

Robert Alex Baron, *The Tyranny of Noise: The World's Most Prevalent Pollution, Who Causes it, How it's Hurting You, and How to Fight it* (New York: St. Martin's Press, 1970).

“It may be true that the meek shall inherit the earth, but that will be because it won't be livable, and the noisemaker will be living on other planets. Whether under geodesic domes or under water, the goal for our cities must be as quiet an environment as necessary for human comfort and well-being. This goal is achievable if we end our passive acceptance of industry's acoustic waste products.” (p. 12)

“We are able to ‘hear’ because among the human senses is the ability to detect the very small and rapid fluctuations in the pressure of the air called sound waves. The detection apparatus is called the ear. It is this organ that first bears the brunt of acoustic abuse.” (p. 30)

“Sound evokes much more than the sensation of hearing. The sound signal is transmitted, via the brain, to almost every nerve center and organ of the body. Therefore, sound influences not only the hearing center of the brain, but the entire physical, physiological, emotional, and psychological makeup of the human being. The received sound wave evokes a combination of responses--auditory, intuitive, emotional, biological, associative. Sound's impact is a profound one.” (p. 31)

“The fight for a quieter world becomes obscured when feelings about a noise are divorced from the noise itself. We are told that how we react to a given noise may be influenced by our attitude towards the noise source, our state of health and well-being, our personalities, education, income, previous exposure, ad nauseum. Does the transportation noise problem disappear if we all learn to love driving and flying, or the industries that make these activities possible? Would I have been less disturbed by the subway project if I appreciated what the TA [NY City Transit Authority] was doing for progress? Is a 90-decibel jackhammer really less of a noise because it takes place during the day, or because I've heard one before? It is relatively simple to measure the physical quality of the noise signal, its decibel level, frequency distribution, duration, number of occurrences per unit time, etc. It is virtually impossible to measure the significant human response to noise. Schemes for predicting complaints and evaluating annoyance responses are crude guidelines, their effectiveness questioned even by noise specialists.” (p. 34)

“The fragmentation of noise measurement units is what Jim Botsford calls The Weighting Game. Botsford has been sharply critical of this racket in numbers, since he sees such complex measurements as a deterrent to hearing conservation programs in industry. ‘Methods for estimating the hazard to hearing must be made as simple as possible,’ he says. After a thorough study of the various schemes for predicting annoyance, speech interference, and hearing loss, this noise control physicist concluded: ‘The complex methods currently recommended for appraising the effects of noise on people can be replaced by simpler methods utilizing the readings of a standard sound level meter. The small errors introduced by these substitutions are negligible compared to those inherent in the relationship of noise measurements to human response.’ Botsford pulls no punches in describing how the public is paying, in discomfort and in money, to support The Weighting Game. In a report the magazine *Sound and Vibration* published in October 1969, he wrote:

Human responses to noise can be predicted from sound levels as from any of the more complex noise rating numbers currently recommended....It is highly improbable that the foregoing facts could have escaped discovery under the intense scientific scrutiny that human responses to noise have received. Yet, sound levels are shunned and the development of complicated noise weighting methods continues. This inconsistent and unproductive behavior implies that motivations other than elucidation of human response may spark the investigator's fervor....The activity related to the interactions of people and noise might really be just a game.

“The principal players in The Weighting Game are the Researchers, the Consultants, The Noisemakers, and the Public. Each player has his strategy and his winnings except the Public who loses steadily.

“Botsford summarizes the Game in a table:

PLAYER	STRATEGY	WINNINGS
Researcher	refines weighting methods endlessly	research contracts, publications, etc.
Noisemaker	lacks information, supports research, waiting for answers	expense of noise abatement postponed
Consultant	helps clients use weightings	fees
Public	wants problem solved	none, pays bill

“Referring to this table, he comments: ‘This program will prove helpful in identifying the players as they are encountered in the field. Masqueraders are quite common in The Weighting Game so, for

positive identification of a player, his strategy and winnings must be examined. Often, what appears to be a Researcher will be identified as a Noisemaker by his strategy and his winnings.'

"No matter how complex, annoyance measurements remain of limited value. Yaffe and Cohen of the Public Health Service state: 'While of some value, perceived noise decibels and other annoyance measurements based upon single judgments of the noise stimulus are expected to have only limited usefulness in gauging the complaint potential of a noise. This is due to the many non-acoustical considerations which enter into such judgments.'

"Herein is a semantic ploy of the first water, because the uninformed are led to believe that what is being measured is the *total* human response to noise. But the subjective reaction of annoyance is *not* the total human response to noise. Conscious annoyance is but a symptom that the human being is disturbed; it is not and cannot be an accurate measure of the extent of that disturbance. (See Chapter 3.)

"Loudness, perceived noise, 'A' or 'D' decibels concentrate on one small aspect of the human response to noise: conscious awareness of irritation. Ignored in the formulae are the effects of noise on sleep, on the emotions, and on the biological processes.

"Does it make sense to worry about the nuances of decibels when the receiver is experiencing noise in the 90- and 100-decibel range? Because the prolonged barking of a dog disturbs sleep, we enact ordinances to compel dog owners to keep their pets quiet at night. These anti-barking codes do not specify the size of the dog, or the decibel level of the bark, or even the use of perceived barking dog noise decibels (PBDNdBs). It is accepted that sleep must be protected, and that barking disturbs sleep. Yet when it comes to jet planes or trucks, or air conditioners, all of which can and do disturb sleep, we are asked to wait for the perfect measurement. One of the standing jokes among the noise experts is that the elaborate decibel measurement systems are necessary because the degree of decibel reduction is so minuscule it cannot be detected by simple means!

"Enough is known about the physical nature of noise to control it. There is no valid reason for not abating noise first, and measuring it during or afterward.

"The methods used to win acceptability for the intense noises of commerce and industry have not worked. Instead, it has become necessary to promote the 'final' solution: move the receiver away from the source. 'To those who complain of [traffic noise] nuisance,' states a leading acoustical consultant, 'there is a reasonable reply. Move.'

"So far government is listening to that old noisemaker's principle: any noise problem, no matter how intense, can be solved by eliminating the people who complain about it." (pp. 107-9)

“Lack of progress in understanding the complex human response to noise is due, in part, to the fact that hearing-oriented specialists dominate the field. These men have consistently downgraded the extra-auditory impact of noise. They take a dim view of those who claim that everyday noise is more serious than a mere nuisance. Some become emotional and let fly at any who dare to challenge their ‘expert’ opinions. At the National Conference on Noise as a Public Health Hazard, one otologist presented a paper covering questions frequently asked about the effects of noise. A brief excerpt illustrates how this ‘dispassionate’ scientist reacts to critics of noise:

Finally, is it true that we are continually surrounded by ultrasound--sound too high infrequency to be heard--and so as a result we are being deafened and maddened by this sound we cannot even hear, as some fanatics claim? I trust the answer to this question is implicit in the way the question was phrased.

“If these men are so secure in their belief that noise is not a serious problem, except as they define it, why do they get so upset at their critics?

“I had occasion to witness a histrionic display of intolerance of noise critics, at an institute for occupational hearing loss operated for industrial hygienists and factory medical directors. One of the speakers was a Fellow of several scientific and professional societies and a consultant on toxicology, air pollution, water pollution, noise, and environmental health. As part of his lecture he had repeated the traditional doctrine that the only damage from noise was hearing loss, as defined. He was upset because the public was told there may be other forms of harm. To illustrate how the public was being given distorted information, he held up a copy of a popular household magazine sold in food markets. He made it very clear this was *not* a scientific magazine. He became more and more emotional as he read excerpts from the article that suggested noise was a health hazard, that kitchens were unduly noisy, and that the inner ear was like a snail. This anatomical description was as much as he could take, and with a dramatic gesture he ripped out the three pages of the offending article and said: ‘Now this magazine is fit to come into my home.’

“As calmly as possible I asked him this carefully-worded question: ‘Is it your contention that, other than hearing loss from specific exposures, noise has no significant non-auditory health effects?’

“He gasped at this unexpected question, and while he fumbled for a reply, the institute's medical director rephrased my question.

Baron wants to know if it isn't true that noise gives you heart attacks, and ulcers, causes divorce...." (pp. 114-5)