

Commentary

The Need for *Not* Breaking the Sound Barrier

ACROSS the country, people are raising the roof over noise. In New York, residents living under the flight paths of the supersonic Concorde jet made nearly 4,000 complaints to the Federal Aviation Administration in just the first year of landings. Fierce debates are raging over whether jet noise in areas surrounding airports can lead to birth defects^{1,2} and excess mortality.^{3,4}

Nor does it take a sonic boom to rattle a good many persons. A recent issue of *MAD Magazine* featured coming attractions of the scariest possible horror movies one could imagine, among them, "The Invasion of the Transistor People." Theories behind the wave of rock-music-blasting radios on public transportation, along the sidewalk, and at the beach range from defiance of authority to just plain deafness.

Of course, one man's rock may be another's roil. Not long ago, a Kew Gardens, NY, man, whose complaints of stereo noise from the apartment above had gone unheeded over many months, went upstairs at 1:30 in the morning and proceeded to shoot the occupants of the offending apartment before doing away with himself. In a similar instance in Chicago, no charges were filed against a 54-year-old man who fatally shot a neighbor during a quarrel over the neighbor's loud-playing stereo.

Simian Crisis

At the University of Miami School of Medicine last year, a group of protesters condemned the use of monkeys in an experiment designed to test the effect of noise on the body. These well-meaning persons apparently did not know that the conditions of the experiment were not so inhumane. In fact, the two monkeys were just receiving the noise that a typical blue-collar worker would experience in a day, from the early morning tea kettle to late-night television violence.

The theory behind such experimentation is that the constant bombardment by noise is more than we were ever meant to hear. However civilized we think we may be, our bodies still react to noise as if it is a threat. Our heart rate

increases, and there is a shift of blood away from certain organs like the stomach to others like muscles, as if we are getting ready to take off or else gird for the opposition—the familiar "fight or flight" mechanism that really means "fright." Blood pressure goes up and may stay there in some persons—and some monkeys—who are exposed to a daily level of supposedly safe noise. In addition to significant, irreversible hearing loss in just a few years at certain high-noise-level jobs—and, according to the Environmental Protection Agency, an estimated 10% of the population, not to mention a far greater proportion of the work force, is currently exposed to hazardous noise—workers may show development of irritability, arrhythmias, and even ulcers.

Small wonder that so many Chicago cabdrivers act like kamikaze pilots: the sustained noise level of traffic is at the potentially dangerous 75-dB level. Discos are way out, indeed, often at 120 dB. Even the housewife (or househusband) does not escape unheard: the noise of such common kitchen appliances as an electric blender is an annoying 93 dB. For persons who work all day amid noise and come home expecting to find peace and quiet, the effect of still more household noise can no doubt lead to family tensions and loud arguments.

Hearing a Pin Crash

On the other hand, it may not be so paradoxical to consider why a jackhammer operator may be unfazed (at least mentally) after years on the job, while a librarian may go to pieces on hearing the sound of a nail-clipper. Context clearly plays a predominant role. As Falk and Woods⁵ point out, noise may be perceived most as if it were being inflicted when it is intermittent, unexpected, and uncontrollable. Even normal conversation itself—just 60 dB—may prove stressful for others, such as patients in the recovery room. From the nursery to the intensive care unit, in fact, Falk and Woods⁶ found also that hospitals fail to do justice to the peace. Fife and Rappaport⁷ go one step further: their study of patients after cataract surgery indicates that those exposed to prolonged periods of noise may have longer hospital stays.

But the most blaring example of needless nosocomial noise has gone essentially unchallenged: the ambulance

From DOC Inc (Doctors Ought to Care), Chicago.
Reprint requests to 924 W Webster St, Chicago, IL 60614 (Dr Blum).

siren. Scant mention of this nuisance has been made in the medical literature. In a brief letter, Henderson⁸ objected to both sirens and flashing lights. Hanlon⁹ noted that the constant sound of a siren operating at a high pitch soon loses its effectiveness and also may have an adverse effect on the victim being transported.

Sounds Better

In 1955, MacLean¹⁰ cited a 70% decrease in the number of ambulance accidents in New York City after the sirens were removed and orders were given to obey normal traffic regulations. Even though the sirens are back on in New York (presumably to be heard above the din of transistor radios), they are still off in Little Rock, Ark, where ambulances are also prohibited from speeding or violating traffic regulations. The high speeds proved unnecessary, and the policy has gained the staunch support of such groups as the American Automobile Association and the Parent-Teacher Association.

Writing in the April 19, 1980, edition of the *Washington Post*, A. E. J. Mullins, an Australian physician visiting the United States, described the assault of ambulance sirens throughout the night that prevented him from getting any sleep in his hotel room: "As an experienced surgeon, I have a clear idea of the incidence of dramatic, dire emergencies in any city, and it is nowhere near as high as these wailing

banshees would proclaim. Even when urgency is real, the value of sustained noise is questionable."

It is high time the sirens were silenced. And as suggested in an excellent American Medical Association monograph,¹¹ all physicians would do well to listen out for noise pollution and to support stronger legislative measures to protect the public.

ALAN BLUM, MD
Chicago

1. Jones FN, Tauscher J: Residence under an airport landing pattern as a factor in teratism. *Arch Environ Health* 33:10-12, 1978.
2. Edmonds LD, Layde PM, Erickson JD: Airport noise and teratogenesis. *Arch Environ Health* 34:243-247, 1978.
3. Meecham WC, Shaw N: Effects of jet noise on mortality rates. *Br J Audiol* 13:77-80, 1979.
4. Frerichs RR, Beeman BL, Coulson AH: Los Angeles airport noise and mortality—faulty analysis and public policy. *Am J Public Health* 70:357-362, 1980.
5. Falk SA, Woods NF: Hospital noise. *N Engl J Med* 290:523, 1974.
6. Falk SA, Woods NF: Hospital noise—levels and potential health hazards. *N Engl J Med* 289:774-781, 1973.
7. Fife D, Rappaport E: Noise and hospital stay. *Am J Public Health* 66:680-681, 1976.
8. Henderson JH: Ambulance noise. *Br Med J* 1:694, 1972.
9. Hanlon RF: Safe driving of ambulances. *Hosp Topics* 46:83-85, 1968.
10. MacLean BC: Introductory remarks. *Can Serv Med J* 11:564-565, 1955.
11. Bell JA: *The Physician's Guide to Noise Pollution*. Chicago, American Medical Association, 1973. (Available for \$1 from AMA Publications, PO Box 821, Monroe, WI 53566.)