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EFFECTS OF NOISE ON HUMAN BEHAVIOR AND COMMUNICATION

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IF NOISE had no effect on man, we should not need to bother about abating noise. In fact, the whole problem has practical meaning only to the extent that there are human limits or tolerances of some sort that we are able to define. There are indeed limits of tolerance of the human ear and of the human nervous system for noise. Unfortunately, however, and particularly for those who would like to write laws and ordinances tomorrow, these limits are still vague and uncertain. We do nevertheless begin to have some clear ideas as to orders of magnitude, and also as to where the problems lie and what kinds of human function are affected.

My task of reviewing this situation is made very easy by the fortunate circumstance that one of my colleagues, Dr. Karl Kryter, formerly of the Psycho-Acoustic Laboratory at Harvard, then of the Department of Psychology at Washington University and now director of the Human Resources Research Laboratory at Bolling Air Force Base, has recently prepared a report for the Office of Naval Research on this subject.¹ One of the very practical-minded bureaus of the United States Navy wanted to know what noise levels would be permissible in various situations on naval vessels, and why. Dr. Kryter's report does not give the final answers, but he has made a very thorough, careful and critical survey of our positive knowledge of the effects of noise on man. His work was done under my general supervision, under a contract between the Office of Naval Research and the Central Institute for the Deaf.

Dr. Kryter's report was necessary for several reasons: First, it had become common experience both in the Armed Forces and in industry that in many important situations noise interfered with ability to communicate by voice and even by electrical intercommunication systems. Second, injury to hearing by loud sounds had become generally recognized in the forms of so-called "boilermaker's deafness," "aviator's notch" and (more serious) "blast injury." Third, many people realized from their personal experience that noise can be annoying. All manner of vague ills and ailments, from insomnia and high blood pressure to inability to do mathematics or ride a bicycle, have been attributed to the baneful effects of noise of one kind or another. But no matter how many times the stories were repeated in

From the Central Institute for the Deaf.

Read at the National Noise Abatement Symposium, Oct. 20, 1950.

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1. Kryter, K. D.: The Effects of Noise on Man, *J. Speech & Hearing Disorders*, 1950, supp. 1, obtainable from Dr. George Kopp, Department of Speech, Wayne University, Detroit.