

Mother's Tree

A Story of Materiality, Environmental Art, and Instrument Lifespan

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Gloucester Massachusetts, Present Day:

The crash that woke Elsie Brewer from her sleep, and the subsequent sickening crunch, came just after 2AM. She rubbed her eyes, dilated and confused, as she stumbled to the bedroom window and peered into the backyard looking for the cause. Unable to see anything, the 38-year old school teacher padded down the hall to her teenage son's bedroom. She opened the door a crack and flicked on the light, which, to her surprise, did nothing. *Power outage?* she thought to herself.

Her son, Daan, stirred from his sleep, turning over in bed and squinting to see her in the low light. "What's up?" he asked, ruffling his hair.

"Did you hear that noise outside?"

He looked confused. "Uh, no. When?"

"Just now - and the power's out too."

Daan climbed out of bed and threw on an oversized NYU hoodie. "I'll go take a look." He walked past his mother and out the bedroom door. "Backyard or front?"

Elsie hurried behind him. "Back, I think."

She turned on her phone flashlight as the pair stepped out into the frigid December air. Elsie panned the light across the empty yard while Daan ventured into the far corner of the property.

"Over here," he called a moment later, and Elsie quickly moved to join her son across the yard. As she approached him, she followed his gaze to a large tree branch that had fallen across the back fence, narrowly missing their shed. Both took a few steps back as they noticed the powerline it had pulled down with it.

“Well that explains the power outage,” said Daan, casting the light from his own smartphone along the splintered fence. “Weird...there’s not even any wind tonight.”

Elsie looked up into the treeline above the fallen branch. Realization hit as her gaze fell upon the dying oak just over the property line in the neighbor’s yard. She had been keeping an eye on this tree for a few months, watching how it swayed in the wind like a jenga tower one turn away from collapse. It hadn’t sprouted leaves this past spring, and Elsie was almost sure it was dead. She had been meaning to call her neighbor about it, but hadn’t gotten around to it with her busy teaching schedule.

“This tree...really needs to be taken down.”

“Clearly,” said Daan, still examining the branch. His flashlight reflected off something metallic hidden partially beneath the branch. Some sort of dish perhaps?

“What do you suppose that is?” he asked, keeping his light fixed on the strange object.

Elsie shrugged. “Probably came down with the powerline.” She began moving back toward the house. “I have the electric company emergency number inside. Come on, it’s freezing out here.”

Daan followed his mother back into the house, where she quickly thumbed through one of those phone books that old people keep.

“You can go back to sleep, hun,” she said. “I’ll deal with this.”

Daan closed his bedroom door, but could still hear his mom’s muffled voice on the phone. He tossed his hoodie over the bedpost and switched his phone to low power mode. Who knew how long they’d be living like the pilgrims? As he lay down, he saw a faint light out his window. He watched the light dance closer to the fallen branch in the backyard until he could make out the form of his elderly neighbor, Dorothy Alden. She wore a white nightgown and

slippers and seemed to be stepping over the crushed fence into his backyard, shining a flashlight over the wreckage.

“What the heck is she doing?” Daan wondered.

He panicked for a moment as she reached down to grab something, fearing she’d nick the live electrical wire. But her hands gently closed around the strange metal dish, which she pulled from beneath the dead branch. Daan could now see that the object was slightly curved, like a bowl or a tire hubcap. He watched Dorothy inspect the object carefully before tucking it under her elbow and stepping back over the fence into her own yard. Daan had no idea what she wanted with the damaged piece of metal, or what function it served in the powerlines. All he knew was that he was gonna be pretty annoyed if this caused any delays getting the power back on.

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Gloucester Massachusetts, August 1953:

A 10-year-old Dorothy Alden lay on the grass in her backyard staring up at the large oak tree that shaded much of the property. She admired the shiny steel domes that Mother had recently suspended at various heights and locations from the tree’s branches. These domes were part of a project Mother was working on, one that Dorothy could hear her working on now in the garage. She had learned recently that most people’s mothers did not have a woodshop in their garage, but then again, Dorothy’s mother wasn’t like most people’s. Every now and then, an acorn would fall from the tree and strike one of the domes, creating a shimmering note.

Dorothy’s perfect pitch was triggered each time a new acorn fell.

“G sharp, F sharp, B natural...”

Mother emerged from the garage and came to sit beside her. “What’re you doing, Dot?” she asked.

Dorothy thought for a moment. “Just listening, I guess. C sharp.”

Mother reached out for Dorothy’s hand and pulled her to her feet. “Well, if you feel like listening, come help me with something in the garage.”

The two-car garage that served as Mother’s woodshop was decked out with just about every piece of machinery one could possibly imagine. Before Father had died, he and Mother had collected a whole host of tools, from custom-made drill bits to the newest power tools on the market. Today, Mother led her to a workbench covered with sawdust in the far corner of the garage. On it sat two curved pieces of wood about 6 inches thick, cut into identical shapes that Dorothy thought looked like large crescent moons. Each of the moons had smaller holes, roughly the size of a fist, cut into its flat edge. No doubt Mother had used one of her fancy custom drill bits to space and shape each hole perfectly. Additionally, both structures appeared slightly wet.

“I just finished staining it,” said Mother. “Tung oil. It’s all natural; great for exterior work.”

Dorothy inspected the pieces closely, catching a whiff of a pungent scent. “It doesn’t smell too good,” she remarked.

“No, it doesn’t, but the smell will fade in a few days.”

“Let’s hope,” said Dorothy, covering her nose.

Mother laughed and delicately brushed away the layer of sawdust on the workbench, revealing a pencil sketch on the wood surface beneath. The small-scale diagram showed the two pieces of wood joined together to form a circle, or rather, a ring of some sort. It seemed to be enclosing a large pillar in the center.

“What’s this thing in the middle?” Dorothy asked, pointing.

“Any guesses?” said Mother.

Another acorn fell outside, hitting one of the steel domes. D sharp.

“...The tree?”

Mother nodded.

“...And what are the smaller holes for?”

“*That* is what I need your help with,” said Mother, rather excitedly. “I could use your good ear.”

Mother led her to another part of the large workshop dedicated to metalworking. Scattered around the space were brass pipes of varying lengths. In the center was Mother’s guitar and a large piece of paper with intimidating numbers scrawled on it.

“The pipes will fit through the smaller holes in the ring,” she explained. “I’m in the process of tuning them now.”

Dorothy thought through the notes she’d heard from the steel domes. “To a...pentatonic scale?” she asked.

“Exactly! I wrote down the fundamental frequencies for each of the pitches in the scale.” Mother pointed to the math equations on the sheet of paper. “Given the speed of sound, I was able to divide by each frequency to come up with an approximate wavelength.”

Dorothy had never been a fan of math, and most of this was making her head hurt.

“Um...so you cut the pipe to the value of the wavelength?”

“Close. Half the wavelength,” she corrected. “Since the pipes are open ended, the wavelength is technically- well, never mind. Just listen.”

Mother grabbed one of the pipes and raised it to her lips. She blew a soft, steady flow of air into the brass length.

Dorothy listened. “G sharp,” she offered. “Give or take a few cents.”

“Do you wanna try out the rest?” asked Mother, smiling. “I’d love your input before I make more.”

Dutifully, Dorothy blew into each pipe and listened for its pitch.

“Pretty accurate,” she said when finished, “but why do you need to make more? You already have enough for a pentatonic scale.”

Mother winked and placed the pipes neatly back on the workbench. “You’ll just have to wait and find out,” she teased. “All I’ll say is that when I’m finished with this, we’ll be able to play music with the tree, and the tree will play with us.”

Dorothy glanced out the open garage door at the large oak tree, with its shiny steel ornaments that glittered in the sunlight.

“Do you think the tree wants to play music with us?” she asked her mother.

Mother thought for a moment – a long moment.

“Ya know...I’m not actually sure,” she replied, still pondering the question, “and I’m not quite sure how I’d ask it.”

There was a pause after this, and both walked back outside into the afternoon heat.

“I guess this will be a new adventure for us...and the tree,” she offered. “Just wait till the acorns really start dropping next month.”

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Present Day:

Daan sat at the kitchen island eating his breakfast at around noon. The first week of his college break had been all the time needed to seriously mess up his sleep schedule. The power had been off for two days now, and in his opinion, there wasn't much else to do besides sleep. He nearly spit out a mouthful of cornflakes when he heard the scream from outside.

Peering out the sliding glass door, it didn't take long for him to see what was unfolding. Dorothy Alden, barefoot and dressed in a bathrobe, ran screaming across her lawn toward a group of men in orange vests labeled "North Shore Tree Removal." The men seemed startled by her rapid approach, and Daan himself was surprised as she barreled through the brush and bits of splintered wood surrounding the tree with seemingly no regard for the cuts and scrapes appearing on her exposed calves and feet.

She and the tree removal crew spoke in harsh tones to each other, and Daan couldn't make out much of the conversation. Eventually the crew seemed to back down in annoyed defeat. Dorothy stood between them and the tree and watched as they left her yard. Only once the van had driven away did she finally move, wincing in pain upon taking a step. Daan slid open the sliding door.

"Miss Alden," he called to her. "Are you alright? Come inside, it's freezing!"

Daan helped the older woman into his home and sat her down at the kitchen island.

"Let me grab the first aid kit. Hold on."

He left the room and returned a few moments later with some antiseptic and bandages. As he got to work cleaning the scrapes on her ankles, Dorothy noticed the now soggy bowl of corn flakes.

"My apologies for intruding on your meal."

Daan looked up at her with a shy smile. “Don’t worry about it,” he assured. “What... was going on out there anyway?”

Dorothy sighed. “They wanna take down my mother’s tree.”

Daan finished cleaning out the scrapes. “The old oak tree? Isn’t it dead?”

Dorothy paused. “I suppose so...but I can’t bear to see it taken down.”

“If you don’t mind me asking, what about that tree reminds you of your mother?”

Dorothy looked out the glass door. “Huh, I guess you can’t really see from this side of the fence,” she said. “Would you like me to show you?”

Daan stood up. “Sure, but first,” he crossed the room and opened a closet. He removed a shoe box and handed it to her, “put these on. My mom bought them last week and was gonna return them.”

She opened her mouth to protest, but Daan cut her off. “I’m not letting you walk over there without shoes on. *Again.*”

Eyeing her bandaged feet, Dorothy saw his reasoning and slipped into the shoes – a fairly decent fit. The pair headed outside and stepped over the broken fence into Dorothy’s yard. As they approached the base of the large oak, Daan could see the lower parts of the trunk typically obscured by the fence. About 3 feet up, fit snugly around the tree trunk was a wooden ring. Attached to the ring were several brass pipes of differing lengths. The structure looked a little worse for wear, but the sophisticated cuts of the wood and the layout of the pipes looked like some sort of musical instrument.

“Did you build this?” he asked, circling the tree.

Dorothy placed her hand on the tree trunk, feeling its rough bark. “Years ago, with my mother,” came her reply. “Well, technically she did most of the work. I only helped with the tuning.” She leaned down and slowly blew into each of the pipes individually.

Daan tried to recall years back in AP music theory. “The pentatonic scale,” he stated.

“Correct.”

He looked up into the branches of the tree and noticed more of the hubcap-like fixtures hanging from them. “What do those do?”

Dorothy sighed. “Nothing anymore. In autumn, the tree used to drop acorns which would hit those steel domes my mother designed; also tuned to a pentatonic scale.”

She walked around the other side of the tree to where Daan was standing. He’d just noticed a second set of pipes.

“There’s more on this side,” he said, “lower down.”

“Yep,” she grabbed the longest pipe and tugged on it a bit. “They used to rotate, but it appears that mechanism has eroded with time.”

Daan stepped back, taking in the full scale of this strange instrument.

“She started by building the domes so the tree could sing to us,” Dorothy recounted. “Then she added the pipes so we could sing with it.”

Daan nodded in understanding. “You don’t want to lose the memory of your mother.”

“It’s more than that... what my mother made is special, one of a kind, even.” Dorothy tugged once more on the pipe, willing it to rotate, but to no avail. “And she’s not around anymore to build another one. I already lost my mother, but I won’t let her creation die.”

Daan sat down in the frosted grass, crossing his legs. “Can you play it for me?”

Dorothy shook her head sadly. “No, it can’t be played anymore,” she explained. “First of all, the tree hasn’t dropped acorns in years, and the pipes, well, they’re supposed to be played by *two* people.”

“You and your mom?”

“Yes. One person would run out of breath in a heartbeat.” She pointed to the pipes. “Mother would take the first three scale degrees and I would play the next two and the octave. There was... a system to it.”

Daan listened quietly as he sat in the cold grass. “If I might be so bold,” he offered hesitantly, “it sounds like this system had three key players. The tree, your mom and, well, you.”

Dorothy wasn’t quite sure where Daan was going with this. She let him continue.

“Miss Alden, you’re all that’s left of that system,” he pointed out. “You said you don’t want to let your mother’s instrument die but... perhaps it already has?”

The older woman slumped and sat beside him, as if an enormous weight had been lifted off her shoulders. She let out a long sigh.

“I think I’ve known that for quite some time,” she confessed. “What stands in my yard today is a skeleton of the beautiful instrument Mother designed. Nothing more than pipes surrounding some rotting wood.”

Daan and Dorothy sat in silence for a while, looking over the dead tree and the remains of the instrument beneath it. After some time, Daan asked:

“Could it be rebuilt? With a different tree?”

Dorothy thought about this for a moment, then shook her head. “Not really. This instrument was part of *this* tree, *this* space, of me and my mother,” she clarified. “The timing of the acorns falling, the tunings from our own ears, and the way the weather changes shifted those

tunings with time...perhaps one could recreate some of it but it wouldn't quite be the same instrument."

Daan agreed, and the two of them stood up and walked toward Dorothy's house.

"Thank you for showing me the, um, instrument."

Dorothy smiled. "And thank you for all your help." She stepped inside her house. "Oh, and for the shoes."

It seemed like there was nothing more to be said, so Dorothy closed the door and Daan began walking back to his own yard. He paused once more when passing the dead instrument, an idea coming to mind. He rushed back up to the door and knocked.

"We can't recreate the instrument," he said when she opened the door, "but what if there was a way for it to inspire new work?"

Dorothy chuckled. "It's a sweet thought, but no one is ever gonna get to see it. My little outburst won't keep the tree cutters away forever," she reminded him, "and I doubt the dead tree is gonna end up in any museums."

Daan cracked a smile. "I think I might have a workaround for that."

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Gloucester Massachusetts, September 1953:

Dorothy sat in her kitchen drinking a glass of orange juice. Mother had been out back putting the finishing touches on her "project" and had instructed her not to come outside until summoned. Over the last few weeks the tree had been dropping an increasing number of acorns. As she listened, sipping her juice, to the ever-present sound of a randomly-ordered pentatonic scale, she wondered if these were in fact *more* annoying than the windchimes Mother despised.

After what seemed like forever, Mother poked her head into the kitchen and called for Dorothy. The young girl went outside and joined her mother at the base of the large oak tree, which was now adorned with an arrangement of brass pipes held securely by the dark stained wooden ring enclosing the tree trunk. Mother sat on a tall stool in front of the brass pipes, and motioned for Dorothy to sit on another stool beside her. Dorothy's feet dangled off the ground, but she was able to hoist herself onto the seat with some effort.

“So,” said Dorothy, admiring the instrument, “how do you play it?”

Mother leaned forward and blew gently into the first pipe. A long, sustained note resonated throughout the yard. The acorns continued to fall, hitting the steel domes hanging from the tree and sounding various intervals along the pentatonic scale.

“I don't play it,” Mother clarified. “*We* play it. You, me and the tree.”

Once again, Mother blew a sustained note into one of the pipes, and Dorothy followed suit, mimicking as best as possible. While they played, Mother grabbed hold of a second wooden ring, fastened to the tree below the first one, largely hidden by the brass pipes. She pulled gently and the ring shifted, rotating an identical set of pipes below the first one. These pipes fit seamlessly together with the existing row, and as soon as Mother set them in place, the tones they blew into the pipes' openings lowered an octave. Dorothy was surprised at first, but then remembered what Mother had said about making a second set of pipes, and how the length of the air column influences the pitch.

Dorothy found that the lowered octave of the pipes distracted less from the striking of acorns on the tuned metal domes. In fact, they complemented each other nicely, with each occupying its own space in the frequency spectrum. They sat for a while, inhaling deeply and blowing long notes into the instrument. Mother experimented with shifting the lower set of pipes

in and out of place at different times, altering the pitch. As the three of them played together, Dorothy thought that they had created their very own concert – one unique to this yard and this moment. Something with an identity all of its own.

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Present Day:

Daan stood beside his mother, Elsie, and her entire third grade class in Dorothy Alden’s backyard. The children watched, wide-eyed, as Dorothy described the various aspects of her mother’s instrument. She showed them the original sketches of the pipes around the tree, a polaroid of Mother hammering on an old trash can to sculpt the steel domes, and even the tuning equations that she herself had struggled to understand all those years ago. Daan had realized that, although the physical body of this instrument would not exist for much longer, there was no reason its memory couldn’t give rise to new creations.

“Any questions?” asked Dorothy, to the captive crowd of kiddos.

A smaller girl raised her hand. “What’s the instrument called?” she questioned. “Like, what’s its name?”

Dorothy paused for a moment before speaking. “Well, I’ve always just called it Mother’s tree,” Dorothy explained, “but the tree was never *really* hers, was it?”

The little girl shook her head. Dorothy continued. “Besides, this instrument was so much more than just Mother or the tree or...well, I suppose it doesn’t really have a name.”

Her voice trailed off, and for a moment she appeared lost in memory. Finally, she asked:

“What do you think?”

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Afterword:

When Dorothy's mother crafted her instrument, she did so with the best of intentions. As described, the materials she chose were largely sustainable, recycled and preservative-free. Though not mentioned in the story, the convex shape of the musical domes was designed to allow the acorns to bounce off them, rather than collecting within them and preventing squirrels and other critters from accessing a food source. This also would not disrupt the tree's reproduction by allowing the squirrels to collect and bury the acorns. For all of Mother's well-intentioned planning, there are still ways in which her instrument could be seen as problematic. A young Dorothy questions if the tree *wants* to be part of the instrument – a question which Mother cannot fully answer. This thread is not lost throughout the story, and the construction of pipes surrounding the tree can be viewed as an augmentation of its natural beauty, or as a sort of prison – a restriction of its agency. I was inspired to include throughlines of environmental art ethics after discussing Kate Galloway's article for class, and a subsequent discussion with environmental visual artist Zoe Strecker.

This story also seeks to highlight and problematize traditional gender roles and stereotypes across musical and popular cultures. The character of Mother, a skilled designer and musician, challenges the outdated idea that women cannot be key players in the music field. At the same time, the construction and performance of this instrument is restricted to the backyard – largely out of sight. This is not unintentional, and symbolizes the “unseen” or “hidden” nature of women as serious musicians and performers. Additionally, the character of Daan is purposefully depicted as a gentle male to challenge ideas of men as brutal or uncaring.

The physical body of this instrument (specifically its rings) was made from redwood and stained with natural tung oil. These rings were attached to the tree trunk with screws and the

tuned brass pipes were inserted through the precut holes in the wood. I researched period-specific power tools and had conversations with my grandmother to ensure the construction of this instrument would have been possible during the 1950's. Materials were chosen with several factors in mind, such as sustainability, durability and practicality. As touched on in the story, the steel domes were made from recycled resonant metals such as aluminum or steel.

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