

CACOPHONY AT 34TH AND 6TH

THE NOISE PROBLEM IN AMERICA, 1900-1930

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Until very recently, a study of the American environment has meant a study of attitudes toward land, a discussion of the use of natural resources and especially appraisals of the politics of the conservation movement. But environment is more than this. Environment involves all the conditions, circumstances and influences that surround an individual and affect his development. With this in mind, some historians have begun to analyze other aspects of the environment—aspects with which individuals have had a more intimate relationship than with minerals in the earth, timber preserves or national parks. The present interest in ecology has led to a corresponding interest in how Americans historically have dealt with the problems of pollution.¹ One of those problems is noise.

In a letter to the editor of *American City* magazine in 1912, an irate citizen from Chattanooga, Tennessee, asked why the nation “leaves the ‘Noise Devil’ to go on making urban life almost intolerable, and why the ‘Yelling Peril,’ promoter of nervous prostration and disturber of the peace of babies, is suffered to do its cruel work unrebuked.” The periodical should take up “this righteous cause” and declare “war on noise,” since noises “injures health, disturbs the right development of infants, destroys the value of property, hinders the growth of cities, promotes hate and resentment and is useless and silly.”² He expressed the sentiments of many Americans attempting to cope with a new and in many ways bewildering society.

After the Panic of 1893, Americans could no longer ignore the harsh effects of the Industrial Revolution on the country's natural resources. Expanding industrialization made escape from the uglier aspects of technology increasingly difficult. As people became conscious of factory smoke dirtying the air, industrial waste fouling water and garbage littering city streets, they recognized for the first time the need to deal with the modern environment. In the drive to end noise pollution, Americans demonstrated their new awareness of the environment and their desire to control their physical surroundings.

The anti-noise campaign shared some basic convictions with the other reform movements of the Progressive Era. Those who worked for a quiet environment were optimists. They believed that problems would give way to rational analysis. Industrialization had created new hazards for society, and only the application of scientific principles, supplemented with the force of law, could alleviate these dangers. A faithful devotion to the doctrine of efficiency would insure progress.

The anti-noise campaign also provides a blueprint for the development of an early consumer activism. Anti-din reformers acquired a type of civic consciousness, a view of the community as a whole, that trans-

smoke and refuse

Industrialization forced recognition of mounting solid waste and spawned the smoke pollution problem.

Refuse reformers put their faith in a scientific solution and believed more efficiency would eliminate the problem.

Those viewing smoke merely as wasted fuel favored moral suasion while those viewing it as a danger to their lives favored prosecution and therefore stronger legislation. The anti-smoke crusade also transcended class lines. But while Americans viewed noise as regressive, most people saw smoke as a symbol of prosperity thus hindering reform efforts.

Women provided information about home economics and the nature of household refuse. Seeing themselves as guardians of family health and the community's morals, they opposed smoke because it threatened the very things they were supposed to preserve.

See Melosi, "Out of Sight, Out of Mind," and Grinder, "The Anti Smoke Crusades," footnote 1.

cended class lines and permitted cross-class cooperation.³ This cooperation was possible because noise was a problem that affected everyone intimately. The middle class directed the anti-noise movement with women taking an active role. But because individuals could agree on the dangerous effects of noise, support for the anti-noise crusade came from all levels of society. The angry and widespread public response to din was more than a call for quiet. It reflected deep feelings of uncertainty accompanying an industrialized way of life.

Anti-noise advocates shared fears about noise that threatened their

belief in progress and faith in efficiency. Noise was retrogressive and primitive. It had to be controlled if modern civilization was to continue advancing. At the same time, clatter was worse than merely annoying; it was inefficient. Racket indicated an intolerable amount of wasted time and resources. As a solution for the problem and a salve for their worries, anti-noise advocates turned to science and legislation. Science promised to be the miracle cure for a noise-ridden society while the force of law was essential to any permanent success in establishing quiet.

Fears about noise persisted throughout the period. Yet, while writers expressed the same concerns about noise from the 1890's through 1930, a shift in the approach to the noise problem occurred. From the early 1900's until World War I, citizen groups waged a strong legal attack against din. They translated their anxiety over noise into a host of laws. During the 1920's, experts, scientists and managers took over the anti-noise campaign delving into research, experiments and measurements aimed at examining every aspect of the noise problem.

After the turn of the century, professional and business men, literary people, farmers, housewives, slum dwellers, teachers and students regretfully admitted that the twentieth century was "the age of noise." Noise engulfed them on all sides. They considered it shocking and entirely new. Because they had no precedent for this "fool uproar," their first encounters with the noise problem were highly personal. They hated not the cause of noise but noise itself. Since the noise nuisance seemed to affront them suddenly and individually, they were long in defining an unnecessary and harmful noise. They knew they disliked the racket and that, for the time being, was all that mattered.

From their first encounters with racket, Americans personalized noise. Every citizen contended with hubbub: "The individual noise struggles to be heard. . . . The single voice, in need of attention, rises into competitive clamor." All types of machines demonstrated a "well-nigh fiendish ingenuity in their varied achievement of toot and whistle."⁴ As "a saturnalia of sound" surrounded individuals, they recognized a "tyranny of noise." Writers personified clatter: "The noise, growing more and more an irritant, beats at last on the wearied ear with whips of strident steel."⁵ Noise seemed a malefactor. Although sound was essential to modern life, unrestrained it became a tyrant instead of a servant. The anxiety over noise stemmed from the suspicion that it was already uncontrollable. While sound indicated activity, work and progress, noise signaled waste, disorder and regression.

Noise represented an infringement of an individual's rights. One writer helplessly asked, "How soon shall we learn that one has no more right to throw noises than they have to throw stones into a house?"⁶ But this belief generated frustration. Individuals hated noise pollution but felt powerless to fight it. Even as late as 1930, there appeared no lasting solution: "People dare not enter a man's house or peep into it, yet he

has no way of preventing them from filling his house and his office with nerve-racking noise.”⁷

Din especially threatened the right to privacy. E. L. Godkin declared that racket “invades the house like a troop of savages on a raid, and respects neither age nor sex.”⁸ It was impossible to think of noise as protective or sheltering; it was an invasion of privacy. No matter how quiet one attempted to be, there seemed no escape. Noise could pour through an open window or filter into a house or office through the crevices of a window. Consequently, sleep and rest in one’s own home were often unattainable. The milkman was one of the worst offenders of early morning peace, and some of the largest milk companies in New York offered “noiseless milk” to customers by means of rubber tires and rubber-shod horses.⁹ The American Public Health Association estimated that in 75 percent of cases of mental breakdown, loss of sleep played a key role, and unnecessary and aggravating noise was a major cause of this loss of sleep.¹⁰

Although noise had been present in all civilizations, the din at the turn of the century appeared a unique phenomenon of industrialization. Anti-noise advocates believed that noise denoted industrial adolescence. They continued to believe that once industry matured “such bad boy tricks will be forgotten.” Since the racket signaled an “evil which (our) technological brethren have let loose unwittingly on the world,” people glanced admiringly to the past: “Before the industrial revolution times may or may not have been happy. They certainly were smokeless and in the main they were quiet.”¹¹

Nearly every symbol of technological life came under attack. The siren was “an intolerable development of savagery of modern machinery (with) no justification whatever.”¹² Thousands of letters poured into New York City officials about the nuisance of the radio and led the *New York Times* to declare, “As a business, radio is all right, but as a next-door nuisance, its hollow tones booming at all hours, it is all wrong.”¹³ In 1929, machine-age inventions such as traffic, transportation, radios and construction totaled 71% of all noise complaints in New York City.¹⁴

The automobile drew the greatest criticism. Its “intolerable screeching” made traffic by 1930 the single greatest noise-maker in America. The car horn became the meanest noise in traffic as drivers used their horns more and their brakes less. A pedestrian described the motorist’s code: “I am coming; If you do not hear my Gabriel trombone I am afraid I shall run over you.”¹⁵ The unmuffled motor was “akin to brutality” because it destroyed rest and created fear. Automobile inventors seemed “modern Frankensteins” because they had developed internal combustion engines and cars “which roar and clang and throb and thunder along the streets and roads . . . (causing) a wholly unnecessary obligato of the groaning and rattle of loose gears, loose parts, loose chains, and loosely packed freights.”¹⁶ As the automobile, with its accompanying noise, domi-

nated modern society, a tranquil environment became harder to envision. Quiet appeared "impossible in cities, and undesired of industrialized man, who carries noise with him in trains and motors to prevent the calamity of silence."¹⁷

The noise problem manifested an underlying fear of many Americans. Reacting to the pressure of the new industrialized society, they began to question seriously the progress the nation had made as a civilization. They dreaded the possibility that civilization was moving backward instead of forward.

The conviction that noise indicated a barbarous civilization resulted in a campaign to civilize, that is to make quiet, Fourth of July celebrations. Of all "noise-fests," the Fourth was "the most shocking." The hubbub was "hideously vulgar and utterly uncivilized."¹⁸ The national birthday was too glorious an occasion for din to mar. Independence Day reformers, a small group of middle and upper class citizens, sorrowfully compared the American Fourth to the tranquil national celebrations of Switzerland, Brazil, Germany and Japan. They sought to save the holiday from the raucous taint of the lower classes. But they also wanted

the perilous fourth

Statistics by the American Medical Association showed that, for the seven Fourths of July from 1903 to 1909, 34,603 people were killed or injured. Some of the causes for the deaths and wounds included blank cartridges in 6,374 cases; tetanus in 796 cases; firecrackers in 10,781 cases; canon in 2,880 cases; firearms in 2,902 cases; and powder and fireworks in 10,550 cases. In 1909, 5,307 people died while in 1910, 2,923 died. *New York Sun*, April 30, 1911.

to stop a national slaughter. The campaign for a Safe and Sane Fourth enlisted the vocal support of the governors of forty states and helped reduce the death rate from 5623 in 1908 to 988 in 1912.

Quiet, seemingly vanishing, became a criterion for an advanced civilization and a civilized man. E. L. Godkin contended that "the progress of a race in civilization may be marked by a steady reduction in the volume of sound which it produces. The more culture of all kinds it acquires, the less noise it produces."¹⁹ To the sensitive ear in modern society, "senseless and deafening noise characterizes the savage, gentleness and quiet ways as markedly characterize the other."²⁰

This concern with the barbaric aspects of noise led to the fear-reaction theory of civilization. The theory began with the premise that to primitive man noise meant danger. It awakened all his energies and held a quality of terror. Because modern man's auditory equipment remained the same as that of primitive man, he experienced an instinctive reaction to noise—a nervous alertness that was primitive man's safeguard against danger that stalked him continually. Every urbanite, the New York City Commissioner of Health pointed out, encountered "as many alarming

noises as the hardest hunter in prehistoric times.”²¹ The fear-reaction supposedly increased the tension of voluntary muscles, lessened the activity of involuntary muscles in the digestive tract, increased the pulse rate and blood pressure, diminished the secretion of saliva and digestive juices and created a vague feeling of apprehension.

Noisy things were not only primitive; they were inefficient. In this respect the anti-noise campaign reflected the general interest in efficiency in this period. The very needlessness of most noises rendered them insufferable. Everyone sought to stifle sounds that wasted energy. As industry expanded, people became less patient with its racket: “The ‘hum of industry’ has now made way for the shriek of industry. . . . Noise is not an essential part of progress.”²² Quiet and efficiency went together just as noise and inefficiency did. Noise cut down production, increased spoilage and harassed the individual worker. The modern office with its carpet and drapes symbolized more than the aesthetic: “It is quiet. It creates poise, encourages calm and straight thinking, concentration without fatigue.”²³

Noise was a liability in business; it cost money. Although it failed to appear on the balance sheet, noise showed in the profit-and-loss statement as an unrealized economy. In the factory, clatter indicated friction and waste. Executives translated a large part of the noise in a manufacturing plant into “loss of power, unnecessarily rapid depreciation of equipment, and a reduced efficiency of employees.”²⁴ As a condition of industry, noise shattered nerves, impaired hearing and caused accidents. It lowered morale. The din lessened the worker’s ability to concentrate, to follow a consistent line of thought and to meet emergencies. By the late 1920’s, some businessmen estimated that the annual cost of unnecessary noise surmounted the yearly losses to the nation from fire.²⁵ And the American Management Association believed that the difference between noisy and reasonably quiet conditions amounted to about 10% of the total output of a company.²⁶

Most management officials explored ways to cut down racket as noise became a prime target in the push for industrial efficiency. Improvement of motors and the use of mufflers lowered the vibration of automobiles. Better gears and silent-running chains diminished machine rattle. Automobile lubrication supplanted the oil can and lessened friction. Car makers attempted to eliminate cranking and built stronger bodies. Leather replaced metal where applicable in factory machines. Improved belts aided smooth-running machine parts. Offices and factories tried to curb carelessness because it resulted in loose parts, a chief cause of noise in all types of machines.

Noise pollution during the first decades of the century was a matter of concern not only to private enterprise but also to public health. Even when people ignored the noise danger, the continual din impaired their hearing, shortened their lives and threatened their entire nervous system. “It is very unfortunate for us,” the National Safety Council warned,

“that we become gradually used to noise of any kind that at first was very disturbing, and that we do not actually recognize its damaging and insidious effects until it has undermined our health.”²⁷ Habitual sound, an integral part of city consciousness, accounted for poor health as much as visible strain.

Observers first maintained that noise damaged hearing. An otologist from Harvard University pointed out that continued exposure to loud noise resulted in a degeneration of the human ear.²⁸ Noise not only caused acute and chronic occupational deafness, sometimes resulting in permanent deafness, but it also played a part therefore in industrial accidents.²⁹ An early fear held that boilermaker’s disease, the gradual loss of hearing because of continual noise, would affect all classes of society. Scientists estimated that the average street noise of a normal busy street in New York or Chicago made the ordinary citizen one-third to one-half deaf. No less an authority than Thomas Edison predicted that increasingly noisy cities would deafen all of their citizens permanently.³⁰

The greatest concern with noise in the field of health centered on the effects of continual din upon the nervous system. After the turn of the century, observers recognized a distinctly nervous national type. Noise seemed a major reason for this heightened nervousness. Every sudden and unexpected sound was an assault upon the nervous system that demanded a physiological process of resistance. The New York State Commissioner of Lunacy condemned noise for causing “a reduction in ordinary resistive force . . . (and) a nerve waste.”³¹ The infiltration of din into a mental hospital was dangerous because “noisiness in an institution for the insane is as infectious as measles.”³² The chairman of the Chicago City Council Committee on Health concluded, “There can be no question of doubt that noise is a decided causative factor in many nervous diseases.”³³ As industry and cities boomed, making noise seemed to become a neurotic habit of the American people.

To relieve taut nerves and gain respite from racket, urbanites looked longingly to the countryside. Their first answer to the noise problem was simply to escape. One reason the rural dweller apparently enjoyed greater endurance and longer life than the city man was because the ceaseless noises of the city did not keep his nerves constantly on edge. But this image of quiet pastoral fields did not last long. William Dean Howells, who became vice-president of the Society for the Suppression of Unnecessary Noise, admitted, “It is truly a serious problem to escape from noise.”³⁴ People fled the city only to discover that the country offered no sanctuary from din. For the summer fugitives from the noise of the city, there seemed “no repose in automobiles or subways, nor relaxation anywhere within the range of a throbbing that is swifter than nature.”³⁵ Reluctantly, city dwellers concluded that “the silence of the green fields” was not possible for them.

As recognition of the dangers of noise pollution became more widespread, a type of community consciousness developed to combat it. The

next step was what to do about the noise problem. Because escape was hopeless, anti-noise advocates turned to legislation. Early in the 1900's, they set out to bring the force of law down on the side of quiet through various citizen organizations. Middle class and professional people usually assumed leadership roles in the legal crusade against noise and headed anti-din associations. But they were not the only element in the attack on noise and not always the first group to demand that municipalities take action to alleviate the racket.

Slum residents hated noise as much as any social group. They demanded the end of useless clatter to protect those who were ill and to prevent those who were well from becoming sick. An early complaint on apartment-living noted the hazard of thin walls: "If ever I am driven to suicide by noise, it will be after an hour of 'Silver Threads Among the Gold' upon an organ at one end of the block, together with 'Hear me! Normal!' upon an organ at the other end." The complainer lamented. "How can we be happy when the nerves are kept jangling day after day and night after night?"³⁶ One woman from a crowded tenement wrote, "What we can not stand is the noise. It never stops. It is killing us. We work hard all day and need sleep and rest at night. No one can sleep till midnight and all the noise begins again at five."³⁷ Other appeals for relief from crowing roosters, barking dogs, and factory bells and whistles came from the tenement districts. In Philadelphia, tenement dwellers asked for help in abating noise from the Civic Club and the Board of Health. Their demands for action led to the organization of the Civic Club Committee on Unnecessary Noise in 1907.³⁸

Petitions, complaints or general concern over noise pollution resulted in the appearance of anti-din groups in other cities. These groups sometimes operated through already existing municipal organizations. The Board of Health was a convenient springboard for action against noise, and city councils responded with investigative bodies such as Chicago's Sub-Committee on the Reduction of Unnecessary Noise. Civic associations like the Chicago City Club worked to reduce racket. Businessmen combatted the problem through local chambers of commerce as in Atlanta. Physicians not only served in these groups but sometimes formed their own. The Baltimore City Medical Society had an Anti-Noise Committee. Individual initiative also sparked the development of anti-din organizations.

Whatever their form, these groups attracted community-wide support and attempted to direct public opinion toward legislation against noise. Women played a prominent role. The noise problem offered them a righteous cause in defense of civilization, a much-publicized issue with which to compete in a man's world, and a way to satisfy their desire to serve.

Mrs. Julia Barnett Rice was representative of the women who became involved in the anti-noise movement. She was an upper middle class woman with a classical and musical education. At the age of 45, after

raising six children, she discovered that she had time to devote herself “to a serious undertaking—the life work to which I have pledged myself.”³⁹ She threw herself into a tireless, one-woman crusade to stop the noises along New York City’s East River. In December, 1906, she formed the Society for the Suppression of Unnecessary Noise in New York City and acquired the support of an impressive list of civic-minded literary, business and professional people.⁴⁰ The Society was the largest and most successful organization of its kind. At the urging of Mrs. Rice, no less a personage than Mark Twain gratefully accepted the post of honorary president of the Children’s Branch of the Society.⁴¹

The first objectives of anti-noise organizations were the defense of the ill and the protection of children as they demanded quiet zones around hospitals and schools. The Society for the Suppression of Unnecessary Noise successfully established hospital and school zones in New York by 1912. Pressure from like groups forced other cities to follow example.

Quiet zones represented “protective circles.” As teachers closed windows to shut out street din, they feared that noise undermined the health of the child and exposed it to the risk of infection through impure and contaminated air. Educators banded together. They reported that noise materially increased their nervous tension and seriously hindered their work. Decrying the clamor from cobblestone and rough pavement, whistles, street vendors, garages, car-barns, factories, junk shops and stoveworks, Mrs. Rice exclaimed, and anti-noise women agreed: “And these are the conditions under which we force our children to study—to our shame be it said.”⁴² This kind of racket caused a loss of time in school and lowered efficiency. More disturbing was the worry that noise damaged the thinking of children. The Medical Sub-Committee on Noise Abatement in New York City feared that “Children may sit all day in the noisy schoolroom never learning how to focus this searchlight (conscious mind) upon the facts before them. They may finish their full years of schooling and have no clear pictures in their memory—only a hazy vision of the field of knowledge as seen through a fog.”⁴³ The New York Commissioner of Health learned that in schoolrooms facing busy streets teachers conducted class recitation to take all possible advantage of the jerky quiet of traffic lulls. He wondered, “Will this create in the children jerky mental habits—a sort of syncopated thinking where the mind jumps from one subject to another without completing its train of thought?”⁴⁴

Anti-din advocates focused on “the crime of noise” and tirelessly sought legislation. They zealously believed they could legislate the noise pollution problem away. Holding to the belief that the law necessarily preceded any hope of success, they demanded quiet and acquired a plethora of legislation in its place.

By 1913, every city in the nation of any size or importance had anti-noise ordinances. The Society for the Suppression of Unnecessary Noise

achieved the greatest success for the forces of silence through the efforts of William Stiles Bennet, a lawyer and a member of the advisory board of the Society. As a United States Representative, Bennet pushed through Congress the only piece of national legislation against noise during the period. The Bennet Act of 1907 regulated boat whistling in harbors across the country.⁴⁵ It was the first bill that Congress ever authorized with its ultimate object the suppression of noise. It passed both houses without objection.⁴⁶

The profusion of anti-noise legislation came at the municipal level where such measures gained community-wide support. Pets, especially dogs and birds, were particularly annoying. In Baltimore, complaints against roosters resulted in the death or banishment of over one thousand of the birds.⁴⁷ Boston, Detroit, Grand Rapids, Jacksonville, Florida, and Bayonne, New Jersey, prohibited the keeping of barking, yelping, or howling dogs and all other noisy animals.

the peddlers' protest

In Chicago, peddlers rioted in protest against the anti-noise ordinance that prohibited them from yelling out their wares. They caused thousands of dollars of damage, beat peddlers refusing to join their strike and engaged in open confrontation with the police. But they failed to have the law repealed. A judge's \$200 fine on one of the leaders of the riot deflated the protest, and the peddlers acquiesced in theory if not completely in practice. *Chicago Daily Tribune*, July 25-29, 1911.

Several cities outlawed hawking because it disturbed the "peace and comfort" of the citizens. In Washington, musical instruments needed a police permit. Dancing, preaching, exhorting, lecturing and singing required the permission of three-fourths of the block. Baltimore forbade drum corps, bands and other bodies of blowing horns between 6:00 p.m. and 6:00 a.m. except by special permit of the mayor. Boston disallowed bell ringing in streets except in lawful parades. Buffalo regulated auctions. Detroit vetoed noisemaking gadgets that "obstruct or incommode" the public. Hartford prohibited "the immoderate use of the voice by peddlars" on pain of revocation of their license. Kansas City declared the sounding of gongs illegal. Little Rock made nuisances of all noise "physically annoying to all persons of ordinary sensibilities." Milwaukee banned noise in peddling wares. San Francisco restricted clatter "having a tendency to frighten horses." St. Louis made bells on animals illegal. Portland, Oregon, limited the time for piano playing. All cities disallowed the blowing of steam whistles and locomotive whistles except as danger signals and limited the use of factory whistles.

New York City maintained the most elaborate code of anti-noise regulations in the nation. The city forbade musical instruments on the streets with certain exceptions, curbed the blasting of rock within city

limits, prohibited loud hauling and ordered anti-noise devices on transportation vehicles. It first established quiet zones for hospitals and schools and barred hawking within 250 feet of those places. The city restricted bells, whistles, clocks and sirens. All municipalities punished violations of noise ordinances by various penalties ranging from a small fine to imprisonment.⁴⁸

With the flood of legislation, anti-noise organizations fulfilled their *raison d'être*. But they had not really eliminated din because they failed to grasp the noise problem in its entirety. Working with a fragmented approach to the difficulty, they were satisfied to have a particular law against a specific nuisance. Anti-noise reformers reflected the progressive confidence in the exemplary power of law. In amassing a profusion of legislation, they outlawed myriad precise noises without thought to the later task of implementation. The good and rational man would willingly obey laws so their enforcement became unnecessary.

The handmaiden to legislation was science. Anti-noise advocates believed that science could be the panacea for the din of modern civilization. Although street vendors and newspaper boys hawked continually, if anything could silence them "science would achieve the seemingly impossible and add new laurels to its reputation."⁴⁹ Automobile engineers affirmed "a sublime faith that the motor car of the future will be as noiseless and perfect in operation as is a gull in its soarings."⁵⁰ For many noise opponents, the city of the future promised to be a quiet place, and scientific research gave them some justification for the hope.

Electric welding replaced riveting. Soundless typewriters appeared in offices. Engineers designed exhaust cut-outs for cars and mufflers for airplanes. Non-clattering ashcans made sanitation work quieter. A special coating on rails and a new brake system lessened the racket of surface cars and trains. Asphalt supplanted cobblestone and brick pavement. The rubber horseshoe hushed early morning milk deliveries, and the rubber tire revolutionized noiseless transportation.

Silence became a branch of applied physics as acoustical engineers strove to eliminate noise in buildings. Certain materials reduced vibrations. Machines rested on thick wool-felt or hair-felt. Decorators placed carpets and rugs at the centers of offices. Sound-proof foundations strengthened elevator motors and refrigeration units in tenements. The "acoustic wave filter" blocked undesirable sounds.⁵¹

Research and measurement reached a height in the 1920's as the expert began to direct the anti-noise movement. Scientists investigated the effects of noise on man through studies at Ohio Wesleyan, Northwestern, Columbia and Colgate Universities. Noise seemed to effect subconscious feelings as it caused violent emotional reactions in a hypnotized subject. Tests on infants showed that annoyance increased rapidly with the increase in pitch. Experiments on white rats demonstrated that noise retarded food consumption and hindered growth. Research also confirmed that noise raised blood pressure and increased

muscular tension. Observations of typists under the stress of noise proved that din decreased efficiency and heightened fatigue because a person must work harder in a noisy room to achieve the same work results as in a quiet environment.⁵²

An accompanying feature of these studies was the formulation of a concrete definition of "din." An unnecessary and harmful noise and a public nuisance was "any noise made at times of the day or night when it is most likely to be disturbing; any noise that is loud, screeching, strident, or discordant, and any noise that is discontinuous and un-rhythmic."⁵³ To measure this noise, Bell Telephone Laboratories invented the audiometer in 1925, and by 1928 the decibel began to come into popular use.

Forum magazine conducted a scientific investigation of racket in New York City in 1926. The noise survey was the first of its kind. Operating under the premise that to stop noise one first had to measure it, the magazine's investigators were also among the first to utilize the audiometer to gauge the noise level at different points in the city. Noting the results in "sensation units," the survey determined that Thirty-Fourth Street and Sixth Avenue was the noisiest location in New York City.⁵⁴ Other major cities, experiencing a noise problem that undermined their sense of progress, followed the *Forum's* example.

New York City officials believed that their city had changed from a comparatively quiet place "to a veritable jungle of noises."⁵⁵ Consequently, they established their own noise survey that was the most elaborate and detailed measurement of din up to that time. In 1929, the director of the New York City Health Department organized a Noise Abatement Commission. He appointed a committee of eleven experts from the fields of neurology, otology, engineering, building and law to study the noise question and report on their findings. The Commission was the first of its type in the United States and represented the first serious attempt to cope with noise pollution as a social problem. It equipped a traveling noise laboratory for the scientific measurement of noise. Investigators took the noise level in nearly ninety different areas of the city and made ten thousand observations. They utilized the audiometer and were one of the earliest research groups to employ the decibel.

Summarizing many of the fears that had disturbed anti-noise advocates for thirty years, the Commission concluded "unhesitatingly that noise is harmful" and that "a state of emergency exists in New York as a result of the increase in noise." It further determined: exposure to constant loud noises impaired hearing; noise seriously hampered efficiency of workers; racket strained the nervous system, leading to neurasthenic and psychothentic states, and necessitating frequent recuperation in the country. Din also gravely interfered with sleep. It had a disastrous effect on the ability of children to think and dangerously hindered the normal development of infants.⁵⁶

The publication of the Commission's results marked the end of an era in the fight against din. After 1930, the anti-noise campaign waned not because it had succeeded but because the first years of the Depression undercut the movement. The exigencies of the Depression took their toll of anti-noise supporters as demands of everyday survival overshadowed the noise pollution problem. If one could find work in a factory, he cared little how noisy it was. Municipal governments turned their attention to unemployment lines rather than traffic congestion. The desire to reinvigorate production was more important than the wish to diminish din in the process.

The anti-noise campaign of the first three decades of the twentieth century left an ambiguous legacy in establishing a record of considerable success and failure. In a real sense, it had achieved all of its objectives except the lessening of noise. From the beginning, the movement lived with inborn conflicts that made enforcing anti-noise ordinances more often than not like catching a shadow. These same conflicts would hamper later attempts to secure a quiet environment.

No one doubted that noise annoyed millions of citizens. But those same citizens always waited weeks or months before finally complaining about the nuisance. Indeed, hesitancy in filing a grievance was characteristic of a vast majority of Americans. Part of the reason for their delay was that for many years a real solution to the problem appeared impossible. As individuals first confronted racket, they assumed that this "new" annoyance was a necessary if unwelcome development of industrialized society.

Nearly everyone frequently shifted sides on the noise question. One hated clatter unless he made it himself. The other person's radio and car were always the loudest. The party to which one was not invited seemed more obstreperous than his. And one's own pet could never be a vociferous pest.

The element of periodicity determined whether a noise was offensive or inoffensive. If the clangor was brief or occurred irregularly, the individual willingly tolerated it. Only after the din proved continually an irritant would he venture a complaint. Because each person had a life within his community, he hesitated to grumble about noise since he wanted no one to gripe about him. A person hesitated "to invoke such powers of the law as are clearly his" since he did not want his neighbors to consider him "a killjoy or opposed to 'progress.'" In every community, "the rule of 'live and let live'" held "considerable sway."⁵⁷

Noise was strongly entrenched economically. The roar indicated someone's work, and everyone demurred to interfere with that right. "Money is something *real*," one critic emphasized, "and it is difficult for anyone to prove that he is losing more money by a given noise than someone else is making from it."⁵⁸ If the individual could not put his protest on an economic basis, his ingrained reverence for property rights, the work ethic and moneymaking efforts impeded his actions.

Unable to see the forest for the trees, anti-noise advocates missed the concept of urbanization and the rapid expansion of the city. They failed to recognize what came to matter most in the noise pollution problem—the sheer growth of numbers. Although cars had mufflers, thousands more automobiles thronged the roads each year. Albeit factories observed noise regulations, more manufacturing plants surrounded the swelling cities. Though science discovered anti-noise devices, inventors constantly produced new types of work and luxury machines and gadgets that created noise. Although people desired quiet at home, crowded tenements and neighborhoods made silence impossible.

But anti-noise advocates, despite this shortsightedness, responded to the pressing concern of the vast majority of Americans to deal with the modern environment. Facing a technological world that seemed alien to their basic sensitivities, people looked for direction in adjusting to a new ecological balance between man and machine. The fight against noise that sprang up in the early 1900's attracted widespread popular support because it gave people the opportunity to express their anxiety over machine technology, to test their ability to control their physical surrounding and to lessen their apprehension in coping with a new environment. As people became aware of the dangers that noise posed, they reacted, not as members of a particular class or a special interest, but as listeners.

This first environmental reform movement reflected the uneasiness of Americans suspended between two eras. While they rushed headlong into the machine age, they were not quite ready for the transition. Technology offered untold benefits; yet it challenged older values and spoiled the agrarian vision. The citizen groups that confronted the noise problem tried to reconcile the old with the new. They felt the first twinges of machine age consciousness. As machine civilization became all-encompassing, the elites of the new society—experts, scientists and managers—took over the anti-noise campaign. They attempted to make the shift to the new industrial order less haphazard and more planned.

Although their faith in the efficacy of legislation and science was often naive, anti-din supporters took important steps forward in both areas. While laws against noise were difficult to enforce, they nevertheless demonstrated the popular conviction that government had the responsibility to improve and protect the environment. Theoretically, if not practically, the force of law for the first time supported the belief that environmental regulation was necessary and possible. Science was never the panacea that so many hoped it would be. Yet, practical inventions, like the muffler, did help to diminish noise, and research into the effects of racket did aid people in understanding their relationship to the technological world around them.

The early attempt to solve the noise pollution problem often seemed

like a losing battle to those involved. Even after thirty years, anti-noise advocates could complain that the din was worse than ever. But throughout, they recognized that society had changed, and they demonstrated that Americans could no longer afford to ignore their environment.

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footnotes

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