Get Off My Lawn

How a small group of activists (our correspondent among them) got leaf blowers banned in the nation's capital

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For a long time I thought the problem was all in my head. When I was growing up, I knew that a certain *kind* of noise was one I needed to avoid. Food blenders in the kitchen, hair dryers in the bathroom, a vacuum cleaner whooshing around—all produced an intense whining sound that, given the specific wiring connections between my ears and my brain, kept me from thinking about anything but the sound itself while it was going on. Over the years I lived by this code: I used high-performance earplugs if I needed to write or otherwise concentrate while sitting in some place that was unusually loud. I added noise-canceling headphones on top of the earplugs in really tough cases.

As time went on, the earplugs-plus-headphones protection rig became standard writing gear. That was because the use of gas-powered leaf blowers in my Washington, D.C., neighborhood evolved from a few hours a week during the leafiest stretch of autumn to most days of the week, most weeks of the year, thanks to the advent of the "groomed" look that modern lawn crews are expected to achieve. One of my longest-running themes as a journalist has been how changes in technology force people to adapt their habits and livelihoods. I thought I was doing my part, with gear that let me attend to my work while others attended to theirs. There even turned out to be a bonus: As other parts of my body went into a predictable age-related descent, my hearing remained sharp.

Then I learned several things that changed my thinking both about leaf blowers and, up to a point, about politics.

One thing I learned has to do with the technology of leaf blowers. Their high volume, which I had long considered their most salient feature, is only their second-most-unusual aspect. The real marvel is the living-fossil nature of their technology. And because the technology is so crude and old, the level of pollution is off the charts.

When people encounter engines these days, they're generally seeing the outcome of decades of intense work toward higher efficiency. The latest

models of jet-turbine engines are up to 80 percent more fuel-efficient than their 1950s counterparts. While power plants burning natural gas obviously emit more carbon than wind or solar facilities, they emit about half as much as coal-fired plants. Today, the average car on America's streets is almost 200 percent more efficient than in 1950, and smog-causing emissions from cars are about 99 percent lower.

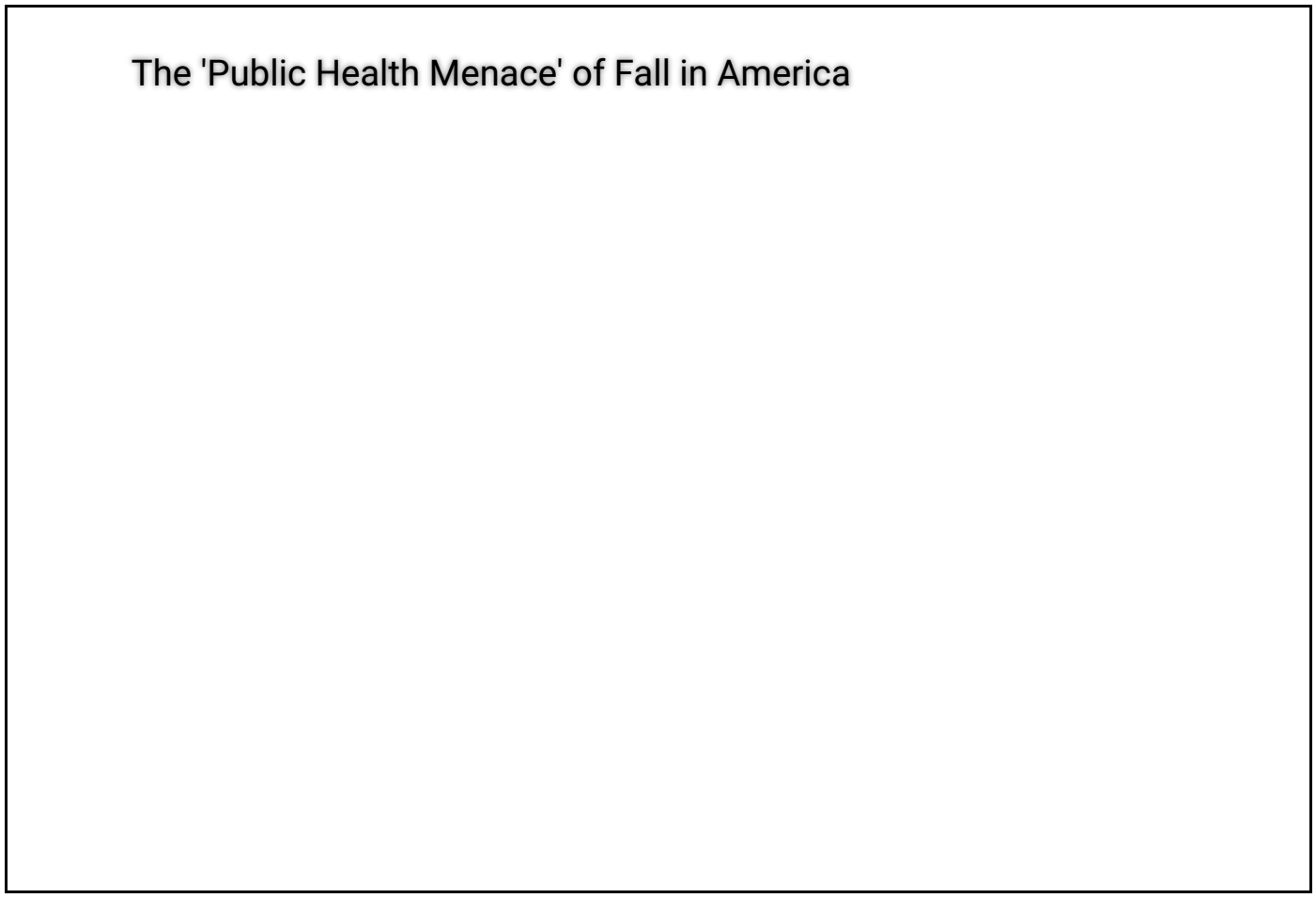
The great outlier here is a piece of obsolete machinery Americans encounter mainly in lawn-care equipment: the humble "two-stroke engine." It's simpler, cheaper, and lighter than the four-stroke engines of most modern cars, and has a better power-to-weight ratio. But it is vastly dirtier and less fuel-efficient, because by design it sloshes together a mixture of gasoline and oil in the combustion chamber and then spews out as much as one-third of that fuel as an unburned aerosol. If you've seen a tuk-tuk, one of the noisy tricycle-style taxis in places such as Bangkok and Jakarta, with purple smoke wafting out of its tailpipe, you've seen a two-stroke engine in action.

But you won't see as many of them in those cities anymore, because governments in Asia and elsewhere have been banning and phasing out two-stroke engines on antipollution grounds. In 2014 a study published in *Nature Communications* found that VOC emissions (a variety of carbon gases that can produce smog and harm human beings) were on average 124 times higher from an idling two-stroke scooter than from a truck or a car. With respect to benzene, a carcinogenic pollutant, the group found that each cubic meter of exhaust from an idling two-stroke scooter contained *60,000 times* the safe level of exposure. Two-stroke engines have largely disappeared from the scooter, moped, and trail-bike markets in America. Regulators around the world are pushing older two-stroke engines toward extinction.

Yet they remain the propulsive force behind the 200-mph winds coming out of many backpack leaf blowers. As a product category, this is a narrow one. But the impact of these little machines is significant. In 2017, the California

Air Resources Board issued a warning that may seem incredible but has not been seriously challenged: By 2020, gas-powered leaf blowers, lawn mowers, and similar equipment in the state could produce more ozone pollution than all the millions of cars in California combined. Two-stroke engines are that dirty. Cars have become that clean.

Video: The ‘Public Health Menace’ of Fall in America



So that’s one thing I learned about gas-powered blowers. A second thing I discovered is the damage leaf blowers do to people’s hearing. The biggest worry of today’s public-health community is not, of course, leaf blowers—it’s the opioid disaster, plus addictions of other forms. The next-biggest worry is obesity, plus diabetes and the other ills that flow from it. But coming up fast on the list is hearing loss. According to a 2017 report from the Centers for Disease Control and Prevention, one-quarter of Americans ages 20 to 69 who reported good to excellent hearing actually had diminished hearing.

This is largely caused by rising levels of ambient urban noise—sirens, traffic, construction, leaf blowers—which can lead to a range of disorders, from high blood pressure to depression to heart disease. “When I started out, I’d see people in their 60s with hearing problems,” says Robert Meyers, an ENT specialist at the University of Illinois at Chicago. “Now I’m seeing them in their 40s.”

Leaf blowers are especially insidious. Something about their sound had long attracted my attention. A study organized by Jamie Banks, a scientist and the founder of Quiet Communities, a Boston-area nonprofit, quantified what it was. Acoustic engineers from a firm called Arup compared gas- and battery-powered blowers with equal manufacturer-rated noise levels. Their analysis showed that gas-powered blowers produce far more “sound energy” in the low-frequency range. This may seem benign—who doesn’t like a nice basso profundo?—but it has a surprising consequence. High-frequency sound—a mosquito’s buzz, a dental drill—gets your attention, but it does not travel. It falls off rapidly with distance and struggles to penetrate barriers. If you’re in the next room, you may not hear it at all. By contrast, low-frequency noise has great penetrating power: It goes through walls, cement barriers, and many kinds of hearing-protection devices. The acoustic study found that in a densely settled neighborhood, a gas-powered blower rated at, say, 75 decibels of noisiness can affect up to 15 times as many households as a battery-powered blower with the same 75-decibel rating.

Hearing damage is cumulative. When the tiny, sound-sensing hairlike cells, called stereocilia, in the inner ear are damaged—usually by extended exposure to sounds of 85 decibels or above—they are generally gone for good. For the landscapers (and homeowners) who use gas-powered blowers—a foot away from their ears—the most powerful can produce sounds of 100 decibels or more. Meyers told me, “Each time I see these crews, I think to myself: *10 years from now, they’ll be on the path to premature deafness*."

In the three decades since backpack blowers from Echo, Stihl, and other companies became popular, at least 100 U.S. cities have banned or restricted their use. Most of those cities are in California, because California is the only state whose jurisdictions have the authority to set their own air-pollution standards. With air-quality standards that were more aggressive than those in other states, California received special treatment under the Clean Air Act when it was passed in 1970. In the rest of the country, the law gives standard-setting authority to the federal government, which in practice means the Environmental Protection Agency.

Considering the current condition of the EPA, people wanting to regulate leaf blowers could be forgiven for throwing up their hands. But as it happens, there is another legally and scientifically legitimate line of attack: going after gas-powered blowers not because they pollute but because they make so much noise.

Starting in 2013, my wife, Deb, and I traveled around the country to report on local-improvement narratives, which always seemed to begin with "I wondered why my town didn't do _____, so I decided to get involved." We'd long been active at our kids' schools and with their sports teams. But we wondered why our town—Washington, D.C.—wasn't doing something about the leaf-blower menace, given that an obvious solution was at hand. We joined a small neighborhood group—barely 10 people at its peak—to try to get a regulatory or legislative change, using noise, not pollution, as the rationale.

Read: James Fallows's Notes on the leaf-blower battle in D.C.

In November 2015, we had our first success, when our Advisory Neighborhood Commission—the most local governmental unit in the District—voted 8–1 to support phasing out gas-powered leaf blowers. (The one no vote came from a libertarian who didn't like regulation of anything.) In retrospect, the resulting request was amazingly timid. We simply asked that our city-council member, Mary Cheh, introduce legislation for a ban. She did

so; the measure got nowhere by the end of the council's term in 2016; she introduced a new measure in 2017. Over the next 18 months, we successfully encouraged more than a third of all ANCs in D.C., representing seven of the District's eight wards, to endorse council action on the bill. Anyone aware of the racial, economic, and other dividing lines within Washington can imagine the level of organizing and explanation necessary to achieve such broad support.

In July 2018, the chair of the city council, Phil Mendelson, convened a hearing to consider the bill. Nearly 20 witnesses spoke in favor. They included members of our group as well as scientists, a former regulator, an acoustic engineer, representatives of the Sierra Club and the Audubon Society, ordinary citizens and residents, and landscapers who had switched to all-battery operation. On the other side were two industry lobbyists, who said that market innovation and "courteous" leaf-blower use were the answer. Council members listened to them with visible incredulity. In the fall, the full council approved the bill unanimously. In December, Washington's mayor, Muriel Bowser, signed it into law. On January 1, 2022, the use of gas-powered leaf blowers will be illegal within city limits.

After spending decades writing about national politics, I've come away from this experience having learned some lessons about local politics—obvious lessons, maybe, but also vivid ones.

To begin with: Showing up matters. Our group met in person every two or three weeks over more than three and a half years. Perhaps our most indefatigable member, a lawyer, made presentations at dozens of ANC meetings. We got to know the legislative directors and schedulers for many of the District's 13 council members.

Having facts also matters—yes, even in today's America. At the beginning of the process, it felt as if 99 percent of the press coverage and online commentary was in the sneering "First World problem!" vein. That has changed. *The Washington Post*, *The New York Times*, *The Wall Street*

Journal, the *Washington Monthly*, and other publications have called attention to the leaf-blower problem, often arguing that gas-powered blowers should be banned. Reflexive sneering is down to about 5 percent among people who have made time to hear the facts. Noise, they have come to understand, is the secondhand smoke of this era.

Technological momentum and timing matter. We worried all along that the lawn-care industry would mount a major lobbying effort against the bill. It never did. Nearly everyone in the industry knows that 10 years from now, practically all leaf blowers will be battery-powered. One of our arguments was that we were simply accelerating the inevitable.

Having a champion matters. At a "meet the council member" session on a rainy Saturday morning in the fall of 2015, Mary Cheh said she'd stay with the bill—if she could rely on us to keep showing up. We did our part, and she did hers—she stayed with it to the end.

Luck matters as well. In its first journey through the council, starting in 2016, Cheh's bill was assigned to a committee whose chair was a council member whose approach to many bills seemed to boil down to: *What's in it for me?* To widespread surprise, apparently including his own, a long-shot challenger upset him in the primaries for the 2016 election.

The final lesson is: Don't get hung up on the conventional wisdom—it's only wise until it isn't. Everyone says nothing gets done in Washington. This one time, everyone was wrong.

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