

The Optimal Level of Lawnmower Safety: Social Marginal Benefit and Social Marginal Cost

When I was a kid, we didn't use rotary lawnmowers at our house. My dad preferred the reel-type mowers that you could walk behind, the motorized version of the standard push mower. He also thought rotary mowers were too dangerous. They had a propensity to fling nasty projectiles out the side of the mower at unsuspecting kids and little old ladies in the neighborhood. Better to have a reel mower and fling projectiles back at yourself, I guess.

I remember spending a night in the hospital after some minor surgery in the early 1960s. I forget the name of the kid in the bed across the room. He was older, a Wenatchee kid (I lived in East Wenatchee.). He lay on his back with his leg elevated, blood still seeping through the gauze bandage on his big toe.

"What happened to you?" I asked.

"Lawnmower accident," he said. "I was mowing around some trees and I pulled the mower back over my foot. Pretty stupid, huh?" He demonstrated the mowing motion in the air with his arms.

"Rotary mower?" I asked.

He nodded yes.

"My dad won't have one of those," I said, deciding not to comment on the stupidity issue directly.

In spite of the danger, almost all lawnmowers are rotary mowers these days. They have more safety features now. Many shut down automatically when you stop to empty

the grass-catching bag. This never would have worked in the old days, because just getting the mower started in 1962 took enormous skill, and a solid vocabulary of words boys were astonished to hear their fathers use. Once you got the mower running, you didn't want to shut it off until the mowing was done. Some modern mowers like my John Deere have a blade clutch that allows the blade to stop even with the motor running. Safety features like these add some cost to the mower, but protect people from what must be an overwhelming human urge to put hands or feet into a whirling maw of death. Lawnmower manufacturers, at the insistence of their lawyers I suppose, even print a warning on the side of the mower. My warning says, "DANGER. ROTATING BLADE! Don't place hands or feet under or into mower when engine is running." Gee, thanks for the warning.

Lawnmower accidents are painful and sometimes even deadly. But we economists would be the first in line to argue that we shouldn't attempt to eliminate all lawnmower accidents, to have 100% safe mowing. At some accident level greater than zero, the additional cost of improving mower safety becomes greater than the additional benefit of doing so. Of course, we don't want everyone who pulls a starter cord to become instantly maimed either. This means there is an optimal level of lawnmower safety somewhere between zero and 100%. Of course, this also means there is an optimal level of lost fingers and sliced toes as well.

Economists describe the optimal level of lawnmower safety as that level where social marginal benefit equals social marginal cost. Again, the word marginal means "change in," or "additional," or "incremental." If mowers are very unsafe, the additional benefit of safety (fewer accidents) is likely much greater than the additional cost of

safety. Designing a mower with a cover over the blade is one example. It costs something not to have an exposed blade, but the additional benefit in reduced suffering and death is greater than the additional cost of a blade housing. As long as we add more in benefit than we add in cost, each additional level of safety moves us in the right direction. But at some point the benefit of additional safety is less than the cost of additional safety. When this is the case, we need to stop making lawnmowers safer.

An ugly side of the economic approach to lawnmower safety becomes more transparent when we consider lawnmowers that are too safe. Put this way, many normal people would think that a mower couldn't be too safe. But to an economist, it's simply a comparison of the social marginal benefit and social marginal cost. By reducing the level of lawnmower safety, we will reduce the benefit from that safety. But if we reduce the cost of lawnmower safety even more, if the cost saved is greater than the benefit lost, we need to have less safety. We need more lawnmower accidents.

Of course, the principle of comparing social marginal benefit and social marginal cost is not limited to issues of lawnmower safety alone. Just substitute the words crime prevention, or water quality, or air quality, or any other good thing, for lawnmower safety in the discussion above. If the change in the benefit (marginal benefit) of water quality is greater than the change in the cost (marginal cost), cleaner water is justified to an economist. Here the economist and the Green or environmentalist would be on the same side of the water quality issue. But only economists would consider water to be too clean. If the reduced benefit from lower water quality is less than the reduction in the cost from lower water quality, we need to allow the water to become dirtier. These kinds of arguments, so sensible to economists, are like a shrill, piercing, screeching noise to

many normal people. Again, by thinking with their heads and not with their hearts, economists exclude themselves from even more parties. No one wants to have cocktails with someone who tries to figure out just the right amount of maiming from lawnmower accidents, someone who thinks water can be too clean. I guess that's O.K., though. If we don't get invited to parties, we will have lots of time to mow the lawn.