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Doing Goethean Science
As Poetry Recycles Neurons
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Although practicing reductionist science has led to many breakthroughs over the years, it tends to reduce phenomena to the tangible and calculable. If you can't cut it open and look at it through a microscope, it doesn't exist. I feel that this is a dangerous way to view the world. It reduces organisms to the sum of their parts without taking into consideration all of the things you can't see. We can't see sound, but we don't deny its existence. Why are feelings any less important? Our feelings are such an integral part of our lives; we cannot often separate them from what we acknowledge as facts. Why then, do we not openly consider them more often? Why is expressing one's feelings often considered a sign of weakness?

Beginnings: Sensing Boundaries

As a child I was not often around other children. My family moved frequently with my father's work and we generally lived in isolated areas. I spent most of my time with my mother and grandmother or by myself. Spending so much time either alone or with my caregivers was both good and bad for me. Because I spent so little time with my peers, I did not develop many of the "executive skills" that children learn from interacting with other children. I never learned patience, or how to deal with disappointment when I don't get what I want when I want it, I don't work well with others--I rarely even think of asking for assistance when I need help, I just figure out a way to do it myself, and I never learned to filter my speech to what others feel is appropriate. Spending so much time alone also taught me to be self-sufficient, to entertain myself without a television or video game console, and that I am a part of the world around me, not separate or superior. Because I spent so much time alone I learned to amuse myself. I played outside and made friends with plants and animals and the wind. I have talked to animals and plants (mostly trees) for as long as I remember. And because there wasn't anyone else around to distract me or tell me I was making things up, I heard them when they talked back. Very rarely in words, but in feelings and vibrations that I have sometimes wondered if I imagined, but am becoming more and more certain that I am

not. Around the time I reached school age my sister was born, turning me from an only child into a big sister overnight, and my father started a new job that kept us in one place. Staying in one place--in a residential area--was bad enough. In my five years of life I had grown very accustomed to the wild places and wide open skies. I had no fear of nature, no fear of anything, really, because the natural world was what I knew and it had always been my friend. But not only did my parents take me away from the wild places I had grown up loving, they also sent me to school. Initially, I was skeptical but curious and a little excited. I already knew how to read and enjoyed doing so, and my mother assured me that I would learn even more and that I would finally have other children to play with. However, my curiosity and excitement soon turned to bitter disappointment. At school we had to sit still and stay inside *all day long*. Spending an entire day indoors was anathema to me, as was having to ask permission to go to the bathroom or get a drink of water. As long as the weather was good, the only rule I had ever had to follow was my mother's insistence that I stay within sight of our house and be home before dark. She trusted my five-year-old judgment to know when I needed to come in or drink water, and if something scared or worried me I was smart enough to run home. Staying indoors all day was bad enough, but spending an entire day in the company of other children was just strange. They didn't listen to each other, were nosy and bossy, and really mean to each other. My parents and grandparents had always listened to what I had to say, and except for them and occasionally an older, visiting cousin, no one had ever told me what to do. I had never been told that something I drew or made was "wrong." I had never been told that I was using the wrong color crayon. And I had never been told that I was weird. I experienced a lot of "firsts" on that first day of school, and I don't recall any of them being good. In *The Secret Teachings of Plants*, Stephen Buhner quotes Robert Bly:

“Behind us we have an invisible bag and the part[s] of us our parent don’t like, we, to keep our parents’ love, put in the bag. By the time we go to school our bag is quite large. Then our teachers have their say...[And] then we do a lot of bag-stuffing in high school. This time it’s no longer the evil grownups that pressure us, but people our own age.” (Buhner, 238)

My “Bly Bag” filled up very quickly in one day. I was five or six years old and made to feel like everything about me was wrong, and until that night in October around the campfire in the Hoh Rainforest when I admitted to twenty near-strangers that trees sometimes talk to me, I had continued to feel that way almost every time I shared an important part of myself with someone.



Delicate Empiricism: Science as a Conversation

The time I have spent with the walnut tree has been both relaxing and an amazing learning experience. I have learned a lot about myself, either from the tree itself, or because the energy of the tree allows me to let my guard down enough to relax and really be myself. Because of my early experiences with my peers, I don't often let my guard down around other humans, only with plants and animals. When I am with the walnut tree I feel peaceful, a sense of calm that I do not normally feel. I am not sure if this comes from me or the tree. Buhner would say that it is the tree's electromagnetic field touching and interacting with my own.

“Everything we encounter in the wildness of the world gives off its own electromagnetic pulse of communication. These waveforms are filled with meanings, living communications that touch us and we experience as feelings.” (Buhner, 149)

The difficulty I am having with this project is intrinsically linked to my early school experiences and how I was made to feel that such an important part of my life and who I am was imaginary or wasn't good enough and needed to be hidden. The Buhner text and the time I have spent with the walnut tree, as well as the acceptance of my classmates in this program has brought me a little closer to accepting this part of my true nature that I have not been able to accept as real since early childhood, but it has also brought up even more doubt and questioning.

“For any part of us that we put in the bag becomes distorted, unhealthy, insane. Life is not meant to be lived in a bag...the part just wants out.” (Buhner, 239)

All of the pieces of myself that I put in the bag have been stewing and fermenting for years. They were demonized and so have become demons in an effort to live up to the expectations of others. I have always tried to keep a tight leash on everything in the bag, but such vigilance is taxing and occasionally things leak out, usually in a destructive way that I learned long ago to turn inward, in an effort to shield those around me from the dark places inside me.

*“For another truth that comes in its own time is that any part that we have locked up begins to take on tremendous energy. And the years of repression, the stored energy of being--**shut up!**--have taken their toll. The shut up parts have begun to devolve, to become hairy and monstrous, to grow claws.--**solitary confinement always does this.**”* (Buhner, 239)

For as long as I remember--at least back to my early teens, I have felt like I have to keep my mind and emotions ship-shape and tied down tight. I feel like I have something of a berserker inside me and if I let go even a little I won't be able to control it. Like the steam valve is broken and the whole thing could blow up at any moment. That is what has defined my life up to this point. I don't want to do that anymore. I want to open the hatch and let everything out. I don't want to be safe. I don't want to be comfortable. I want to howl into the storm.

Engaging the Conversation

10-3-12 First Impressions: The Nut Orchard

It's shady and cool. A little bare. Sparse. It feels lonely, and a little haunted, even when the whole class was gathered there. I like the lonely places. They speak to me, like the wind in the

trees. The ground around the nut trees is bare, something the trees do to the soil. Because I love the deep, dark, --hushed-- forest so much I did not expect to be drawn to this place, but the bare ground feels a little like a stage and I want to twirl around on it. I have a little, and would more if my classmates weren't around. I love the wind. The whole nut orchard speaks to me in some way, but the walnut tree in particular. The shape of it--always the shapes of things. It is a recent interest, formed just this summer, but it is quickly becoming an obsession. I want to examine this tree from every angle, photograph it, learn to draw just so I can draw it. The angles of the branches, the lower ones thrown wide like a lover awaiting embrace. The texture of the moss, the strength of the trunk. My reaction to this tree is almost sexual. I remember the first time I ever felt this way about a tree. I was 18, it was late winter/early spring and the tree in question was on the ACC campus, a huge old magnolia. Or was it a few years earlier, the old china berry tree behind the wellhouse? That was probably it, but I didn't have the words to describe what I felt. I was a precocious 14 or 15, but being excited by a tree was so far out of my frame of reference that I couldn't wrap my head around it.

*I have never read a poem as lovely as a tree
Or so very much like pornography.*

This tree is also very comfortable. I have walked around it, leaning against it in various spots and it always fits my body just right. I wonder if this will change as I lose weight over the next few months. I also like the crunch underfoot, the leaves and branches and nut shells the squirrels left behind, even the way the ground gives way into mole holes. There is a large twist of bark on the ground, dry and peeling on the inside still green with moss on the outside. I want to write the history of this place on that piece of bark.

10-10-12 Return Visit

I feel like I am coming back to myself. Like all the pieces of me I lost so many years ago are coming home and I will be whole again. I want to cry, but I'm smiling, too.

"Maybe they're just pieces of me you've never seen."

--Tori Amos, "Tear In Your Hand"

That day in the Hoh on the Spruce trail when the trees were trying to teach me to see without my glasses. I heard them, but didn't know how to let go enough to learn.

There is a woodpecker with a red cap poking holes in my tree. At first I was upset, but then realized that the tree would do something if it were bothered. And then I realized that the series of knotholes I had noticed on the tree were made by woodpeckers and that they are all over the tree...maybe my tree is getting a tattoo.

The wrinkle at the base of the trunk looks like a walnut shell.

What kind of moss grows on you? Tiny spiderwebs shining diamonds.

10-24-12 Personal Growth Through Sensory Observation

1. Color--green and brown and grey and tree-colored
2. Pattern of Color--mottled and tree-like
3. Shape--6 large branches from the trunk, many small offshoots
4. Smell--like wood and moss and green and wet, a little spicy
5. Taste--Maybe I have tasted too many trees or drunk too much well water, but it just tastes like a tree. Green and a little earthy, a little gritty.
6. Sound--I press my ear against the trunk and hear my own heartbeat, or maybe we share a heartbeat--maybe all living things do

7. Touch--cold, wet, grooves, moss--wet hair ball, but not unpleasant, strength, solid but not immobile, like placing my hand on a man's chest and feeling his strength vibrating within, fire and heat and the beat of his heart--that's probably why I equate trees with sexuality.
8. Ugliest Aspect--The newer branches. They are all shiny and new, like they've been waxed clean, and stick out at odd angles like an awkward teenager.
9. Most Beautiful Aspect--the shape of it

Ugliest aspect of plant--The new and shiny branches sticking out at odd angles like a waxed-down porn star. I like beings with a few miles on them; people, plants and animals that have been around the block a few times. Or the brand new: toddlers, buds, puppies. The branches I don't like are teenage.

Ugliest aspect of Self--My laziness. If something is hard I don't want to do it--even if it is something I really do want to do. Like this. I really want to kick this class's ass, but it's hard, so instead I go shopping or watch TV.

Correlation?--Yes. My laziness is because I don't like to be a beginner. I want to spring fully formed from the skull of Athena (yes, Athena), wise and warrior and clutching my spear with a steely glint in my clear grey eyes. Instead, my eyes are the color of water and too open and full of feelings.

Most beautiful aspect of tree--The strength of the trunk. I said shape at first, which is very beautiful, but the strength is what I find most beautiful. Like a man's chest, vibrating with life and fire and strength, and trees do too. A slow burn, bubbling up from the center of the earth.

Most beautiful aspect of Self--my ability to feel everything. It hurts, it sucks, it's *really* inconvenient sometimes, but I would not trade it for anything. I know that I feel things that many

other people can only imagine. Maybe they can't even imagine it. Do they even know about this whole other spectrum of feelings?

How do they relate?--I think they are complementary. Frankly, the most beautiful aspect of the tree is what I look for in a partner. I feel everything so strongly and cannot always handle it, so I both admire and seek out strength in others. It's not always healthy, but the right person can provide a good balance of support without smothering me.

--I am probably projecting onto the tree. But then, I don't feel that way about all trees, no matter how strong and beautiful. So, am I crazy or not?

--Marisa pointed out that taking it all on myself takes away the plant's power, its uniqueness and individuality. It is something that is alive and can affect me.

"Sometimes, when you first begin to learn this work, the feelings you get from an outside source can become tangled up in your internal responses, as if a pile of different colored threads were dumped in a big heap on a table. To sort them out, you must take each thread as you find it, slowly pull it out of the pile, and follow it to its end...In this way you will know which thread of emotion/meaning come from outside you and which are response/meaning threads from within you." (Buhner, 234)

This part of the assignment was very difficult for me. I have been so accustomed to viewing the world according to feelings--and then keeping those feelings to myself--that I have a hard time articulating my observations. It wasn't until we did the series of exercises and writing prompts noted above that I started to get it, and I am still struggling with it now. How do you relate your thoughts if they are not in words but in feelings? How can I articulate the vibrations I feel emanating from the world around me? Sometimes they are so strong and overwhelming that all I

can do is sit and stare and vibrate along with them like a string on an upright bass, low and full and taut, containing all the sounds in the universe. I like knowing that I am a part of the world, that there is very little difference between myself and a rock or tree. I like vibrating with nature. But until humans develop a method of communication based on the psychic transfer of emotions, I also need to learn to live in the world that my fellow man has created around me. And the time I have spent with this walnut tree has taught me a lot about myself and what I need to survive in that world.



Exact Sensorial Imagination and Living Understanding

Although I would never have chosen the walnut tree as a subject if I hadn't *felt* it, what initially caught my eye about it was the shape. I took a drawing class last summer, and the very first

exercise we did was about training your eye to see the shapes of things. To study the shape, revel in it, to take the subject out of its context and view it in negative space. I only attended the first two classes--I have a tendency to get bored or scared and wander off from pretty much everything--so I have no idea where to go from there as far as the visual arts go, but what I learned during those first two classes has changed the way I see the world in a very fundamental way. Throughout the week, from Wednesday to Wednesday, I often find myself ruminating on the shape of the walnut tree. The main branches coming off of the trunk are thrown wide, embracing the world,

*O, walnut tree
you wait for me
with your
branches spread
wide like a
lover awaiting embrace.*

while the smaller, higher branches tangle and twist.

*Tangle of branches
weaving skyward,
tracing patterns in the light*

The larger branches stretch from side to side, making the tree look overbalanced like a contortionist. But, after the initial attraction based on my own aesthetic preferences, and far more important to any long-term relationship is the way the tree makes me feel. I can stand several feet away from the walnut tree and *feel* it. It is very difficult to put into words exactly what I feel: a vibration, a calm presence in the back of my mind, an acceptance, an invitation to come closer? Words are inadequate. The feeling is all of these things, and when I do move closer it gets stronger and stronger, and pulls me in. I reach out my hand, intending to lay my palm on the trunk, but that isn't enough. I embrace the tree, leaning my whole body against it, running my hands up and down the branches within reach. The bark is rough where it is not covered in moss, and the moss is damp and very soft and I rub my cheek against it.

*Cushioned velvet damp with tears
from the air and a vibrating
strength that draws me and
cradles me and I want to weep
at the rough, firm-smoothness.*

My clothes get wet and become covered in moss and leaves but I don't care.

“If we eat the wild, it begins to work inside us, altering us, changing us. Soon, if we eat too much, we will no longer fit the suit that has been made for us. Our hair will begin to grow long and ragged. Our gait and how we hold our body will change. A wild light begins to gleam in our eyes. Our words start to sound strange, nonlinear, emotional. Unpractical. Poetic” (Buhner, 145)

I don't eat the walnut tree, the squirrels have already taken the nuts, but it makes me feel that way anyway. Embracing it, embracing the living world around me has the same affect. It makes me want to pull even further away from the man-made world and go back to the green, to become a wild animal again, instead of this domesticated beast tottering about in clothes that keep me from feeling the wind and sun on my skin and shoes that prevent me from feeling the ground beneath me. Whenever I am away from the walnut tree, I can call up these images and feelings at any time and am transported from wherever I am, sitting in a classroom or riding the bus, back to the farm, to the nut orchard, that although it is fenced in and protected, doesn't feel entirely domesticated.

Walnut

Tree--A

Portrayal

Members of the walnut family (*Juglandaceae*) generally grow in more temperate regions than this, so I was very surprised to find such a



healthy specimen in the damp and rainy Northwest. They are a very old family, dating back to the Middle to Upper Cretaceous period, and was probably much more widespread in ancient times than today. Walnut trees tend to be moderate to large in size, have very large and deep taproots, and a dark and durable wood often used in cabinetry. The leaves are deciduous, aromatic and dotted with glands, and grow in alternating, pinnately compound leaflets with toothed margins. Although they grow separately, both male and female flowers grow on the same tree, and the male flowers produce an enormous amount of pollen, possibly because the female flowers are very small and inconspicuous, and all of the North American varieties are wind-pollinated. After pollination in the springtime, the fruit begins to grow and is ripe by autumn. In more temperate climates, the fruit

usually drops after the first frost, but the walnut tree I studied had already dropped its fruit by the beginning of October. I had noted that the ground around the tree was very bare. No other plants grew within a fairly wide circumference, including grass and weeds. This is because of the tannic acid Juglone, which is believed to be leached from the roots into the soil. Juglone prevents seeds from germinating, both other species as well as young, aspiring walnuts.

The Whole As a Part

When we first started spending time with our plants, the walnut tree was preparing for winter. The fruit had dropped and the remains left by the squirrels were crunching pleasantly underfoot. The tree was still covered in leaves, but they were just beginning to turn yellow and drop. Although the tree was clearly preparing for the winter, it still felt alive and companionable, right up until the week before Thanksgiving. When we went out to the farm that day, everything was very quiet, there was a silence permeating the whole farm that I noticed in the back of my mind, but did not consciously register until I went to the nut orchard. Where I normally felt a welcoming presence in my heart and mind there was only silence. I moved closer to the tree and placed my hand on the trunk, but felt only bark. I embraced the tree and rested my forehead against it and there, in the back of my mind was the softest hum, just the barest glimmer of a vibration that let me know the tree was still alive and aware, but very, very slow and very sleepy. The nut orchard is on the border of the farm and forest, and the only things I could feel without touching them were some of the pine trees, but even they were very quiet.

The Unity of the Organism

I am not sure that I accomplished this part of the experiment, at least not in any way I can articulate. I do sometimes reach what I believe is the “pregnant point” that Buhner speaks of, but it just happens sometimes when I am particularly drawn to something. I feel an intense, but very calm excitement and the rest of the world fades into the background. My breathing deepens and my mind quiets, and although I’ve never checked, my eyes probably dilate. The only thing that matters at that moment is me and the stimulus. I have trouble directing my attention elsewhere until whatever is happening between me and the stimulus finishes happening. Upon our first meeting I did feel this way about the walnut tree. I was reluctant to leave the nut orchard during the tour of the farm, and went back as soon as I could. I choked up and my eyes filled with tears and all I could do was stand there touching the tree. I would like to describe what I felt in more detail, but the closest I can come to articulating it is simply that I felt at peace, wanted to revel in that feeling and did not want to leave the organism whose very presence allowed me to feel that way.

Doing Goethean Science

I don’t want to sound like I think I know everything about Goethean science or that I am an expert in the field of *feelings*--I have only just this quarter learned that this form of observation exists outside of myself, and up until very recently wondered if I might be crazy--but I think I have been practicing Goethean science in some form or another for most of my life. The way I grew up, geographically isolated and then in a self-imposed isolation in an attempt to protect myself from those who didn’t understand me, taught me to step back and view the world in a slightly different way than most in the industrialized world. I have always marveled at how alive and exciting the natural world is, shimmering and vibrating with *life*.

Practicing Goethean Science

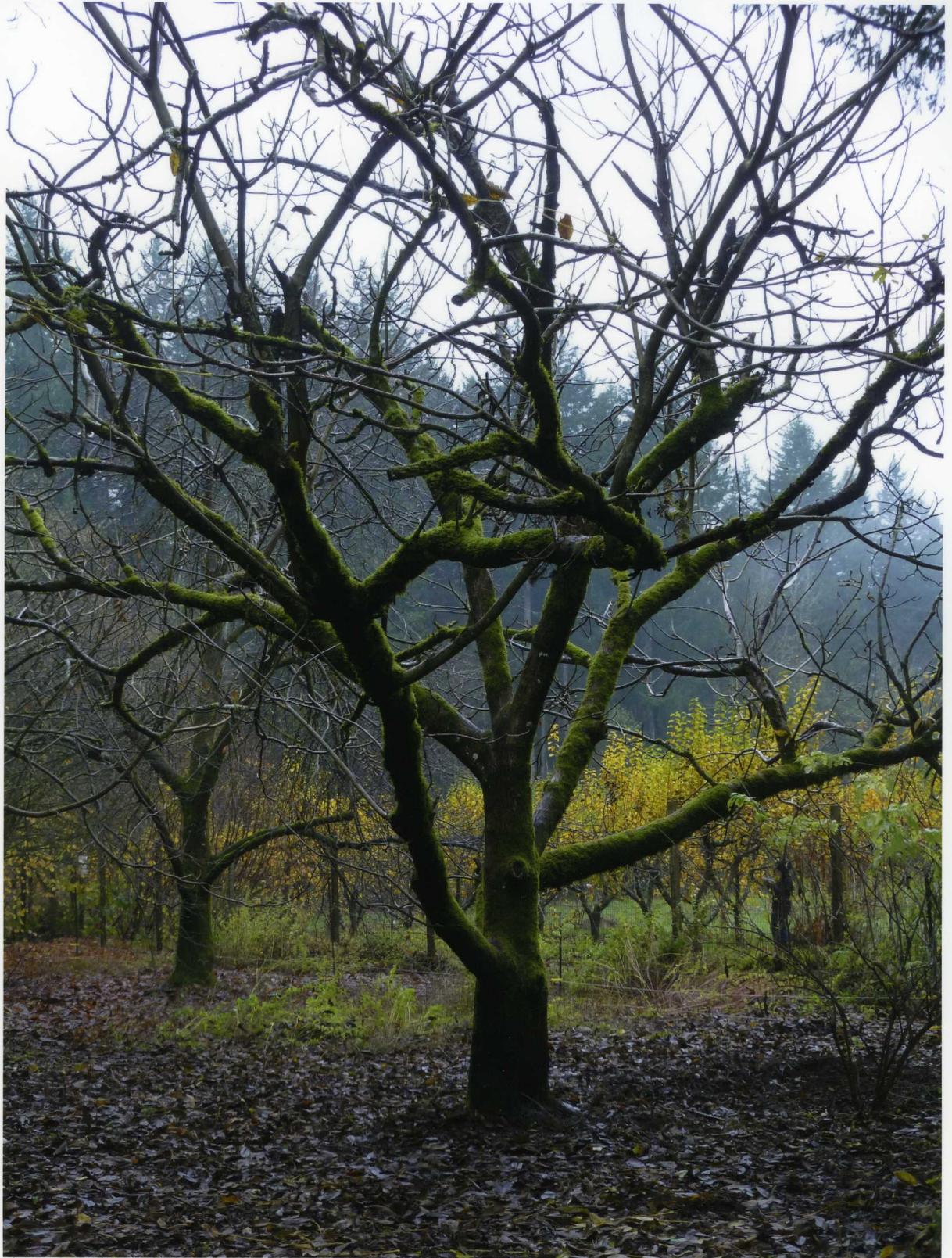
The Riddle. During the farm tour, I was on the lookout for a plant that I wanted to interact with. I had my eye on the fig tree, but it wasn't really speaking to me. I checked out the herb garden, and although there were many plants there that I wanted to learn more about, nothing really grabbed my attention. When we went into the nut orchard I was immediately captivated, first by the lonely and haunted feel of the orchard in general, but then by the shape of the walnut tree, with its spread branches and moss-covered trunk.

Into the Phenomena. I only wanted to spend time with the walnut tree. I did not want to have to put my observations into human language, or look up facts in books, I just wanted to lean against the tree and *feel* it. I had a lot of trouble turning my wordless conversations with the tree into words that anyone else could understand.

Exact Picture Building. During the time I was away from the walnut tree, I would often revisit it in my mind. I would follow the shapes of the branches against the sky. I would close my eyes and try to picture the tree in negative space, and remember exactly how the moss felt under my hands. But most of all, I would try to remember how the tree made me feel, try to recapture the sense of communion that I felt when I was with it.

Seeing the Whole. The time I spent with the walnut tree is very valuable to me. It, along with the readings we have done for class, has taught me some very important things about myself. I no longer think that I am imagining it when I think plants or animals are trying to talk to me. Some of the exercises we have done in class in regards to this assignment have shown me things about my thought processes and inner workings that I had always wondered about but had never been able to figure out. The sense of peace and oneness I have experienced when spending time with the walnut tree has opened a whole world of possibility to me that I would not have even hoped was real a few

months ago. Although I have a (hopefully) very long road to travel, I no longer feel quite so at odds with the rest of the world, and now I know that if I can't make it work with my fellow man, the trees will always make a place for me.



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