



Truckee Meadows Community College Reno, Nevada

Eulogy for an Elm Tree

Andrew Miller

Back when I was a university professor, there was an ailing elm on our campus that I liked to walk beneath. The tree stood in the center of a field where students and faculty parked their cars. For most, it was nothing special. About 30 feet tall, it was in poor health and would soon succumb to Dutch elm disease. Over the last few years I had noticed increased evidence of 'flagging'—dead branches and dried leaves throughout its crown. The elm was festooned with Spanish moss, as if it wished to camouflage its scraggly limbs and leafless branches.

One afternoon when I should have been working on an Environmental Science lecture, I spotted a two-axel dump truck with trailer drive onto the field and park next to the tree. The driver, a white-haired man dressed in coveralls and red flannel shirt, jumped out and began to unleash a huge, yellow 'mechanical digger,' or excavator: an odd-looking, box-like vehicle armed with a toothed bucket attached to an articulated boom. These machines are designed to dig holes, pick up logs, rocks, and trash. The operator had his sights on my ailing elm.

Our little university was growing. This was good news, but now campus had to expand. We needed new buildings, more professors, additional library books, and a paved parking lot. Once this elm and nearby trees were gone, parking lot construction could begin. When completed, students and faculty could leave their vehicles in neat rows on asphalt rather than scattered across the field. No longer would they have to traipse through grasses, sedges, and herbs to reach classrooms and offices.

Campus renovation certainly can't be halted for a single elm; yet the finality of eliminating this tree overwhelmed me. I wondered, could this be one of those 'teachable moments?' An

opportunity to introduce my students to a larger question such as: are there global consequences to removing a single tree?

After the operator unleashed his rig, I thought he'd stride over and scrutinize the elm. I assumed he'd examine its base, assess the size and condition of its branches, perhaps touch the bark, get some feel for his opponent. Instead, he vaulted into the cab and started the diesel engine. With a clang and clatter reminiscent of Marley's ghost, it roared off the trailer. The excavator skidded to a stop in front of the tree and extended a pair of metal bars, something like forelegs, that elevated the machine by at least a foot. The boom swiveled counterclockwise, snapped back and bashed the iron bucket against the trunk. Before the sound of metal on wood reached my ears, the tree shuddered and showered the earth with twigs and dried leaves. The excavator rotated left again, then spun around and walloped the trunk a second time. More leaves and branches fell, and a huge shard of bark shot through the air and landed several yards away. The bucket continued to smash the tree. The soil surrounding the root mass loosened. My elm stood defenseless. Its branches pointed skyward, unable to stave off the onslaught.

The scene reminded me of a fist fight I heard about when I was in the seventh grade. The next day I overheard one boy ask another, "How'd William do?"

"Not so good," was the reply, "he came at Jeffery like this." The eye-witness held arms at his sides and fists at shoulder height. William had failed to protect his face. The elm was even less schooled than William in fisticuffs. But unlike that boy who was felled with a single blow, the tree remained standing, arms raised while it was slugged again and again.

I usually kick off Environmental Science with a discussion of Henry David Thoreau, and have my students read *Death of a Pine Tree.* As Thoreau observed, when one tree is cut, much more is lost than a single individual. But I am always in a quandary as the best way to describe the essay's intent to my students. Could they move from a single datum—loss of a pine or an elm—to a comprehensive view of the complex issues facing environmental scientists? To scale up from a single tree, to the population, to the biome? And, suppose they were here with me, watching this drama? Would they also feel empathy for the tree as it was beaten senseless? Or would they smirk, whisper to each other that I was a 'tree hugger?'

'Tree hugger.' Most people are surprised to learn the likely origin of that phrase. Although often used as a pejorative, 'tree hugger' references a brutal event. In 1730, residents of a small village in northwest India were ordered to cut down a grove of trees needed for the Maharaja's palace. Villagers considered the trees sacred and refused to cut them. The Maharaja sent in soldiers with axes. A woman named Amrita protested by hugging a tree. The soldiers beheaded her, along with 68 other women and 294 men.

In the early 1970s, a similar incident occurred in Rajasthan, where the government planned to cut and sell 2,500 trees. The villagers objected. Loggers threatened them with guns, and women surrounded the trees. This time no blood was shed and eventually the loggers departed. This nonviolent strategy, which included embracing trees, was referred to as *Chipko Andolan*, the Chipko Movement.

Trees were also the focal point for Wangari Maathai, a Kenyan woman who struggled to create opportunities for the poor. She established Envirocare Ltd., which encouraged local people to plant trees as part of resource conservation. In 1977, under the auspices of the National Council of Women of Kenya, she founded the Greenbelt Movement. It focused on environmental conservation, community development, and capacity building. Her goal was to develop a safe, healthy, and productive environment. For her people, trees represented

subsistence: a source of firewood, stable soil, and clean water. They truly were sacred.

Wangari Maathai was awarded the Nobel Peace Prize in 2004 for her contribution to 'sustainable development, democracy, and peace.' Her altruism and sense of justice came at a price. During her lifetime, she received death threats, was tear-gassed, spent a night in jail, and in 1992 she and three other women were clubbed unconscious by police.

After more strikes, the mechanical digger snapped the elm's spine, and its upper torso and branches collapsed in a splintery crash. Much like a wary pugilist, it repositioned and pummeled the elm's lower trunk until it crumpled. The bucket then gnawed at the soil, grasped the remnants of the stump in its jaws and yanked it up as though it were a giant tooth and shook it. The machine retracted its forelegs, sped back to the dump truck and spat out the root mass. It returned to the battleground and nudged the scattered elm vertebrae, limbs, and tissue shards into piles. It bit down on one of the heaps and raced back to the truck, repeating this maneuver until the field was cleared of carnage.

When Thoreau's noble pine crashed to the earth, he lamented: 'Why does not the village bell sound a knell?'

And, why didn't this 21st century tree-cutting attract even one university student? Of course, lots of Americans are sensitive to environmental issues. In 1997, Julia Butterfly Hill climbed a redwood to protest logging. She spent 738 days in the tree. Her feet didn't touch the ground until a deal was reached with the Pacific Lumber Company to protect the tree and a surrounding buffer zone. Later, the timber controversy was settled when the Headwaters Forest Reserve was established. Eleven square miles of old-growth redwoods were protected.

Regardless of the lack of interest on my campus, I still

wondered if incidents like this could be used to introduce students to a global perspective on environmental issues. In retrospect, I think much more is required. They need the complete story, and Thoreau's essay is just a part. The tale must include the beheading of 363 residents of an Indian village, the Chipko Movement, and the struggles of Wangari Maathai and Julia Hill Butterfly. Complete understanding of a complex issue, environmental or not, requires comprehensive knowledge and historical perspective.

I still think that a dramatic event, even without perspective and logic, can galvanize people into action. Would I have been affected if a lone sawyer buzzed the tree off at ground level and sectioned it into firewood? Probably not. It was the drama of the incident—the thrashing of a tree until it was torn to shreds—that's what really got me.

In *To Kill a Mockingbird*, a tree was a symbol for communication. The reclusive Boo Radley left gifts for Scout and Jem in the knothole of a live oak. But gift-giving ceased when Boo's brother filled the knothole with cement to 'keep it from dying.' Scout and her brother were devastated; their link to Boo was severed. Much later, Scout passed the oak and saw that the trunk had begun to swell around the patch and the concrete had turned yellow. There was no indication as to whether the tree had been dying, or that a shot of concrete saved it. Regardless, the knothole could no longer be used for messages.

Recent research establishes the validity of Harper Lee's metaphoric notion that trees are information hubs. In *The Hidden Life of Trees*, Peter Wohlleben reported that trees communicate among themselves via their vast, intertwined root system. That enables them to translocate minerals, nutrients, and sugars to other trees in the community. They can do more than just communicate among themselves. The thorn acacia exhales toxic ethylene gas in response to a leaf-munching giraffe. This

discourages further defoliation and simulates nearby acacia to also release ethylene. Some tree species release pheromones in response to the saliva of certain leaf-chewing insects. The pheromones entice predacious insects that attack the herbivores.

In less than an hour, the clash between tree and machine was over. Where my elm once stood, only patches of raw earth and a scattering of splinters and bark remained. The operator stowed the excavator on the trailer and shackled it with chains. He never glanced back to where the elm had stood. After he pulled away, loaded with the remains of my elm, a few gawkers did appear. Crows and blackbirds pecked around the bare spot where the tree stood, and two red squirrels sniffed the disturbed soil. Later, when a woman approached with two poodles, the birds flew off and the squirrels scrambled up a nearby red pine, unaware that it would be cut down next.