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THE MILLENNIAL WHO PLANTED TREES:  
FIELD NOTES FROM A YOUNG RESTORATIONIST

By

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Thesis

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The Millennial Who Planted Trees: Field Notes from a Young Restorationist

Chairperson: Phil Condon

In this work of creative non-fiction essays and stories, the author explores ecological restoration through a variety of contexts, settings, and conditions.

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### *These Trees Destroy Apathy*

*In the 1930's, Woody Guthrie roamed the country. One morning, somewhere in America, he painted black text on his guitar-body in wide, loping letters. It read: "This Machine Kills Fascists."*

*In 2014, I roamed my watershed. One morning, somewhere in Vermont, in the dust on my work truck, I wrote out: "These Trees Destroy Apathy."*

*By "These Trees" I mean the thousands of trees planted every May for stream-restoration projects. By "Apathy" I mean the results of our faux-hopeful story that someone else, from somewhere else, is going to swoop in and solder back together our crumbling homes. And by "Destroy Apathy," I mean exactly that— for when you plant a tree, apathy is up-rooted from your mind like the insidious weed that it is.*

*When you plant a tree beside a damaged river, you begin by digging a hole. The shovel, as it slices into the soil, goes flit, cruck, shuck. Lifting the newly-loosened dirt, you turn the shovel-head with an un-coiling wrist— the soil lands next to the hole, ka-shhhh. When the hole appears deep enough to accept a small tree, put the shovel down. Grab a baby bare-root tree from the bag we brought. This cottonwood is about one year old— it's light as a wisp, flexible as a wrist, and long as a shotgun. Some day it will fire seeds like cottony buck-shot, scattering life across these denuded fields.*

*Hold it your hand. On one end, the roots and rootlets. These are a rich, earthy-brown, and smell of the garden after a rain. You run a hand through the gnarled strands like a brush through uncombed hair. The roots have been bound for ease of travel— tease them open some. Once planted in the dirt, these roots must spread out unhindered. These roots will go deeper than you can dig, and they will likely keep digging long after you have been dug.*

*Toward the other end, the tree's girth tapers to a warted nub. Below the tip you observe a few new branches bumped up and a few stems forked out. Out on the terminus of each twig, study the tightly packed buds as botanical knuckles— anticipate the hand of leaves ready to wave from within. Further down the shaft, the tensile strength stiffens, and there you clasp, between thumb and a few dirty fingers, the spot where soil will meet trunk for as long as this tree shall live.*

*Kneeling before your freshly-dug hole, you lower the tree into the dark cavity with one hand and begin to back-fill your excavated dirt with the other. Keeping the soil-line in mind, you are careful not to plant it too deep. You hold it steady. You pack the final fistfuls of humus most carefully. With the hole filled and the tree upright, you loosen your grasp, but slowly at first, like a parent riding beside a bike-riding child. Finally, convinced the tree will remain standing, you let go. Stand up. The tree stands up to your knee. A hush falls upon your world— field, stream, human, and tree.*

*What has just transpired? The potential for a thousand forests has been loaded into nature's living machine— you just pressed “play.” Out of this comes a recollection— that our hands can heal just as surely as they can harm— and you're helping to smooth one of our scars. This story shimmers in its unexpected break— you've hacked the story, removed the malicious humans, and replaced them with folks like you. Folks who cease obsessing with the ending. Folks who are readying the grounds for a different beginning.*

•

*Guthrie's machine may not have killed fascism, but the songs it spun remain woven into this land. Be it fascism, or buccaneer capitalism, or just a stunted human evolution— whatever is at work in this warming world, our own apathy might be the final straw that breaks Nature's back. Maybe we can be forgiven for our apathy, for our banking on an abstract hope, because we've largely lost the songs that say otherwise. But as David Orr reminds us, “Hope is a verb with its sleeve rolled up,” and your aching forearms pulse with more hope than any campaign I've ever seen.*

*You pick up your shovel and lean on it. This tool, like its excavator and back-hoe cousins, hums in your hand like a Faustian talisman— these tools can destroy in days what other Nature*

*took millennia to create. But these tools can also initiate what will take mere minutes, and-also many millennia, to fully flower. And you, upright hominid, neo-human, now walk with this power. How could there be time for apathy at this golden, greening, vivifying hour?*

### The Millennial Who Planted Trees

I.

The mouth of the river speaks.

This is where the water that sheds off and courses through 1000 square miles of the Winooski River watershed of central Vermont arrives to tell to its story. The mouth here is wide, the shoreline a beard constituted of water-worn stumps, gnawed-down beaver sticks, slashes of sediment, saplings of maple and dogwood, and peppered amongst it all the dull sheen of plastic of all kinds. The water pulsing out is a dull, coffee-colored brown, its chemical make-up a nutrient-rich brew. This is where this river's story merges with dozens of other similar rivers that together comprise the ongoing saga we call "Lake Champlain." The Lake receives the language of rivers all day and all night, just as it did long before Samuel de Champlain came to explore and name and claim this shore in 1609.

In the early summer of 2009, on the much-celebrated quad-centennial, my wife and I wandered the river's mouth with our two friends and their four year old son Sammy. It was evening time, with a sinking sun illuminating our nearby Green Mountains and casting the Adirondack Mountains across the lake into deepening shadows. The air still had the crispness of spring but was warming to the touch of summer, so with bare-feet we prowled the litter-strewn sand bars and felt content to witness the river's constant arrival into the lake. Sammy kept asking us to go swimming. We, with weariness and some sadness, had to tell him "no." Because of recent algae blooms, the result of too much phosphorous draining off from farms and entering the rivers, the lake was running dangerously high levels of *e. coli* bacteria all week—multiple beaches were closed to the north and south of us. "I'm sorry Sammy, but we can't today, the water is sick."

Sam stared at the water, his face placid at first, but then his eyes began to squint, struggling to understand. In a flash of empathy, of my ego-mind dissolving and then illuminating within the heart of him, I glimpsed his profound confusion and sadness at this new information, at this denial of his beautiful and loving desire to immerse himself into that liquid medium. I saw through Sammy's eyes the vastness of the lake, the rhythmic dance of white-capped waves peeling in the shallows, the elegant flights of gulls and the heaving shields of cormorants drying their wings on distant rocks. I sensed in him the innate, biophilic urge to connect and converse with this magnificence of all around him, an urge no different than wanting to join other children on the playground— and through Sam I recalled the feeling that I am as much a part of this place as any molecule of mallard or particle of water-kissed light.



But also, creeping into this ease like a dark cloud passing before the sun, the new information arrived in Sam's mind for perhaps the first time. There was something wrong here—this river and lake, despite the glory felt in its presence, was a flawed being. And the flaw, the pollution, the bacteria, the imbalance, I think Sam realized that day, was our fault. Somehow the relationship he so gracefully experienced with this place was not the same relationship the adults around him have with this place— and this confused him. The language of the river, which he was just beginning to learn, suddenly betrayed a dissonance to his ear.

We tried to distract him, but like any good four year old human he asked us that incorrigibly difficult question— “why?” “Why is the river bad? Why is it sick?” We did our best to keep the answers simple, to keep them honest. But if we were as honest as possible, we'd have to admit we don't really know the full answer to his question, nor just what to do about it.

Just when Sam threatened to collapse our defenses and expose just how hurtful and confusing the topic really is for us— how tragic it is to be unable to swim in this river, drink this river, eat fish from this river— we were saved by the sudden eruption of fire-works from nearby Burlington Bay. The quadra-centennial celebration for Champlain's “discovery” had begun. Flashes of colorful, thunderous brilliance distracted us from the question once again.

In the four hundred years since Champlain arrived, this Winooski River, so named by the Abenaki Indians, a name which means “Onion River,” has undergone as many changes as any other river on the continent. Riparian areas cleared for farms and cities, mountain slopes cleared for lumber and pasture, dams erected for mills and electricity— it is, in many ways, a quintessential American river, unhealthy and getting worse. And the five of us, four millennials and one of our offspring, are quintessential Americans, confused and dismayed at the state of this gorgeous, fractured world into which we've been born.

After the sun set, we started walking back, and Sam's father, Chatch, pulled me aside. Chatch knows that I'm very invested in restoring the health of Lake Champlain. For several years running now I've been employed in the still nascent project of Ecological Restoration, planting trees along the major rivers and their many tributaries, trying to re-establish the bank-stabilizing, pollution-filtering riparian areas that used to grow along every stream in the Basin.

“So, you're in the thick of this more than most people I know. What do you think is really the matter?” Chatch asked me. “Why can't we figure this thing out and clean up our lake? What can't we restore this one river so that I can take my son swimming here?”

I'd been hearing this question from friends with greater frequency of late. I tried to be honest: "Well my friend, I honestly don't know, but I have some hunches, and I'm trying to develop some new ways of understanding it. What it boils down to, I believe, is that it's not the river that's in the most dire need of restoration. It's us. And our relationship to the river. If we're going to restore this river, and this whole lake, it's going to be because we've been able to articulate a better story for ourselves here, of what it means to be the people of this place."

"What will that look like, do you think?"

"I think it's going to be not just something we shift in our minds— I think it's going to be an activity, a practice, that once again ties us to this place. And I think this tree-planting practice may just well be part of that broader project."

We stopped, our two dear partners walking ahead, each holding Sammy's hands and swinging him between them. I saw them then as ancient women, timeless, spreading seeds before them into the soil like Goddesses from the Original Garden. I witnessed in them the generative capacity for Love embedded not just in their bodies and hands, but also in their minds and heart. But with the soil denuded and the water impaired, and a culture that seems unable to even notice, how successful can their efforts be?

I realized right then that our generation doesn't have that much time left to wipe away the confusion, and perhaps much less time get to work at leaving this place in better shape for these future people waiting in the wings of maple seeds. Sammy, and his generation, are going to take the seeds from us soon enough. As if sensing my musings, Sammy suddenly stopped, looked back at me. In the fading light I could not make out his expression, but I saw his chest rise, and he yelled "I still love this River! Thank you River!"

Sometimes we pass through thresholds in life intentionally, like moving out of our parents' homes or getting married, and we feel different coming out the other end— fuller, brighter, riper. But sometimes, it seems, thresholds can arrive like waves from the ocean, pick us up into their currents, and rapidly transport us further down the beach than we'd been a moment before. This scene before me, and Sammy's comment, had this effect on me— and I knew right then that I would dedicate my life to understanding this river's story, and to help in the healing between this river and its people.

I turned, looked back at the river's mouth, open wide to the darkening blues of the lake, and pledged allegiance right there to these waters, these mountains, these bones. It was a feeling

that I could only describe as discovering that I was, for perhaps the first time since I was Sammy's age, finding my way Home.

## II.

Despite the apparent rapidness of my realization along the banks of the Winooski River that night, I'm also aware that the flowering was a long time in coming, and it's a flower not yet matured to fruit. I'd like to honor those who have helped me flower.

In the 1953 classic "The Man Who Planted Trees," a narrator introduces us to Elzéard Bouffier, a shepherd and hermit living in the far-flung foothills of the southern Alps. When we first meet Elzéard, he is at work in the barren, worn-out landscape above his stone cottage, planting acorns. We spend a few days with this lonely shepherd, and witness him plant hundreds of these acorns. The narrator soon departs to go fight in World War I, and upon his return several years later, is amazed to find that the formerly denuded hills surrounding Elzéard are now alive with thousands of oaken saplings. A third visit many years later reveals that in addition to those saplings having matured into thriving forests, so too have other elements of the landscape been restored— streams are once again flowing, and formerly abandoned hamlets are coming back to life. The whole story is only 4,000 words long, but it contains within it multitudes of beauty and potential.

I first read this story in a high school English class. Growing up in the lush, rural forests of New England, it was hard for me to fathom a tree-less landscape, but I was nevertheless inspired by the tale. Contrasted to what much of my young mind was learning in school— global warming and rain forest destruction paired with unhealthy doses of "the American Dream" realized through cash, cars, and condos— this man who planted trees struck me as a different sort of role model. Around this same time, a few teachers who noticed my sympathies also started floating other curious characters my way. At my sit-spot beside the copper-colored Piscataquog River, books in hand, I met Emerson and Thoreau, Whitman and Wordsworth, Muir and Leopold, Carson and Snyder. All of these authors and stories helped me warm to the fire in my heart— a fire that I did not start, a fire that I do not own, a fire that my mind may never fully understand. Yet it is that fire that has kept me company through all of these intervening years, and it is the tending of that fire that drives me still.

The world I was born into as a so-called “millennial” is undergoing rapid, staggeringly complex transformations in the way we as humans exist within this Earth. Two centuries of the industrial age, riding on the polluted currents of colonialism, produced for me and my generation a bizarre stage within which to come of age. Many of us are children of parents who’d lived through the upheavals of the 60’s, and we were to be the inheritors of the agony and the ecstasy of that era. As the fireworks of technology continue to go off around us, flashing kaleidoscopic images of melting ice-caps, rioting cities, and celebrity skin that all dance across the screens of computers that we carry in our pockets, we struggle to find meaning and melody within this digital cacophony. To say that ours has been a time of alienation from the natural world– the more-than-human world that has birthed these mammalian bodies and fostered these elegant minds– would be an understatement of a most naive kind. The typical young person in America in 2015 stares at, on average, six hours of digital screens a day. What meaning and culture we may once received from rivers and elders is being elbowed out by our fascination with these digital dreams. The thrust of these memes? Happiness awaits us through material acquisition and our mercurial tastes, regardless of the burned-out landscapes that we leave in our scorching wake.

The fact that we, as creatures, are rapidly altering the very conditions that make this earth livable shows we are in way over our heads, and the water is not pleasant to swim in. The warming climate is but one of the symptoms, perhaps the equivalent of the body of earth running a fever. More locally however, the very places we inhabit– the specific acres of earth where we all work, play, drink and eat, leave our tracks and our scat, procreate and later cease– these individual places are also flaring up with the symptoms of our sickness.

The water that we require to live is compromised, if not fully poisoned, or soon to be.

The soil that grasps and nourishes the plants that comprise our daily bread is equally in peril, the answer to “how life?” blowing away in the wind.

The forests that make every single human breath possible are falling, rapidly coming off-line, one of our primary life support systems slowly coming unplugged.

And perhaps most strikingly, the fabric of relationships we have with the ground beneath our feet, the water in our capillaries, the soil in our metabolisms, and the air in our chests are all torn and frayed. We know that our relationships to this tricky terrain of earth have always been tenuous, our relationships with one another have always been fragile, our relationships with our

own hearts have always been full of confusion and doubt– but if you needed to choose a time in history when this web of relations appeared to be the most tattered, it would be easy to decide that time is now.

If you're reading this, I trust you already witness these facts in your own way. But what you might not know, perhaps, is what some people are doing about it. You might not know that many of us in my generation are trying to jettison the value-less moniker of “millennials,” and are instead vying to be identified by what we do in the world: we seek to be the “Restoration Generation.” And it is to give voice to that idea, dear reader, that brings me before you today, offering you rivers, trees, shovels, and a few of my stories.

### Moose, Algae, and Alders:

#### An Immersion into Stream Restoration in the Champlain Basin

The humid spring sky, even at that early hour, held as much cream as the dairy farmer's old tin milking pail. Though he'd switched long ago to an automated system in the milking barn, one that used suction-cups, kilometers of hosing, and dull-metal holding tanks, he kept a few tin buckets around for his daughter's milking goats. And while the goats were hers– she named them and brushed them and all that– the milking remained his job. My tree-planting crew and I were in his barn that morning, sorting our various trees for the day's planting, when he came back with two buckets of goat milk, and some news.

“I was leading the cows to the south pasture this morning, when I heard some moose down in the alders ‘round dawn.”

“Oh yeah?” I asked, “Over where the creek goes into the swamp?”

“Ayup. They love the alder bark in spring.” His rough-weathered face yielded no change in his expression as he said this, but in between the greying curls of hair that sprung out of his faded-green ball cap, I saw his blue eyes dance briefly alight. “The moose were gone around

here when I was a kid. It's really nice to have 'em back. I'm hoping you folks here can keep 'em around."

"Well," I say, stuffing fistfuls of baby, bare-root alder trees into a bag, "we're hoping so too."

And he got back to work, as we began ours. On our walk down to the job site, which was his creek in question, we walked past a small herd of dairy cows crowded along the far fence-line— they were staring down into the alders as well.

Gentle, bucolic hills, dotted with those black-and-white creatures, all roll through the post-cards and calendars of New England landscapes. The images evoke in many folks a vague and almost archaic nostalgia. In those scenes, so much is implied— it seems to hold a suspended promise of another time, one that was simpler, more peaceful, more authentic, and in closer ties to the rhythms of seasons, soils, work, and life. As the ravages of industrial agriculture continue to come to light in the form of dead rivers, polluted ground-water, and major outputs of greenhouse gases, these traditional dairy-farms seem to speak in whispers of the old ways.

But for me and my team of tree-planters here today, we know that such idealistic dreaming does not always match the reality on the ground. As we wind our way down into today's job site, carrying massive black contractor-bags full of trees and a shovel for each of us, we confront that even this method of farming is exacting a steep and eroding cost on the land's fertile wealth. And while that may seem like it's just a bummer for this particular farmer, and that the water degradation is happening on just this particular reach of stream, my team and I know that damage done to one part of our watershed is damage done to the whole. The entire Lake Champlain Basin, in which we're living and working today, is suffering because of thousands of small polluted streams like these.

Walking along the thin, muddy, meandering creek, we re-trace our steps through yesterday's planting. What was at the beginning of the week an undulating crease in the land devoid of anything but grasses, slumping banks, and eroding gullies is today, well, mostly still the same. But now, thanks to our efforts, we now gaze upon these six hundred newly planted. Spaced at ten-foot intervals, a sharp eye can pick out white pine, Atlantic white cedar, white oak, balsam fir and red maple now growing on the slopes that rise from the stream. Closer to the water, in the adjacent alluvial flood-plain, we planted the wet-loving tree species like silver

maple, white ash, cottonwood, and swamp white oak. Nearest the stream, along the banks and in the areas that show evidence of being wet-land during early spring's thaw, we scattered the water-adoring, hydrophilic shrubs— red-osier dogwood, shrub willow, and speckled alder. And it is that final species, the speckled alder (*Alnus incana*), that still grows prolifically just down stream. And it is those alders, so we've just heard, that may be hiding a moose this May morning.

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The Lake Champlain Basin, situated in the northeastern United States and southern Canada, constitutes a vast amount of land and land-use patterns. The alpine and sub-alpine forested slopes of the Green Mountains of Vermont and the Adirondack Mountains of New York create this bowl-shaped basin's upper rim. Lower down, the uplands and foothills of these mountains run for hundreds of miles south to north— a mostly wooded patch-work of state-forests, timber-lots, sugar-bushes, small dairy farms, suburbs, and old colonial villages. Closer to the lake, the Champlain Valley's lowlands exist as a vast complex of modern-farm fields, small cities, condo-type development, old farm-houses, floodplains, and closest to the water, marsh-lands and rocky shores. Standing on such a shore in the southern reaches of the lake, one may look north and see only water on the horizon— at one hundred miles long, flowing north, the furthest water you see may well be in Canada. Once the lake does flow into Canada it goes through a series of dams and canals to join the Richelieu river, which in turn flows into the Saint Lawrence Seaway, destined to wash over whales and roil under gulls in the Atlantic. And on it flows.

Here in the Northeast US, we get as much as thirty-five inches of rain a year, and all of that water has to go somewhere. In between all of those verdant folds in the landscape— be they forested hills, pasture, or human development— run thousands of rivulets, seeps, springs, creeks, streams, and rivers, all flowing down-hill and through these places we call home. When rain falls upon the land, be it forest, field, or city, it may do one of four things— evaporate in place, soak into the soil to be used by plants, penetrate into the groundwater table, or run overland into streams.

In the urban and semi-urban environments, falling water lands upon roofs and roadways, lawns and golf-courses, and is pulled down dim alleys and across bright stretches of asphalt, drains through athletic fields and parking lots, before eventually dumping into storm-water

systems that may or may not lead to water treatment facilities. Along the way, the water has collected into its molecular folds all the detritus of our modern lives— pesticides and herbicides from lawns and parks; motor oil and coolant from parking lots and streets; and the small, ubiquitous boats of cigarette butts and plastic packaging found the world over.

In the farmlands, the story is often even more destructive to water quality. These places that grow our food— be it produce, milk, or meat— have increasingly cared little for the effect their operations have upon the land and the water. Stuck in a cut-throat economy that makes it extremely difficult to be a small farm in New England, they are always forced to maximize what the land can produce, often to the detriment of the very soil and streams needed for next years' farming. One of the most common problems emerges from the use of phosphorous fertilizer to help grow the corn crop that is needed to feed cows through the winter. Further worsening the situation is the common practice of broadcasting that phosphorus-heavy cow manure over farm fields for yet more fertilizer— and most fields in this part of the country drain directly into lake-bound streams.

For Lake Champlain, this means that the lake receives an ever-increasing amount of phosphorous, an element that, when present in high concentrations, stimulates the growth of blue-green algae, sometimes in spectacular quantities. These “algae blooms” then create a positive feedback loop wherein they rapidly consume the dissolved oxygen in the water, making conditions yet more ripe for further blooming. This process of “eutrophication” has become a common problem in many parts of the modern world. Some algae blooms, like the ones that often form at the mouth of the Mississippi, can even be seen from space as an eerily beautiful, swirling cloud of neon green currents suspended in the water. Earlier this year, one such algae bloom in Lake Erie made the water undrinkable, and unusable, for four-hundred-thousand people in Toledo, Ohio. For an entire week, a large population of usually comfortable, water-ignoring people had to confront the stakes of our agricultural practices— which includes the eater— by drinking bottled-water and taking sponge baths. To live amongst so much water, and to not be able to drink it, strikes me as one of the most shocking symptoms of this larger problem.

Within Lake Champlain, these algae blooms have been shown to dramatically reduce the water quality for most other aquatic life, degrading and in some cases destroying fish population in shallow bays. Within the blooms themselves, conditions become ripe for the explosion of *e. coli* bacteria as well. Harmful to humans, the high concentration of *e. coli* results in the



closures of many popular bays and beaches in Vermont every summer. Simultaneously, the blooms reduce the amount of dissolved oxygen in the water, effectively suffocating innumerable micro-organisms. All of this should be considered a tragedy– not only can we no longer eat many of the fish due to mercury and heavy metals, now we can't even swim our bodies through the waters. Luckily, we've yet to experience a bloom that compromises the drinking water for the few hundred thousand people in Vermont, New York, and Quebec who depend upon it, but there's no guarantee that this couldn't happen. In fact, it seems like that may be where we're heading.

Not a moment too soon, local, state, and federal agencies are taking notice. In addition to upgrades in storm-water infrastructure and development policies, one of the most immediate strategies to combat the problem is this work that my crew and I are performing: “watershed restoration.” Federal entities like the USDA and US Fish and Wildlife have set up programs such as “CREP” (Conservation Reserve Enhancement Program) and WRP (Wetland Reserve Program.) By reaching out to land-owners who either farm or steward a damaged stretch of creek, and then offering financial incentives to discontinue destructive practices, these agencies are hoping to alleviate the most acute problems. For many of these projects, landowners also agree to one other condition: that they let guys like me come and attempt to restore the stream banks.

The most common job we get hired to complete are the CREP projects along streams. In addition to establishing a ninety-foot buffer upon each side of the stream, within which no livestock will graze or wade, and in which no soil will be tilled or crops planted, agencies also develop a plan for new plant-based restoration. A trained restoration ecologist will study soil maps, historical documents, and close observation of nearby vegetation to try to determine what “natural community” would exist along that creek prior to disturbance. A natural community can be thought of as Nature's self-designed assemblage of cooperating plant species, often characterized by a few indicator species– an example might be a “silver-maple ostrich-fern floodplain” or an “alder swamp.” With that knowledge in hand, the restoration ecologist will craft plans for a plant-assisted recovery of the site, which will again include which species, their quantity, and density, and then they hire out crews to complete that planting plan.

Natural communities vary throughout a landscape, and to train your eye to see them is to realize that the land around you is far from a uniform mass of places interspersed with green

stuff. Within one square mile, depending upon the shape of the terrain, the elevation, the aspect, the soil type, the presence of water, and history of disturbance, you might find a multiplicity of natural communities, each with its own plant species and the animals that forage, stalk, and den within them. And while it can be hard at first to predict which conditions may call forth which natural communities, there is one suite of communities that are easily identified, studied, and enjoyed; the ones found along stream and rivers. Called “riparian zones” (latin: *ripa*, meaning river-bank), and existing upon both sides of the river and stretching right up to the edge where the land meets the water, riparian communities are often some of the most species-diverse, nutrient-rich, complex, and down right beautiful areas in the landscape.

When traditional farming practices cleared river banks of these riparian communities, we lost more than a list of species and pretty places– we also lost a vital organ in a river’s health-support system. Starting at the the roots of the trees, shrubs, and grasses within a riparian area, we can observe that roots act as a soil-stabilizer, gripping the minerals and organic matter along the banks and holding them in place. These roots also act as natural bio-filters, so that when urban or agricultural run-off does makes its way to the river, the dense diversity of fungal and bacterial organisms that live within the roots have a chance to absorb and then neutralize many of the nitrite and phosphorous pollutants with an uncanny array of biochemical strategies. If you were a fish in a river, you’d want to hang out in the purified water that drains through an intact riparian zone.

But wait little fish, there’s more. As those dogwoods and willows grow along the riverbank, they also provide you with two critical components of your livelihood– shade, and food. When those branches overhang your creek, casting their embowered shadows upon your watery sky, they are keeping that water cool for you in the summer months. Simultaneously, within those branches and upon those leaves crawl and fly a myriad of insects that provide you with a significant portion of your nutrition. And wouldn’t you know it, a great many of those insects have a habit of falling out of those shrubs and landing with a splash into your medium, and all you have to do is dart up there and devour them. It has been found that many cold-water trout species eat up 70% *terrestrial* insects, and these insects are mostly falling off of stream-side vegetation. Score another point for the importance of the riparian zone.

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And so here we are, on this farm, on this May morning, attempting to re-establish the riparian areas along this creek. As we continue our walk through yesterday's plantings, I try to keep all of these threads of context in mind as well. This seemingly simple act of planting trees along a creek also contains within it so many concepts and conditions that emerge out of our presence in the landscape. As we can see all around us, humanity's role thus far has generally been one of destruction and reduction, taking threads out, but today, it's a joy to be out here lacing some strands of vitality back in.

After a quarter mile of trudging with our trees, shovels, and day-packs, we establish a base camp under one of the few old cedars that stand dark green against the cream of the humid sky. Not even nine a.m., it's already getting hot and muggy, which is rare this early in May, and I've heard musing that this could be a new norm with climate change. I ponder what our landscape and lake will look like when my own children someday roam these hills. I often wonder what challenges await them, and what streams, animals, and weather will greet them on May mornings like these.

As the five members of the crew start to put on sun-screen and make final preparations, and my fellow crew-leader sorts the morning's trees, I take the opportunity to scout the land that lies ahead of us downstream, as we'll likely go past that bend there by lunch-time. I'll admit that I also want to visit the alder swamp, hoping that I might see that moose.

Hiking around the bend, again amazed at this humidity, I imagine two different futures awaiting humanity just downstream in time. As our population continues to expand exponentially, and as we proceed in our ravenous devouring of Earth's resources, it's easy to predict that qualities like the subtle beauty and functionality of riparian areas may be of little concern, and such unique ribbons of life may cease to exist in all but the most remote of places. In this future, most children will grow up thinking a riverbank is the concrete slope of a canal or the steep, sloughing banks of a deforested ditch running through endless corn fields. For millions of miles of stream and river-banks this world over, this fate has already come to pass. Some places may be spared through conservation and preservation efforts, but the majority of earth's riparian communities and their life-supporting systems may be destroyed— their functions replaced by desalination and chemically-run water-treatment plants.

But out here, pausing to look back up-stream at my fellow tree-planters spreading out into the bare land, shovels and bare-root tree-stock in hand, I can't help but entertain another,

alternative vision for the Lake Champlain Basin, and for watersheds the world over. If we can continue to recognize the error in many of our practices, use wise policy to slow the rate of our destruction, generate sound science that adequately and creatively explains the value of keeping nature's assemblages intact, and then continue to develop innovative techniques for ameliorating great swaths of our previous blunders, we might succeed in re-designing many of watersheds back in line with nature's original schematics. Many of the species may not be the same and in the same concentrations, and we may never fully erase our mistakes. But in the act of restoring our watersheds one stretch of river at time, we might begin the work of re-establishing not just a better method of living in a landscape, we might restore our *relationship to* these interpenetrating places that create, and support, our homes. With that relationship restored, we might then cease much of the destruction, amplifying instead our healing and regenerative capacities, and come into a more reciprocal, ceremonial, and devotional land ethic with the water, soil, and sky. I'm sure willing to try.

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Emerging around the bend, the narrow views of these tight bottom-lands suddenly expand and open like a river expanding into a bay. Before me flows another quarter mile of stream, meandering through the denuded pasture as before, but then disappearing into a broad, flat thicket— the alder swamp. Filled with thousands upon thousands of these dynamic, resourceful, habitat-providing, nitrogen-fixing, and water-cleansing trees, the alder swamp is one of the most rich, but also least understood, natural communities in the Northeast. I say least understood because it's hard to understand a place when we rarely experience it. The lack of experience is owed to the fact that alder swamps tend to grow as thick, clumping acres that prohibit easy travel by humans, so few people ever enter an alder swamp to see what the moose and turtles are up to. The lack of conceptual understanding, in similar limited fashion, is borne out of our well-worn method of determining the value of a thing.

Because speckled alder wood has few uses as food, building material, fuel, or fiber to modern humans, we have blithely assumed that these are useless trees that render the lands they dominate equally useless. Many of the wetlands that used to dot and dash the landscape of the northeast were comprised of alder swamps and beaver ponds, which taken together helped the land and water achieve a dynamic equilibrium of clean water and productive ecosystems. A biologist from Fish and Wildlife told me one day while walking this site that “if we could

magically replace even half of the alder swamps that used to grow in the Champlain Basin in one planting season, I guarantee you we'd have a significantly cleaner lake that summer, and for every year after." It was a compelling thought, and while it may not be attainable now, I can't help but wonder what we could one day create if our imaginations and values were to ever fully realize the wild, quaking nuances of Nature's designs.

Of course, the whole earth isn't going to be converted into an alder swamp, and nor should it be. Every place will call for a different suite of species and a different natural community, and every place could also include an active and regenerative human presence. If we can continue to find value where we once ignored it, discover natural immunities in the landscape where we once saw only impediments, and recover a sense of ethical involvement and integral participation in our home territories, I'm convinced that this work my peers and I are doing out here could be part of a new paradigm of living on Earth. After a few centuries of rapid growth in our population and technological capabilities, it is time to re-assess how we live within this vast, mysterious, inter-connected web of life that claims us. In getting out, studying our watersheds, learning the plants and animals, and doing paid or volunteer work like planting trees, we are commencing the next phase of earth living. These practices, if balanced with all the other gains needed in social and environmental justice, might guarantee that the next generations will inhabit an equally exciting, gorgeous landscape as this one we enjoy today.

I walk to the ecotone where the creek disappears into the alders with a trickle and a warm breeze. All of the alder buds are beginning to bloom and glow as tight, ovular miters of green. Many of last year's cones still hang from the interlacing branches that together create a tight, closed canopy, under which this stream will continue to run for miles. As the water is pulled by gravity through the root structures of these ancient plants, thousands of tiny nodules of bacteria colonies that live symbiotically within the root-masses will absorb the water and cleanse it of impurities. This water, combined with nutrients in the soil and gases in the air, will be used to feed the growth of more bio-mass in the form of trunk, branch, bud, catkin, cone, and leaf. The alders stand over these acres as both givers *and* takers, creators *and* stewards, and all beings within this entire Basin benefit from their presence. In this way, I welcome the alders into my life as the quintessential teacher of reciprocity.

Just as I pivot to leave, to return to my crew and jump into the work of planting today's future forests, I hear a sudden sucking sound and thrashing within the alder thicket, and then it

stops. Tilting my head side to side, trying to locate the source, I strain my eyes through the interweavings of the ten-thousand dendritic branches– but see no movement, and hear nothing more. Turning to go, I look down upon my boots and see that there in the mud beside me, perched at the intersection of the water, the pasture, and the alder swamp, shines the single, deep, cloven foot-print of that massive creature that has only recently returned to our lands. The moose print, and in those alders, the moose who made it.

I hear the farmer from this morning repeat his phrase– “The moose were gone around here when I was a kid. It’s really nice to have ‘em back. I’m hoping you folks here can keep ‘em around.” After waiting another minute without a sound, I decide it’s time to get to work. If we’re going to keep moose around, and ourselves for that matter, there’s plenty to be done.

### Awaken to Our Basin

Dear Fellow Denizens of the Lake Champlain Basin,

Lake Champlain is still severely impaired.

The seasons can have a comforting effect on us. When the world news portrays turmoil and turbidity in the streams of humanity, we take comfort in the peace we enjoy in this land of changing leaves and harvest moons. It seems we're immune to the worries of the world. We don't have oil rigs, and hence no oil spills. We don't have mining, so we don't have toxic tailing ponds. We don't have a dominating timber industry, so we don't have clear-cuts. We don't have political instability, so we don't have riots and food-shortages. And autumn is just gorgeous. We seem to be sitting pretty.

And yet, Lake Champlain is still severely degraded.

One reason we're able to live this well on *this* land is because we've outsourced all the nasty processes. Our cars, phones, computers, clothes, and most of our food are produced elsewhere. After three centuries of heavy use, much of this basin is being allowed to rest, and to recover. Other places aren't so lucky— they're ramping up production to meet the desires of modernity's decadence. We're fortunate not to be dealing with any of these big-time problems affecting us locally.

And yet, Lake Champlain is still severely polluted.

Here's the harsh news: we're still participating in a cultural life-style that is destroying our water. Let's not get used to this. It's a tragedy that the lake is often closed to swimming. It's a tragedy that we shouldn't eat more than two fish a month. It's a tragedy that our drinking water needs to be shocked with chlorine to make it safe to drink. Consider this from the arc of human history, and how unfortunate it is— we can't eat and drink from the natural bounty we live upon. Let's not be lulled into thinking this is normal, or okay.

Because Lake Champlain is still severely impaired.

But here's the positive news: we're capable of restoring this entire basin, one watershed at a time, and we can restore our relationship to this place in the process. The future likely will

require us to meet more of our needs on this land base again, and we're going to need clean water to do it. To get there, it's going to take a lot of work, but I reckon we've never been afraid of that. It's going to take a lot of time, but it will be time spent together. We'll have to realize that this modern life never will be satisfying if we aren't all feeling healthy, vibrant, and inter-connected with one another and the water and land.

Here's a few questions we must ask ourselves. 1) What watershed do we live in? When water flows off our yard, toward what stream does it flow? Where does that stream go? 2) What's the water do when it runs off of our farm, land, or street? Is it gathering chemicals and fertilizers? Could we slow it, spread it, sink it? 3) What long-term effects will gas pipelines have on our water? 4) What projects are going on in our watershed? Lake Champlain is fed by rivers, and many rivers are damaged. Seek out watershed groups or businesses dedicated to helping organize projects— Friends of the Winooski River and Intervale Conservation Nursery, for example.

Try volunteering a Saturday to restore a riparian corridor, or attend a city-council meeting. Advocate for better storm-water management. Encourage youth to become ecological restorationists!

We know future generations will swim in this lake, drink this water, eat these fish, watch these sunsets, and marvel at these seasons. Will they look back on us and our efforts with thankfulness or despair? The answer's up to us, flowing by us and through us everyday, in the water and air.



## California Beaming

a travelogue from Fruit Tree Tour

part one

I'm cutting up an apple, thinking about its journey from seed, to flower, to fruit. All week I've been planting fruit trees with school kids, part of my volunteer work here on Fruit Tree Tour. Where I might normally cut an apple with nary a thought of its origins, tonight I'm deliciously curious. Who planted the apple tree that grew this perfect specimen? Who pruned the tree as it aged, maintaining a shape that produced high yields of easily harvested fruits? Which bee pollinated the flower that then transformed itself from a delicate purse into a plump apple? Who then picked this fruit? How did it arrive in the store? I raise a piece to my mouth and take a bite— bright, crisp, slightly acidic, and loudly sweet. Who needs candy?

Dusk is falling here at our camp-ground on the outskirts of San Diego, with the high crags of the Laguna mountains to the east turning a desert crimson in the sunset. Working on dinner crew within the Common Vision tour bus, I take delight in knowing that this pie will feed my peers who are helping plant the trees that will generate future pies. Below the window, just outside, I hear the chattering din of my fellow Tour crew members– they sit beside a forking campfire, headlamps trained upon small white boards in their dirt-caked hands as they sand down the edges, readying them for an orchard-sign painting workshop tomorrow morning. Beyond them, working beneath some towering eucalyptus trees, are two other crew members watering over thirty citrus trees and a half-dozen bags of bare-root fruit trees– peaches, persimmons, figs, apples, plums, and nectarines. Just another evening of Fruit Tree Tour, and as I now bite into a piece of citrus as the orange sun finally sets, I think back on my first week of Tour, as a delightful series of memories sway through my mind like peach blossoms wafting on a breeze at evening time.

Fruit Tree Tour is one of the primary activities of an educational non-profit organization called Common Vision. Operating in California and built upon a desire to address a suite of multi-pronged problems– poor nutrition in schools, urban food-deserts (places where community members do not have access to food beyond that which is available in gas stations and convenience stores), and the lack of quality environmental programming in these underserved areas. Common Vision believes that one way we might start to address these issues would be to begin planting fruit tree orchards at public schools, and use the opportunity to provide immersive, outdoor educational experiences with students throughout California. And they've done just that– they have planted and help maintain over 200 orchards from San Diego to Chico, and we're slated to install another 15 on this tour alone.

Fruit Tree Tour is hard to pin down into one sentence or articulate as one sound bite. But earlier today, I found myself trying to do just that. I was digging a large hole at Burbank elementary school, huffing and puffing, knee-deep in the cavity, dirt-flying. Two other volunteers were doing the same in holes to my right and left, with our three holes all being excavated right next to the chain link fence that separates the school-yard from the street. The soil was a hard-packed clay, so our shoveling was slow and arduous– but with a little work song and a cool, Pacific breeze riffling through the single palm tree overhead, we were enjoying the process. We knew that within the hour we'd be planting apple and plum trees in these holes with

a couple dozen fourth graders, and knowing that our shoveling was readying that experience seemed to make the dirt lighter and the shovel sharper.

Just then a local teenager swaggered up to us from the street, laced his fingers through the chain-link fence, and asked through the metal diamonds– “What are you guys doing in there? Digging holes or something?”

And there’s the question. And here’s an answer: “We’re planting fruit trees at schools all over California! We’re about to plant a bunch of fig, apple, and citrus trees here with the fourth-graders, as well as paint orchard signs for each tree, teach them about local food, and encourage them to create positive change in their community.” As I say this, I see his expression go from curiosity, to confusion, to intrigue, and finally to a smile.

“Wow, really? I went to this school, and we never did anything like that. Can I come help sometime?” And just then the school-garden coordinator, a sweet woman with the gentle demeanor of a life-long gardener, suddenly chimes in from behind a green-wall of tomatoes in the corner. “Sure! Come on over and I’ll get your information!” and she walks to a door in the fence, unlocks it, and the two began to chat. What was a previously lifeless fence, a prohibitive boundary between the street and the schoolyard, between the community and the school kids, had been temporarily dismantled by our presence– and we hadn’t even planted a tree yet.

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Right at ten am sharp, out they come– sixty fourth-graders, with their frolicking gaits and their lively energies. We hear them coming, as the gregarious din that emerges from them grows and amplifies across the sea of pavement like a rising tide. Their teachers steer the flow the best they can, but the kids present a broad swell of excitement that bears down upon the fourteen other volunteers and me. We are standing in front of our massive, colorfully-painted, 1979 MCI MC-8 tour bus, and they seem drawn to us and the bus as irresistibly as waves seek the shore. And just as it seems the wave of little humans will break upon our heads, our co-executive-director/co-hero of Common Vision intercepts them. With quick wit and some lithe linguistic jujitsu, he has them forming a long line along the pavement, facing off from us like two opposing teams– kids versus the volunteer tree-planters.

“Good morning everybody!”

“Good morning!” sheepish at first, all of them eyeing us and the bus, their little eyes dilating in the bright light of their home terrain– a home terrain suddenly populated by these strange new outsiders and the promise of time outside.

“I said good morning everybody!”

“GOOD MORNING!!!!!!!!!!”

“We’re so glad you’re here today,” Leo begins, and then proceeds to give a brief explanation of who we are– “We’re from a group called Common Vision, and we drive around California in this sweet, veggie-oil and solar-powered tour bus you see behind me, and we plant fruit trees with kids just like you!” And then what work we’ll be doing today– “Some of you are going to be planting fruit trees right here in your school-yard this morning, and then some of you are going to be painting signs to go with those fruit trees. We’ll be planting apples, persimmons, figs, plums, and one of my personal favorites– *dragon fruits*.” There are some excited gasps and confused “huh?”s at that one. “So here we go, when I give you a number one you’ll be going with my best friend Diana–” and Diana raises her hand, “If I give you a number two you’ll be going with the great TreeJay,” and TreeJay raises his hand, “If I give you a number three you’ll go with the ‘Bearded Wonder’ Travis–” and Travis raises his hand, and on it goes until six groups are made for tree-planting, and then six more are made for sign-painting. I’m on tree-planting– come on over kids, let’s head to our hole.

But before we jump in to this, let me set down more of the context here. As mentioned, the hole is pre-dug. The four fourth-graders and I arrive at it to find one large pile of the soil that was excavated in the digging process, and next to that a smaller mound of rich, fragrant, dark-hued compost. The hole is surrounded by what was previously impenetrable shrubbery– an aromatic rosemary and something else I don’t recognize. This strip of land beside parking spaces and the fence was inaccessible to these kids just an hour ago, but now here we are.

When Common Vision installs fruit orchards at schools, we often are making more land available for humans to inhabit, providing the kids some more earth acreage upon which the children can tread and play. With the inert sea of pavement that surrounds most urban schools, there are rarely open-patches of land for kids to interact with the dirt, plants, flowers and trees that surround their school– and by omitting these areas from the education, the message they receive is that these elements don’t matter.

When we then dig up under-utilized slices of school-grounds like this one, and then insert into them these wild-leaning fruit-trees, we are inviting non-paved Nature back into areas that have traditionally had no use for it/Her. But unlike a mere “greening” of the campus, wherein some landscapers come in to pepper the grounds with a few more flower features, we are here to help the kids themselves beautify their place. And to do so, and to guide them into the experience, I have them each draw their first initial in the soil in front of them, activating their hands in the work that’s to come.

Just then good ol’ Lep arrives with our tree. With all of us crouched or kneeling beside the hole, he is a giant figure that blots out the sun– his silhouette that of the timeless hero, but rather than brandishing a sword he grasps a five-foot tall peach tree– hands it to me.

I hold the tree up, say its name, pass it once around. The four kids take it in their hands one by one, some inspecting it closely, some running their hands through the roots like fingers through hair, and one boy holds it daintily with just two fingers, concerned that it’s getting his hand dirty. It returns to me and I place it down on the earth beside me and lower myself into a crouch, facing this little circle of little people. Next I ask us all to introduce ourselves by saying our name and our favorite fruit. In this way I meet two girls, Sasha and Mary, and two boys, Stephen and Pablo.

Introductions completed (amidst the sounds of similar scenes going on within the five other tree-groups to my right and left), I start guiding us in.

“Okay my friends,” I begin, “my name is Trevien, and I’m here with Common Vision today to help you plant your peach tree. But I have one important question I want to ask of you before we begin.” They stare at me, eyes wide, likely still trying to figure me out– this bearded, youthful adult in a canvas vest smiling at them from the other side of a hole in the ground. “I want to know– why do you think we’re doing this today?”

“Doing what?” Sasha asks. She has intense brown eyes and her head is adorned by corn-rows.

“Well, this. Why do you think we’re all here to help you plant fruit trees today?” I ask.

“Because trees are good,” she replies.

“Because trees are good for the earth? Like good for the air?” Stephen offers.

“Because fruit is, like, good for you?” Pablo asks.

And we're off! Slowly and at the pace the kids provoke with their questions, I lead them to consider four primary ideas that speak to *why* we're there planting fruit trees. Depending upon the student's age, interest level, and apparent knowledge on the subjects, I proceed to cover the following major points.

(note: these descriptions closely follow the curriculum framework that Common Vision trains us to use with the students, and I am greatly indebted to their years of hard work refining this simple but expansive set of topics to cover when working with kids and fruit-trees)

FOOD:

"Okay, I heard someone mention FOOD. As you all can guess, you'll eventually be able to eat peaches from this tree. Where do you all usually get your food?"

"From the my house."

"From the store--"

"--yeah from Walmart!"

"Okay," I inject, "good. But how does it get to the store?"

I proceed to ask them to consider that most food comes from farms that are quite far away, and during every step of the way, fuel is burned and carbon is added to the atmosphere. This sets up ideas around the importance of local food (and you can't get more local than growing it at home or at school), the issue of green-houses gases and climate change (burning fossil-fuels is increasing the amount of carbon in the atmosphere, which is in turn trapping more heat on earth and changing our climate) and then also nutritional values of fresh fruit. I don't go too deep on climate change, mostly because I'm not sure they are ready to start confronting the emotional weight of the problem-- namely, that the world around them, run by the adults they rely upon to keep them fed and safe, is also a world of deeply complex, daunting problems. Problems that will, inevitably, come down on them. Instead, with these elementary school kids, we're hoping to provoke more intense wonder and love for this world, and to give them a focal point onto which to concentrate that love.

"Okay, and what's one more good reason to plant fruit for food?" I ask.

"Because fruit is, like, delicious!" Mary says with a smile.

AIR:

“Now, I heard someone else mention that trees are good for the Earth and good for the AIR. What did you mean by that?” As they answer, I try to suss out their level of understanding around our respiration and the respiration of plants. “Okay, how about this—” and I grab the tree and hold it in center of our circle, “on the count of three, on the three, let’s all take a big, deep breath in together...1, 2,3—” and we all do, our chests all filling and swelling upward— “and exhale—” *whooooooshh*. “Okay, what gas did we just breathe into our bodies there?”

“Good gas!”

“Air!”

“Oh, umm, oxygen!”

“Yes!” I affirm, “oxygen! We’re breathing it in constantly, all day every day, even we’re not thinking about it right? Every moment since you were born you’ve been breathing oxygen into your lungs, and every person you ever see, now matter how old they are or what they look like, they’re all breathing in oxygen from the air. But also, I wonder— what do you we breathe *out* when we *exhale*?”

“More oxygen? Gas?”

“Oh I know! Carbon!”

“Okay, close,” I say. “We breathe out another gas called carbon dioxide. So every day, every night, we’re breathing in what?”

“Oxygen.”

“Right! And we’re breathing out carbon-dioxide. Now, what do you think a tree does when it breathes?” and I proceed to teach/remind them that trees and plants are constantly doing the opposite, breathing in our carbon-dioxide and breathing out the oxygen we need. I ask them to imagine these fluid, bright blue arrows streaming into their lungs as they inhale, and woody-brown arrows wafting out of their mouths as they exhale. And then we watch the tree as it inhales those exhalations, pushes them through its bark-clad body, and then exhales those pulsing, shimmering blue gases of oxygen back our way. With our arms, we push out breaths and and pull in the next, acting this out. Five fourth-graders and a thirty-two-year-old man, on a sunny morning, performing some sort of silly thai chi— a practice that is helping us recall our constant participation with the breathing plant beings of the world.

SHADE:

A quickie but an easy get. “Why else are we planting fruit trees?” I ask again.

“Um, because it gives us food.”

“Good, yes, but what else? Like, it’s a hot, sunny day, and you’re running around on blacktop and you start getting really hot. Where might you run to for some relief?”

“To the drinking fountain!”

“Yes, nice, you’re right water is amazing when we’re hot– trees love water too– but what else, if we wanted to get out of the sun?”

“Oh!” Sasha is suddenly raising her hand frantically, “I know where I like to go!”

“Where is that?”

“Under a big tree!”

“Yeah, you’re right– trees make shade for us! But do you think new trees make shade?” I inquire, pivoting slightly toward another dimension of our work here today– “will this tree we’re about to plant make shade for us later today?”

“Nooooo!”

“Okay, but what about that tree over there?” I ask, gesturing toward the broad-crowned eucalyptus tree that rains shadows over the parking lot like so many cool spears of dark and light. “Was that tree ever really small?”

“Si! It was a baby once!” Pablo manages through some giggles.

“Just like us!” says Mary, adding her own giggles to the growing gaggle of them.

“Exactly!” I affirm, chuckling now too, “we all were babies once, trees and people! ... So do you think our tree will make shade for people some day?”

“Yes! Like when we’re really old,” Pablo says.

“And will future humans get to sit under the shade of this tree we plant?” I inquire.

“Yeah....”

“Yeah, they will. I don’t know about you all, but I think that’s just amazing, and I’m really glad you’re all doing this today– making better air, fruit, and shade for other people in your community.

“Okay, I think we should get started planting this tree, but before we do, what’s one more reason to plant fruit trees here at your school? I’ll give you a hint– it has to do with Art and Beauty.”



BEAUTY:

*Fast-forward twenty years. Spring-time in California, 2035. Over two-hundred school orchards that were planted between 2006 and 2015 are in full bloom— seen from above, the black-top pavements of the school-yards all pocked with the micro-bursts of colorful flowers abuzz with bees, careening through wavering rich greens of the thousands leaves, forming mini-forest canopies.*

*Seen from within, the trees' well-pruned and cared-for branches all sturdy and strong, laden with early fleshy fruit and home to myriad birds and bees.*

*Seen from below, the once-thin trunks and graft-unions now robust and muscular, the ground that was once compacted dirt and grass now rich in humus and mulch.*

*Seen from within the soil, the once meager roots now thick and well-established— well-interlocked with mycorrhizal and fully-supported by the micro-biology that booms in the billions.*

*And seen from the play-ground, kids that were born in 2028 come careening out of class like bees from the hive. They run to swing-sets, to ball-fields, maybe to hover boards, and maybe into these orchards. Like the honey bees noisily at work in the flowers above them, crawling deep into the floral structures and drinking deeply of the nectar, the kids climb around and through the trees, playing games and reading the fruit-varietal names of their trees. They recall the fruit they ate from them last fall, the sugary-contentment they felt as they ate the food they helped grow. They recall the workshops that Common Vision, or some program like it, did with them earlier in the spring to care for the trees, fertilizing and weeding and pruning and making new signs, affirming their role and their relationship to these living, food-providing, shade-creating, oxygen-generating and carbon-sequestering organisms.*

And still here in 2015, this group and I still just warming up, just simply thinking about how beautiful these trees will be in an hour, and by next year, when they'll still be here,

So we begin pawing into the soil with our ten hands, back-filling the hole to ready it to receive the tree— letting our hands get dirty, our heads to become engaged, and our hearts to perhaps become a little more rooted into the toil and soil of this warming and whirling world.

“Okay boys and girls, whaddya think, should we plant this tree?”

## Companion Planting

a white activist's reflections on race in an urban garden

Above this urban garden, on an otherwise unremarkable street corner in west Oakland, lives a mural. Twenty-five feet tall by fifty-feet long, this mural takes up the entire east-face of the concrete building, and I swear to you it is one of the most vivid walls you might ever look upon. When I first approached it, with a shovel in one hand and a baby tree in the other, I wondered if the colors were somehow glowing from within, neon lights somehow hidden. I stopped at the edge where the sidewalk meets the earth to let my eyes and my mind come alive to the color and content. This garden growing in garlands of green beneath it all further contrasts this scene to the urban grays of this West Oakland day.

I scan the mural, picking out details. In the street-side corner, just a few feet from a bus-stop, the painted coyote seems to howl with life— her fur silver and her silhouette a lucid aura of magenta light. In the center of the wall a gaunt, brown-skinned, shirtless farmer carries two watering cans that hang from a yoke stretched across his sinewy shoulders— I can almost hear his muscles creaking. A pregnant African woman kneels in the upper left, her knees folded beneath her crimson skirt— keeps a hand on her swollen abdomen, around which glows a tremor of blushed vermillion that suggests the birth of cosmos. A male child with long hair, cut at the bangs, with the complexion and features of an indigenous South American, portrayed behind turrets of ferns, stands and stares from the center of the mural— his hands clinging to a tall bean bush, staring back at me with the grave expression of a person in danger.

And then the painted plants, everywhere plants— shuddering corn-stalks tall as giraffes and equally elegant; powerful succulents stabbing into the foreground like fleshy knives; hot peppers that roar with scarlets and jades; and also beans in bushes, stalks, and vines. An absence is also apparent: the long rows of industrial agriculture are not in this scene. Instead, my eye finds repeated, intentional clusters of crops that are grouped together as in *companion planting*.

And yet, I'm aware that this painting signifies not just a set of strengths in the food sovereignty movement, but also many of its complicated components in a place like West

Oakland. As gorgeous as I find this mural to be, it seems explicit that there are no white people portrayed here, nor any of the alternative-foodie-lifestyle iconography you're likely to find at a Whole Foods. As a young white man, out of my home climate and comfort zone, I have to acknowledge that this mural is not directed at me, and the garden growing beneath is not for me. And yet, here I am, invited in the name of service, to help better position this garden do its vital work.

Why *am* I here? It is my intention, as a practitioner of ecological restoration and a humble worker in the fields of social, racial, and environmental justice, to have my life's work contribute to the creation of a more beautiful, peaceful, and healthy earth. It is my intention to not limit myself to traditional environmentalism, working only in so-called "natural" and "wild" terrain— I aim to complicate that notion, and to realize that any work in the name of healing humans' relationship to place is a part of what Joanna Macy calls "The Great Turning." It is my intention to be a part of this turning, even when it means acknowledging facets of the work that I may find uncomfortable, inconvenient, and imbued with contexts I wish I had nothing to do with. The question of race and privilege in environmental work in urban landscapes has me confronting such discomfort. I know my intentions here today, but what about my impacts?

Still staring at the wall of color, I felt entranced – the undulating mass of color pulled me into the landscape, which felt both *right here*, but also of somewhere else, and somewhen else.

"Pretty fantastic, hey son?" asks Wanda, the director here at the non-profit People's Grocery, who owns this building and property. "And to think a year ago that was a blank wall, and the garden here was an overgrown lot you couldn't even walk through."

"It sure is amazing Wanda. I've helped transform some places in my day as well, but nothing as dramatic and gorgeous as this." I turn to her, look her in the eye— "So glad we can help today... Now, where would you like me to plant this apple tree?"

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I'm here today as part of my work with the educational non-profit Common Vision. We're about five weeks into our annual Fruit Tree Tour— a seven week tour that had us starting in San Diego and making our way north in a veggie-oil-powered tour bus. The mission: to plant school-yard fruit tree orchards at underserved schools in the greater San Diego, Los Angeles, Santa Barbara, and San Francisco areas. The goal: to engage school kids with their place in new

and immersive ways, giving them the opportunity to have positive interactions with their local environment. The fruits: children will taste the benefits of healthy food, healthy bodies, and healthy communities. Every school day over the past five weeks we've arrived at schools, dug holes, and proceeded to work with thousands of students, helping them to plant their very own fruit trees.

But today is a little different. For one thing, it's a Saturday, and we're not expecting any gaggles of school children today. Instead, we are here to deepen the relationship between Common Vision and this non-profit The People's Grocery. And this building here, which houses their offices and serves as their home base for community events, is our planting ground today, and the fourteen other Common Vision volunteers and I are excited to help, even if we're not sure exactly how we fit in.

Before long, we've got our gear spread out and our bodies splayed out— some folks are lithe pendulums of might, swinging pick-axes into hard-packed ground, while others are on hands and knees, following irrigation lines and trying to find ways to splice in our new ones. Several of our more art-inclined volunteers are setting up tables and the art supplies— they've got the paint, the list of tree-names, and the white-primed plywood signs. Some neighbors and various volunteers are trickling in, with a few old station wagons disgorging entire families. Common Vision co-director Michael is talking with The People's Grocery garden manager about the plans for the day, and it seems everyone is feeling fine.

But truthfully, not every one of us in this city is feeling fine. Today's planting project is much more than a feel-good performance— rather, it is part of a long-term project aimed at addressing a variety of overlapping issues here in West Oakland, and they are issues that reverberate across the country.

And the issues, I believe, are very well illustrated by this mural we're working beneath. Anyone who looks upon this painting, while standing amidst an urban environment that stands as such a sharp contrast, is sure to realize one thing in particular: that's not how people get to live in this city. This simultaneously nostalgic and neo-tribal portrayal of a people living in colorful balance within a precious landscape is not the way most residents around here experience the world around them. The growing of food, the caring for plants, the sweat and ache of honest work, and the sense of life lived as part of a colorful, communal performance is just not available

in West Oakland these days. But perhaps, with the work we're helping with today, the people of West Oakland might be starting to change that.

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Oakland's story follows a similar arc to that of many cities, but also has characteristics unique to the West Coast. This city comprises a large territory of land that is situated due east of the peninsula of San Francisco, and for thousands of years it supported a robust population of native tribes. Eventually, conquest arrived as Spanish settlers recognized the area's rich, fertile bottom-lands for agriculture and its thickly forested hills for timber. But this lush, well-positioned terrain, with its Mediterranean climate and its mellow, convenient harbor was not to be destined a little Spain or a northern retreat of Mexico. Instead, the United States and Manifest Destiny happened, and California slowly but surely received millions upon millions of emigrants from all over the world, and Oakland proved to be one of the most attractive areas for new settlers, enterprising businessmen, gold-rushers, freed slaves (California as a state never allowed slavery), and come the start of World War II, folks looking for work in the shipyards.

Like San Diego to the south and Portland and Seattle to the north, Oakland and nearby Richmond both became frenetic hubs of activity during World War II. In order to build the ships, planes, and weaponry needed for the maelstrom unfolding in the Pacific theater, calls went out across the country looking for workers— the calls were answered by thousands of African-Americans fleeing the Jim Crow badlands of the Deep South. Those incoming black men, women, and children, living alongside decades worth of migrants from Mexico, central America, and southeast Asia, quickly made Oakland one of most ethnically diverse cities in the entire country, a distinction it holds today.

Today the Port of Oakland is still the busiest port of San Francisco Bay and all of California, and to find yourself down along those industrial wharves is to marvel at the volume of shipping containers being unloaded 24/7— nearly all of them coming here full from China, and nearly all of them returning empty. But with automated machinery, one-man-operated cranes ten-stories tall that resemble AT-AT's from Star Wars (George Lucas grew up in the Marin headlands nearby), and an increasingly automated work force, there aren't nearly as many jobs down in the harbor as their used to be.

As the decades rolled on, Oakland's diversity and vitality led it to become a cultural hotspot for art, music, and activism— with much of that activism rising in response to racial

tension between the black community and predominantly white police force. While nearby San Francisco was busy birthing the age of Aquarius in the sixties, Oakland's decaying neighborhoods of West Oakland saw the founding of the Black Panthers. With fewer and fewer jobs in the auto and war-time industries, and few other prospects in any other direction, high rates of unemployment followed.

West Oakland was particularly hard hit once again during the 80's and early 90's, as the outsourcing practices of major American corporations began to ship their manufacturing jobs to overseas locations. For a population with limited access to education, the workers had few other options as these jobs left, and unemployment soared. Into this void rushed a furious flood of destructive drugs— Oakland was not spared the heroin and crack cocaine epidemics that raged through poor neighborhoods throughout America. People who were around then that I've spoken to described this period as being an especially difficult time for West Oakland. Living in either dense clusters of public housing or in increasingly run-down apartments and homes, with minimal public transportation and very few parks, the people of West Oakland, and the youth in particular, were entirely immersed in an environment of blight, violence, and a sense of hopelessness.

On top of these problems, institutional racism continued to squeeze Oakland like an invisible hand, constraining people's abilities to move themselves and their communities out of poverty. Continuous, ongoing disinvestment drained entire neighborhoods of any economic activity. Here racism showed itself every day not as explicit acts of hatred from one ethnicity toward another, but rather as a systematic failure that affected everything from access to education, health care, bank loans, and public services. And most poignantly to our work here today, these phenomena also created a new type of urban ecosystem that affects everyone in West Oakland— it became a Food Desert.

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Wanda, a few others, and I are marking out holes to be dug for trees, and she relates to me one of the biggest problems the People's Grocery faces in this garden— people keep picking the vegetables too early, or keep pulling out entire plants. “A lot of these folks have never been in a garden before, you know? They've lost that connection to these plants and these foods. One of the things I need you all to do today to is help me come up with some clever signs instructed people to stop pulling out our entire bush beans!”

There is another trend that began in the seventies that this garden is trying to confront—the people lose access to fresh, quality food. As more and more businesses and industries pulled out of West Oakland, groceries stores also evaporated. Moving into these vacant niches were the opportunistic fast-food restaurants and corner liquor stores, peddling their quick, fatty foods and quicker energy drinks. Gone were the markets where families could shop together and run into neighbors, choosing foods to which they might have cultural connections— instead all replaced by the banal, sugary monotony of our “Fast Food Nation,” transforming huge areas into food deserts. As this new nutritional ecosystem increased, the people’s health declined, and it’s easy to imagine how much community cohesion, peace, and contentment declined with it.

The situation today is still quite desperate, but with small signs of hope popping up like blackberries through the pavement. People have become much more aware of these connections, and some startling statistics have come out over the last few years that confirm what many already guessed— you take away access to healthy food and replace it with corn syrup and fast food, and the people will suffer. One report in particular, put out by the Alameda County Public Health Department, reads like the results from a failed food experiment, and it reveals a distinct correlation between health and racial inequity—

“Compared with a White child in the Oakland Hills, an African American born in West Oakland is 1.5 times more likely to be born premature or low birth weight, seven times more likely to be born into poverty. By fourth grade, this child is likely to live in a neighborhood with twice the concentration of liquor stores and more fast food outlets. As an adult, he will be five times more likely to be hospitalized for diabetes, twice as likely to be hospitalized for and to die of heart disease, three times more likely to die of stroke, and twice as likely to die of cancer.”

How do you begin to address such startling, discouraging statistics? For the dedicated folks at People’s Grocery, and for us with Common Vision, part of the strategy has to include changing the conversation around, and access to, healthy food. And this can begin in the garden.

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Meanwhile, I lean into all of this with curiosity and trepidation. Because as much my intentions may be in line with the intentions of the People’s Grocery, I want to be aware of the fact that our presence brings with it the weight of history and the difficulty of context. Plenty of white-guilt do-gooders, and/or oblivious white saviors, have made attempts to come play hero to

the struggling people of color in the inner-cities, and we know that this work has often left those communities feeling more alienated and marginalized than they'd felt before the heroes arrived.

But that is also why the community garden model presents such a different paradigm. Though we are indeed helping to establish this garden so that it can thrive, we are not going to remain here to act as stewards or to maintain any sort of hierarchical power structures. These gardens are to be for these people, by these people— we are only here out of camaraderie and a sense of shared fate, for what happens to one of us happens to all of us.

But I'm also reluctant to leap too quickly into concepts of unity, and I'm certainly not going to claim that this garden can instantly transform this block into an Edenic, post-racial reality. If anything, places like this can help us all make better connections to the felt reality of race, both our own and those different from us. In this way I am trying to show that many white millennials like myself are trying to address the systemic racism and oppression has been forced on all races except for us— the fact that many of us don't readily notice that such racism still exists only confirms the privileges we hold and the luxuries our race enjoys (and yes, we *are* a race as just surely as all of the other people of this world identify as a race— we are not the baseline normal, we're not a non-race).

One of my strategies to come to terms with all of this is to inspect my roots. While I may not be able to trace my lineage to any slave-owners or conquistadors, my French and German ancestors were surely benefactors of the centuries of colonialism that enriched Europe and the American colonies, all the while decimating entire cultural life-ways on this continent and establishing the systemic racism that still strangles so much life today. Just as a black man my age must walk around in a skin that signifies, so too must I recognize that my skin tone also emanates history and context.

And over the last year and a half, we've all had to confront just how much the ugliness of racism persists today. As many well-intentioned white people witness this, we may struggle to determine how to act. If I am personally appalled by the ongoing unjust nature of this, my sense of rightness gravely shaken by the continued slaying of young black men around me in this country, my sense of fairness insulted by the health, education, and incarceration statistics that constrict my young peers of color, well then I *must* work to hone my intentions, and I *must* seek out ways to have an impact. I don't expect the practices we come up with to be perfect, and I don't expect our activism to be free of discomfort, error, and friction.



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It seems one way to start to is allow ourselves to amplify what we already care about and see how our skill-sets could be of use in the work of healing our communities. For me, this has meant approaching the problems with the concepts of social permaculture and the eyes of an ecological restorationist.

As I've honed my eye to see the world as a dynamic, fluid mandala of individual watersheds, each comprised of separate strands of creeks, streams, soils, and cities, I've also come to recognize where there are ruptures in the fabric of a functioning ecosystem. To perform ecological restoration on a river is to look upon a stream as a doctor inspects a patient— locating symptoms of sickness and attempting diagnosis. And while many of the symptoms are treatable (the most common in my work is polluted water, which we treat by planting trees as a way to boost a stream's immunity to run-off), other diseases are clearly, deeply systemic.

But unlike a doctor, or an ecologist for that matter, there is no single book that we can reference to make our diagnosis in the territories of racial and environmental injustice. We're making this up as we go, still writing this book. For too long the only authors have been many of the very people who have gotten us into this mess, and we've been doomed to keep repeating the same cycles. It seems that one of the most important things we can begin doing, right here within environmental activism, is to open up the book for everyone, and to give everyone a chance to tell their stories and articulate their visions. And then, as more and more stories come into the light, we begin to discover areas of overlap and shared concerns. One of the most striking of these overlaps is what I see around me here today— gardens, food, and the role of plants in helping all people's restore their relationships to place.

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We're inside the People's Grocery offices now, about thirty of us, standing in a circle. After some further introductions from Wanda and a few other staff members, Wanda proceeds to tell us the story and context of West Oakland in fewer, likely more accurate words than I've just set down here. She also tells us about the founding of, and ongoing efforts, of the People's Grocery.

Founded in 2003 and run by a small but super dedicated staff, People’s Grocery works at the intersection of food systems, public health, and economic development. Their mission “is to improve the health and local economy of West Oakland through investing in the local food system.”

Their strategies for this are multifaceted and dynamic, including teaching adult cooking classes, nutritional education programming, establishing urban agriculture opportunities (like the garden outside), facilitating leadership development, and community celebrations.

After getting this primer, we’re thanked for coming today to plant our fruit trees. The fruit trees, she reminds us, will add further complexity and beauty to the new garden, as well as produce even more food. And in the process, we all hope, another alliance is made between two non-profits with similar goals.

But as I look around the circle, I also can’t help but recognize just how diverse this movement is becoming, and I’m thrilled by it. For a long time, it seemed that the push for local food was going to remain locked up in largely white, liberal value systems and symbols– think Michael Pollan and Joel Sallinger, Whole Foods, VW buses, and quaint New England-looking farms run by good-looking hipsters. And while it’s amazing that this movement has indeed rooted itself so well into the broader public consciousness, the lack of diversity and color represented has been apparent to anyone willing to look closely. What the People’s Grocery, and the work of people like Ron Finley (whose TED Talk about similar issues in the food deserts of South-Central LA has been viewed over two millions times), and even Michelle Obama’s “Let’s Move” campaign are all performing is amazing for the growth and dissemination of these ideas. And just as a good garden or farm will benefit from the presence of diverse species, so too will this movement grow more resilient with the growth of these new voices.

As I stand in a circle surrounded by such a diversity of voices, backgrounds, and skin tones, however, I truly do second-guess myself and question myself– because I want to inspect this whole process, and ask myself the harder questions. Is my presence here helpful, or does it also complicate the work being done? Is there room for young white activists to join the nutritional justice movement in non-white cities, or should we avoid it?

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In the first week of Fruit Tree Tour, we were a frenetic mess of ambition and action. Camped at a retreat center in the Castro Valley, about an hour south of Oakland, we filled our

days with tree-care instruction, curriculum orientation, bus preparation, sign construction, fruit-tree inventory, and on one of the last day's, we had a "diversity training."

After a morning in an onsite orchard earning to prune fruit trees, all the while still getting to know each other, we headed back to one of the classrooms at the center. At the front of the room sat a regal, somewhat imposing African-American woman, dressed in black-and-white silks and enwrapped by long dreadlocks. Her name is Jasmine Schlafke, a Santa Cruz-based poet and activist, who dedicates herself to, amongst many things, "ending the silence in her community."

She didn't waste any time— we cut right to the dark heart of the matter. She asked us to recognize some of the difficulties and ironies inherent in our work. As a group of 15, only two of us identified as non-white, so we had to realize that in some of the schools in which we'd be working, we were going to be a group of young white people working with colored youth. While that may not automatically add anything strange besides typical race relations, the fact that we would be going to teach a type of agriculture brought with it certain historical connotations.

"So y'all need to be ready, you know, for a black teenager to talk back to you, right? Maybe something like 'what, are you my Master?! Or 'What, you gonna crack the whip if I don't do it?' Any of you thought about that yet?" The air in the room cracked; no, perhaps we hadn't thought of that.

"Okay, but look at me, everybody—" we did, "BREATHE. Okay, breathe. That's the first thing you've gotta be able to do around this stuff, is *breathe*. We don't talk about this stuff much in our culture, about the real implications of racism and how it might play out, so we're not used to it. But you gotta be able to do it if you're going to get involved in racial justice work." We breathed some more.

We went on to discuss just how often the world of agriculture in this country has generally been one of white farmers employing black and brown workers, or worse. Running alongside that, we thought about how often the relationship between white educators and colored students has generally been patriarchal, domineering, and laced with the poison of racial superiority. This wasn't to say that any of this history would rear its ugly head, but nor should we bury our heads in the sand and pretend it doesn't exist.

But there we were, a group of well-intentioned, mostly white folks in their twenties and thirties from all over the country, voluntarily putting ourselves in this position. And while we

are well intentioned (I don't think you volunteer seven weeks of your life to do this work with bad intentions), we were being asked to contemplate the other side of the coin– not just intention, but *impact*.

Intention versus impact is a fascinating dichotomy, and to demonstrate this Jasmine had us free-write a little bit about our intentions. My intentions are to do this work with a spirit of compassion for those I work with, and with a strong desire to help amplify what I consider to be ecologically restorative work in the world around me. My intention is to use my humor and charisma in ways that help create a safe space for teaching this ecology and agriculture, and hopefully, to let that lead my students toward thinking about issues of access and the need for structural change. I know all of these things about my intentions.

What we often fail to realize, however, is that there can be a wide gulf between the intentions of our actions, which includes our words, and the impacts of those actions. Here's a good way to understand it: while *I* am the expert on my intentions, *you* are the expert on my impacts. So while we might have all done really valuable personal work to hone our intentions for how we want to operate in this world (which is likely what brought each of us here), we also need to take the time to examine what our impacts will be. I realized then, with great thankfulness, just how much Common Vision as an organization has chosen to do this type of privilege checking and impact inspection– the fact that we were even having this training struck me as an invaluable hour of our time, one that we would reference back to constantly in the weeks ahead.

At the beginning of the session, I recall thinking a classic error in white thought– “I don't really see color anymore, at least not in racist way, because I've done that work on myself.” But Jasmine was sure to point out that such thinking does not help generate safe space and open dialogue. Rather, such denial of difference of experience can have the impact of erasure, rather than honest acknowledgement. And while I might feel like I'm an expert on my intentions here as well, she reminded us that it is the people of color who are the experts of racial prejudice and the misuse of power– not white people.

In her excellent work “White Privilege: Unpacking the Invisible Knapsack,” white author Peggy McIntosh opened up new ways of coming to terms with what it means to be white in a racist society. For her, there is much to be gained from this work: “Describing white

privilege makes one newly accountable. As we in Women's Studies work to reveal male privilege and ask men to give up some of their power, so one who writes about having white privilege must ask, 'having described it, what will I do to lessen or end it?'"

It was, to say the least, a challenging yet enlightening afternoon with Jasmine. As we closed the space for the evening, I asked Jasmine "What do you think the single best thing we could do to be better change agents around these issues of racial and nutritional justice?"

"Don't be silent," she said, "because it's the silence that keeps all of these forms of oppression from going unchallenged and unchecked. If you're going to engage this work, you have to be creative in your resistance, and you have to be willing to speak up."

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Following our introductions at People's Grocery, we all head back outside into the garden. Those of us with Common Vision spread ourselves out, with about half of us planting trees and the other half split between sign making and laying irrigation. I head over to a hole I dug earlier. Situated beside some raspberry bushes and a pea trellis, it's about three feet deep by three feet wide, the sides of the holes scored with shovel marks and veined with neighboring roots. The soil I dug up looked good, but it also came laden with the detritus of a hundred years of city inhabitants— I found broken glass, an old nylon rope, and the rusted disc of a mason jar top that shimmered in the sun like a fish.

After going to locate the apple tree I'd stashed in the shade, I return to my hole accompanied by a community member, a man by the name of Billy Page. An interesting looking man with cinnamon brown skin, a neatly trimmed gray mustache, and a short gray flattop.

Billy and I get right to work, breaking up the soil with our gloved hands and backfilling it into the hole. He's super eager to hear all about how Tour is going, asking me questions about the kids and the bus and the trees. Since he is so curious, I offer to walk him through the curriculum we use when we plant trees with the kiddos. So for the next ten minutes, I have us going over everything from the form and function of each part of the tree, to what the tree needs to thrive, to how flowers will eventually, hopefully, turn to fruit. With each factoid and each nugget of wisdom I profess Billy is nodding his head and working himself into a fervor— "yes!"

and “yes I see,” and “Amen brother!” The gospel of the fruit trees is speaking to him, and I’m more than happy to be the pastor today.

But I’m also getting carried away– I lift my head, breathe, and reground myself to the scene. The four-way intersection, the three-story highway roaring a block away, the high rise apartment buildings looming nearby– and everywhere pavement, chain link fence, concrete. Our hands may be in the soil, talking about things like pollinators and mycorrhizal fungi, but that’s not an experience readily available to most of the sixty thousands residents of West Oakland that surround us. And while it’s amazing we have this great turn-out today, I also realize there’s a hell of a lot people *not* here today. I decide to ask Billy what brought him here.

“Well, I love food,” he says with a twinkle in his eyes. He proceeds to tell me that not too long ago, he loved food so much that he was becoming extremely unhealthy and overweight, eating most meals at fast-food joints and never really taking the time to exercise or cook. It wasn’t until he had a few revelatory experiences through his faith community that he realized that his experience of life, both physically and spiritually, was suffering from his eating habits. Soon after that he discovered eating raw and vegan foods, and he’s never looked back. In fact, he even started a small business called Divine Raw Foods, and he’s taught some of the cooking classes here at People’s Grocery.

“But I’ll tell you what,” Billy says, his blue-jeans in the dirt and his hands in the hole, “this “Food Desert” thing is for real. It’s hard work to go get the right food man. For a while there I didn’t have a car, and the buses aren’t that convenient, you know? So if we can be planting more gardens like this you know, and getting more kids to think about this stuff, well...” He pauses, I’m nodding. “Well it’s like this apple tree isn’t going to make much fruit for what, five years?”

“Yeah, three to five years, and not a lot of apples for a few years after that,” I answer.

“Well, to me that just shows how good this is, and how realistic. We can’t solve all of these problems today, but we can be planting the seeds for what has to come next.”

After about twenty minutes, we finish planting our apple tree. With the dirt mounded and the base of the tree upright, I ask Billy if he’d mind a little ceremony. “It’s something I like to do with the kids,” I say a little sheepishly, “as a way to focus the heart and mind on what the hands have just completed.”

He nods yes, face now solemn yet playful. I begin, but admittedly on shaky ground at first; “Well, I guess what I like to do with the kids is, well, I like to just take a moment to focus in on where we are, what we’re doing today...”

“Okay,” Billy says, his eyes lowered.

“So, well first, let’s both touch our tree.” We do. “We’re here today in West Oakland, on this exact street corner, in this garden. Looking around, we see the massive highway right to our West, and we see a thin sliver of the bay between its massive tiers of pavement. On the other corners, we see a gas-station, a McDonald’s, and a high-rise of public housing– three common elements of urban areas everywhere. But here, on this corner, we’re standing in a garden, and we’re just two of many people who are volunteering their time to establish this place as a safe place, a healing place, a delicious place–”

“Amen,” Billy says through a bemused smile. I glance around the garden, seeing a couple of other pairs and small groups finishing up their trees. I narrate, I bear witness, adding more to the ceremony:

“We see around us today a group of folks, from many races, backgrounds, and ages working together to create a common good. I see three young women planting a peach tree with a woman in her twenties. I see a Vietnam war vet helping my buddy to uproot an overgrown rosemary bush to make way for a new raised-bed. I see three teenage boys walking by, carrying a basketball and Big Gulps, craning their necks in our direction, seeing something not common in their daily environment. Hi guys!” I shout, raising my hand in a friendly salute– Billy opens us his eyes and does the same.

“Well, at this point, Billy, I usually ask the kids to maybe say a few intentions they have for the tree.”

“Okay,” he replies, “guess I can do that. I wish for this apple tree to grow strong, to be healthy, to make good shade for someone else some day. And for it be well cared for. I wish for young people to come in here and want to care for this apple tree. And in return, I wish for this tree to give those kids some delicious, healthy apples to eat.” He says this last part with his eyes closed, raising his one hand to his mouth, miming taking a bite from one our future apples. “I wish for this tree to help make this whole garden a place for peace. We need that man, we need more peace...”

And with that, I do one more summary, and ease us out of the ceremony– “Nice Billy. More peace. We’re helping reclaim a vacant lot, a forgotten slice of earth, and we’re helping a new vision and a new future push up through the pavement. May it be a place of peace, may this painting watching over us and these plants growing under us inspire more people to come bask in this glow of peace, and may this apple tree we’re planting here today help anchor the whole thing.” I close my eyes now too, lowering my head, feeling both a little silly but also playfully serious, channeling the space I like to hold when working with the kids– “so on three Billy, let’s both take a deep breath, remember that this tree gives us the oxygen we need and we give it the CO2 it needs, and we’ll give it one last surge of our love and intention... one... two... three...” and we *breathe*.

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A couple of hours later now, and most of the volunteers have gone home. A few of us from Common Vision and The People’s Grocery remain, tidying things up and hammering in stakes and affixing the newly painted, wildly colorful signs. I’m finishing planting some herbs beneath different fruit trees, an example of “companion planting,” wherein the assembled plants will benefit from one another’s presence. The fruit tree may be the focus, but these other species can play a part in helping to create soil fertility, lock in moisture, and keep away unwanted pests. Taken together, they can all act as a sort of mutualistic system, often called a “Guild” in permaculture, and they provide an example of how much more can be done when multiple organisms work together in reciprocity.

I’m finishing up planting a small start of comfrey, my white fingers in the dark soil, beneath a tiny canopy of green. In addition to being a useful medicinal herb, comfrey will send down deep tap roots that access nutrients not available at the surface of the soil. The plant accumulates these nutrients in its leaves, and as it sheds these leaves through the seasons, it drops them as offerings of nutritious mulch to the other plants around it.

Perhaps this is the example many young, white, well-intentioned millennials need to see. We don’t have to be the saviors, but we also don’t have to ignore these problems. We can show up where needed and invited with clear intentions in our heads, hands, and hearts, and we can learn to make sure our impacts are felt in a way that supports the growth of justice movements



like comfrey can help support this apple tree.

When we send our taproots deep into the privilege we're born into, we have easy access to education, inspirations, and experiences that are not, in the current world we inhabit, as accessible to every one else. What if instead of just using this privilege to advance and embellish our selves, we used the gifts we accumulate to help be better companions to those around us?

Wanda and Michael are calling us all over for some mint lemonade, asking us to wrap up for the day. A half dozen figures stand up and emerge out of bushes and beneath new fruit trees. We all glance around at one another, smiling with a well-earned weariness. The cool, fragrant, fog-kissed air of the East Bay suffuses with the afternoon sunshine in such a way that casts all of us in a golden radiance— one that does not subdue the complexion of our skin's vibrant foliage, but instead accentuates our diversity of color and shine.

Picking up my tools, I glance up at this gorgeous, colorful mural once more. I accept the reasons that white people are not represented in there, and it's not my intention to paint myself in. I'd rather have this impact, to translate my privilege into these forms of flower, fruit, and leaf. To offer myself now to these new relationships, which we confirm with a wink and a drink in the fading, California light. The trees will start growing tonight.

## California Beaming

### part two

*Here I resume my tale of planting a tree with four 4th-graders in the school-yard in sunny San Diego.*

#### SOIL, SUN, AIR, WATER, CARE:

Dirt begins to fly. The mound of soil is torn apart with the eager hands of some students, gently pawed apart by others. I let the conversations meander, listening for the rich areas where I might ask more leading questions. Eventually one of the kids discovers the darker, richer soil that is mounded against the back of our dirt pile. “Whoa, this one’s so different!”

“Let me see! Oh my God, it’s *warm!*” Stephen says, taking it into his hands and holding up for us all to see.

“Yeah,” I affirm, “It sure is. What else is different about that soil?”

Sasha walks over, grabs two handfuls of the earth-stuff, and throws it high into the air above her— “It’s way lighter!” she screams, giggling as the brown confetti rains down on all of us. After a quick reminder to please not throw the soil, I engage.

“Okay okay, that lighter soil is something called ‘compost.’ Does anyone know what compost is made of?”

“Poop?!” Quick giggles and little kid teeth bared. “Ewwwww!”

“No, not this compost. Well what happens if you put a bunch of banana peels, apple cores, melon rinds, and a bunch of grass in a big bucket and leave it alone?”

“It’s gets rotten! It turns to compost!”

“Yeah, sort of, but instead of rotting we could just say that it ‘breaks down’ into this compost. But how does it break down? What breaks it down?”

“Like, worms and stuff?” offers Stephen.

“Yes! Exactly! Worms and stuff!” I grab a handful of compost– “so, can every one pick up a handful of this compost?” They all do. “I have a question for you: how many organisms are in this one handful of compost?”

“What’s an organ-anism?” the young boy Pablo in the blue shirt asks.

“Good question. An *organism* is anything that is alive. So, is the Whale an organism?”

“Yes!!!” they all laugh-affirm.

“Is the Eagle an organism?”

“Yes!!”

“Is the Ladybug an organism?”

“Yes!!!”

“Is the truck an organism?”

“No!!!!”

“Are *You* an organism?”

“Yes!!!!”

“Okay, great, so how many organisms do you think are in your handful of compost?” I ask again.

“I don’t see any...” Sasha says, closely inspecting her hands.

“Well they’re all very, very small– so small they’re microscopic.”

“Um, like, a thousand?”

“More.”

“Um, like, a million?”

“More.”

“What?! A gajillion?!!!”

“Okay I’ll tell you– there are over SEVEN BILLION organisms living in that handful of soil.” Pause for absorption. See four pairs of eyes scanning the soil in their hands, about their feet, all around them. See their gaze dance from our pile, to their neighbors, to the length of this strip of land beside the parking lot. “Pretty incredible, huh?”

The two boys are holding the soil up an inch from their faces, while the two girls are beginning to move the soil into the hole with gentle strokes of their cupped hands. Just when I’m wondering what my next transition should be, I remember that we haven’t looked at our Tree in a while.

“Okay, look friends, *our Tree!*” I exclaim, taking into my hand and immediately passing the Tree around the circle again. Each student takes the Tree in hand and then passes the Tree on, some holding onto the Tree longer than others. The last girl, Mary, takes hold of the trunk and thrusts the top-most branches into the sky, “It’s so little! How will it ever grow big and make apples?!”

“Well, for one thing this Tree a Peach Tree, so this Tree won’t produce apples, but you’re right, this Tree is really small right now. Does anyone know how this Tree is going to grow big? What does a fruit Tree need to survive?” I ask, leading back toward some of the established curriculum.

“Sun!”

“And soil, and water!”

“Um, fresh air?!”

“Okay,” I say, holding the Tree in the middle of the hole, letting the Tree become our focal point. “You’re all right. First of all, let’s remember that this, *this Tree*, is *alive*, right? Like, *alive right now*. Do you call your friend an ‘it?’ Like, ‘it’s digging a hole?’”

“No, I say ‘she,’” Sasha says.

“Yeah, and we can do that for Tree, because our Tree is more than an ‘it.’ Let’s address the Tree with good manners...” and they’re looking at me quizzically at that one, so I move on. “Okay, anyway, once we put this Tree into the soil, the Tree is going to sort of wake up out of dormancy and begin to grow. And we know that the Tree will need good soil– which is why we’ve dug such a deep hole and have healthy compost for the Tree– and we know that Tree will need water– which is why we’ll be installing an irrigation system here– and we know the Tree will need a lot of sunlight for some super fascinating reasons that we’ll get to soon. So yes, our Tree needs soil, sunlight, water, air, and actually needs one more thing for our Tree to do really well... One more thing... Any one know what else it will need?”

After a brief pause, Sasha pounces– “It needs LOVE!” We all giggle, but not because it’s wrong or silly, but I suppose because it challenges the more scientifically-inclined mind we’ve been using thus far.

“You’re right dear, the Tree does need our love. Especially if we want this Tree to live a long life and give us years and years of delicious peaches, well then we need to be able care for

the Tree, so that it can care for us. We can take care of each other, right? So, in order for us to care for the Tree, what should we do?" I ask.

"We can give it food," Pablo says with the solemn look of a Father promising to care for a found kitten.

"Good, but we'll call the food 'fertilizer.' And you're right, every year or two we'll come back and help you feed your tree the right mix of vitamins and minerals. What else?"

"Oh, I know!" Mary blurts out, "we can protect the Tree from people who might, like, break it or kill it?"

"Yes, great, please do that. And you know some people might not think much of it, breaking branches or climbing the Tree when the Tree is still too small for climbing, but that's where all of you can come in. Can you promise, right this very moment, that you'll help keep an eye out for this Tree? Promise to care for the Tree as a living being?" I get nods and smiles from every one. Suddenly the air feels perfectly still, the whole morning perfectly still— a brief moment of serious yet joyous ceremony has just occurred, one that seems larger than I can appreciate right now. I smile the smile of a man who feels like his ideals and his practice are working in tandem— so see me too, if you will, smiling among these kids and trees.

#### FORM AND FUNCTION:

"Okay," I continue, "well here's another way we can care for this Tree— we can better get to know our Tree. The same way we might care for our bodies or the bodies of our pets, we need to know a little about how the Tree works and what the Tree's body does. So," I begin, changing my tone back to teacher-authority for a moment, as I see some eyes wandering to the group next me who has already started planting their Tree, "the way I want you to think of this is with two different words. *Form*, and *function*. Think about your body. Can everyone wiggle their toes?" They do. "Okay, so you have feet— that's the *form*. What's the *function* of your feet? What do they *do*?"

"They help us walk?" Sasha asks.

"Great. If you hands are the form, what's the function?"

"They help us grab stuff."

"Good— if ears are the form—"

"Listening!"

“If eyes are the form?”

“They help us see stuff!”

“Teeth?”

“Eating!”

“Okay, awesome, y’all are amazing. So, now, let’s try the same thing for our Peach Tree.” I take up the tree in my hand and hold it upright in the hole, with its lateral roots protruding outward and the fibrous root-hairs hanging down toward the soil. “So, down here we have the roots— if roots are the form, what’s the function? Why does the tree have roots, and what do they do?”

Quiet for a moment. I lift the tree higher, so that now the roots are at eye-level— we look across at one another through the earthy tendrils. I make eye-contact with Pablo and ask him— “What do the roots do?”

“Agua. They drink,” he says confidently.

“Yes, great Pablo, they drink water like a straw stuck in the soil, and then send the water up into the tree through the *xylem* layer. Do we drink water through our feet?”

“No!!!!”

“Right, pretty amazing the roots do, and can send the water up, huh? Okay, what else do the roots do for the tree?” I ask, running my fingers through the rootlets and splaying some out across my hand.

“They eat food out of the soil?” Sasha ventures.

“They do, that’s true, they get nutrients out of the soil and send those up the tree in the *xylem* layer as well. Okay, what about on a really windy day— what do the roots do?”

“Oh, they help hold it down so it doesn’t blow away.”

“Good, exactly. Because trees and plants stay in one spot, right? They can’t walk around to go get out of the wind or go walk to the store for food, so they have to stay firmly rooted in place, even when it’s windy. Okay, how about this?” I ask, pointing toward the soil-line where the roots taper into the main...

“Trunk!”

“Good, the tree-trunk, which makes a strong base for the tree. Now what about these crazy arm-thingies up here?” I inquire, holding one of the lower branches and waving it like a puppeteer makes his puppet dance and point.

“Those are the sticks? I mean, the branches,” Pablo says.

“Good, yes, the branches. What do the branches do for the Tree? What’s their function?”

“They make the leaves and fruits and stuff,” Stephen replies.

“Yeah they’ll hold all of that, especially a lot of leaves. What do the leaves do for the tree? I mean, look around,” I say, gesturing outward across the parking lot and out toward the larger view-shed, “look at all of these trees around us, and they all have leaves. But what do the leaves do? What are they doing right now for all of those trees, and for us?”

“They’re making the food?” someone asks.

“Yes, nice, they are. So right now, this very moment, the leaves on the trees around us are taking in sunlight and converting it into energy, into sugar. Does anyone know the name of process where leaves are taking in sunlight and turning it into energy?”

“Um, chlorophyl?” Sasha asks.

“Close, that’s the stuff in the leaf that makes the energy. Anyone else? Anyone here heard of ‘photosynthesis?’” Some nods. “Yeah, so the leaves can take in sunlight, and when they mix it in their chlorophyll, along with the carbon-dioxide that we breathe out and the water the plant drinks, they make a type of sugar called glucose. Then they send those sugars down the *phloem* and then use that sugar to make roots, shoots, and fruits. Can anyone name anything else that can turn sunlight into energy, or electricity?”

“Oh,” Sasha begins, “yeah, those things on your bus. Solar somethings.”

“Oh, so close! Solar panels! Yeah, plants know how to make energy from the sun just like people have figured out how to make electricity from the sun. In fact, almost all the food you’ve ever eaten comes from plants’ ability to turn sunlight into sugar. Can anyone name the one thing people eat every day that doesn’t come from plants?” I ask. “Again, what’s the one thing we eat that doesn’t come from plants?”

At this point in the lessons, if I even get to this question, I’m ready to field a variety of guesses and thoughts for a few minutes. Mostly these revolve around me showing them that that meat does in fact come from plants (grass), cheerios come from plants (wheat), fish come from plants (phyto-plankton), and candy comes from plants (sugar cane and corn). While they work on this question, I have these kiddos start to back-fill the hole, to ready the tree for planting.

“Salt and pepper?” Sasha finally guesses.

“Close! Pepper comes from peppers, which are a plant, but salt is the correct answer! People all over the world have always sought out salt in their diet, and it’s the only thing that doesn’t come from plants, because it’s a mineral present in our geology of the planet, which is super cool.” The hole is filling up slowly now, which is fine, because I still want to hit on the last part of the tree we’ve yet to discuss. “Now, as this hole keeps filling, I wonder if anyone can answer me this: where will the peaches come from on this tree?”

#### POLLINATION:

No answers come immediately, so I start showing them different areas on the branches, guiding them to look upon the nodes and buds and bumps in the branches. Pablo eventually shouts “I know! They come from the flowers!” Smart kid.

“Okay, you’re right Pablo, awesome. The peaches are going to come out of the flowers, which will come out of many of these buds. But how does a flower turn into a fruit? Does anyone know?” Invariably I get some statement along the lines of “it just happens,” and I use this to opportunity to play a quick little imagination game. Wanna play with us?

*Okay, let’s pretend we’re all honey-bees, okay? Check out our yellow bodies and our wings and our crazy bee eyes. And we’re thirsty for that super sugary beverage we love that lives in the back of flowers, called Nectar. So let’s fly over to this flower over here (I sketch out a huge shape, the height of the chain link fence and wide as a bus) and let’s fly deep into the back of that flower. On our way in, we bump into a bunch of crazy, noodley shapes that grow in the flower called Stamens, and when we bump into their Anther tops all of this yellow dust explodes out and lands on our bodies and gets stuck to our feet. What’s this stuff called?! “Pollen!” Yup, so now we have this pollen all over us, and we go to the bottom of the flower to get our drink, drink all of that sweetness, and then quick! Let’s fly over to another flower on a different tree— and remember we have all of this pollen on us right? So now while we’re in this new flower, some of that pollen comes off of us and lands in this one specific, super sticky spot on the flower called the Stigma, and from there the pollen we brought might travel deep into the flower and fertilize the flower’s Ovaries— and only then, only when this happens because of creatures like us bees, only then will this flower be able to turn into a fruit. Anyone know what it’s called when a flower gets the pollen that will turn it into a fruit? “Pollination!” Yes! What else helps to pollinate flowers? “Humming birds!” “Butterflies!” Woohoo!*



## SYMBIOSIS:

In her marvelous, astoundingly gorgeous book “Braiding Sweetgrass,” native writer and botanist Robin Kimmerer asks us to think upon just how wired our bodies are to this Earth. Describing her work with her college Botany students, she writes about a weekend teaching her students to go “shopping” for all of their needs in the local marsh. As these college kids go about digging spruce roots in the humus of marsh’s forested edge, she watches a great calmness come upon each student. As a woman with a rich spiritual background in her Potawatomi tradition, she credits the land for creating an emotional resonance with the students that is real and durable— but she doesn’t stop there. As a botanist, she also backs up her spiritual wisdom with an admirable attention to the facts that science reveals to us.

“Recent research has shown that the smell of humus exerts a physiological effect on humans. Breathing in the scent of Mother Earth stimulates the release of the hormone oxytocin, the same chemical that promotes bonds between mother and child, between lovers.”

I sit down now beside our hole, ready to close the heady flight of fancy I just took us on to instead get our hands and hearts back into the soil.

Just then we get another delivery, this time from crew-member and irrigator-extraordinaire Evan. With pale blue eyes, blonde hair pulled back in a man-bun, and the facial features of a mythic Nordic prince, his sudden presence in the group has the children gazing up at him in awe or fear or both. With slow, deliberate movements of a wizard, he reaches into a large black satchel that he carries on his hip like a huge holster. After digging into the bag for a moment, his clutched hand emerges, covered in a slate-grey powder. He reaches towards us, and with the gentle gestures of a baker, sprinkles the flour-like substance all over our Tree’s bare roots.

“Thank you Evan,” I say, “you’re a gentlemen and a scholar— there’s only a few of us left!” He moves on to the next group to deliver more from his gift bag. “Does anyone know what this stuff is?” I ask the students.

“Is it food? Like fish food? It looks like fish food,” Stephen says with serious concentration.

“Is fertilizer?” asks Sasha.

“Okay, close. This is something called ‘Mycorrhizal.’ Remember earlier when we talked about an organism– something that’s alive? Well, this powder is a living organism that’s going to help our Tree grow extra strong. But Mycorrhizal is an interesting organism, because it’s neither a plant, nor is it an animal. Does anyone know what other type of organism it might be?” No response. “Okay, it’s a type of mushroom, a Fungi. This Mycorrhizal powder is going to come alive in the soil and splice itself, insert itself, into the roots of our Tree. Then the Mycorrhizal is going to spread out and meet up with the Mycorrhizal we put on that Tree’s roots,” I say, pointing toward the apple tree going in next to us, “and over to all of those Trees down there,” I say, motioning toward the other fruit trees going down the line, “until eventually all of these trees will be interconnected, like in a big web. And then, together, all of these Trees are going to use the Mycorrhizal Fungi to share nutrients with each other.”

“Wow.”

“Yup, and here’s the cool part– the Mycorrhizal can’t make its own food from the sun like the plant can– and the plant can’t access as many nutrients and transport them the way the Mycorrhizal can. But together, they both help the other one out. The Tree will provide the Mycorrhizal with sugars, and the Mycorrhizal will provide the Tree with nutrients. Does anyone know what that’s called? When two species are engaged in a relationship where they both benefit?”

After a bit of errant guessing, I let them know. “It’s called *Symbiosis*. Can everyone say that word with me? *Symbiosis*?”

“Symbiosis!” they say in unison (which makes my heart sing.)

“Awesome. So, if two organisms have a relationship in which they both benefit, like the Mycorrhizal and the Tree, or the Bees and the Trees, do you think *we* can have a symbiotic relationship with this Tree?” I ask.

“Yeah I guess so,” ventures Pablo, “unless we have to kill the tree to eat the fruit, but we don’t right?”

“No, we don’t. So you’re right Pablo– because like we already said, you all are going to take good care of this Tree, and in turn the Tree will help take good care of you. That sure sounds like we’re all benefitting. So here’s another question you all can think about today, and for the next few decades of your life.”

“What?” Sasha asks, curious.

“How many relationships can Humans have with Nature where we all benefit? Can Humans have a more symbiotic relationship with the Earth? And with each other? What might that look like?”

#### PLANTING THE TREE:

You never get to know just how much the students are retaining the information that you’re actively giving them in the moment, with your voice growing hoarse and your body alert and awake from the exertion of speaking your small mouth noises– speaking your small pollen. In these schoolyards we don’t test the kids after we plant a tree, and I doubt their teachers do either. Instead, I like to think that this model of experiential, service-based learning is activating something within them that goes beyond mere memorization of facts. It is my hope that somehow, when work like this engages *the head, the hands, and the heart*, students will grow a well-grounded understanding about themselves and their world, and perhaps that understanding might become folded into the very heartwood of their being. It is my hope, and the hope that many educators hang their work upon, that if we can provide a certain set of experiences for young folks now, then perhaps it will urge them to be good people today and tomorrow– helping them to become more conscious, empathetic, honorable, and loving members of our increasingly global village.

When we talk about what these orchards will look like in twenty years, which means these kids will be in their twenties and thirties with kids of their own, I think we’re all hoping that our global village will be in in a much healthier state than the wobbling one we witness today. But how to move from hope to reality? I for one grow rusty if I keep that hope silent and unarticulated, and I’m weary of letting that hope languish in unspoken idealism instead of flourishing in practice. Instead, I and tens of thousands of others are trying to figure out the right practices to work on *now*, and the right way to articulate it *now*, so that we might realize that better world *then*. But to speak that vision is a task that proves tricky– one’s wild ideas always need pruning.

But nevertheless, here’s how I think of it at this point in my life– here’s my articulation:

All people working for justice– be it environmental, social, nutritional, spiritual– we all work toward a world that will some day be united by a sense of shared destiny; one where *all* members of the Earth community are treated with dignity and respect– one where *all* people in

*all* places have made peace with Nature and are welcoming Her back into our cities and homes— one where our modern lifestyles no longer run at a deficit, constantly over-borrowing from Earth’s generous but limited coffers— one where individuals feel interconnected and interwoven with one another and the Earth, and base their decisions upon the good of the whole— one where we share a common vision but we cultivate our own unique way to see it— and one where healthy bodies, healthy food, and healthy land emerge out of the same ethos of symbiosis. This Earth we work toward imagining, manifesting, and practicing is to be realized as just part of this ongoing Creation— a Creation that is always being generated and supported in ways that are disciplined, diverse, virtuous, artistic, and wildly, delightfully playful.

E.M. Forester had a take on the importance of speech to edify ideas. He wondered “How do I know what I think until I see what I say?”

What do you think we should do? And how do you help bring it into being? How do you say it?

“Okay, we’re getting close, anyone want to name the Tree?” I ask. The kids have been working together mostly in silence for the last few minutes, figuring out how to move the dirt the few feet needed while also packing the soil in along the roots. I’ve been holding the Tree at the right height, so that the soil will come up to the Tree’s previous soil-line (when the Tree was growing in a nursery field before harvest,) and now I take the Tree and shake a little, nudging the branches to dance. “Should we name it?”

Still no one answers. I’m not sure about the naming thing myself, but I like to give them the option. “Well then, we’re almost there. Stephen, can you hold the Tree while I help get this last part in?” He does, and I crouch down to use my fingers to quickly pack in the soil around the roots like a potter pinching her clay into a mold. “Okay, now let’s get the compost on here too,” and we all do. Right on time comes Leo, acting now as foreman with his metal clip-board and mirrored sun-glasses, and he gives me the finger-twirling gesture of “wrap it up.” Forty-five minutes already?

I invite all the kids down to ground-level now to help me with the final dirt-tamping. We spread the compost around, the texture soft and warm to our touch. I show them how to sculpt a

small, crescent-shaped berm on the down-hill side of the tree to help retain more irrigation and rain water. When that looks good, we stand up.

See our Tree again: it is five feet tall, has five or six branches growing off a central leader, its buds look swollen on the smooth-skinned bark, and it is surrounded by five humans. Through the knowledge, practice, and patience of hundreds of generations of orchardists, we have before us a tree that has been genetically bred for this specific soil type and climate, and most importantly, for the delicious peaches it will produce. And through the knowledge, practice, and patience of the folks who run this non-profit Common Vision, we have this Tree in this school-yard on this exact day in this exact, school-sanctioned way.

See us now from above: the five of us around our Tree, and then the five other groups standing around their trees— all in a long line that runs along the parking lot and chain-link fence. See us from the street: half a block of concrete sidewalk, half a block of ten-foot tall fence, and half a dozen groups planting half a dozen trees.

See us from within this small group: here, put your hand on the tree. We're going to have a ceremony, and I invite you in.

Again from Robin Kimmerer:

“Ceremony focuses attention so that attention becomes intention. If you stand together and profess a thing before your community, it holds you accountable.

“Ceremonies transcend the boundaries of the individual and resonate beyond the human realm. These acts of reverence are powerfully pragmatic. These are ceremonies that magnify life.”

I invite us all in. “Okay, now, can we all do one more thing together? Can we all put our hand on the Tree for a planting ceremony?” They all oblige. All of our hands grasping the Tree, some on the branches, some on the stem. I tap into my experience holding space for poetry readings and speaking at weddings and running certain fire ceremonies— I tap into the vein of the Present like a Vermont-sugarer taps into the phloem of the Maple, and I let the sap run (in more ways than one).

“First of all, I’m really proud of you all for doing this work today. You’ve done something that won’t just benefit you– it’s also going to positively impact your whole community for many years to come. That’s really special.

“Second, I want acknowledge how great you all worked together, and I thank you for that.” I try to cast my eyes toward each child, making eye-contact, affirming them and witnessing them while still engaged in this powerful act. Hoping the piercing gaze of an adult ally might affirm the essential goodness they may be feeling right about now. “This is an *historic day* for you and your school. In the future, you’ll be able to say that you were here when your fruit-tree orchard was planted, that you helped to plant these Trees, and that is truly deserving of this ceremony. Just like other important times in life when we have ceremonies, now is a good time to have one.

“So what I’d like you each to do is, on the count of three, let’s all take another deep breath in together. We’ll inhale together, and when we exhale, let’s send this Tree as much love and positive intention as we can toward our Tree– imagining this Tree with strong branches, deep roots, and big, delicious peaches...” I watch them look around at each other a little self-consciously at first, but they see that I’m taking it seriously, and it appears that feel safe enough to do so too. “Okay, ready? ... One, two, three...” and we all audibly inhale, our bodies filling with oxygen– our bodies breathing in this invisible oceanic medium of air like the rhythm of a tide– the beaches of our lungs receiving the air and transporting the oxygen through the terrain of our interiors– the billions of organisms that each of bodies house welcoming the air like a plant welcomes water.

In this space I also direct some positive thoughts toward each of these students as well, wishing them love and adventure and connection throughout their lives within this shared Earth, in whatever state this Earth will be in– and wishing them a feeling of grand possibility and excitement for this fruitful fact of existence– and also wishing them peaches: sweet, sweet peaches.

“And exhale...” and we all do, our bodies contracting, pushing out the chemically-altered air and releasing our unique CO<sub>2</sub> back into the atmosphere, the mass withdrawing from one place and moving onto the next spin of the cycle– watch it float toward our Tree, and watch the Tree take a turn.

“Alright kiddos, that’s it. You did it. Our circle is closed, our Tree is planted, you may go in peace to serve your community or your dog or your teacher or your Mom. But seriously, it was great working with you, I’m proud of you and your school, and we can’t thank you enough for helping to make your school and this Earth a little better today...”

Stephen and Pablo both thank me and immediately chase each other away toward their teacher, who is already beginning to herd her flock. The two girls Sasha and Mary, however, are lingering, once again padding down the berm we built, their fingers in the humus. Two other students from another group come over, a boy and a girl, and drop to their knees to help.

“What kind of Tree did you plant?” the boy asks Sasha and Mary.

“A Peach Tree. Isn’t it pretty?” she replies prettily.

“Uh-huh. We planted a Plum Tree. Maybe some day we can have a fruit party together,” he says with light in his eyes.

“I sure hope so,” I say to them, picking up the shovel I had leaning on the fence. With a nod I take my leave, allowing them a few moments of free-verse time beside their new Trees.

“Hey Mister,” Sasha calls to me as I walk away.

“Yes Sasha?”

“I promise you we’ll take care of the Tree,” she says with a look of serious joy in her leaf-green eyes. “And I know the Tree will also take care of me.”

### Portrait of An Alder as a Young Tree

Our baby Alder's life began in a nursery. The seed, however, was a wild one, collected on a frost-biting day from a nearby swamp in late-autumn, then germinated the following spring. Alder seeds, which come sheathed in a fruit-cone, often travel downstream to seed new banks and establish new wet-lands. The seed of our tree, however, was plucked by human hands and then transported upstream in a truck, destined to grow along a different creek altogether.

Surrounded by several hundred cousins, and growing amidst multiple other species, the Alder spent a full year within the plastic walls of a heated green-house. Growing in a yellow tube filled with rich potting soil and lightly watered twice a day from overhead sprinklers that resembled hovering dragonflies, the baby Alder knew nothing yet of summer thunderstorms and turbid flood-waters. Walled-off and protected from the hungry foraging of the local fauna, the Alder's one-inch-caliper trunk never suffered the rodent-gnaw of meadow voles nor did its branches need to withstand the leaf-stripping tongues of deer or moose. In addition to all of these curious circumstances, the Alder also had the occasional human hand brushing against its few leaves, stimulating it like a breeze. The humans also exhaled their CO<sub>2</sub> beside the tree, which the Alder then used to photosynthesize and breathe.

Following that first year of relative ease and isolation, the second spring saw our Alder graduate to its own plot of earth in the fields nearby. Again surrounded by thousands of other toddler-saplings, here the Alder began to establish roots and even push a few buds to leaf by mid-summer. The roots were cared for with frequent waterings from a coughing old pump in the river, while the leaves tasted their first days of sunshine and withstood their first autumn winds. Occasionally, the roots began to feel crowded amongst some competing grasses and herbs, and again the humans came by to offer their care. Sometimes working in groups, other times working alone, the people would remove the encroaching neighbors beside our Alder's trunk. The tree grew two feet that second year, and heading into winter it looked healthy— the bark was beginning to darken toward a rich, marbled-maroon, and across the slim girth, at varying



intervals, the pale-grey horizontal lenticels began to grow more pronounced, the appearance of which confirmed the veracity of the people's name for the tree: Speckled Alder.

After the few leaves fell to the ground, where they joined the crackling mulch of neighbors' leaves, our Alder gently drifted into a deep winter sleep. While in its dormant slumber, the tree was repeatedly buried by snow-storms. With its up-most branches hidden under the snow, the Alder was stepped on one night by a passing deer, breaking off part of the upper stem. Other than that, the winter passed without incident, and as the lengthening days and strengthening rays of sun began to melt the snow from the fields, the Alder appeared poised for another year of robust growth, despite its dangling branch. But just as the coming spring brought with it the songs of returning robins, it also carried humans back into the fields, and this time, they brought a tractor.

With a roaring engine and tires taller than any tree in its midst, the tractor made its way toward our Alder at a slow crawl. One moment the tree was growing upright in the soil, and the next it was bending beneath the tractor's metal body, its cambium getting scraped by the steel. Right behind the tractor came the implement in tow— a seedling-harvester. Cruising at a depth of two feet beneath the Alder's roots, the implement's long metal tines tore through the soil, and with rapid up-down motions, lifted and dropped every tree it encountered, including our Alder.

Before long, a hundred-foot long row of trees was worked over, with the tractor leaving thousands of up-rooted trees in its wake. But in addition to the human driving the tractor, a group of five other people were coming up behind. Trailing the tractor in tan work jackets and armed with red-handled spade shovels, these people were scooping the freshly-loosened soil into their shovel blades and scattering the rich earth on top of the newly-exposed tree roots. Eventually our Alder, laying there with its branches on the ground and its roots completely naked to the spring sun, was again cared for by the humans. With a flick of the wrist, a mound of dirt was tossed onto the roots.

Next the people doubled back. Working together, they pulled the baby trees out from their temporary mounds of dirt. Holding each tree delicately but with the speed of farm-workers, they measured each tree against an orange stick they'd shove in the dirt beside them. Separating the trees into piles based upon size range, all of the trees rested in piles, including our Alder— its diminutive branches barely visible amongst the bramble of the two dozen others in the group.

Again the people doubled back, this time carrying large, black contractor bags half-filled with soggy saw-dust. Each person filled an order with trees, writing out the name of the trees' size and eventual destination onto colored tape. Our Alder made it into one of these– the sharpie-penned script upon the label read “Alder Brook, 20 x 2-3ft.” Our Alder's long, spindly roots were rolled up around its base like a woman's hair put-up to dry, and then placed in the bag with twenty other trees, with all of their top-stems barely poking out of the top. That bag, and about two dozen others, were then loaded onto a truck and driven away, leaving behind the field in which they'd just spent the last year of their lives.

The trees rode past the green-house from which they'd be first nursed to life, and then past that to a barn where their seeds had first been laid out to dry after collection. The people again got to work, and before long our Alder's bag was taken from the truck-bed, hefted onto the shoulders of a young woman in overalls, and brought into the barn's refrigerated basement. There it was placed in a pile with other trees of other species, with each bag labelled “Alder Brook.” An hour later, with the trees unloaded, the people left, shutting the heavy, creaking door behind them, and all was dark and still.

Weeks passed. Outside, the spring thaw caused creeks to rise and flood-plains to become wet-lands. Every day or so the humans would throw open the basement door and flood the room with light. Working together, they'd remove all the bags for particular destinations– those labelled “Beebe Farm,” “NRCD,” “US Fish and Wildlife,” and “Nature Conservancy” all went out that first week. Our Alder remained, silent and immobile in dormancy.

One warm May morning, the first of its kind that year, the people came to load trucks at dawn. It was late in tree-planting season, and even in the near-total darkness, many of the trees had begun to break bud, pushing out small green leaves that resembled curled green caterpillars.

When the door flung open, the trees experienced a humid, fragrant spring air waft into the basement, and our Alder's slight leaves likely bent toward the light. Our tree's bag, and all of the other “Alder Brook” bags, were loaded that morning and driven twenty miles up-river.

The truck stopped at the mouth of a small tributary– the last stretch of Alder Brook– and got out. The people unloaded the bags and carried them into the shade of a great willow– the only tree standing upon that half-mile of creek. Before long, a mound of black bags, containing over a thousand trees, all leaned against one another and the trunk of the willow. One small

crew of four people remained with the trees, and as they sat beside the bags they drank water and lathered themselves with sunblock, apparently waiting.

One thoughtful crew member even noticed that the trees looked dry. She walked to the creek that meandered just below them, lowered a five-gallon bucket, let it fill half-way with the murky brown water, and then hoisted it back up onto the eroding bank beside him. From this she watered each bag, re-wetting the roots and saw-dust. Our Alder received this gift thirstily, its drying roots absorbing the water like a parched throat.

An hour later, a school bus full of young humans arrived. The bus parked where the gravel met the grass, the door opened, and the children swarmed the field and overcame the crew members. They gathered around and were asked to sit down in the shaded grass. Our Alder's bag became a seat for a few of the kids. Its branches grimaced under the weight, but did not break.

The crew held a meeting with the children beneath the willow and beside the water. The crew spoke about this brook, Alder Brook, and described how the stream was like a person with a sickness. They pointed upstream— describing the ways that people had harmed the water by cutting down the special trees that used to line the banks, called the *riparian zone*.

With trees, the crew explained, the water here used to be cold, clear, and clean. Without the trees, this brook had become warm, brown, and dirty.

With the trees, branches cast cooling shadows on the creek, and from their branches fell the insects that fish like to eat for lunch. Without the trees, the sun baked the water all day, making it too warm for fish and too open to support arboreal insects.

With the trees, there were complex networks of branches from which birds would sing, tree-frogs would trill, squirrels would bark, and raccoons would chortle. Without the trees, this creek is silent.

With the trees' roots, the banks of the brook were held together like a barn is held together with posts and beams. Without the trees' roots, the banks of the brook have sloughed off and collapsed like sand castles built too close to water.

With the trees' roots, there were elaborate homes for muskrats, mink, and swallows. Without the trees' roots, the banks are empty hill-sides that resemble golf-course sand-traps.

With the trees' roots, there was habitat for billions of micro-organisms that could filter out pollutants from parking lots, cow pasture, and golf courses. Without the trees' roots, these pollutants are making their way into our rivers, lakes, and ultimately, the One Great Ocean.

With the trees, people used to live here too, for thousands of years. These people knew the songs and stories that these trees supported. Then new people came, of which most of us are descendants, and in their rush to build farms they cleared the land too hastily— they cut down all of the trees that used to grow along the rivers. In the process, whether or not they meant to do it, they silenced the song of the rivers, and for a long time we could no longer hear them. They stopped having give-and-take, take-and-give relationships with the rivers, with the water, with the land.

With these trees, the crew explained, we're here to help repair some of that damage. We're here to help restore some of the functions of a healthy brook. We're here to heal our relationships to this place, and to create new ones. We're here to plant some trees.

And to plant our Alder tree.

With that, they split the children up into six teams, and spread themselves out along the creek, carrying shovels and their bags of trees. Our Alder's bag was hoisted onto the shoulder of one of the young crew members. He carried the bag and felt the weight of the saw-dust and trees on his back. He chatted with the children. He led them to the far end of the field, right where the creek emerged out of the forested hill-side. He wanted them to see the difference between the farmed stretch of stream and the one that was undisturbed. He wanted them to see mature Alders.

At the ecotone, the edge, where forest meets field meets stream, he stopped and directed his team. Together they dug a few holes atop the denuded banks. Even though the creek had incised itself deeper into the land, he thought that these wet-loving species could still do well here. He saw evidence that early-spring run-off would swell the creek to bank-full, and these alders and red-osier dogwoods and viburnums would get the soggy soil they love. Our Alder, he surmised, would do just fine.

Together they planted a few trees, taking their time to get the soil-levels right, to spread the roots so that they could begin growing with ease. They talked. They breathed. They listened to the water sing and the breeze hush through the grasses.

Our Alder was next. It was the only tree left in the bag. The young man came over, grasped the tree with dirt-stained fingers, and extracted it from the sack like a rabbit from a hat. To his eyes, it fairly glowed with life— its flesh a rich ruddy red, its branches perky, its buds swollen, its roots fine as a maiden’s hair.

With great care, he spread the roots of Alder across his hands and described what he saw. In addition to the spindly tendrils of roots and rootlets found on all of the other trees, alders exhibit a most curious adornment. Pale-orange, bead-like bumps, called nodules, rise off the roots like warts. Into these nodules have entered a suite of bacteria throughout the tree’s two years of growth. These bacteria, known as *Frankia*, do something amazing for our Alder— they allow it to pull nitrogen from the atmosphere and “fix” it into the soil. Such additions of nitrogen is what allows alders to grow so well in otherwise nutrient-poor, bare soils like these.

In exchange for this nitrogen, our Alder will provide the bacteria with sugars and minerals. As the bacteria accesses more of these nutrients, they in turn fix yet more nitrogen, further enriching the soil. These two species, our Alder and these *Frankia*, are engaged in a mutualistic relationship where not only do they both benefit, but the soil around them grows more rich and fertile as well. This brook, likely named Alder Brook because alders used to thrive here, could some day become rich habitat for them again. With the help of our Alder.

Holding it upright, the tree-planter helped the children break up the sod clods and fill the hole with soil. The orange-nodule-clad roots are buried, and the soil crept up to the base of our Alder. While they worked, the crew-member spoke of what future this tree might lead, asking the young people to consider themselves witnesses and guardians of this Alder, and all of the other trees being planted around them.

They padded down the soil with their fingertips, leaving dozens of print that resembled tree-rings. They stood up, stood around around our Alder, and uttered words of respect, honor, hope. In ways that our Alder could likely understand, the people pledged to participate in this trees’ future, and to benefit from it as well. To engage in a symbiotic mutualism not so different from the Alder and the bacteria humming below the dirt.

And then they walked away, leaving our Alder to begin its new life, in its new home. The creek sparkled beneath it, the sky warmed above it, and a warm wind began to rattle its tiny leaves like prayer flags in a breeze.

Later that day, all the humans went home. The sun withdrew behind the western hills, and dusk streamed into the river valley and crept up Alder Brook. Our Alder, and the fifty other new trees, appeared to stand together like a miniature forest in the twilight. A raccoon emerged out of the forest to prowl the creek-bed, and she paused at the sight of new trees overlooking her from the banks. So too were the birds aware of their new companions, as several fly-catcher birds were already using the branches to alight from in their curving quests to devour the aerial may-flies. Our Alder provided just such a perch– the fly-catcher’s grass-thin talons grasped one of the lower branches, which was one of the first branches our Alder produced in the greenhouse nearly two years before.

The next morning, one of the crew members returns to the field to check on the trees and retrieve some tools. He returned to our Alder, which he helped to plant with the kids, and has a seat beside it. Together, separate yet newly inseparable, they are a new sort of dream– Alder, human, and stream.

### Mission: Restoration

I’m lucky I didn’t step on her. Hell hath no fury like a mother protecting her brood. And I’m in no hurry to test her mood. I quickly lower my eyes, shift my trajectory, and skirt on by. For me to interrupt the incipient life-force she stewards would go against my mission, and my mission is already a fragile and delicate process, easily bruised. Keep on walking, tell the team soon. I wonder how they will take it, and how to phrase it best. Best to just say it: “the goose is on the nest.”

Eventually I reach the further boundary of the site, sliding myself sneakily into a deeply dappled grove of mature black willow trees. Here I cross the trickle-deep creek with a grunting leap, dodging the dog-wood branches that overhang and entangle. Heading back downstream, I sidle through just-budding viburnums and emerge from the thicket at the same time the sun emerges from its morning cloud cover. The world explodes into light, and with it, the nine figures of my team also come into sight. It's 0900 hundred hours, my watch tells me, and they look ready for rations. I walk briskly back toward them, careful to give the just-discovered nest a wide berth. This mission can be hard, out here, away from home, with few people really understanding what it is we do, let alone how to support us. But we do it for them anyway. And we do it well.

We've already planted seven hundreds trees on this site since yesterday, and we've got at least another thousand awaiting us on the other side. I looked at the map earlier, and by this evening we expect to cross the thin red line that separates this silver-maple floodplain forest from the alder swamp, where we're surely in for a difficult time. I hope these kids can stomach the destruction we're sure to see over there— ten decades of mismanagement having left the stream incised and the banks denuded of life. Not a pretty sight.

This all comes with the territory. It's part of our job to defend our very way of life. And we do this duty with honor, courage, and sacrifice.

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I come home from doing this work as an “ecological restoration practitioner” exhausted but honored to be doing the work. I stop by a friend's house. One of his roommates, and three of his friends, are playing the shooter game “Call of Duty: Black Ops” on his PS3 console. Over forty million people are subscribed to an online platform for playing this game— most log dozens of hours each month, and some log hundreds.

I stand beside the LCD screen and watch their faces glow with flashes of animated gunfire. If the blinds weren't drawn on the living room windows, I would see the river out there behind their heads. I also know that this river is severely polluted, and in need of more people to not only lessen their impacts, but also to go out on restorative missions like the ones my team and I are on leave from now.

I learn that these four young men have been pursuing one virtual mission in this game for several hours a day over the last few weeks. They describe to me the importance of understanding the goals of the mission, executing it with speed and efficiency, and how important team work is throughout. They speak with conviction about the brotherhood they've developed, the bonding experiences of facing a common enemy, and the military code of honor they uphold while playing. "We don't ever leave a man behind," one of them tells me with a steely glare. "We've been friends since college man, and we stick together."

"When did you guys graduate?" I ask.

"Three years ago I guess, right?" He looks at his friends, and they nod and shrug.

Standing just a few feet away from them, I feel a vast gulf exists between us. I am only a few years older than these guys, and my guess is they've been educated and raised within the same modern American culture as I. They have studied the same difficult facts about the state of our world, and they have easy access to thousands of proposed ideas and solutions. If I were to ask, I'm sure each of them could demonstrate a knowledge of climate change, of the water cycle, of industrial vs. organic agriculture, of over-population, of colonial-global conquest— you name it. They have the info. But clearly, that's not enough. "Humanity will destroy itself not from lack of information, but from lack of appreciation," I say aloud, quoting Abraham Heschel, the civil-rights era Jewish theologian. No one answers me.

It would appear the five of us are all looking upon a similar terrain— we all live within this denuded, impaired anthropocene landscape. In fact billions of us are gazing at this, with varying shades of understanding, and the picture is coming into focus quite rapidly. And yet these four men— and let them stand in for the millions also playing this very game right now— and for the millions of others who are stuck in the easy chair of apathy— these four men are not engaging this information with the same vigor with which they engage their cartoon enemy. Why not? What's missing?

"A couple of us are heading down to the river to have a fire soon. Probably cook some food and play some music. You guys want to come?" I ask.

No answer. The roar of a fire-fight has erupted from the surround-sound system— the crashing, symphonic music of Wagnerian anthems deafen. The anthems of what? I wonder.

Outside an hour later, swollen with spring snow-melt, the river is even louder.

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I believe in the freedom of these young men to spend their time as they wish. I honor the men and women who have helped secure that freedom— both the lovers and the fighters. I honor the men and women who crafted our guiding laws— both the fighters and the writers. I honor the Earth that makes such freedom possible. The original constitution is not a document written on parchment— the constitution for which I stand is all of Creation, and sometimes it seems this constitution is under attack.

Our way of life, as in humanity’s way of life, has always been one that intertwines with the life that surrounds and supports us. More so than any ideology or religion, our genes and stories have been perpetuated through time on the strength of our physical, land-given health. Try as we might, we have never eaten money or created offspring with a machine. The very foundation beneath all of our endeavors has always been the fertility of the soil, the purity of the water, and the abundance of a place. For some time now, it’s been appropriate to construct our identities relative to political boundaries. But now, it’s becoming clear, the place where we all live is this one shared diverse Earth, and that we are really just one shared diverse human race.

But the Earth, and our freedom to pursue happiness upon it, is under siege. We are educated, from a young age, that a time may come when we may be called upon to take up arms to defend our way of life. To “go into the service.” But with whom do we identify when we say “our?” And whom are we serving?

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In my senior year of high school, in May of 2001, the New Hampshire National Guard and the US Marine Corps came to our small-town school and put on a fun and upbeat assembly. With the possibility of prizes like baseball bats, climbing ropes, tee-shirts, and free passes to paintball, we were invited to attempt various, seemingly-outlandish obstacle courses and feats of strength. I felt intimidated by these military men and their biceps as big as my head. I was more a lover of rivers than of Land Rovers. But when I got selected to join the pull-up competition, I felt a giddy thrill at the possibility of earning praise from G.I. Joe.

My light frame and desire to prove myself gave me the strength to complete eighteen pull-ups— I beat out our star baseball pitcher by five. I won a “Marine Corps” tee-shirt. I was clapped on the back, sent back to my seat, and over the mic, was told “You’re just the sort of material needed out there!” For the next five months, much to my mother’s dismay, military

recruitment arrived through my mail and my phone multiple times a week. It felt good to be wanted. No one else was recruiting me.

The week after that assembly, our yearbooks came out. Our faces and exploits filled the black and white and brittle pages. In the back of the book, however, was a glossy, illustrious twenty pages devoted to the year in pop culture. Jennifer Aniston in white tank top; a milk mustache over her sexy smile. A picture of Green Day on stage; chain wallets and dyed hair. The cast of Dawson's Creek, all wearing American Eagle. We all knew all of the figures and personalities featured. It felt good to be included in this culture-wide community.

That night, after another hour studying the glossy pop spreads, I looked through the pictures of my class-mates. So many faces, so many stories, so many future adults, so many kids. I realized that I knew very few of them.

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Military might and the consumerism of pop-culture emerge first from persuasive might. There are pre-existing cultural narratives through which our youth are shown how to identify with certain philosophies and life-styles— and when the time is right, many of these youth can be convinced to go off and risk their lives to fight for those ideas. As adults we assume we've outgrown this, but we subtly engage with the narrative anyway; the language and patterns permeate our epic sports battles, our movie-quoting friends, our war on weeds. We justify actions by way of the righteous fight and the honor and courage one needs. We are shown that success is dictated by the car one drives over the driving ethics of one's deeds. How might we subtly shift these propensities toward other goals beyond a nation's virtues or greed? Clearly, we're in need of other guiding visions, and other dreams.

The dream of military glory and the dream of material comfort are sold to us through similar streams. We have a media culture that glorifies the personal over the communal, and the superficial exteriors of our identities over the deeper interiors of our souls and psyches. *We do* have an innate, adaptive desire to belong to a broader community, which can be seen in our near-ravenous consumption of the connections and interactions that social media is starting to provide. *But how* do we fulfill that desire, and from what sense of identity does that desire emerge? Through what new dream might we execute a surge?

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We used to think about freedom *from* things like terror and tyranny. I want us to think about the freedom *to*. I speak with so many when I proclaim that we have a dream— that one day our children will live in a world of rich and illustrious ecosystems, healthy and productive land-bases, clean and free-flowing waters, compassionate societies, and loving communities. We dream that they may be free to enjoy fair and just interactions with all fellow humans and non-humans. We dream that they may live in a way that honors the sacredness of water, sun, soil, science, and spirit. We dream this simple and humble dream, that they may always feel a clarity of purpose about their mission, and that the cultivation and propagation of this mission will always unfurl in a serious, wild, and altogether playful feedback loop that describes the hoop of every night and day.

This world we dream of exists on a horizon that we will only reach by our own courage and volition. To continue this work, we must continually refine the mission. The tactics and strategies are diverse, as we are still in the beginning stages of articulating solutions and testing them out. It seems a consensus is being reached in a few areas, and one in particular that speaks to me (for we all must take up the tasks for which our individual skill-sets seemed designed), is this: we need more minds to join the cause. Actively disengaging our maladaptive behaviors and restoring adaptive ones is a mission that is going to require all hands on deck. If we're truly trying to right Space-Ship Earth, we need as many members as we can get. I'm here to recruit.

Of course we risk danger in activism, dogma in vision. We must proceed despite this, and ask how to go about recruiting more people into the mission in a way that does not manipulate or control, but rather liberates and cultivates the virtues we already extoll. But we will never enjoy the one-sided, black-and-white narratives the military employs. Nor will we be able to achieve the visual and emotional saturation capabilities of the corporate-owned media. Instead, our recruitment needs to be nimble, fluid, and emerge out of a trust that the light of the truths we present will do the work for us. The recruitment, however, will not be ideas alone— we advocate for Experience above all else.

How could I, standing there in that room, try to recruit those young men, those individuals? How could I get them out in the field with me, working on restorative missions in our homeland? We've already established that information alone isn't doing it. And unlike military or consumerist recruitment, this enlistment process has no room for coercion— for it is

reliant on the self-willed, self-realized acknowledgment that the mission begins at the very *intersection* of the Self and the World. The actions then emerge from the hard-won merger between Self and World. But how do we encourage people to embark on that ancient, seemingly esoteric quest? And can we trust the mission that arises will bring out our best? How might we take the military template, tease out its worthwhile patterns, and apply it to how we support the young people who pursue a wider quest? One way, I believe, is to resurrect some version of the traditional “Vision Quest.”

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Some years back, a friend and I executed a mission around New Zealand’s South Island. We were young men, just out of college, heads full of romantic notions and longings for the wildness of forests and oceans. This was a few years after 9/11, and two years into Operation Iraqi Freedom. We both knew one or two guys our age who were over there. We both knew that, in a different time, we would have been drafted. We both knew that our decision to enlist in a tour of our own design was some sort of peaceful *doppelganger* to the tours on which our soldier friends had been deployed.

We both also sensed that the parallels between these two cultural quests ran quite deep. We sensed that in between being kids and being men there was a space, and along the way, a series of thresholds. We intuited that we had to go meet them, confront them, and move through them. We knew that our peers in the military were embarking on this same journey, but that the missions were leading toward very different places.

On one especially wet afternoon, amidst salt-stiffened oceanic winds, we completed a ten-day march through the Kahurangi Mountains. The last miles of trail followed a broad, rain-forested river all the way to the ocean, and then ended beside the coast’s one main highway. Our boots clicked on the pavement, audibly distinct from the last days of quiet walking. We were bent, back-packed figures in the foggy light.

Even though we’d known each other for years, and had already been on the road together for a month, we spent the first few days of our hike truly and fully telling our life stories to one another. We took turns, letting the other speak for hours if he needed or wanted. By the fourth day we’d caught one another up to the present time, and only began hinting at what the next stages of our life stories would look like. We grew quieter with each subsequent day thereafter. We both knew that even if we figured out how to keep traveling for six months or twelve, we

were going to be returning home eventually. We knew that we had left home grown boys, but that we wanted to go back as men. But what that change would look like, and how it would inform the next phases of our lives— what of jobs? homes? wives? — those questions hung about us like the low-clouds that moistened our eyes.

A light rain permeated everything— it seemed to be falling, misting, evaporating, and repeating all simultaneously. The road hugged hills, and the cliffs beneath us exploded in a wild surf. We got one ride, and then another, and another. We were wet, exhausted, hungry. To hitch back to a base-camp we'd arranged near the trailhead was going to take a couple of days at least. The hike was over, but the adventure, or ordeal, continued.

One driver dropped us off beside a thundering river and wished us luck. My buddy walked off to relieve himself, leaving me alone on the road. Well-worn from my our hike, I hobbled out onto the narrow bridge, feeling the river's velocity beneath me. I gazed upriver into a vast and uninhabited watershed. So exhausted now, I was wide-open, fragile, vulnerable. Transfixed by so much motion— the world was a flowing mandala of rivers, mountains, and low-slung clouds that tied the tatters of a vaporous, diaphanous gloom. I marked the out-flowering forests of beech and kauri trees lining the river, with pierced-green ferns climbing and perching and spreading in every available niche— dozens of species represented in all their vividness. I noted the flanks and folds of the nearest peaks, with each crinkle and crease releasing rising mists and falling creeks. I noticed a numbness in my body, and an instability in my mind. In a sudden, disorienting roar of river and hurling of sky, I felt the whole, full force of this wild watershed pouring into me. I received it as if I were the sea itself.

The force that animates all life was felt as this raging flow. It poured, and it pounded, and it pummeled me with an ancient, relentless, terrifying energy. For a moment there, on that bridge, I experienced a total dis-lodging of an anchor within me. For a moment there, above that river, I ceased to be me, and went adrift. I co-identified with all that has ever been, or ever will be, and for what seemed an eternity, lived in that rift.

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And yet, there is nothing new about this. And I don't consider myself all that special for having had the experience. For the remainder of that journey, and throughout several others I've been fortunate enough to take in the intervening years, I continually come across others who have had, at some point in their lives, a similar experience. A similar, boundary-dissolving set of

moments that subsumed their egos under a flowing sensation, and co-identification, with the entirety of Earth. Born out of an intense, sometimes-frightening, sometimes-enlightening confrontation with the phenomenon of Life, these people describe a sudden departure to a sense of self that exists *beyond* or *before* the phenomena. I've heard stories of this happening while immersed in the wild, raw grandeur of mountains or deserts. Also in a glancing look into a stranger's eye who was wasting in the gutter, or a leveling of eye-contact with the sudden, ominous arrival of an animal. The stories are all different and yet all the same. This is truly an ancient arc: to the Hindus, this is the journey of us realizing that our *Atman* (our essential self) exists within and through *Brahman* (the unified, transcendent Self).

Many cultures have deliberately encouraged folks to pursue such a path, and to seek opportunities for this experience to arise. For some, it is done through years of study at a monastery, ashram, or temple. For others, the emphasis was on finding such paths into the *wildness* of the world. For many indigenous traditions in North America, one was instructed to pursue a Vision Quest that would lead an individual, through a confrontation with the Great Spirit, to identify with that Oneness. The vision found would then inform how one ought to live from that point forth.

Some wonder if such a seemingly “spiritual” tradition is still relevant in this more secular, aspiritual time. But we needn't, I believe, immediately ascribe spirit to the process if that gets in the way. To go on such a mission, you confront things we need not consider spiritual at all— the cycles of birth and death; the fragility of the body; the necessities of being able to procure nutritious food and clean drinking water; and the value and importance of community.

Despite how it may feel sometimes, we all do live in community. It's pretty damned hard to live a socially solo human life, and impossible to do so materially. Our bodies feast upon, and host, community. Yet one of the more desperate sensations of our time is that many people *do* feel they're leading a solo existence, when in fact nearly all humans alive today live in the most inter-connected, inter-dependent culture this world has ever seen. But without some sort of vision-quest-like experience, some wonder if a modern human may ever find a way to face down the true nudity of solitude, peer all the way through it, and see the community out the other side. And from there, to see just how jeopardized the integrity of our earth community is right now, and to take that on.

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We've somehow marginalized these immersion experiences, and condemned them to being possible through very few paths. The soldier, waiting in line at the airport, has become one of the only heroes we know how to encourage. It is a primal and perhaps noble urge we have to send our young off— not to wage war, but to wage conflict. We seem aware that to live a human life inevitably requires us to navigate conflicts. In the more ancient times when such practices were being codified, we still lived in a world that required an intimacy with the conflicts of predators and prey, of moral quandaries arising with new technologies, and of differing views within families and communities. We'd be remiss to think that pre-literate people didn't debate how to handle being good parents or disagree how to ask grown children to leave the nest. As a species that perpetuates genes through culture, we needed ways to train our children to carry on traditions that would ensure their survival, and later, their happiness. I contend that one of the oldest, most durable, and pan-cultural ways we have done this is through this act of sending our young out on vision quests. And unlike many customs created long ago that seem too out-dated to address the current evolution at hand, I believe that this ritual, this mission, this act, is worth carrying on— that it might be the most sensible direction for our ship to tack.

In high school, my friends and I were subtly aware of the expectation that we leave. The very tangible, almost obsessive drive from our parents to *leave home* for college was our first interaction with this impulse. Every year in this country alone, millions of young college freshman depart on a journey to begin wrestling with the cursory complexities of this world they are inheriting. This is perhaps a more sophisticated, but also more convoluted, take on the vision quest. The underlying intentions are similar: go forth, study this world and your role within it, and return as a mature being capable of no longer needing the parental support. In agrarian societies, the expectation might be that you're now ready to take over the farm from the parents and begin caring for them. In hunter-gather-horticultural societies, it may be that you're now welcomed into the council meetings.

But what happens now? If one does go out to pursue the hero's journey, and while out, discovers this sensation that all is not well with this life-thrusting Earth— how does one apply the lessons to how we'll structure our lives?

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Not long after my experience on that bridge in New Zealand, I found myself standing on a bridge in an old industrial city near my new home in Vermont. Looking up the Winooski river, lined with brick mills and the gnarled guts of discarded machinery, I noted how different it looked from the descriptions written on an interpretive sign nearby. The falls on this river used to churn with Atlantic salmon runs every year— early explorers described the greatest concentration of the native Abenaki people to be living here beside these falls. Now a dam impedes the fish and the pond behind it drowns the shore. There are now very few salmon to catch, and the river is too polluted down here for swimming. Now our children eat frozen fish sticks and swim in backyard pools.

After some time, my eye began to pick through the patterns and began to see details. A muskrat nest wedged in an old cracked pipe. Deer prints in the shoreline sediment, glittering with broken glass. Interspersed throughout it all were willow shoots and dogwood thickets— sparrows and chickadees wafting on the diesel-fumed breeze.

Having realized that Life *wants* to express itself in a way that encourages more Life, and that I too am embedded in those patterns, how could I not wish to heal this place? Once we've had direct, self-dissolving contact with the forces of creation in which we are immersed and which our bodies and minds express, how could we ever choose work that undermines that vitality? How could we not join the mission to restore that reality?

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The Universal is composed of seven billion people's personals— "The One from the Many."

We are each tasked with a process of escalation— the higher you go, the further out you see. It is also a task of deliberate immersion— the deeper you go, the more you know the ground of being. To take up the work is to acknowledge your role within it; and to acknowledge your role within it is an act of rigging into it. The patterns of relationships within our bodies and at work in our yards are mirrored in the webs of relations we enjoy with one another and the land. And we are inheriting a damaged land. We agree to the mission— we will heal with the head, heart, and hand.

With each level of awareness we succeed in climbing, there is a corresponding set of values we become responsible for stewarding. The hiking of a mountain in your watershed is both a physical and a metaphorical act; you see the dendritic patterns that irrigate and breathe



through the conduits of your place, and you see the perils, problems, and solutions that await our ever-unifying human race. The same duality exists when you get in rivers or oceans; you experience the pulsing flows of a place's blood from within the veins, and you develop an empathy with the pollution and the beauty.

We're all collecting stories. You too. You there, looking around at the watershed in which you abide, passing and throttling and thriving in your time. You've stumbled upon another written piece that reflects some of the things you hold dear. But also read it through clear lenses: the work is not done, as we're just starting to hone in. Dig in.

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These immersive ideas, and their articulation, are never ending. But here I am again, reminding you that I'm bending down now, senses heightened, as I help my team of tree-planters move around the goose's nest. We're going to do our best to avoid her and give her some space. My co-leader and I devise a plan— we'll send just two folks in first to dig the holes with laser-like precision and skill. Next we'll send in two tree-layers to move in for the tree-laying. Then she and I will come up and do the final, propulsive, radical act— we'll upright those dormant trees in their holes, back-fill the dirt up to the root-collar lines, and pad down the soil, still wet in the morning sunshine.

We don't know if the other members of our crew feel the same sensitivities regarding the peacefulness of this goose. But we design the hour the best we can anyway— we know that by this afternoon, when our work here is done, this goose will have glimpsed a way forward for the human race that may well create a black-beaked smile on her Canadian face.

After so many generations of watching humans come into her home and rip away some of the land's vitality and resiliency, she's just watched ten humans come in, on a dedicated mission, and not take life and energy away— she's watched them put something back in.

And because it matters, here's what we did: thirty viburnums, twenty red-osier dogwoods, and twenty five willows, all these went in. I could never have done it, or perceived it, were it not for the experiences that recruited me in.

The Earth is a unwritten letter gifted to each of us, and your mind is the pen. Please write your name on deer-print dotted line, and let's begin.

## Dream Local

Back from a hike one afternoon in the foothills of the Champlain Basin, where from a perch I'd seen the vast valley with its massive lake and its myriad rivers emptying into it, I came upon a message, written in the yellow pollen dust on my volvo: it read "Dream Local."

That evening I lay down to rest on the windy lake shore, by the wide mouth of the Winooski River. The river delivered the snow-melt, creeks, and streams from the Green Mountains to the east. Considered then the old Abenaki people, for whom the seasonal dance between lake and river, valley and mountain, was a sort of cyclical, climatic tide— down to shores for a fishing summer, up mountain hollows for a hunting autumn, down valley floor for a long-house winter, up the slopes for a maple syrup spring— all backed by the nourishment the three-sisters gardens would bring.

I drifted to dream. A great being, Odzihozo to Abenaki, appears— makes himself from nothing, but fails to give himself legs. Wanders a flat ash forest, drags himself along with tremendous hands that carve up the land. I stand on a small hill— he narrowly misses me as he rips off the side, leaves behind a u-shaped valley and a new stream— it immediately roars to life with waterfalls and fish and fowl.

A creative geographer, he crawls, gouges and scrapes, sculpts valleys and ridges, cliff-lined drainages— I watch my homeland taking shape. Tired, he sits in the center, sinks down, the rivers rising around him...becomes a stone island in an azure lake, ringed by mountains. Eons of stillness bear witness.

He calls me. I descend my hills, clamber into a birch-bark canoe, and paddle onto this island body. On his rocky lap I sit: watch the waves of my ancestors come carve— mountains cleared of trees, rivers dammed and wetlands drained— fracking planned and pipe-lines laid.

He turns to me, and in stone-speak says: "I am with you in the backhoe, in the shovel, in the plow— but you've wielded these tools too carelessly. Your destruction lacks life's creativity. I beg of you: do better, or leave. I'll carve again after you're gone."

And I awoke, at dawn, beside a set of turtle tracks in the sand. "Dream Local," they read. I looked at my hands.

## Watershed Theory

An Epilogue of my Epistemology and Methodology

“There is almost a sensual longing for communion with others who have a large vision. The immense fulfillment of the friendship between those engaged in furthering the evolution of consciousness has a quality impossible to describe.” -*Theirald de Chardin*

I.

I have a friend, a dear friend, whose presence in my life glows with a dusk-like mystery. The first mystery is simply that we even met, as it was a matter of mere seconds. The second mystery is how just one sentence he uttered to me over eight years ago lingers with me every day. I wish to tell you how we met, and I wish to tell you what he said to me that fateful afternoon on the edge of the world.

I was hitchhiking out West one time, due west out of Eugene, Oregon, on one of my first true walkabouts. I was an East Coast kid just beginning his flirtations with the art of Dharmma bumming in the American West, and as the weeks added up and the experiences piled on, I was starting to inhabit a lithe, sharp, and wily state of mind. The whole of the continent was becoming my home one mile at a time, and I had the distinct sensation that the whole of Creation was, for those few weeks, taking great joy in experiencing itself as me— or as Alan Watts reminded me each day in my journal: “You are an aperture through which the universe is looking at and exploring itself.”

Often hitching exists within a pace not unlike fishing— you might catch a few thrilling rides each day, but you also spend a lot more of the time waiting around, getting to know that particular patch of ground that surrounds your spot. The smell of the trees and the tar, the look of the dull metal guardrails and the gun-metal clouds, the sounds of rivers of water or rivers of traffic— all of these coalesce to become your temporary home on the planet for an hour or ten. Sometimes darkness falls like a soft rain and you retreat from the road to find a patch of ground to sleep upon for the night, or sometimes you’re whisked away by a stranger who offers you instead a beer and a bed.

On this particular day, it seems I was destined the latter. A series of brief rides in fairly rapid succession ferried me along route 126, and I was able to reach Highway 1, the coast road, in much less than time than I’d anticipated. Elated, I popped out of my last ride, grabbed my

rucksack, thanked the driver— a school-teacher with slate gray hair and a soothing, motherly voice— and prepared myself to get to know this great new spot for a while. While I was not rich in the wallet at that point I was rich in time, so I felt no rush to go much faster now that I'd finally reached the Pacific. When a small, white Toyota came careening around the bend and down the hill toward me like an errant ping-pong ball, I almost let it pass me by without even raising a thumb.

But raise my thumb I did, and to my surprise the car came to rapid stop next to me, as though I was expected. I got in, and over the next three days got to know one of the most beautiful beings I've ever met. His story is almost too outlandish and potent for telling, but a quick bio of his life-story might read like this:

A poor, gay Texan who grew up within evangelicalism; has the voice of an angel as teenager and is ferried around the globe to sing at state dinners and for world leaders; gets kicked out of the church for his homosexuality, moves to LA to become a massively successful editor for a gay magazine; years later comes down with sudden and extremely degenerative MS; proceeds to reach rock bottom in every aspect of his physical, emotional, and spiritual life; lays in a heap upon death's door for weeks, willingly giving up the will to live; has a sudden and truly miraculous healing (in that it can't be explained by science); returns to full health and within weeks is completely committed to leading a newly refined life based on service to the earth and his fellow humanity; then gets hired into and rapidly ascends the ladder within a major environmental non-profit; spends years confronting the darkness that was the Bush administration; eases himself out of that work into a humble, largely monastic existence as a web-designer, PR specialist, and a consultant for environmental non-profits all over the globe; and on the day I meet him, he's on his way to San Francisco to meet with presidential hopeful Dennis Kucinich. He tells me all of this over those first two days we spent together, and it was clear that his words all rang the bell of truth.

After his healing, this man that we'll call Peter began to also dedicate tremendous amounts of his energy to the study of his healing, and of the content of the dream-like states that he experienced upon his death bed. Through the use of all digital, physical, and spiritual technologies available— ranging from dream-work to yoga to psychedelics— Peter relentlessly pursued the wisdom he'd glimpsed, even as much of it receded from his grasp with each passing year.

On our last day together on that trip, sitting cross-legged on a windswept headland in Mendocino, he said something that has remained with me ever since. “I have a lot of my thoughts about what happened that day, and why I was healed, but mostly I came away with a vision of all of humanity being really, really close to ending this suicidal path we’re all on.”

I of course knew what he meant, in terms of the suicidal path. My mind, at that point, was thoroughly convinced that humans had blown it, and that there wasn’t much left to do but enjoy the last days of the ride.

“Well, do you know how we’ll do it?” I asked him. “How we’ll avoid this mess that seems to be awaiting us in our own life times?”

“No, I don’t. But here’s what the lesson I received seems to be...” he paused. And he paused. “That we’re just an idea away...”

An idea away.

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I came home from that trip with those words ringing in my head. In the intervening years, I’ve honed in on what they mean to me, and what the idea may be. This book, and the experiences that spawned it, is partly my response to my friend Peter’s proposal.

## II.

The Idea, as I see it, is that we are in need of a major realigning of our sense of self in this world— a realignment that places our soul directly and inseparably within the ecology of earth. By “soul” here I don’t mean an abstract, theological soul but rather that deep essence within each of us, or what the poet David Whyte calls “that small, bright and indescribable wedge of freedom in your own heart.” If each of us can not only glimpse and honor this soul, but then find ways to live with that knowledge and use it to generate a healthier culture in the places around us, then I think this “one idea away” could have some merit.

But how to get there? This Idea, as I live it, is that this realigning will only happen through certain practices and actions. The idea is that it’s not going to be *only* an idea— it’s also going to be a lived reality. That reality will come into being for each of us through practices; certain activities that we can perform in a spirit of connection and reciprocity with the earth. These practices, as I understand them, can look different for many different people, but the most successful will be those that somehow speak to *the head, the hands, and the heart*.

The practice that I have found that does all of these things for me lies within the field of “ecological restoration,” specifically the act of planting trees. Whether it’s planting trees along denuded stream-banks in the name of watershed restoration or planting fruit trees in school yards in the spirit of addressing health concerns and nature deficit disorder in kids, this seemingly simple act of planting a tree acts as a rapid catalyst within us. With our heads activated we can understand the ecological benefits; with our hands engaged we draw our animal bodies back into the ecosphere where they belong; and with our hearts open we intuitively grasp how our soul fits into the shimmering net of Spirit. I’ll admit it’s easy for this to sound too heady, an idea emerging exclusively from the intellect, but that is only because our words can only make glancing blows at this truth— such a limitation only reiterates why this Idea has to be an *Experience*, not a mere concept.

### III.

“There are tens of millions of people who were physically born here but are not actually living here intellectually, imaginatively, or morally.” Gary Snyder, *the Practice of the Wild*

Every spring, during planting season, I enter a “flow state” of awareness within my watershed. Some weeks we’re at a planting site for a few days straight, other times it’s only a one day project— but generally we try to cluster the schedule so that we’re visiting the same area each week. Because we’re also working with the spring thaw, we try to arrange to do the sites in the valley’s low-lands first, and then plan on moving up stream with the coming spring. It all makes logical sense from a zoomed-out planning perspective, but when we’re in the steady rhythm of it a different sense is used in the experience that resembles, to me, a type of five-week-long music festival with venues spread out across the basin, one where we’re both one of the headlining acts, but also an ecstatic audience.

Every show begins with the sun pulling up the curtain of darkness to reveal the conditions of the day. Time in wardrobe is significant the first few weeks, as many clothing layers are needed to stay warm and dry in the inclement weather, but by late spring this is easier. Once dressed, we meet up at the Nursery, fill water jugs and grab our tools, and go over the day’s set-list: how many trees, species list, soil type, and crucial info on the site.

And like a performer gets to know his audience and his venues, I start to develop intimacy with the local landscape. Because of the nature of the work, it all comes down to water— where it’s coming from, where it’s going— and my eyes and map-making mind are hawk-sharp on every drive. Ridges and valleys, wetlands and gorges, bridges and culverts, stormwater systems and treatment facilities, springs and seeps, riparian areas and barren banks— all of these elements of each watershed constantly impressing themselves into the soft sands of my awareness. Clearly the brain not only runs on connections, but also is capable of making constant new ones— which streams go where; where today’s creek must find its confluence with yesterday’s; how hemlocks will love a rocky north slope above this river; why red-wing blackbirds prefer cattails to tree branches— all of the phenomena absorbing me into their fields, effectively dismantling any illusion I have of being a mere observer. Like a musician feeling the boundary between herself, the instrument, the music, and the audience dissolving, I too find myself caught within a flow state, neither within or without of the landscape, but *of*. And like a member of a band who knows his instrument and contribution to the song is critical— it would not be the same band without him— I too have felt that my presence, especially within this heightened state of awareness— is somehow crucial to how the entire place expresses itself. The feeling, quite frankly, of *belonging to* this landscape.

#### IV.

“How could we begin to act like people of a place rather than like consumers and producers in a market system over which we had little control? What if we began to develop and share our own vernacular experience and wisdom to the point where it had credibility equal to that of the specialists in the state capitol?” Freeman House, from *Totem Salmon*

To belong in, and to, a landscape: isn’t that a rarity today? I feel extremely fortunate I’ve found this particular angle of entry in my work doing stream restoration, though it only lasts a few months a year. Perhaps because I’ve tasted the sweetness of the sensation, I also have an acute sense of loss and hunger when I can’t find ways to belong at other times, or in other places. Just as I may miss my wife when I’m away for a week of planting at a far-flung site, wherein I don’t just miss her but I miss the daily practice of being *in relationship* with her, I’m sympathetic to how hard it can be to feel as though we’re *in relationship* to a watershed. As an increasingly

multiplicity of technologies bedazzle our eyeballs, adorn our bodies, and ensnare our attention—the average American now experiences eight hours of screen time a day— there isn't much time left for cloud watching and stream counting. Our means of daily, biological sustenance are met through ever more abstract circumstances, as the food, fuel, and fibers we need to live are procured not through direct contact with the landscape but rather through monetary exchange. At an outdoor gear store in town that I visit before longer planting trips, I can purchase propane, energy bars, and a used rain coat— a very different experience from having to meet the same needs with only the landscape at hand.

But I am not a Luddite nor another young idealist caught in the throws of a fantastical nostalgia. I know as well as anyone that we're not likely to return to pre-industrial ways any time soon (though if we do, I think some of these skills I'm describing will help us meet such challenges with a little more humility and grace), so if we're to find ways of reconnecting ourselves and our children to place in ways that are relevant to the times, we can't look only to traditional and romantic methods, as aesthetically attractive they may be. While a family of shepherds in Vermont a century ago may have had a deep connection to this landscape, they were also responsible for the mass deforestation in New England whose effects are still being felt today. While a homesteader in the deeper hollows of the Green Mountains may have known his acreage with intense intimacy, the ample deer and moose meat he relied upon would never have supported the town of fifty thousand people that now occupy the same terrain. And while the native Abenaki and Mohawk people certainly possessed that impressive mix of technology and ceremony that allowed them to thrive within this basin's natural provisions for thousands of years, it would no longer be possible to practice their seasonal rounds today without trespassing private property and, tragically, eating a lot of mercury-laden fish from the lake. In short, I am trying to be a realist to our situation— we're not going back. However, we're also not stuck right here.

I see that realization as cutting two ways— on the one hand, we are in need of completely novel ways of thinking to meet the freshness of the situation. On the other hand, we can look around us and before us for older, more traditional ways of thinking and acting that may no longer be replicable on a grand scale (i.e. subsistence living based on seasonal rounds), but these old ways can still inform us on the *quality* of the interactions and on the values that certain practices engendered in the people living within those relationships.



V.

As someone who grew up with grand notions of wilderness and wildness— both out in the world and within myself— I can attest that these notions have not always served me well. For too long, I felt content to only learn local wild areas and national parks, relegating the rest of the land around me to a type of fly-over country. Such a paradigm destined me to have a fractured sense of place, and with it, a fractured sense of my self in the world. If we are to find ways to better inject ourselves back into the very places we call Home, it seems we need to keep rethinking our notions of wildness and wilderness.

An inviting path into environmental thought is that we somehow can preserve, intact and unchanging, particular sections of a landscape. Such an action acts as a soothing balm on our collective sense of guilt at our destruction elsewhere. While we can certainly set aside large tracts of land within which we can legally bar certain activities, for example legally designated wilderness areas here in the US, we have to be honest about we're really doing. We are not, by any means, securing that place like a boat tied to a dock. Even in a preserved place wherein we agree to halt any sort of extractive industry, be it mining, grazing, or logging, the place itself will continue to evolve and manifest not as "a place" in noun-form, but rather as place-as-process. The notion that if we could just preserve enough of these places to act as bio-reserve and living museums we'd be able to right our entire relationship with the natural world has been misguided and even short-sighted. It is in error to the flow-state reality of ecology and it is too idealistic in thinking that wilderness alone will be our saving grace. Even if the environmental wilderness movement succeeded in protecting twice as much acreage as Wilderness, we'd still be in over our heads everywhere else. I'm extremely, unspeakably thankful for the time I get to spend every year in wilderness areas, within which I always find a way to tap into a nerve that that connects my feet to my brain and my brain to more-than-human nature. But at the same time I have to acknowledge that no amount of wilderness is going to stop the local natural gas company wanting to frack in my backyard. If anything, it seems to have given much of humanity the green light to begin firing up every non-wilderness place on earth like a big, fat cigar wrapped in money.

Another, more subtle effect of this has been the tendency for Americans to project a sense of sacredness upon these wild areas, a topic worthy of its own book. As someone who feels that

he has in fact made contact with the sacred in these areas, I'm not belittling these ideas nor undermining the amazing work people like Muir did to help us recognize the spiritual value of places like the Yosemite Valley. I am suggesting, however, that this idea has also done us a disservice in three critical ways.

The first of these is the inherent limits this view puts upon the majority of individuals living in the Western world. For the tens of millions of people who don't live anywhere near a National Park or wilderness area, they have limited opportunities to go experience the sacredness to be found "out there." For those who can, they will figure out a way to spend some of their vacation time in these places, and hopefully after navigating airports, rental cars, and crowds, they will succeed in finding a few individual areas in which they might make that sacred connection. But eventually the trip must end, and people return to their home landscapes (hopefully rejuvenated and still glowing with the awe they'd experienced), only to find that their own watershed has limited opportunities to recapture those feelings. Because our conceptual model keeps sacredness confined to the parks and wilds, we are prevented from seeing that sacredness as somehow still at work in our local rivers, plant communities, and bodies.

There is no doubt that many of these parks will instill a sense of awe, majesty, and beauty in visitors in ways that few cities or suburbs will ever do— but it seems worth noting that the version of touching sacredness in parks and wilderness is locked up in a type of consumption. Much work has been done to show that the manner in which majority of us interact with our parks— with few people feel empowered or encouraged to explore anywhere beyond a half-mile from their car— truly constrains our ability to develop any sort of relationship to the places we visit. Instead we remain confined to the all-too-comfortable role of consumers, buying souvenirs and consuming iconic vistas as though we're visiting famous film sets. We accumulate the experiences like canvas patches you get at the gift shop, stitching them onto our backpacks to make an outward display of our affinities (I must admit I that have a solid collection going as well). The rise of the "selfie" photograph is an extension of this, as the photo confirms we visited the famous area and helps to mark us with that place's "brand." Rarely are we given an opportunity to engage with these places in ways that might grant us a different perspective than those provided from side-of-the-road view points, and even more rare are the chances to engage in a reciprocal relationship with the place. We become stuck in what the environmental

education scholar David Sobel, describing similar phenomenon at small-scale Nature Centers, calls “look but don’t touch” experiences.

This is where the second disservice of our notions of sacred wilderness comes in. By limiting ourselves to only finding a sacredness in parks and wilderness, and then confining ourselves to only experiencing that sacredness in a passive, consumer-like manner, we see few opportunities to keep that feeling alive once back home. We equate the feeling as something that can only emerge out of experiences of awe or majesty, a feeling that is hard to re-capture within our spatial and mental routines in our home terrain. Those feelings of awe that perhaps led us to contemplate our lives within the whole of Creation, to see ourselves as living within a living community of species, and to understand our presence on Earth as something sacred and wonderful all begin to evaporate like puddles in the parking lots of home. Intentionally or not, this conceptual framework that led us to think of sacredness as always being elsewhere, somewhere more wild and holy than the ground beneath our feet and the water sloshing through our brains, has in turn led us to grow numb to even the possibility that the places in which we work and play are equally valid, equally special, and equally sacred.

The third, and perhaps most destructive, disservice this idea is creating for us is a dichotomy of virtues. In the areas labeled sacred and wild, we have agreed as a culture to comport ourselves with certain values like restraint and respect, effectively elevating those rivers and those mountains and those species as being better than the rivers, mountains, and species that exist everywhere else. And it is within the “everywhere else” that the vast majority of us live. Without those values we reserve for the sacred place, we instead are permitted to relate to the land around us in the narrow terms of property, commodity, and resource.

Calling it the “myth of wilderness,” or “the invented landscape” can still rile a few feathers, so I’d like to clarify where I and many in my generation locate ourselves within this idea. Many of us have read and come to accept the findings and new narratives presented through recent archaeology, natural history, and eco-criticism. Books like Charles Mann’s “1491” confirmed and brought to life what many indigenous people have been saying since the arrival of the Pilgrims– that rather than Europeans encountering a vast, virgin wilderness on this continent, they were in fact walking through a landscape that had been lived in, altered, cultivated, impacted, fought over, celebrated, and adored by millions of humans for thousands of years.

“1491” confirmed these facts and showed that Europeans were not the only people developing religion, language, art, or even agriculture, which I understand as that human endeavor that most binds us to the hoop of Creation. William Cronon, in his widely read and debated essay “The Trouble with Wilderness” also opens this terrain for us. Through his work as sort of eco-historian, Cronon reveals that the qualities we ascribe to wilderness— especially the pristine and the sublime— are only there because of our projections “As we gaze into the mirror it holds up for us, we too easily imagine that what we behold is Nature when in fact we see the reflection of our own unexamined longings and desires. For this reason, we mistake ourselves when we suppose that wilderness can be the solution to our culture’s problematic relationships with the nonhuman world, for wilderness is itself no small part of the problem.”

Indeed, Cronon and Mann are but two of many thinkers who have been leading us in this direction. Frederick Turner, Gary Synder, and Michael Pollan could also be credited for breaking up the monopoly of wilderness for many in my generation, though their distinct perturbations to the idea vary in fascinating ways.

Other works in the recent canon that awakens my peers and I to the long-term indigenous presence on this continent are those that are coming from certain native authors like Winona LaDuke and Robin Kimmerer, both of whom are helping to keep alive the histories, stories, and practices of various native groups throughout Turtle Island. Robin Kimmerer’s most recent book “Braiding Sweetgrass” has proven to be especially fruitful in my own evolution on this idea, and her work around restoration and Traditional Ecological Knowledge (TEK) permeates my thinking throughout this book.

## VI.

“The Land,” as I understand it, is that dizzying, dazzling, startlingly alive place within which one lives out their life in every moment. The Land— the rocks, dirt, minerals, and dirt, outside your windows and under your fingernails. The Land is also the living communities— the matrix of inter-acting, inter-penetrating species of plants, fungus, and animals that a place’s climate, topography, soil-type, and water-courses call into existence.

Those watercourses, or the ways in which water flows across a landscape, call forth a geographic entity we can call a Watershed. The water that falls off the roof of your house or the hood of your car is bound for *somewhere*, and that series of destinations delineates your

Mississippi River watershed from someone's else's Columbia, Merrimack, or in my case, Winooski (which flows into Lake Champlain.) While a town, city, or state, is a temporary, political entity recognized only by the humans who agree to recognize it as such, the watershed is our "elemental community," as Gary Snyder put it. While county lines or international borders may be re-drawn multiple times within one's life-time ("we used to be in Mexico, but now I hear we're in the US"), the boundaries that separate watersheds are much more fixed points in the landscape.

To some thinkers, myself included, it is just as important for people to know in which watershed they live as it is to know in which state they reside. But why stop there? We can also get to know our watersheds the way people learn the streets of their cities— which streams into which, how the natural communities are arranged, where the confluences are, where the fish can be found and when the swimming holes can be enjoyed. Slowly, the watershed becomes both the physical phenomena and what Freeman House, author of the exquisite salmon-restoration book "Totem Salmon," calls "a unit of perception." As a unit of perception, to know your watershed is then to also to know its boundaries and divides, its head-waters and flood-plains, and how the water molecules in the river you're gazing will eventually make their way to the Ocean. And to know your watershed is also, in modern times, to know how we Humans have cut, carved, caved, and compromised The Land around us.

The Land *is* also us— our gardens, our streets, our cities, our farms, our parks, and our bodies moving through and moving *as* the place. But unlike the other animals that transform a place through their physical behaviors, we humans create our places that emerge out of our values and attitudes. The land itself becomes formed by and reflects the culture's beliefs— one peoples' waste-land is another creature's entire habitat. From the mountains to the low-lands, from the rivers to the sea, one can travel the world and always observe the fascinating interactions between a people and their place. However, for many of these places, my homeland included, this initial fascination gives way to concern and sometimes despair. Because the Land, and our Watersheds, no matter how you define these, are undoubtedly facing some tough times.

When we engage the Land as an extension of ourselves, the engagement calls forth a different set of values and virtues we previously didn't see as necessary, or even possible.

VII.

“Watershed consciousness and bioregionalism is not just environmentalism, not just a means toward resolution of social and economic problems, but a move toward resolving both nature and society with the practice of a profound citizenship in both the natural and social worlds.” Gary Snyder, *Coming into the Watershed*

In effect, we are caught in the limitations of a culture-wide experience within an ontological design. It is exactly this sort of limiting experience, this sort of feedback loop, that I believe ecological restoration *as a practice* gives us the ability to redesign. And once redesigned, I wish to show that the possibilities available to us for engaging with and inhabiting this earth become thoroughly and beautifully expanded. By banishing this “myth of the wilderness” as I’m defining it here, we can begin to better avail ourselves of not only a richer experience of earth, and not only a more responsible relationship to the world around us, but also, I believe, we can begin to usher in a paradigm of participation that will have impacts on everything from water quality, climate change, social justice, and to the long-term viability of our human communities. But it’s not just an idea that will come about, it will be an activity, and a practice.

Because ultimately, this current relationship we as humans have with the land today is what grants us the right, and the incentive, to continue to poison our waters, shave off our forests, shred the web of our relations with non-human life, all the while effectively enslaving billions of people into a lifestyle that grant us few other choices. I don’t think we’re going address many of these problems if we can’t address our relationship to this earth, and I don’t see us developing a new relationship without identifying, amending, and expanding what it means for all of us, every single human, to be a Self in this world. If my friend is correct in that we’re “an Idea away,” then we have to come to terms with the limits of our current idea, and we have to relish the opportunity to make new ones.

But how can we do this work to flatten out the hierarchy we’ve imposed upon the world around us, and instead move toward a more thorough and compassionate understanding toward the whole of nature? And how can such an understanding spur us to act in a more sensitive, empathetic, and responsible manner?

To answer this, I’m continuing to suggest that this work cannot be done with the head alone— that if we as individuals are to come into new relationships with place, it is going to come

about through work that engages the Head, the Hands, and the Heart. When these three are engaged, the whole of a person is activated in ways that only attending to one or the other cannot do.

In my drive down to this week's planting site, I pass through several individual watersheds that together comprise the larger Lake Champlain Basin watershed. Moving north, I can look off to the east at the Green Mountains etched against the morning sky. There, carved into the ancient hillsides, are the folds of drainages and ridges that separate them. At the start of our drive today, it was clear that all of the streams shedding off of the mountains were draining toward a central stem— in that case, the Winooski River. An hour later, glancing east once again, this time at a different set of peaks, the mountains again are shedding water into streams that then become another river— a river that is the accumulation and amalgamation of those streams— this time, it's the Franklin River. Each of these river systems are separated from one another in ways that are real and tangible, and unlike a political boundary, are not subject to any of our projections. The watershed, unlike a town or city, comprises the whole of an individual place— a place nested within a great whole— but simultaneously a unique entity unto itself. And in any watershed, you generally find two distinct areas that I bring to your attention: the headwaters, and the river's mouth.

Seen on a map, many of the watersheds around me in Vermont resemble great trees. The headwaters, which are in the highest country and are furthest from the river mouth, look like the top-most branches on a tree. And just as you can follow the upper-most branch all the way to the base of the tree, so too could you jump into any headwater stream and find that it will take you all the way down river. The river's mouth, meanwhile, is like the trunk of the tree, as all the branches lead down to it eventually. The dendritic patterns we see on maps confirms the strength of the analogy.

If we are curious about the health of a particular river, we must not only study the river as we see it in front of us, but we must also look upstream. When my friend asks me why the river before us is polluted, most people both instinctively gaze upriver— and in my struggle to answer him, I realized that the river itself not only held the answer to its chemical make-up (with the water accumulating sediments from the forests and run-off from farm and towns and folding all

of these into its body), but that the watershed lends itself as the perfect metaphor. The river's mouth tells the story.

“Well,” I said, “one stream we could go up is the stream of capitalism. Up there, a view of land as commodity and capital reigns supreme, and it has made it so that the people have to choose between healthy water and a healthy pay-check– this lets IBM build a plant on cheap land by the river and proceed to experiment with new chemicals in their manufacturing that have since poisoned the groundwater there for acres, and has at times spilled into the river. That same stream of ‘profit above all else’ is what’s contributed to small family farms having a harder time getting by, and being forced to plant every available acre they have, even when it means clearing the trees right along the river, which erodes stream banks and damages the land’s ability to filter the farm’s manure and pesticide run-off.”

“Okay, well, if that’s one stream, what else is going on? What are the other streams?” she asked.

I realized then, a little dumb-founded, that I was really going to find an answer to his question, I’d have to take the time to truly go explore each of the cultural watersheds as much as the physical one. But in my years thinking about it since, I’ve realized that the questions that fascinate me the most are those that keep us as individuals in the equation. “How does the design of our watersheds, as both physical and conceptual places, create a feed-back loop that designs us? How are we as individuals shaped by our watersheds? And if, upon inspection, we decide we don’t like what we or our watersheds are becoming, how can we redirect the future of entire flowing mandala of rivers, cultures, and individuals?”

The answer, I believe, is to inspect our headwaters.

## VIII.

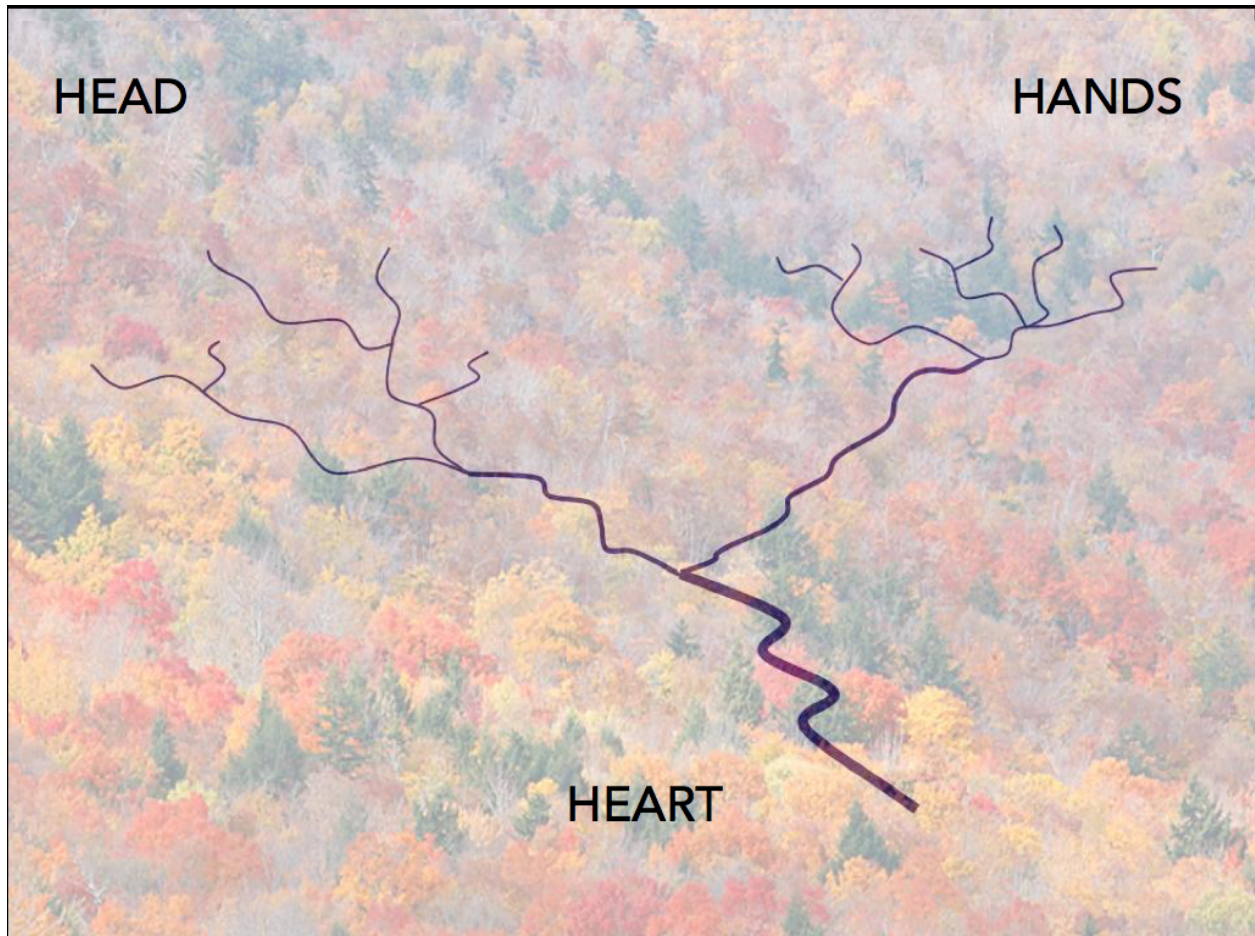
To do this work of studying the headwaters that create us as individuals and as a culture, I propose we use a framework inspired by biomimicry. Biomimicry, an idea and method by which humans may design technologies that mimic the designs found in nature, (i.e. designing bullet trains that mimic the plunge of kingfisher birds into water) biomimicry can also be employed as a conceptual tool for philosophical or psychological pursuits. I believe that the flowing



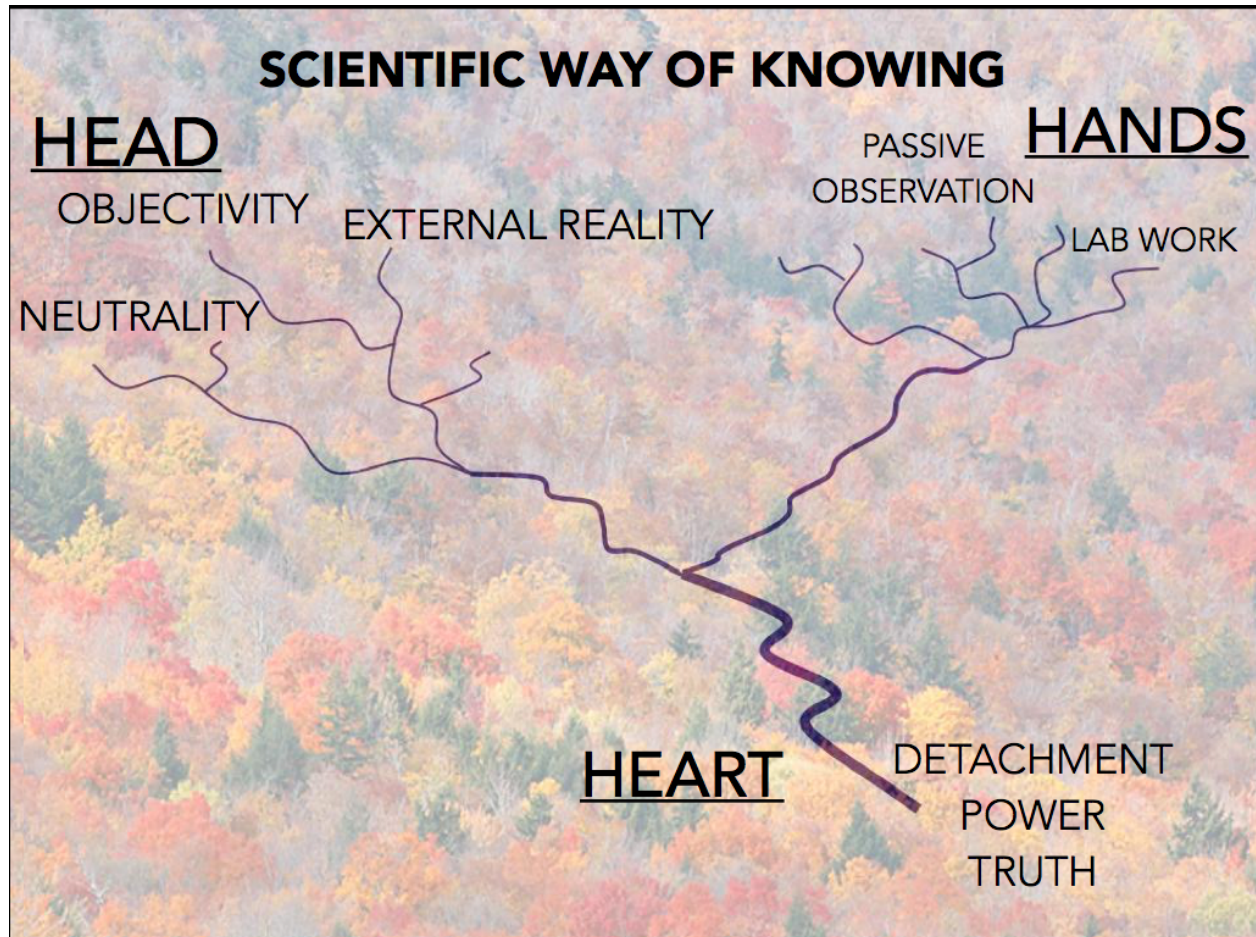
phenomena of a watershed can provide us just such a tool for understanding the problems associated with placelessness and the promise of ecological restoration.

I recall once meeting a group of individuals, peers of mine, who were completely disinterested and disempowered in the face of the ecological degradation going around us. Their hearts felt zero kinship, care, and responsibility for the health of the place around them. The Heart– which I identify as the seat of one’s virtues, ethics, and sense of belonging– were cold to the very touches of life that make my own blood run so hot. What was the difference between us? To better understand the question, I realized, I’d have to go upstream.

Upstream from the river of our Hearts, into the headwaters that will later form how we feel about these questions, I can locate two primary branches. One branch is the Head, and the other is the Hands. See below:



With this model in hand, we can then plug in different frameworks, and see how the Head concepts and Hand activities may form the Heart's ethics and emotions. Take, for an example,



the scientific way of engaging with place:

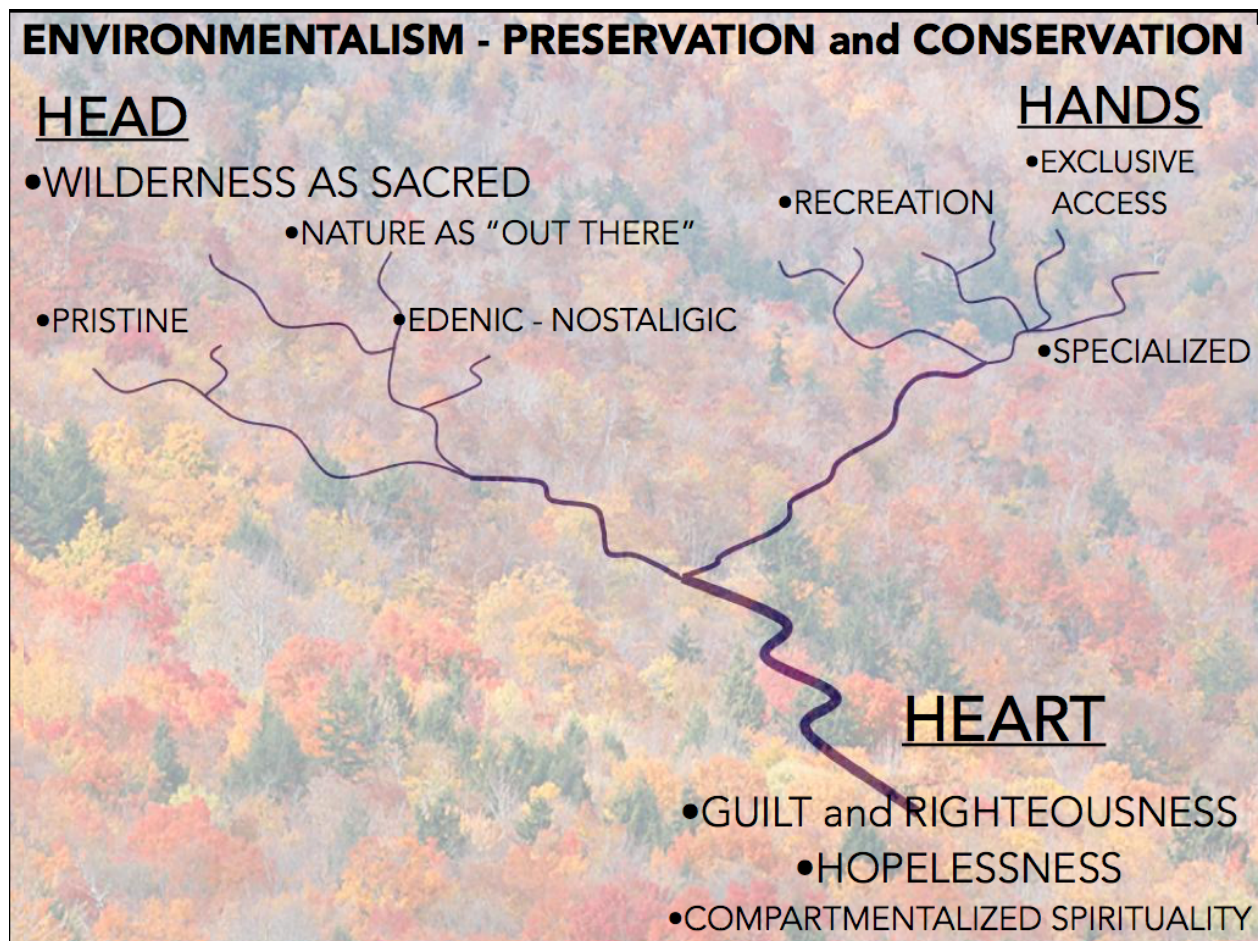
Clearly there is much to be gained by operating within the scientific paradigm, but we note that it often leads people to a sense of objective detachment from the place of study. It also, intentionally, leaves out the role of virtue, ethics, and civics in the discussion, and therefore is woefully inadequate for the task of getting more people to feel more connected to watersheds.

The other, most common watershed in which we live is that of consumer capitalism.



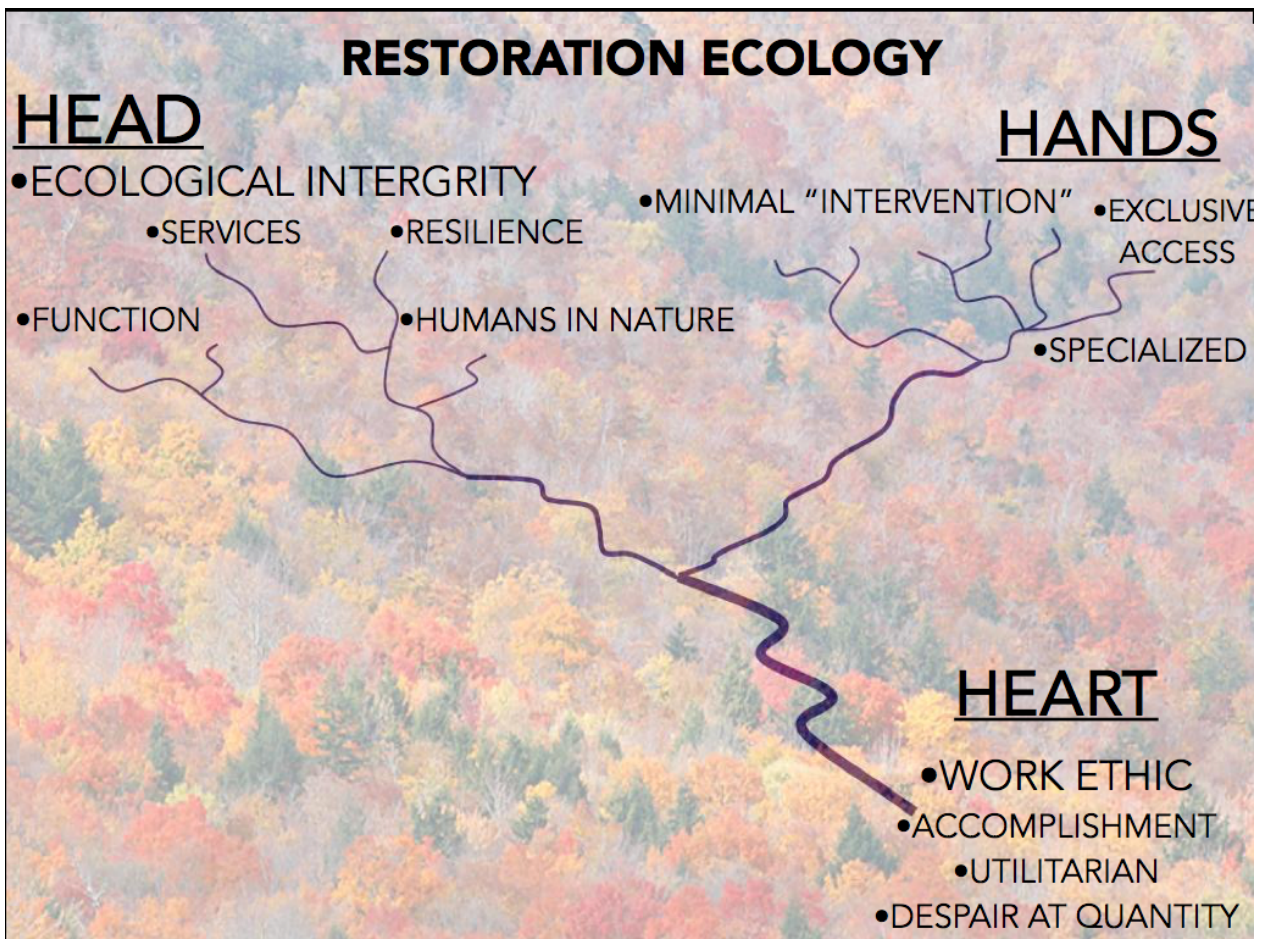
This too has some serious advantages for our culture, as it has, whilst working in tandem with the scientific paradigm, been able to procure and secure a dramatically improved material lifestyle for billions. But again, if a goal is to know have more people engaged with their home watersheds on deep, Heart-felt levels, the Head and Hands of consumer capitalism are of little help, and in fact often pollute our hearts with a sense of alienation from place.

Much of traditionalism environmentalism attempts to rectify these short-comings, and seeks to provide ideas and practices that can heal our relationships to place.



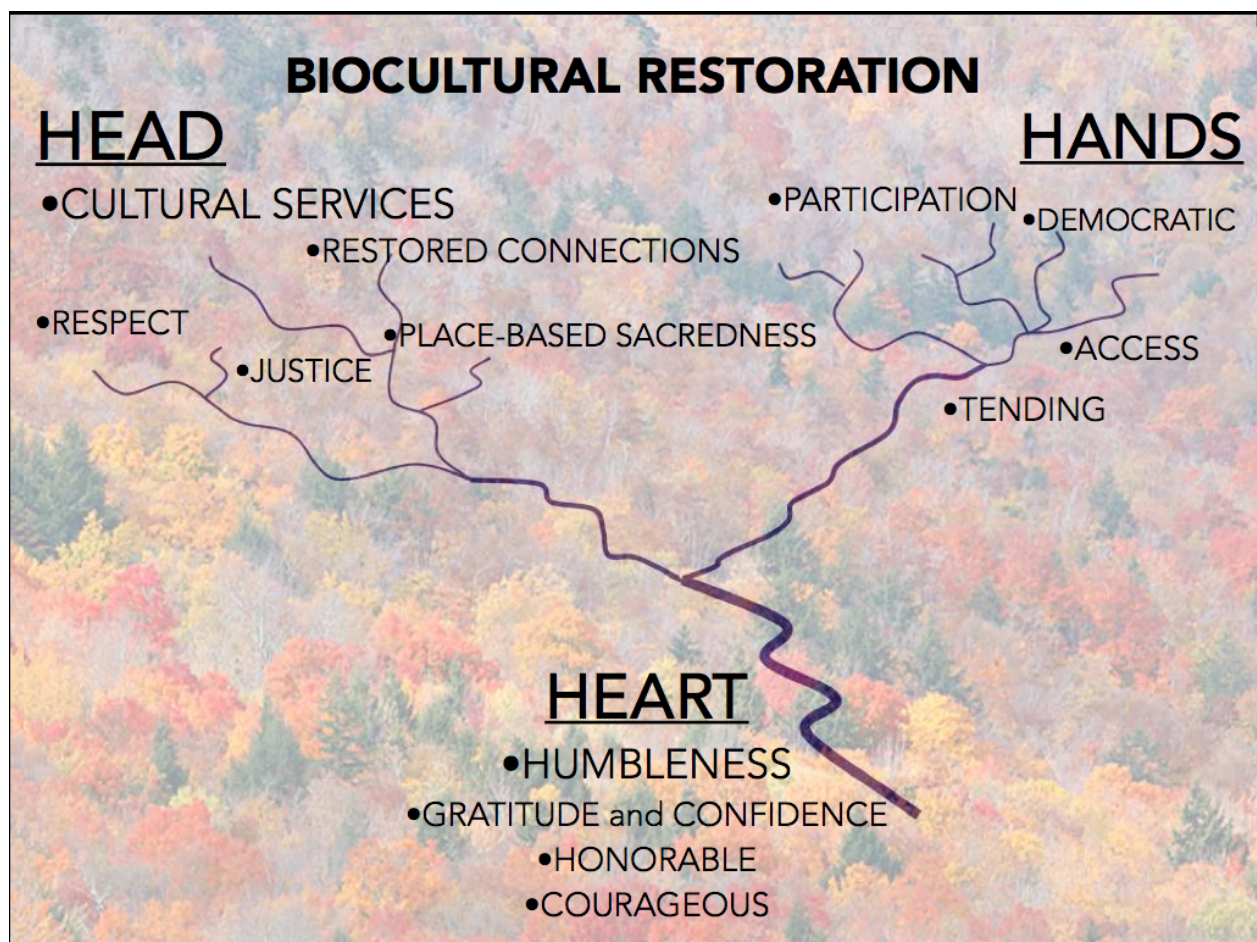
However, I believe that without a more refined sense of *what* the environment around us is and *how* we can engage it, we are creating generation of environmentalists whose Heart streams run thick with a confusing concoction of righteousness and despair.

The field of Restoration Ecology, however, offers up some strong ways to reorient ourselves to place. The Head concepts value more than aesthetics of “natural–“ instead placing emphasis on ecological integrity, as well as being willing to include humans as potentially positive agents within a place, rather than brief visitors or dominators. Hand practices of doing restoration can also better enmesh into place in novel ways.



With these concepts and practices, the streams flowing through our Hearts can engender some increased sense of accomplishment and capability in the face of environmental destruction.

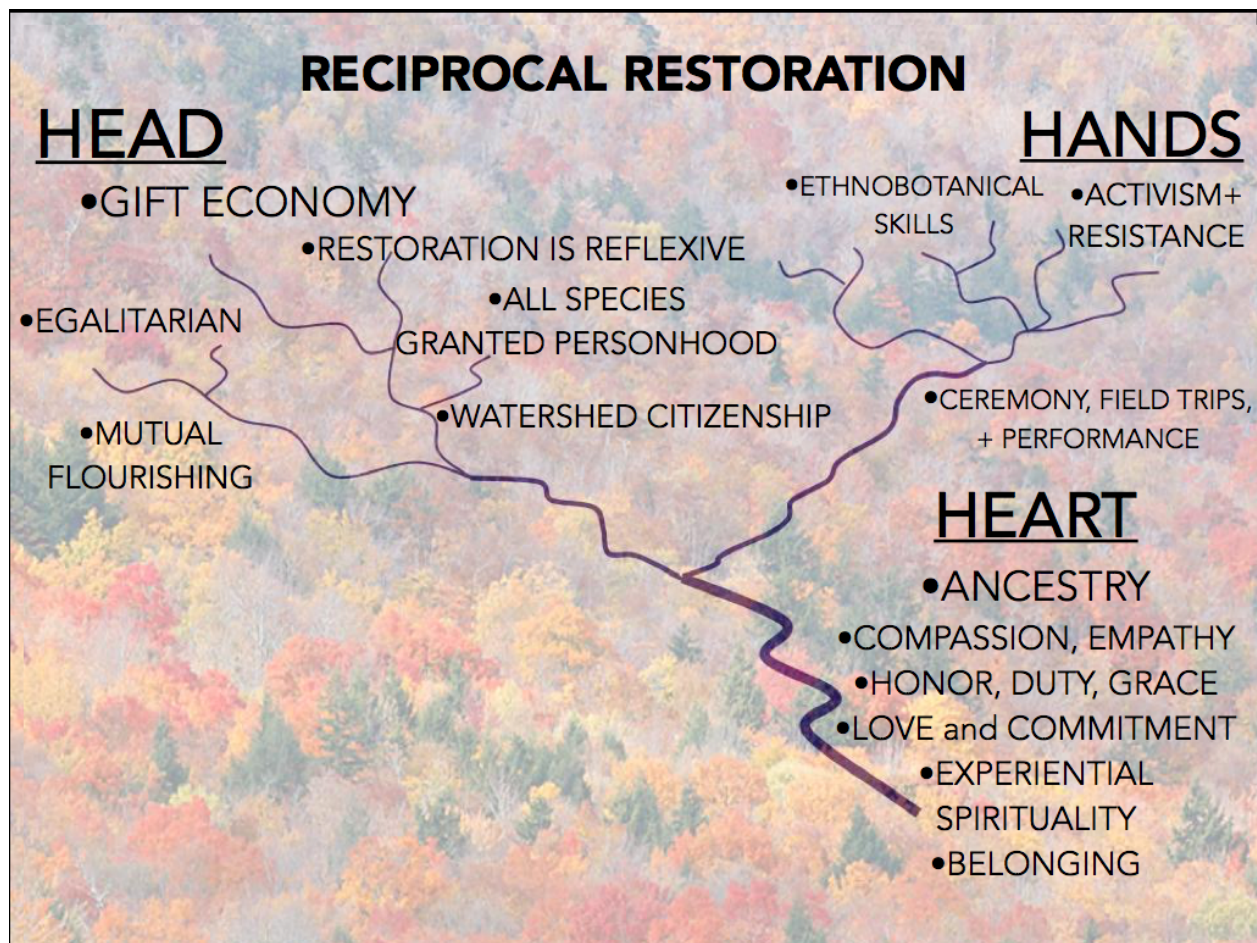
Robin Kimmerer, an author whose work I quote extensively throughout this book, has also identified a type of restoration work that goes beyond a scientific application of restoration ecology, instead generating what she calls “Biocultural Restoration.”



With biocultural or ecocultural restoration in play, the Head can enjoy a suite of ideas that fold us back into the landscape in ways seldom thought of in traditional environmentalism. The Hand practices can include not just the initial restoration work, but also ongoing tending and relationship-building. Taken together, these ideas and practices can create a strong, healthy

flow of Heart-centric sensations of being not just *a part* of the landscape, but that *we are the landscape* as much as any other biotic or abiotic feature comprises the landscape. When we practice this sort of our restoration, our Hearts delight in the knowledge that within this landscape, we are its people!

Finally, we might also point ourselves toward yet one more watershed of possibility that is even more immersive, more inclusive, and more encouraging— that of Reciprocal Restoration (again named by Robin Kimmerer). As you study this watershed, I invite the reader to consider how these ideas and practices could help us feel those emotions and virtues listed under the Heart. If we could work toward such a way of being within ourselves and amongst one another, shouldn't we? Mustn't we?



IX.

“We need acts of restoration, not only for polluted waters and degraded lands, but also for our relationship to the world. We need to restore honor to the way we live, so that when we walk through the world we don’t have to avert our eyes with shame, so that we can hold our heads high and receive the respectful acknowledgment of the rest of earth’s beings.” Robin Kimmerer, *Braiding Sweetgrass*

It has been my intention in this book to irrigate some of these ideas with my stories and essays. I am aware that the personal and cultural shifts our species needs in the coming decades may arise in ways far different from what I’m articulating here— and the project of restoring our landscapes, if it happens at all, may prove to be a task accomplished by a select few specialists. If, however, the practice of restoration can be taken up in all the places I’ve described in these pages— from rural to urban, wild to domestic— I believe that the benefits will go far beyond cleaner water and clearer skies.

A musician friend of mine from Vermont, a true guitar genius by the name of Nick Cassarino, once described to me that when he’s *inside* the music on stage, listening and playing and listening and reacting, he feels like he’s channeling an energy or life-force that surely does not originate from him or his band-mates. The Grateful Dead would often describe something similar, wherein this force would show up at certain times in their music— they welcomed it and even named it “The Other One.” Upon witnessing and participating in this, it seems many musicians feel compelled to relentlessly and passionately pursue that sensation again and again, often writing new music with the hope that certain songs could again elicit this feeling in themselves and their audience. Such songs, they hope, will become a vehicle within which they may travel to this heightened state— a state that is simultaneously, and constantly, *right here*.

For me, planting trees and doing restoration work has become my vehicle and my song. While within this song, I am aware of this larger, eloquent, mysterious presence at work through and as me. I begin to feel like I *am* my watershed, and it/we are doing this work for reasons that are as beautiful, melodic, and healing as any musical score. And while I hope my writing about the topic may also ring with this music, I must be clear that the writing, in this case, is not the

music itself. The music is the act– the practice– of doing this work. So just as my friend likes to encourage everyone to learn to play music, so that they too can discover that presence always awaiting us, so too do I encourage everyone to go plant some trees in his or her watershed.

From working with children, to college students, to adults, I see in everyone a sincere desire to deepen one’s connection to place, to people, and to the earth. I see this in everyone; it is a deep but perhaps imperceptible current running through everyone’s hearts. The more I witness this current, the more I wish to help myself and others identify it, and hopefully, to bring it up into a lived reality. When we can identify it, and find ways to both build better conceptual models for our Heads and cultivate richer practices with our Hands, I’m confident that this current flowing through our Hearts can become cleaner, stronger, more resilient, and altogether more beautiful.

#### Acknowledgments/In Gratitude



If there's one central lesson that seems to emerge out of all of the experiences I've described in this book, it's that we never do anything alone. Even when out in some of the most far-flung places I've been (which are of course just called "Home" by the local flora and fauna), I have remained attentive to how much I have been formed and influenced by friends, family, authors, and teachers throughout my life.

On the scholarly front, I've been extremely influenced by a few professors in my time in academia— teachers who have the ability to make the classroom walls shimmer with doubt and the trees outside the window waver with possibility. Of these professors, I'm especially grateful the gritty intellect of Nat Lewis at Saint Michaels' College, the elegant ethics of Daniel Spencer here at UM, and the devotional attention to craft of Phil Condon, also here at UM.

From the vast, howling terrain of literature, I must honor the influence that the following authors have had on my life and writing, listed in no particular order: Henry David Thoreau, Gary Snyder, Mary Oliver, Rainer Maria Rilke, Robin Kimmerer, Peter Mathiessen, Barry Lopez, Herman Melville, Jack Kerouac, Walt Whitman, and Freeman House. Every time I sit down to write, I am aware of these folks' presence upstream from me, sending their ideas and styles down river like so many alder cones. My banks would be barren without their inspiration.

Within the closer fabric of my daily reality, my life is clothed and colorful because of a few dear friends who constantly challenge, provoke, dance, and delight my mind and heart to a most welcomed music. Fellow EVST grad student and activist-writer-filmmaker-soul-brother extraordinaire Nick Triolo deserves special recognition for the fire he helped me tend these last two years, with him usually providing the best fuel. Guitarist friend Nick Cassarino, a companion in poetry and piety, is also there beside the fire, as are my mates Ryan Strobel, Glenn Manning, and John Milton Oliver.

My family— Mom and Dad, Bill and Judy, Matt and Courtney— have been ardent supporters and dependable allies throughout the circuitous path that brought me from a childhood of hoop dreams to this unspooling thread of writing and earth-work. Rachel Carson writes "...if a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in." For me, this has always been my Mother, Marie Stanger, and for her companionship, love, and inspiration I remain forever thankful, and eternally grateful.

And finally my darling wife Whitney, and our cunning cat Birdie, deserve total thanks and adoration. For these past two years of absurdly busy, strangely confusing, and altogether consuming graduate work, they've both been available and generous with their love, friendship, guidance, and time. I love you both beyond words and purrs.

And finally, I wish to thank the physical watersheds that form and inform me. While I may never see the day where our language and understandings can catch up to the complexity and beauty of your realities, my time watching your water and witnessing your miraculous manifestations will always inspire me to keep working on this project, this much I know. Onward ho!