

Newton Morton's paper "Morbidity of children from consanguineous marriages" in Steinberg's *Progress in Medical Genetics* (Grune and Stratton, New York, 1961).

VICTOR A. MCKUSICK
Johns Hopkins University School of Medicine, Baltimore, Maryland

Mea culpa. Dr. McKusick is quite right, of course. What I meant and should have said was, "... that consanguineous marriage is *always* biologically dangerous." What I was really shooting at was the popular belief, common among the scientifically unsophisticated, that consanguineous unions *inevitably* produce feeble-minded or physically deformed offspring or descendants, by some mysterious and essentially nongenetic process. I have had my nose rubbed in this belief so often and so hard during my years of work abroad that I have perhaps become overly sensitized to it. I fully realize that ill effects do result from such marriages, in varying degrees according to the deleterious gene loads of the partners, and obviously I should have made this clear or not brought up the subject. And I am grateful to Dr. McKusick for calling it to my attention.

L. CABOT BRIGGS
Peabody Museum, Harvard University, Cambridge, Massachusetts

Noise

Where are the acoustical engineers of the country? We know that this large and able group of highly trained scientists is deep in research and practical technology. Perhaps they are busy designing auditoriums or suppressing the sonic boom as the jets break the sound barrier, or controlling the noise of a submarine. They must be hard at work on some important project, but unfortunately they are not very effective in helping the tired businessman relax in a quiet office, hotel, or home.

The fault may not lie entirely with the acoustical engineer. It may be that he has the know-how but that he is over-ruled by the building and equipment industry. It would seem, at least from the layman's point of view, that most research and technology in these industries are directed toward cheaper construction to offset rising labor costs, provided showy exteriors and interior decoration remain to dazzle the casual observer.

The tired businessman, or victim, purchases what looks to be a beautiful ranch-type rambler home in which to relax after a tough day in a noisy office. The noise continues throughout the night. The heating system roars intermittently with ventilating fans or noisy circulating pumps. He becomes thirsty and draws a drink of water from the bathroom tap, awakening everyone in the house as the water rushes through paper-thin copper tubing. If a toilet is flushed, there is no more sleep for anyone. Such noises did not occur with the old-fashioned red brass or heavy copper plumbing now considered antiquated. Flexible, thin-wall noisy piping is used because it costs less and repairs can be made by snaking new lines through the walls. Even for drain lines, thinner-walled pipe, of smaller diameter, is being used, giving rise to noisy surges and other hydrodynamical phenomena if several toilets are flushed simultaneously. The British are far ahead of us in the design of noiseless plumbing, accessories, valves, and so on.

To reduce cost, interior and exterior walls are made thinner each year, with inadequate insulation against heat and cold and, of course, no attention to noise. One finds that a central air conditioner installed to offset heat input through the thin walls is so noisy that it must be shut off at night, regardless of the location of the compressor. Anyone who uses, instead, one of the so-called "quiet" window air conditioners finds the noise just as disturbing, and there are complaints from nearby homes. If the compressor and cooling tower of a central system are located outside the house, sooner or later there are visits from unfriendly neighbors or the police.

Some manufacturers and builders of equipment are installing cooking stoves, ovens, and broilers with no ventilating fan whatever. Perhaps they are noise-conscious, but do not be misled by the claims that when the door of the broiler is opened a crack there are no fumes. It is going to be interesting to see what grease deposits accumulate on the interior walls of the large apartment houses now being constructed with no provision for ventilation, to say nothing of the odors as one enters the building. Here, certainly, ventilating fans are needed, regardless of noise. Fortunately they need not be operated at night. Of course, some of the odor and fume problems can be solved by use of the so-called electronic devices that add

toxic ozone to air circulated by the fan. The home-owner may choose between smell and headache-plus-noise.

The noise problem is even worse in the modern hotel or motor inn. If one enjoys music he will hear plenty from radios and television sets several doors down the hall, all simultaneous and in chorus. Conversation in the adjoining room is quite audible through the thin partitions. To the layman it seems astonishing that all the motels or hotels in a chain of motels or hotels are based on the same design, regardless of location. For example, in a resort area at a high elevation, all the windows may be sealed, as they would be in a humid, hot climate, making it impossible to enjoy the cool evening breeze.

Moreover, if the hotels should make a survey they would be surprised at the number of people who avoid some of the modern buildings because the heating system in winter and the cooling system in summer are so noisy that sleep is impossible. Often there is no way to cut off this circulation.

A proposal to run a railroad track or even a speed highway through a restricted residential section will arouse the populace to fury. Yet we tolerate without complaint major air routes a few hundred yards over our homes.

If one desires quiet in his home he must avoid the sales pitch of the modern building contractor. He had better purchase a house at least 60 years old. This will of course require remodeling of bathroom and kitchen, but with the help of a good acoustical engineer the buyer stands a fair chance of minimizing noise, and the purchase price plus the cost of improvements will be no more than the inflated costs of flimsy modern construction.

Mental diseases are said to be the greatest affliction of all illnesses. These certainly are not improved by living in a miniature boiler factory. It may cost a little more to design homes and public buildings properly, making use of the information developed by the acoustical engineering profession.

Eventually the problem will be solved. The Federal Housing Authority is promoting noise insulation, based on the work of the National Bureau of Standards. However, by the time the building industry and the architects are educated to the requirements, most of us will be immune to noise, buried under six feet of sod.

PAUL D. FOOTE
*5144 Macomb Street, NW,
Washington, D.C. 20016*