feasible, very little experimental evidence is available on which to judge whether such a technique would in fact be practicable.

Finally, there is a chapter on the practical uses of particulate clouds in industry and agriculture together with a brief reference to therapeutic uses. The preparation of screening and signal smokes in warfare is also dealt with. The reproduction in the eight plates is very good, although having them grouped together at the back of the book is a minor inconvenience.

R. E. WALLER

Traffic Accidents and Driver Characteristics: A Statistical and Psychological Study. By Sauli Häkkinen. (Pp. 198. \$3.-; 20s.) Helsinki: Institute of Technology.

This study, a thesis for the degree of Doctor of Technology, was carried out at the Institute of Occupational Health. Its main value lies in the full summary and review of the literature on this subject. The aim of the experimental study was "a general clarification of the characteristics requisite for a driver". The work is in two parts. The first is a statistical study of accident proneness in about 1,000 bus and tram drivers in Helsinki. It was found that such factors as age, driving experience, and duration of employment exerted a considerable influence upon accident rates. Correlations between the accidents in two consecutive years were in the order of 0.25 to 0.35 and between two consecutive four-year periods in the order of 0.6 to 0.7. The author concludes that a long period of observation, such as the eight years of the present study, is necessary for the consistency of accident rates to be sufficient for experimental use. This is a valuable warning to those whose periods of study of accident rates relate to only one or two years, or even less.

In the second part, 100 volunteer bus and tram drivers, in high and low accident groups, were subjected to a battery of intelligence, psychomotor personality, and mechanical aptitude tests. Although there was some variation between the test results, no single test appeared to be of practical value in differentiating between high and low accident groups. If multiple prediction by means of the five best test variables had been used for selection of drivers, the number of accidents would have been reduced by 34% if only 50% of the drivers had been accepted for employment. These valuable research studies should continue, but at present it is doubtful whether satisfactory practical tests of accident prediction are available for those who are engaged in driver selection.

L. G. NORMAN

Ergonomics. Human Factors in Work, Machine Control and Equipment Design, Vol. 1, No. 1, November, 1957. Edited by A. T. Welford. (Pp. 100; illustrated. 25s. per part, subscription £4 15s. 0d. per volume). London: Taylor and Francis, agents for Academic Press, New York.

Ergonomics, the title of this new quarterly journal, has been defined as the customs, habits, or laws of work. In the editorial article of this first number, it is pointed out that the problems of human work and of control operations which presented themselves in the last great war in relation to the equipment used in the fighting

services are now known to have important implications for industry.

The first article in this number will be welcomed by many who drive cars and all who study road safety. Detailed examples are given of badly designed vehicles and it is urged that all possible faults in equipment and design as well as the capacities of the operator should be more fully studied before the vehicle takes the road.

In another paper a study is reported of the effects of noise on the behaviour of young naval ratings. In the conclusions reached it is suggested that because the effect of noise is often distracting rather than disabling, it may be more urgent to reduce irrelevant noise than that which is due to the work itself.

Elsewhere in this journal the traditional methods of training workpeople are contrasted with a new experimental method applied to those with the task of mending worsted cloth, an occupation which is rated in the Yorkshire wool textile industry as highly skilled. This new system of training is based on the theory that for the successful performance of a difficult task it is necessary to learn not only the correct method or motion pattern, but also to acquire the correct perception of the cues which make possible the desired motion pattern. This method has certain advantages over other better known training schemes and may be applicable in other industries.

Other papers contributed include studies of the causes of fatigue in drivers of high-speed diesel railway cars in the United States, of the changing physical demands made on German foundry workers, and of intermittent light stimulation and flicker sensation.

This journal, in which will be published papers relating to the human factors in work, machine control, and equipment design, has an editorial board representing several nations and is the official organ of the Ergonomics Research Society.

T. G. FAULKNER HUDSON

The Annals of Occupational Hygiene. (Pp. 133. £2 12s. 6d. per annum for private subscribers; £3 10s. per volume for libraries, industrial undertakings, and Government departments.) Published for the British Occupational Hygiene Society by the Pergamon Press, London. December, 1958.

The British Occupational Hygiene Society has initiated this new journal. Since its foundation a few years ago, brief reports of the Society's meetings have been welcomed for publication in the *British Journal of Industrial Medicine*, as have a number of the papers read at its meetings. The Society is now firmly established and naturally feels the need to have its own journal.

This first issue of the Annals is devoted to noise in industry. There are 11 authoritative papers, covering such aspects of the noise problem as the clinical and physiological effects of noise, noise measurement, noise suppression, the effects of noise on work, a study of occupational deafness, auditory damage after short exposure, and an account of the Scottish audiometer calibration service. A discussion is reported after several of the papers, though there is no mention of their having been read at a meeting. Busy readers may regret that only one paper is equipped with a summary.