

# The Assault of Sound

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by Robert Alex Baron

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It was 6:00 a.m. on a balmy April day in 1964. The place was a six-block stretch of Manhattan's Sixth Avenue between Radio City Music Hall and Central Park, in the heart of New York City. Thousands of New Yorkers and transients slept in the cosmopolitan neighborhood of apartments, hotels, and schools.

Darkened windows of the apartment houses and the giant buildings owned by CBS, the J.C. Penney Co., and the Equitable Life Assurance Society looked down on a fever of activity in the street. "Slattery's Army" was moving into position, a position it was to hold for three years, from 1964 to 1967. It was a highly mechanized contractor's army, equipped with 80-pound-class pneumatic paving-breakers, track-mounted high-impact rock drills, giant cranes, and bulldozers. Its pneumatic tools were powered by a battery of five portable air compressors, each with a normal discharge pressure of 100 pounds per square inch and a full-load speed of 1,750 rpm. The compressor engines were noisy, six-cylinder diesels of 900 cubic feet per minute (cfm) capacity.

Workers with scarred eardrums were preparing to launch an open-cut subway extension project for the New York City Transit Authority. As luck would have

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it, the Slattery Construction Company had chosen the southwest corner of 55th Street and Sixth Avenue, just opposite the windows of my apartment, to assemble the five compressors.

The operating engineer started the battery of air compressors. Jackhammer and rock drill operators hunched forward, waiting for the compressed air to feed their vibrating pneumatic tools.

Suddenly, all hell broke loose. What someone later termed "a symphony of insanity" had begun. The overture to a three-year concert combined the sounds of air compressors, jackhammers, rock drills, chain saws, and dynamite blasts, with additional instrumentation by cement mixers, vibrators, cranes, and portable generators. All were unmuffled or inadequately muffled, through economy or through indifference and ignorance. And there was no practical escape from the din.

What happened to the residents of my neighborhood, as I was to learn, is already happening or will soon happen to millions of human and animal receivers of noise. The clatter of a jet or helicopter flight path; the incessant hum of a thruway; "temporary" construction sounds; the multi-level buzz of a dozen modern kitchen conveniences; conversations of neighbors in the next apartment; automated office equipment; the roar of an air conditioner; power lawn mowers, chain saws, and mechanized farm implements—you don't have to live

near a subway project to suffer from noise. And nobody, especially in the United States, has any incentive to design for noise control.

It was no secret that upper Sixth Avenue was noisy. Three months after the start of the subway project, an acoustical engineer told a reporter that Manhattan was "the noisiest place in the country and probably the whole world," and upper Sixth Avenue was the worst area in the city.

From 7:00 a.m. to 4:30 p.m., for a period of three years, my family and my neighbors dwelt in a noise environment far higher than that permitted at the property line of factories by New York's zoning code.

One's first reaction to a noise assault of this caliber is to believe, then just hope, then pray that the nagging noise will go away. But it continued. Daytime telephone conversation was possible only during the golden half-hour when the construction workers stopped for lunch. Office personnel were tormented by headaches and other noise-induced ailments, including short tempers. Many of us residents seemed to become absent-minded: neighbors reported taking showers without removing eyeglasses or articles of clothing. We couldn't converse in our own apartments without shouting.

Doctors could only offer their patients tranquilizers and sympathy. Those with offices in the vicinity were themselves complaining, not only of the discomfort, but of the impossibility of using stethoscopes for diagnosis. A neighborhood drugstore made news because of its phenomenal sale of ear-plugs; another shop featured acoustic earmuffs in its windows.

The intense noise proved to be an economic as well as a personal blight. The Ziegfeld Theater lost bookings. Real estate rentals dropped. For-rent signs in midtown New York are normally as rare as dodo birds, especially in so convenient a location as upper Sixth Avenue, but now they blossomed in front of the luxury buildings lining the Avenue. Ten-

ants broke leases and moved. One management reported a \$7,000-a-month loss in rentals.

We did not get used to the agony of living with nagging, reverberating noise; indeed, we became super-sensitive to other noises.

Naively, I decided to take action.

First I complained to the neighborhood policeman. Patiently, he pulled out a collection of mimeographed notes. One dealt with noise complaints.

"Look!" he said. "There it is in black and white."

I looked. Construction noise from 7:00 a.m. to 6:00 p.m. was exempt from the anti-noise ordinance.

Well, I would appeal directly to the Transit Authority.

This bureaucratic dictatorship, I was to learn, was responsible to no one. The noise, I was flatly told, was the price of progress.

The price was too high. I decided to try the contractor. His representative told me in so many words (that I can't print) that the noise would remain as it was. The contractor told newspaper reporters that "concentrating the compressors in one spot is the most humane way to handle the problem."

City Councilman (later Congressman and now New York State Supreme Court Judge) Theodore Kupferman talked to the contractor and was told: "Nothing will be done." The representative of the people was as helpless to control the noise as the people themselves.

I wrote to the Commissioner of Health, asking for a meeting. I received no reply, and went over his head to call one of the four doctors on the Board of Health, only to hear that the noise of construction at Bellevue Hospital was disturbing *his* work! Nevertheless, I demanded some attention. Persistence (and threat of a lawsuit) finally made the Health Department act—they passed the buck to the Police Department.

A police sergeant visited me at home, listened politely, and told me he would hear Slattery's side of the story. When I didn't hear from the Police Department

within a reasonable time, I wrote to the Sanitary Inspection Division of the Health Department asking for a report. The reply referred me to the Deputy Police Commissioner in charge of community relations. I called that office and was told that it was merely a liaison with the Health Department. I was referred to the Chief Inspector's Office. I called that office and was referred to Patrol Headquarters, Manhattan South. After persistent inquiry, I was told that this project was classified as temporary and "emergency work" and that permits had been issued for necessary drilling, and so forth. (In other words, I had no grounds for complaint.)

And meanwhile the buck continued to be passed. The Transit Authority claimed it was following traditional construction industry practice in accepting the contractor's noise levels. The contractor said he was using the standard equipment available to him. The manufacturer of the air compressors said he was not responsible for the noisy engine that powered his compressors: he had to buy the components that were on the market. GM's Detroit Diesel, manufacturers of engines for compressors, told me it designed engines to meet the needs of the market, and no one was asking for quieter engines.

When Governor Rockefeller refused to intercede with the TA, I tried the federal level. I asked the Division of Occupational Health of the United States Public Health Service if an official noise survey could be made. I was told: "At the present time the U.S. Public Health Service does not have funds available nor would it be possible for us to do this work unless it was requested by the City of New York." I asked also if the PHS had any recommended standards for community noise and was told it had none, even though more and more of the population is being drawn into the insane symphony of urban life.

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### A Vast Earsore

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Demographers predict that by the

year 2000, 50 per cent of the population of the United States will live in three supercities: "Boswash," a megalopolis stretching from Boston to Washington, D.C.; "Chipitt," stretching from Chicago to Pittsburgh; and "Sansan," encompassing the area from San Diego to San Francisco.

There may be as many urban buildings constructed in the next 40 to 50 years as in all mankind's history.

Cities and suburbs alike will reverberate to the roar of the jackhammer and the air compressor as they strain to accommodate the 80 per cent of the population expected to live in urban areas by 1985. Some idea of what it will be like is already heard in New York City, with its annual average of 10,000 demolitions plus 80,000 street repair projects. To add acoustic insult to the "normal" construction noise injury, the construction industry is planning to use helicopters to place heavy slabs of concrete and other building parts into position. The Westchester County, New York, local of the International Union of Operating Engineers (its members operate air compressors) is training some of its members to operate helicopters for that purpose.

So where does one go for quiet? Honolulu, where the pressure of complaints led to formation of a Mayor's Committee on Noise Control? The Virgin Islands, with a new jetport for St. Thomas and St. Croix? Snowmobile country in the north woods?

The noise-harassed citizen is not even permitted the essential of quiet living space. The misconception that a decent acoustic environment is a luxury rather than a necessity and a human right, plus greed and the pressure of competition, encourage the builder to ignore noise insulation. In the United States there is no national code for dwelling sound control. Though such codes could be found in Europe as early as 1938, not until New York City adopted one in 1968 did a single American municipality have a building code with noise control provisions.

In most cases, you can't sue. You don't even have the right to stop the overhead neighbor's son from pounding away with a full complement of drums and amplified rock'n'roll instruments. When his \$400-a-month tenants threatened to move out, one Manhattan landlord tried to evict a young drummer's family. The judge ruled: "While the court can sympathize with the neighbors who may be annoyed by the sound of drums, that is the price they must pay to live in a city apartment." He referred to children learning to make music as some of the more civilized sounds of life.

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### The "Wallopin' Whale"

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The Industrial Revolution gave business and industry great power—including the right to pollute, the right of the machine to be as noisy as it is today. This state of things typically means that the maker of machines is free to choose his design goals, and must not be pressured by laws or ordinances to spend time or money for quiet.

Society seems to look upon any degree of excessive noise as it now regards pornography—if it contains a modicum of social value, it is not obscene.

For example, most cities do not regulate the noise levels of air conditioners. As long as the apparatus is operating properly, judges will not recognize a noisy air conditioner as a nuisance. In a precedent-setting case, one court ruled that an air conditioner is a product of man's search for improved comfort and enjoyment, and the fact that it may cause some annoyance to others does not justify denouncing its use as criminal.

Certain magic words can ward off any meaningful regulation. These words are: socially useful, temporary, and mobile. Many communities have adopted the model anti-noise code recommended by the National Institute of Municipal Law Officers.

Written to cover "unnecessary and unreasonable" noise, it is a license to pollute. Here is part of the "preamble"

to New York City's "model" anti-noise ordinance:

Unnecessary noises: Prohibited. a. Subject to the provisions of this section, the creation of any unreasonably loud, disturbing, and unnecessary noise is prohibited. . . ."

That word *unnecessary* is the fly in the ointment. It is not interpreted as meaning capable of being designed to make less noise, or capable of being muffled. An unnecessary noise is a noise without social utility. Dog barking and promiscuous use of the auto horn are deemed to be without social utility. Construction noise is the result of a socially useful activity, and therefore free from restraint.

Daytime construction noise is specifically exempt from regulation. All municipalities that have adopted the model code contain a clause similar to this one, found in the New York City Administrative Code, prohibiting

... the erection, including excavating, demolition, alteration or repair of any building other than between seven ante meridian and six post meridian on weekdays, except in case of urgent necessity in the interest of public safety and then only with a permit from the commissioner of buildings, which permit may be renewed for a period of three days or less while the emergency continues.

This is acoustic anarchy with a vengeance. Any degree of construction noise can be legally maintained from 7:00 a.m. to 6:00 p.m. (and through the night with an easily obtained permit), six days a week (and Sunday by permit), week in and week out for many months and years. It is noise legally defined as temporary and necessary and thus excluded from the laws of nuisance.

It is, for example, the intense noise generated by giant portable air compressors that force-feed the jackhammers with enough pressure to enable them to slug away with 1,100 80-pounds-per-square-inch blows per minute, while exuding waste energy to the tune of 105

or more decibels. It is noise made by the giraffe-like pneumatic rock drills employed to drill holes for dynamite charges. It is the incredible noise made by another pneumatic tool, the tamper or compactor used to beat down the soil or for subsurfacing. One model, the "Jumping-Jack," delivers a 1,000-pound sock at the rate of 350 to 700 blows per minute. Its cousin, heavyweight "Wallopin' Whale," delivers 3,400 to 6,000-pound blows at the rate of 1,500 to 2,000 per minute. Construction equipment is not designed for human compatibility. The air compressors and jackhammers do not have to be muffled, and neither do the cranes, bulldozers, or transit cement mixers.

By giving moral and legal sanction to noisemaking, we have made outcasts of those who suffer from noise. They are made to be ashamed of their suffering, as if it indicated some flaw in their character, a desire to stop civilization's progress. They feel constrained not to convey to their family or friends how they feel. Many choose to suffer silently, rather than chance ridicule.

Among the hundreds of letters Citizens for a Quieter City (CQC) received after my appearance on the Johnny Carson *Tonight* show was one from an elderly woman who found relief in writing to an organization that understood what she was going through. All her life, she wrote, she not only suffered from noise, but had to hold back her complaints.

CQC's first office was a sublet in the Theatre Guild building. A public relations man wandered into the place one day by accident. Instead of excusing himself and departing, his eyes fastened on our name plate. Cool and poised, this Madison Avenue huckster started asking questions about our operation. Suddenly he plunged from his poised demeanor into an agonizing description of his own noise problem:

"They've just opened up the second bar within earshot of my apartment.

These two spots have become the "in" spots with the sports car crowd. I can't sleep. And now the building across the street has just installed a giant air conditioning unit on the roof opposite my window. That constant roaring is driving me bugs. . . ." And then he stopped as suddenly as he had started, visibly embarrassed. "My God, I'm not a complainer. I didn't mean to complain. I must sound like a kook."

Torture is defined as something that causes agony or pain, suffering, annoyance. These are the very terms the public and our social commentators use to describe what noise is doing to us.

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### Child's Terror

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The brutalization of our society by noise is revealed by what we are doing to our children, exposing them to such excessive noise in their formative years that they tune out in self-defense and have to be educated to listen to verbal communication. The Mabaan children are taught to listen for self-protection. Educators have told me it is a commonplace in a city like New York that new pupils coming from low-income areas also have to be trained to listen. At home, amid probably many brothers and sisters demanding attention against the external noises of raucous street activities and heavy traffic, the children have heard speech chiefly as grunts, and had to pick even those out from among many other generalized human sounds. Apparently, in the act of screening out the destructive sounds of their environment, they have lost the art of focusing on speech sounds.

Pre-talking-age children who constantly hear noise-masked speech do not receive the full auditory value of the speech sounds in their surroundings. Consonants and vocal nuances are masked, filtered out, and the child learns an imperfect vocal pattern.

Tune-outs, especially among the underprivileged, growing up in noisy environments, may later become drop-outs.

As if to assure ourselves that our children will be prepared for tomorrow's noise-saturated world, we allow excessive noise to accompany them during their school hours. Most schools seem designed to be reverberation boxes. Hard floors and ceilings amplify the normal sounds of school activities. The students are sitting ducks for decibels. This is what one small-town Texas high school environment sounded like to a college professor of health and physical education: "In a single wing of the building, a half-dozen classrooms are hammered with afternoon noises—vocational education classes. The efficiency and effectiveness of the lecture classes drop and the students strain to hear. Fatigue and irritability of students and teachers is great."

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### Head in a Gong

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The serious effects of noise pollution are not confined to children in the classroom. Dr. Aram Glorig and other medical men have noted that blood pressure goes up with noise exposure. What happens if the noise exposure is continuous, and extends over a long period of time? It has been discovered that the impact on the peripheral blood vessels is a prolonged one, that the vasoconstriction (tightening of the blood vessels) persists for a significant length of time even after the noise is stopped. Not only does the vasoconstriction continue after the noise stops, the return to a normal state is slow.

The physical quality of the noise seems to be unimportant. The degree of vasoconstriction these physicians observed was the same for the noise of a punch press, an air pressure hammer, or white noise. (White noise is a "flat" noise with a more or less equal distribution of sound energy across the frequency spectrum.)

People with systemic weaknesses would react to vasoconstriction differently from normal, healthy persons. This suggests the possibility that people with systemic circulatory or cardiac disorders

would be more grossly affected by noise.

According to Rosen, adrenalin increase, if chronic, could elevate blood pressure. Noise, hypertension, and heart disease thus make for a vicious circle: noise can elevate the blood pressure, elevated blood pressure can contribute to heart disease, and heart disease can be a cause of high blood pressure.

Rats subjected to excessive noise have developed hypertension, with the older rats showing the greatest sensitivity to noise stress. As for humans, it does not require a sonic boom to trigger a sudden, potentially damaging increase in cerebral blood pressure. In one test, a popping paper bag raised the brain pressure more quickly than a hypodermic injection.

Disordered heart beats may be the central problem in at least 40 per cent of sudden heart-attack deaths, and they trigger most of the deaths during the first four days after an attack. Noise influences the heart's beat. Experimental work in the Soviet Union has shown a weakening of the contractions of the heart muscle from noise exposure. Many Russian workers exposed to continuous noise between 85 and 120 dB complained of chest pain, and medical examination of these workers revealed irregularities of the heart beat. Russian research shows that workers in high-noise ball bearing and steel plants have a high incidence of irregularities in heart rate, which in some cases can be fatal.

A town in New Jersey moved a firehouse siren away from the adjacent home of a boy with congenital heart disease after his doctor warned that the noise could throw him into a spasm that could be fatal.

Dr. Hans Selye pioneered a theory that the body produced these complex chemical changes to enable it to cope with stress. This stress reaction he described as the body's normal adjustment to an abnormal situation. However, when the stress is constant or too intense, the defense reaction itself becomes sufficiently extreme to be harmful. The adrenal glands become enlarged, the lymph tissues shrink, the

stomach and intestines develop bleeding ulcers. He discovered that in patients who were under stress or tension from various sources, there appeared a number of vague, diffuse symptoms such as aches and pains, coated tongue, fever, and mental confusion.

Describing Dr. Selye's work, *Saturday Review* editor Norman Cousins wrote, "He has studied the effects of anxiety, stress and exhaustion on the adrenal glands. He reports a direct physiological connection between persistent tension and fear and the weakening of the total human organism. What happens, he finds, is that the supply of adrenalin runs dry and the body loses its chemical balance, or homeostasis. . . . The effects of adrenal exhaustion vary all the way from physical crippling to heart disease."

When chickens are stressed with noise a complex physiological change takes place. Air-ground military maneuvers in the midst of North Carolina's largest poultry counties provided the necessary evidence. Chicken houses were subjected to the noises from planes, trucks, tanks, and foot traffic. "The roar of the motors and rotors combined with dust and air movement seemed most effective in exciting the hens," reported Dr. Douglas Hamm, poultry scientist. Egg production was down.

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## Noise Spasm

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Granted that a certain amount of stress is normal, and needed for survival, what happens when we ring the alarm bell too often? Day and night, urban man's nervous system is getting false alarms from sirens, helicopters, jets, trucks, cars, motorcycles, with and without defective mufflers. The constant rain of noise can cause a state of stress. Ecologist Dr. Bruce Welch compares being forced to live in an environment of constant high-level stimulation to driving at high speed in second gear, or maybe in first. At the very least, a lot of energy is wasted, rejecting and reacting to unwanted sounds of excessive amplitude.

Dr. Jansen's studies at the Max

Planck Institute have shown that noise bursts of 70 decibels and more caused pronounced bodily reactions which, he believes, could lead to illness if continued and high. In his pioneering study of a thousand steel workers, the group working in noisy conditions—more than 90 decibels—had a higher incidence of physiological and psychological disturbances than a comparable group working under quiet conditions (61 per cent as against 48 per cent). The noise-stressed group also revealed a 24 per cent incidence of heart irregularities as against 16 per cent for the "quiet" group. In Dr. Jansen's opinion, many industrial noise levels cause such undesirable reactions.

Among the acousticians who have noted a possible relationship between stressful noise and physiological damage is Los Angeles physicist Dr. Vern Knudsen, who has been studying and working with sound for some 40 years. "I have always been sensitive to noise," he says, "and I even believe, though I have no proof, that my reactions to noise were significant in developing a series of ulcers in my duodenum. I knew that sudden noises cause violent stomach contractions, and I am convinced these contractions can exacerbate incipient peptic ulcers."

If noise stress activates the biological organism to seek quiet, what happens when that need cannot be met? A person can do something about hunger, thirst, and fatigue. But what happens if he can't avoid noise?

Perhaps the unmet urge for escape is responsible for the acts of violence triggered by noise. Extreme hunger and thirst have forced men to behave irrationally. Is it not conceivable that unrelenting noise may also produce acts of violence?

Most noise victims, however, do not give vent to their anger. And since they usually have no rights against the noise source, they turn their rage inward. Or, even if there is no conscious awareness of the irritation, the organism is tensed.

One result of unreleased tension may be headaches. The modern incidence of

headaches is associated with industrialization. Some experts believe New York has the highest headache rate in the United States. Dr. Arnold P. Friedman, a psychiatrist-neurologist who runs the headache unit at Montefiore Hospital, New York City, believes that tension, or "nerves," accounts for 70 per cent of the headaches which are so severe they annually send 24 million Americans to doctors for help.

A sudden rise in blood pressure may cause a headache.

*Noise causes a sudden rise in blood pressure.*

Headache pain may be caused by contraction of the head and neck muscles in response to stress.

*Noise causes stress.*

Many headaches occur when the blood vessels around the brain swell and impinge on a sensitive nerve, or when the blood supply to the brain is choked off by tense neck muscles. The muscle tension constricts the arteries, and the subsequent dilating phase is the painful phase.

*Noise tenses muscles.*

Migraine headaches are most often triggered by emotional factors in persons whose blood vessels are predisposed to painful changes in diameter.

*Noise changes the diameter of the blood vessels.*

Can noise cause headaches? No one knows, but it seems plausible that a dose of quiet could hurt aspirin sales.

X It would also seem that noise produces tension because it violates the "zones of sensory experience" described by anthropologist Dr. Edward T. Hall. Certainly noise is a trespass of the "social zone" four to ten feet from the body, and a trespass of the "personal zone" a little more than arm's length. But it seems to me that what makes noise so unendurable is that it also violates the "intimate zone," the one associated with lovemaking, comforting, and protecting.

Given all of this, there is good reason to suspect that in addition to chemical and physical reactions, noise plays havoc

with our minds and our emotions. It is difficult to believe that noise which irritates, disturbs sleep, and constantly jars our nerves, just goes in one ear and out the other.

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### Echo Through the Body

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Until recently doctors have resisted the idea that emotions can play a role in all diseases, including infections, cancer, and heart ailments. Now the medical profession is receiving a flow of research reports that establish a relationship between emotions and disease. Emotional disturbance was reported to influence the common cold, attacks of asthma, and even the state of one's gums. (Yes, dentists are being urged to include some psychology as part of their treatment.) Other medical researchers have suggested a link between emotional states and the ability to ward off disease states, or get well once an illness has developed.

One does not get used to noise. Somewhere in the human body, that sound is being absorbed—at an as yet unknown price. This is the law of the conservation of energy. Energy does not just disappear.

Whether or not noise annoyance is a health problem depends, to some degree, on the price to the human organism of "adapting," of making the necessary adjustments to an abnormal situation.

In 1966, Karl D. Kryter, who does research for NASA and the FAA at the Stanford Research Institute, reported: "There is evidence that following an initial adjustment to and learning the nature and meaning of one's noise environment people become less, rather than more, tolerant of continued exposure to aircraft noise."

There is a tendency to dismiss noises found in the everyday environment as unimportant because they usually are below such intensities and in many cases are of short duration. There is also a tendency to evaluate noise exposure as if the person so exposed was in perfect health and not undergoing any other intense stresses. An organ forced to

adapt to one set of abnormal conditions may have difficulty adapting to another set of abnormal conditions. Scientific research has not yet come up with an exact limit at which health becomes endangered.

Most research has been done on the effects of industrial noise, not the variegated cacophony of today's civilized living. Is there periodicity or rhythm in the auto horn, the helicopter flyover, the jet flyover, the blender, the lawn mower, the garbage truck? All are sudden, unexpected. Adjustment does not seem possible.

If body tissue is penetrated by a needle with a given force, the pain decreases with repeated jabbing. Does the decline or even the absence of pain mean there is no tissue damage? Isn't the human nervous system being poked with the broad-band noise of an air conditioner, the sharp whine of a garbage truck, the staccato interjection of a jackhammer? To live with noise is not unlike living with electric shocks.

"Adapting" in any case to a continuing abnormal situation is like living with a bad marriage. Certainly a mismatched couple scraping on each others nerves can "adapt" and continue living together. What is the price of that adaptation, both to the partners and to the children of such a family, and to the community? What decibel formula measures adapting?

Noise, at even moderate levels, forces a systemic reponse from the total organism. It is not only the sense of hearing that is involved. What is also involved is what happens after the brain receives the sound signal. The brain places the body on a war footing. The repetition of these alerts is exhausting. It depletes energy levels; it can cause changes in the chemistry of the blood, in the volume of the blood circulation; it places a strain on the heart; it prevents restorative sleep and rest; it hinders convalescence; it can be a form of torture. It can so weaken the body's defense mechanisms that diseases can more readily take hold. The organism does not adapt to noise; it

becomes enured and pays a price. The price of this "adaptation" is in itself a hazard to health. j

The effect of noise on health may—like radiation poisoning—be something that will show no clinically significant symptoms at the time of exposure or shortly thereafter. Conclusions must not be drawn from short-term observations. Nobody, even today, knows too much about how air pollution affects people. Doctors back in the 1920s were concerned about smoking as a health hazard, but it was not until recent years that medical science was able to establish a link between smoking and health. The same lag applies to noise. Some doctors and scientists have long suspected that noise is inflicting damage, but the nature of that damage is yet to be discovered.

The most constructive medical and commonsense position is the one taken by Jansen:

Any sound or noise may *change physiological states*; and until someone will prove that these more or less repeated changes are negligible we must consider noise to have a possible detrimental influence on human health.

Noise per se may not be dangerous. But when noise becomes immoderate, as with anything else in life, it loses its innocence. It also loses its innocence when it strikes at those whose constitutions are weakened by ill health or old age. Noise may yet prove to be as deadly a threat to man as the noxious fumes about which we are presently hearing so much. j

Someday we shall be able to count the dollar cost of noise, and diagnose its price in physical health. But, in trying to assay a direct dollar cost, we must not lose sight of the fact that this life on earth is a limited one. Noise, no matter how one interprets its impact, does "cost" man a portion of his human existence. I am haunted by the phrase environmentalist Ron Linton used before a meeting of the American Public Health Association: "What is the cost of a living day?" ■

# Gilbert Fitzhugh's Golden Fleece

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by A. Ernest Fitzgerald

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On July 27, 1970, an elaborately staged news conference took place at the Summer Palace in San Clemente. Emerging from a 90-minute meeting with the President, Secretary of Defense Melvin Laird had good news for the assembled reporters. As reported by the newspapers, the Secretary, his deputy David Packard, Henry Kissinger, and others had met with the President to discuss the then-secret Fitzhugh Report. Mr. Laird's message to the newsmen was that the report, a year in the making, would be

released the next day, and that it would recommend changes in Pentagon procurement designed to prevent massive losses to taxpayers because of cost overruns on weapons programs.

After the San Clemente press conference made the news by announcing what would be reported, the report was issued with another press conference and the appropriate fanfare—followed by analyses and personality profiles, which kept alive the good news that the Pentagon was to be brought under control.

The Fitzhugh Report itself covered a broad range of Pentagon management problems, but the best-publicized items dealt with big weapons procurement and civilian control. The costly, overrun-producing procurement practices of the

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