drought or disease. Robert Macfarlane recently published an article in the *New Yorker* called, “The Secrets of the Wood Wide Web,” a phrase first coined in 1998 by Helgason et al in *Nature* magazine. Macfarlane describes the Wood Wide Web as “an underground hyphal network: a dazzlingly complex and collaborative structure.”

What would it mean to link human information networks with forest information networks—to connect global “flows” with intensely local ones? Stamets argues for a literal connection, through technological innovation. “A new bioneering science could be born,” he writes, “dedicated to programming myconeurological networks to monitor and respond to threats to environments. Mycelial webs could be used as information platforms for mycoengineered ecosystems” [8]. That is, we might invent the technology to “hack” mycelial networks, in order to communicate with—or at least better “read”—different ecosystems. The idea is not so far fetched as it might sound. Gary Sayler at the University of Tennessee has pioneered biotechnology linking different fungi and bacteria to computer chips, in order to more accurately gauge the severity of chemical spills. The above image depicts his system in action.

Of course, the “link” between fungal networks and human information networks need not be mediated by technology. Many permaculture farmers are today learning from Native American traditions—especially those of the Sierra Miwok and Valley Yokuts Indians of Californian—, who understood that plant cultivation was much easier and productive when fungal networks are kept intact. Wohlleben writes that when we step into most modern day farm fields, “the vegetation becomes very quiet. Thanks to selective breeding, our cultivated plants have, for the most part, lost their ability to communicate above or below ground... and therefore are easy prey for insect pests” [11]. He adds that this is part of why modern farmers are so dependent on pesticides and chemical fertilizers. And yet, it is still possible to utilize heirloom plants that participate more fully in fungal communication networks, though it requires an increased attention to soil and species diversity. In *Tending the Wild*, M Kat Anderson writes that Miwok grandmothers spoke about preserving mycelial networks beneath the soil when harvesting mushrooms and plants, to “ensure future abundance” in that forest [132]. Anderson studies in great detail the management practices—selective burning, dredging, transplanting and re-seeding—that Miwoks and Yokuts used to encourage species diversity within forests. One unseen results of their practices was healthy fungal biomes, which undergirded their ability to grow huge surpluses every year, despite lack of chemical fertilizers and pesticides and mechanized farm equipment. Many eastern tribes reproduced natural soil cycles in their crop fields, layering organic material rather than plowing into the earth, a technique recently rebranded as “lasagna gardening,” which is now standard procedure among small and medium scale organic farmers. Many thorough studies have shown that this technique encourages fungal and micro bacterial life in the soil, while tilling destroys it, literally cutting off lines of communication between plants.

Of course, it would be silly to suggest that in today's world, anyone except progressive farmers will interact with ecological networks as Native Americans did hundreds of years ago— such a model runs contrary to market and social and technological forces, which Castells emphasizes must be considered and confronted, not simply dismissed. Paul Mason, writing on the possibilities of what he calls “post-capitalism,” and the role of network technology in bringing about a new economic order, points out that the Khmer Rouge attempted to restructure Cambodia under “back to the land” principles. Although the comparison is a bit extreme, his point is well-taken; we cannot in all likelihood un-invent self-driving semi-trucks or bring steel jobs back from China to the United States. Progress happens, Castells suggests, by building and extending networks, not by destroying them. The genius of Lowenhaupt Tsing's *The Mushroom at the End of the World*, is that she combines an acute awareness of ecological principles with a thorough understanding of global and local markets, the flows of information, dollars, and power. Her post-capitalist world already exists, here and there in small pockets in Japan and China, right at the (growing) intersection between the place of flows and the place of spaces. She argues that human social and economic systems, nematodes, a variety of fungi, pine trees, and bulldozers, are all part of an “assemblage,” which make certain kinds of life possible (and others impossible) for all the organisms involved. She tries to deemphasize humans— like the other organisms, we are often unknowing collaborators in the creation of new kinds of ecosystems. Both Mistake (the mushroom Tsing follows throughout her book), and SRA thrive in areas of high human disturbance. Last year, a construction crew clearcut a bit of land beside the road near my house, while repairing a bridge. Now, during fall and spring, the area is full of SRA fruiting bodies. Totally unaware of their partnership with the fungi, those men in neon safety vests were co-creators of a new ecosystem. Tsing seizes on areas like this—mountaintops removed for fracking and abandoned once the gas has been extracted, hills cut clear of trees and then sold for pennies an acre, “the unruly edges” [20]—as both metaphors and literal

sites of a kind of post-capitalist system. Though she mourns environmental degradation, she throws herself into the project of finding value in places the market deems valueless. “In a global state of precarity,” she writes. “We don’t have choices other than looking for life in [ecological] ruin” [5].

Tsing writes that she is attracted to sites of ruin because they tell stories, not about (capitalist, liberal) progress, as a more “productive” or healthy site might, but instead about what she calls “assemblages”—collections of accidental and purposeful interactions between organisms, which influence those organisms' ways of being. “For living things,” she writes, “species identities are a place to begin, but they are not enough: ways of being are emergent effects of *encounters*” [22, emphasis mine]. Just as she is attracted to ecosystems degraded and then discarded by humans, Tsing is also interested in the “fringes” of capitalist economies, to people whose ways of life are obviously dependent on emergent effects of encounters with other organisms—wild mushroom collectors, for example, come to the U.S. from Laos and Cambodia, and make their living searching for the valuable Mistake mushroom in the industrial wastelands of Oregon and California. They know, intimately, both the webs of international commerce and culture that make the mushroom (which is part of the Japanese culinary tradition) valuable, as well as the webs of interaction between timber corporations, pine trees that grow rapidly in barren lands, nematodes, and a variety of fungi, as well as the animals that help disperse pine seeds and mushroom spores. Paul Mason argues that such seemingly inconsequential corners of the capitalist, globalized world—forms of human behavior that conventional economics would hardly recognize as relevant—set the template for a new economic and social order, based on “externalities”—his version of Tsing's “fringes”—“the free stuff [...] generated by networked interaction [...] the rise of non-market production, of unknowable information, of peer networks and unmanaged enterprises” [7]. The mushroom foragers, to return to Tsing's example, profit from an unanticipated byproduct of aggressive industrial expansion, participating in an ecosystem that others would see as drained of value. Even more importantly, they also have an acute awareness of their dependency on other beings and systems. They know that the failure of just one of many parties across these interconnected webs (Americans becoming less interested in Japanese high cuisine, for example, or the sudden disappearance of

important micro-bacteria) would mean the end of their way of life. They experience, on a daily basis, the interconnectedness of everything, the intimate relationships between the world of flows and the world of places. Mushrooms are for them—and can be for us all—essential lessons in interdependence, a healthy counterweight to our cultural myths of the individual's self-sufficiency.

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Most of us will never live like mushroom hunters. Right now, Tsing's fridges are narrow, offering only a difficult existence. In a rather harsh review of *The Mushroom*, Jedediah Purdy writes that “the only thing worse than being closed to the natural world is being radically open to it—whether it is freezing you to death, tracking you as prey, or fatally infecting you.” While I'm not sure she's right that being closed to the natural world is better than being radically open to it, her point is well taken. Not many of us are willing to risk our lives and careers to work on the fringes, to participate in nature as fully as we participate in human society, though perhaps more of us should. But, there are other ways we start bringing the world of flows closer to the world of spaces.

One of these approaches—but only one of who knows how many—is suggested in the above essays. Identity has always been a slippery thing, existing at the crossroads of culture and history and individual experience. Yet we tend to think of it as a human thing. When we ask ourselves why we are the way we are, we tend to think of our family, the accumulation of our experiences, happenstance, our friends and partners. We ask ourselves how race or culture or music or money has shaped our sense of self. We know that we depend on a variety of institutions, traditions, and structures to support our various ways of life. But all the while the most basic cornerstone of identity, our sense of *humanness*, goes largely unexamined. Where do we get this sense? How does it change? What does it mean, exactly? I do not claim to have answered any of these questions—they are not that sort of question. I do know, however, that this part of us, like any other, is part of a mycelial mat of other words, concepts, objects, and living creatures. If we are ever to understand ourselves as a single (networked) species, if we want to know ourselves better as individuals composing that species, we must spend more time considering and interacting with members of other species. A sense of species-identity hinges on our ability to experience the similarities and differences between ourselves and other species, to recognize the history and symbolism evoked by our relationships with other creatures, and most of all to attempt to inhabit their *aliveness*—to see our understanding of ourselves change as we try to imagine the world as it might be experienced through a different set of sensory organs. Some may argue that it is not within our nature to coordinate as a species, that such a thought goes against the “laws” of natural selection, which depends on individual fitness and behavior; bees and termites and mushrooms may lead a networked existence, but nature did not dole us that ability. Maybe this is so, who am I to say? But as we increasingly encounter global problems (climate change, global market instability, extremest violence), our ability to act and think as a species may well become a matter of survival. In the interactive documentary *Bear 71*, a mother grizzly bear speaks from the dead after being run down by a freight train

that she attempted to charge, her protective instinct kicked into high gear by the noise and movement. “She'll have to find a new way to survive,” the bear says. “More than a million years of evolution have prepared her to live in the wild, but let's face it, the wild isn't where she lives. She'll have to learn a new way to survive and so will her cubs... they'll have to learn not to do what comes naturally.” We humans are not unlike the bears, who live on the edge of the Canadian wild outside of Calgary. If we do indeed have a biological tendency toward individualism and self-enrichment even at the cost of collective injury, we'll have to learn not to do what comes naturally. This is the ultimate Darwinian trait— the ability and willingness to adapt in real-time, on the fly. *Bear 71* uses the viewer's webcam, implicating and including them in the film. And so the mother bear's final statement isn't just about her cub. “I wonder...” she says sadly, “Maybe the lesson is too hard.”

And, yet, if Darwin teaches us anything, it's that adaptation is a project. It takes trial and error, it takes strife, it also takes a certain kind of inventiveness. As Elizabeth Grosz writes, natural selection provokes life, inciting the living to transform themselves. This thesis project is for me likewise ongoing— I'll continue to write and think about animals in lit and life, pressing against “natural” or normal ways of understanding and interacting with them. I'll try not to forget that image of Bear 71 charging toward the train.

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