

Quiet, Please

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Noise pollution is the great ignored urban problem, dismissed as a minor annoyance, unworthy of policymakers' serious attention. But to physiologists, it is a much weightier matter. They describe loud noise as a trauma, a warning that provokes the body's reflexes to prepare for an emergency. In most people, sound levels over 70 decibels constrict blood flow to the extremities while increasing it to the brain. The adrenal and pituitary glands rush hormones into the bloodstream. The liver releases glucose for energy. The fear persists after the noise stops, fading only gradually as the body waits for a recurrence.

Not only is loud noise a trauma; it can do permanent physical damage as well. Hearing loss, often caused by noise, is the country's most common chronic physical disability, affecting one in eight Americans, according to the Council on the Environment.

A certain amount of noise is inseparable from the urban ambience—hot, young, energetic. But if people are to live peaceably in a close-packed urban setting, they must be able to count on limits to the noise their neighbors make. Accordingly, from the Babylonians forward, cities have routinely sought to outlaw unnecessary, excessive, offensive, or unreasonable noise. English common law deems freedom from noise essential to the full enjoyment of a dwelling: acts that diminish that enjoyment may expose the noisy to legal action. In modern times, precise new technology to measure noise has paved the way for more precise ordinances, such as New York City's 1972 law.

But technology to create louder noise than ever before has developed even faster than measurement technology, and today noise is seriously marring New York City's quality of life. "I hear more complaints about noise than I hear about murders and drugs," says Deputy Inspector James F. McShane, commanding officer of the 47th Precinct in the Bronx. Bob Leitman of the polling firm Louis Harris and Associates calls noise a "real top-of-the-consciousness" issue. In a quality-of-life survey Leitman conducted for the Commonwealth Fund, 62 percent of New Yorkers said noise bothers them; half of those said it does "to a great extent." Physicist and preeminent acoustical engineer Cyril M. Harris, who lives in a superbly quiet apartment high above the East River Drive, says he has concluded that every New Yorker has at least one exasperating noise problem.

Much of the city's noise is unnecessary. For example, ambulance sirens often project their sound so inefficiently that it awakens residents 20 stories above, even while a driver three cars ahead may be unsure of where the sound is coming from. Noise intended to express oneself has hit unprecedented levels in amplified sound trucks for political candidates or music coming from rock clubs and discos. Some of that self-expressive noise

Repairing New York's quality of life means getting serious about noise pollution.

has an explicitly aggressive edge: teenagers with boom boxes, for example, or motorcycles with "straight pipes," an illegal resonant exhaust device.

The city's environment includes almost limitless sources and kinds of noise. But when the city government tries to quiet noise, it quickly runs up against the difficulties of measuring it accurately and claims of First Amendment rights. Add to that the irrational split in jurisdiction between two separate city agencies: the Department of Environmental Protection (DEP) regulates what engineers call "community noise," like outdoor concerts, honking, construction, motorcycles, discos, and car alarms; the police, reluctantly, regulate private noise inside apartment buildings and single-family dwellings. But the bulk of DEP's 5,500 annual complaints are in the area of private noise, where the department has no jurisdiction, notes Commissioner Marilyn Gelber.

You have to measure noise before you can regulate it, and, even with the new technology, that isn't easy. Sound is measured in decibels, named for Alexander Graham Bell. Because the scale is logarithmic, not arithmetic, a 10-decibel increase means that a sound has roughly doubled in loudness. Quiet breathing registers 10 decibels; quiet conversation, around 60; shouting across a room, 75. Midtown traffic ranges from 80 to 95 decibels, while an express subway train rumbling through a local station can reach 105. Registering 120 decibels are: a jet at takeoff, a rock band playing "normally" with amplifiers and loudspeakers, and a thunderclap, the loudest natural sound on earth. The specifications for sirens on New York City fire engines call for 118 decibels at 50 feet.

A sound of 40 decibels will awaken sensitive people; 70 will wake up almost anyone. Noise of 120 decibels causes discomfort and sometimes injury; 140 is acutely painful. The National Institute for Occupational Safety and Health says that two years of regular exposure to 90 decibels will produce hearing loss.

Measuring urban sound is especially difficult, because inspectors have to measure the prevailing background noise before they can measure the additional noise generated by, say, a rock concert or street fair. Once the inspector has established the ambient level, he must take measurements at intervals and calculate the difference from the ambient level at each, an operation requiring much preparation.

Another complication: because some noise is the result of expressive activity, the city must design its regulations so as to control noise without running afoul of the First Amendment. Regulation of outdoor rock concerts is a frequent source of legal challenges, for at least since the 1960s popular music has often presented loudness itself as a political protest.

The U.S. Supreme Court has consistently held that governments may impose "reasonable time, place, and manner" restrictions to regulate nuisances attendant upon expression. A court will uphold such a regulation if it is tailored to meet a significant governmental interest, such as noise abatement, and if it does not discriminate based on the content of expression. The rule that applies for a rock concert, for example, must also apply to an equally loud opera performed at the same time of day.

New York's most famous recent noise case, *Ward v. Rock Against Racism*, demonstrates how furiously these issues can clash in practice. In the mid-1980s, the Parks Department was

issuing some 175 permits a year for public performances in Central Park's Naumberg Bandshell. To avoid excessively disturbing the neighbors in the buildings that surround the park, the Parks Department needed a way of limiting the noise the concerts generated. Measuring the sound level and intervening during a performance had proved impractical, so the department came up with a different way to keep a hand on the volume control. In 1986 it hired its own professional sound engineer, or "mixer," who would regulate the level of sound of every performance. If citizens complained, the mixer could make instant adjustments.

Rock Against Racism, an advocacy group that held annual all-day concerts in the park, balked at the requirement, because it regarded the mixer as a skilled band member, just as important as a musician. With William Kunstler as its high-profile attorney, the organization won a preliminary injunction against the required use of the city's mixer. Three years later, the case reached the Supreme Court.

In a six-to-three decision delivered by Justice Anthony Kennedy, the Court held the regulation reasonable and constitutional. But the disagreement within the Court reflects a fundamental conflict in viewpoints over the relationship between individual rights and the common good where noise is concerned. In a furious dissent, Justice Thurgood Marshall quoted musician and lexicographer Nicolas Slonimsky: "New music always sounds loud to old ears. Beethoven seemed to make more noise than Mozart; Liszt was noisier than Beethoven; Schoenberg and Stravinsky noisier than their predecessors."

But today's musicians not only sound loud to old ears; they are loud. The electronic technology they use to project their music is far more powerful than anything imagined by previous generations. Indeed, when asked what he would consider too loud, Rock Against Racism's mixer had replied: "I think a volume that would cause people's ears to bleed would be too loud." While music is unquestionably a form of expression protected by the Constitution, free expression does not entail a right to be as loud as one wants in any public place.

Rock bands aren't the only users—and abusers—of powerful amplification technology. For a few thousand dollars, a driver can equip his car with a stereo system capable of projecting music at outdoor-concert sound levels. These "boom box cars" represent a step up in aggression from the portable stereos popular among urban youths. Ironically, once it became clear that Sony's huge, powerful portable radios had become noisy blights, Akio Morita, Sony's CEO, had the Walkman developed as an alternative. But the Walkman didn't displace the boom box, selling like hotcakes instead to middle-class joggers. Morita had missed the cultural implications of the boom box, often used to attract attention or stake out territory.

By the early 1990s, complaints about boom box cars were pouring into precincts all over the city, especially in Washington Heights and Greenwich Village. The city's response was ineffective, owing to the convoluted system of jurisdiction. DEP inspectors had the meters to measure the noise, but only the meterless police could issue summonses.

In 1992, Jeremy Travis, then deputy police commissioner in charge of legal affairs, devised a strategy dubbed Operation Soundtrap to give officers meters and train them to use them, so they could enforce a long-standing state law allowing police to

confiscate cars if their stereo sound measured more than 80 decibels at 50 feet. The campaign began in Washington Heights and Greenwich Village on Friday nights in mid-summer 1993. Police ship the seized cars to the distant Whitestone Pound, and owners cannot reclaim them until after paying a \$100 fine Monday morning.

Police in Washington Heights seized 40 cars in 1993 and have seized 103 so far in 1994, according to Captain Terry Monahan. In Greenwich Village, officers confiscated up to 10 vehicles every Friday night early in the program, but the effort was so successful that by the end of the summer of 1993 police were facing Fridays with no offending vehicles to confiscate. By the beginning of the following summer, the window-rattling, ear-shattering cars were back, and the police started in again. Village police confiscated 33 cars in 1994 and by the end of summer had eliminated the blight. "On Saturday night we were out to 4 AM, and the only boom car we found measured 76 decibels," Lieutenant Robert McKenna said in early September.

Soundtrap is an important step forward, but an early technical decision has constrained its effectiveness. Although the law's 80-decibel limit is itself beyond most people's tolerance, the Police Department has chosen to enforce a higher level—83 decibels—in order, it says, to make its cases ironclad. But because of the logarithmic scale, the three-decibel difference represents an exponential increase in loudness.

The sum total of noise that boom box cars make pales to insignificance compared to the braying of countless automobile alarms, which can be as loud as a 100 decibels. They are intended to deter theft, but most insurance actuaries and criminologists deem them ineffective: many alarms go off so easily and repeatedly that people no longer associate them with danger. Some make purely gratuitous noises, beeping hello when the driver enters the car. And some, like the Invisibeam Plus, claim public space as the domain of the car, barking orders at pedestrians who merely walk by. "It works in two languages," says a Brooklyn merchant who sells the Invisibeam—"English and rap." The rap version begins: "Yo! I know you want to look inside, but I suggest you step away from the ride." If a passerby fails to comply, the voice continues: "You violated the perimeter beam; you now have five seconds to leave the scene." If this warning fails, a noisy alarm starts wailing.

Though alarms that go off without the car being touched are illegal in New York, state law actively encourages drivers to own conventional alarms. A law passed in the late 1970s requires insurance companies to give discounts to owners of cars equipped with them. Alarms have become standard equipment on most cars sold in the city. Adding \$200 to \$2,000 to the cost of a car, they can save 10 percent annually in insurance premiums.

New York City's current noise code requires that alarms cease after three minutes, and periodically City Councilman Sheldon Leffler of Queens reasonably proposes banning alarms outright. The city could ban their use within city limits, subject to fines. At the very least, the State Legislature should end the mandatory insurance discount. Quiet anti-theft devices are available—steering-wheel locks like the Club, for example. Lojack, a silent tracking system that sends radio signals out from the car, allowing police to locate it on a computer screen, may well be the wave of the future in auto security.

Honking, another automotive nuisance, is meant to annoy. "Don't honk, Bobby," Senator Robert F. Wagner once told his son, the mayor, when they were caught behind a slow-moving car. "The man is a voter." Honking is illegal in New York City, except in an emergency. But New York drivers routinely use their horns to notify the driver ahead of a changing light, to express outrage at bad driving, to ward off pedestrians in the crosswalk, to assert their manhood, or to blow off steam.

Nearly everyone who challenges a honking citation at the city's Environmental Control Board gets off, usually on the grounds that an officer couldn't know for sure who was honking. Other cities, however, particularly in California, effectively punish honking under the same provisions that cover amplified sound and barking dogs.

City officials attribute the worsening honking by taxi drivers over the past few years to the many new drivers from countries where honking is commonplace. But even if drivers arrive thinking honking is fine, the Taxi and Limousine Commission should instruct them otherwise in its mandatory training courses and should enforce the noise code against them. Right now it does neither.

Noise generated by many kinds of business is usually controlled by a combination of regulation and negotiation. Restaurant air conditioners venting outside, for example, cannot exceed 45 decibels. In the mid-1980s, after the city had persuaded the *Daily News* to keep its printing plant in Brooklyn, angry residents complained that the huge trucks that deliver newsprint were too noisy. When an environmental study confirmed their complaints, the *News* provided double windows to some 60 local households and spent hundreds of thousands of dollars to soundproof its facility. Not every business, however, would be so accommodating or have as strong a reason to be concerned about its public image.

Noise is at the very heart of businesses like rock clubs, discos, and aerobics studios, all of which regularly register 110 decibels and above. Proprietors tend to look on complaining neighbors as neurotic nuisances, but DEP inspectors take complaints seriously. For a period in the 1980s, inspectors visited the Jeff Martin Studio on Manhattan's West Side every week. The studio's solution was an expensive renovation that included tightly sealed double-glazed windows. Most complaints ceased.

Deputy Commissioner Travis's noise-abatement teams are targeting clubs and discos, but here the law explicitly constrains the police, who must measure noise inside an apartment, not on the street. The practical complications are enormous: police must find someone, preferably ahead of time, who will let the team come in, perhaps repeatedly, in the dead of night when noise is worst.

The Police Department faces the same problem in regulating loud businesses as it did with boom box cars before Operation Soundtrap: various state and city agencies have jurisdiction over different parts of the process. The Police Department should develop an assertive program for regulating loud clubs and discos, starting with a simple change in the city's administrative code eliminating the requirement that noise from a commercial club can only be measured from inside an apartment.

An astounding amount of noise comes directly from public

agencies, which are, unfortunately, exempt from the noise code. Shrieking brakes on city garbage trucks, an order of magnitude louder than those of almost any other vehicle, frequently awaken citizens as sanitation workers make their morning rounds. Despite empty streets and green lights the whole way, five fire engines barreled up Amsterdam Avenue at 8:15 on a recent Sunday morning, blaring a symphony of noise in which horns and sirens blended with an accompaniment of little yelps. On another Sunday, a fire engine roared down Columbus Avenue, lights flashing and horn honking, en route to Poulet Away for an emergency take-out chicken.

Sirens are perhaps the most notorious governmental noisemaker. Their purpose, of course, is to signal an emergency and induce vehicles to yield. But drivers often have trouble locating the siren's wail, a problem caused by the modulating frequency. Cyril Harris says a far better device is the loudspeaker, which can be directed at a particular vehicle: "You, in the red car, move to the right!"

Sirens sometimes panic people into doing the wrong thing. And because their overuse teaches people that a siren often doesn't mean an emergency, New Yorkers have learned to disregard them. This, in turn, becomes a justification for even more aggressive use of sirens. Solution: use sirens and horns only in true emergencies, and configure them to be as inoffensive as possible to get the job done. At present, the Police and Fire departments don't consider their siren noise a problem and refuse even to measure it.

Ambulance sirens are an even more vexing problem. Emergency Medical Service spokesman Charles DeGaetano says that "indiscriminate use of the siren is strongly frowned upon," but acknowledges that some of the agency's ambulance drivers put their sirens "on continuous mode so they don't have to fiddle with the siren while they're driving." In addition, the ambulances of voluntary hospitals and organizations like Hatzolah, essentially unregulated, can mount any siren or horn they like, no matter how loud, and use it whenever they want.

So loud is the subterranean din of the subways that a transit policeman recently couldn't hear the calls for help of two fellow officers being attacked 140 feet away. Decades of poor maintenance have created the mind-numbing noise. While not subject to city control, the Metropolitan Transportation Authority is subject to New York State's 1982 Rapid Transit Noise Code, which it violates on many counts despite the \$1.47 billion it has spent to bring itself into compliance. The state's overly lenient code requires that most cars maintain noise levels below 85 decibels. Instead, cars average in the high 80s. The MTA was supposed to be in compliance by this year, but is still far from that goal. Arlene Bronzaft, a psychologist who did the original research on the damaging effects of noise that led to the 1982 code, says the MTA refuses to measure subway noise. Moreover, she says, one can verify that the subways are too loud by taking a rough measurement with an amateur's meter. "I did—on the A train—and measured 100 decibels, way over code."

Neighbors behavior is the most common source of noise complaints, according to Harris. The best solution is usually private negotiation. Diplomacy, however, may not be enough. Many indoor sounds are both persistent and elusive. The loud television you blame on your upstairs neighbor may be several stories away; its sound has traveled a circuitous path to reach your apartment.

A key to indoor quiet is good construction. Harris says that New York's standards are acceptable, but California's are better, requiring, for example, more sophisticated insulating materials. And many New York City apartments were built between World War II and the 1960s, when standards sagged.

Renters have some protection under the statutory right called the "warranty of habitability," which requires the landlord to provide a dwelling "fit for human living," and under a common law right to "quiet enjoyment" of an apartment. These provisions obligate the landlord to police the behavior of other tenants. But in practice, if private negotiation fails, tenants must generally take their landlord to court in order to enforce their rights—a costly, time-consuming process that doesn't guarantee success. One solution for the noise-bedeveled is to move to a co-op with strict rules: some, for example, ban the playing of televisions and radios late at night and have boards willing to take on noisy shareholders.

The police are traditionally reluctant to intervene in disputes about private noise. In many precincts, operators will simply tell callers it is not a police matter. But when James McShane arrived at the Bronx's 47th Precinct in January 1994, he decided to do something about the precinct's most frequent citizen complaint: deafeningly loud backyard stereo systems installed to entertain parties of 400 to 500 people, who often pay \$5 each to attend. McShane and the NYPD counsel's office developed a legal strategy to control noise by seizing private property.

Police frequently seize property as evidence, but the offending sound equipment was huge. "You'd need a truck to carry it away," McShane says. The counsel concluded that police could also seize property to abate a nuisance, taking just the speaker wires, turntable, or whatever would render the equipment inoperable.

McShane created a noise-abatement unit that worked in three stages. First, police identified "recidivist locations," where parties had produced complaints in the past. Second, they posted signs saying noisy parties were against the law. Third, they did "preemptive work," warning the house-holders who had offended before. Only after these efforts failed would they resort to seizing property.

On an average Saturday when the weather is nice, the unit handles 50 noise complaints. McShane says the program has been a striking success: "I heard constant complaints about what we weren't doing in January, but I got only one irate call this summer. There was a party, it was bad, and we didn't do anything. We'd had an off-duty cop shot, a homicide, and we didn't have the manpower to handle the party."

McShane's experience demonstrates that police assertiveness can have a powerful deterrent effect on noisemakers. The unit's officers have not had to seize any sound equipment because lesser measures have been so effective.

If the public demands a quieter city, their elected officials will eventually respond. Anger about noisy garbage collection prompted the Lindsay administration to mandate garbage bags instead of 54 cans for apartment buildings. Bensonhurst residents calling themselves the Big Screechers pressured the Transit Authority into modifying the brakes on subway trains in the mid-1980s.

Harris suggests Mayor Rudolph Giuliani begin by calling the city's own employees to account. He should ask bus drivers not to honk; he should demand that all city vehicles adhere to the muffler ordinance; he should instruct drivers of emergency vehicles to minimize the use of their sirens; he should order the Sanitation Department to fix the brakes on its trucks.

At the same time, the mayor should put the onus on nongovernmental sources of noise that depend on government services. Street fairs, for example, are a tremendous source of noise during their high seasons in spring and fall, in part because they have become too frequent and in part because traffic is not alerted properly to street closings or directed properly at jammed intersections.

And what about the noise that private citizens generate, from car alarms to honking to blaring music in the apartment upstairs? A forceful public-awareness campaign could make noise a front-burner issue and embolden the 62 percent of New Yorkers who are troubled by noise to speak their minds. Such efforts, combined with strictly enforced ordinances, have reduced noise significantly in Memphis, Chicago, and throughout California. The NYPD has made noise-abatement part of its recently announced strategy for combating quality-of-life crimes. Active police involvement is crucial: as Inspector McShane found, the vast majority of people will comply with reasonable requests from officers.

Excess noise is a form of pollution, not an inevitable part of urban life. Environmentalists have succeeded in cleaning the city's air and water; they have one more frontier to conquer. Mayor Giuliani was elected to improve the quality of life in New York—and that means making the city not only wealthier and safer, but quieter as well.

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