heating installations, and in ensuring circulation troubles due to gas-blocking and blockage of pipes by sludge. Some research was undertaken for improving products manufactured to the Council's specifications, such as a

laundry powder for white work at large laundries and a detergent for use in washing-up machines. The assessment of traffic noise has become a principal task of the Physics Section.

MANAGERS AND SHOP STEWARDS

A FURTHER occasional paper from the Institute of Personnel Management, which is entitled Managers and Shop Stewards*, gives a balanced but concise account of the problems presented in industry by the rise of the shop steward—a phenomenon which reinforces much of the argument to-day for more attention to management and industrial training generally, including the education of the shop stewards themselves. There are also ample notes and references.

In the first chapter, Mr. Marsh reviews the growth of workplace bargaining as he describes the essentially domestic issues of a works or factory with which the shop steward is concerned, pointing out that the shop stewards as we know them to-day, except in the printing industry and in some engineering firms, date only from the early 1940's. He explains the work of the shop stewards and the inevitability of some form of workplace bargaining, quite apart from outside agreements, for managements which desire close relations with their workers on a domestic basis. In the second chapter he discusses the advantages and disadvantages which workplace bargaining presents for the Unions and the solutions which the Trade Unions could offer. He points out that, in Trade Unions, rules and discipline are not related in any simple way and that Unions rules form only part of the system of regulations under which shop stewards operate; other kinds of rules may be more important than those provided by the Unions themselves. Both Unions and

*Institute of Personnel Management. Managers and Shop Stewards. By Arthur Marsh. Pp. 40. (London: Institute of Personnel Management, 1963.) 78. 6d.

employers are conscious that the greatest force for control within any Union is not the rules themselves but the relation of workplace representatives with full-time officials, and Mr. Marsh insists that while there can be strong Unions there cannot be good relations without good employers.

Mr. Marsh then examines in his third chapter the advantages and problems of workplace bargaining for management and the solutions which management could offer, stressing particularly that management should show more initiative in this field to ensure that the rules under which bargaining is conducted are understandable and predictable. Finally, in his last chapter on the future of workplace bargaining, he considers the challenge which the evolution of this system presents, the reasons which have led both Unions and employers to favour the growth of educational provision for both management and shop stewards in the field of industrial relations in the workplace. This he regards as a major challenge to the teaching capacity of managements, Unions, technical colleges and extra-mural educational bodies like the Workers Educational Association and the universities. While that is a long-term contribution, the heaviest and primary responsibility lies with management, not because managements are often wrong, but because they cannot afford the luxury of 'not being right', and Mr. Marsh suggests in conclusion that the responsibilities of managers under workplace bargaining are so onerous that they would be wise to act as if it were true that managements get the shop stewards they deserve.

LEARNING TO READ

HREE papers recently published in Educational Research (6, No. 1; November 1963. Published for the National Foundation for Educational Research by Newnes Educational Publishing Co., Ltd.) deal with the concept of reading readiness which has prevailed in English-speaking countries over the past few decades, during which it has been widely held that a child is not ready to learn to read until he has attained a mental age of about 6½. A. E. Sanderson feels that this concept is in urgent need of re-examination since nation-wide literacy is possible only in an environment exerting social and economic pressure on children to acquire and use reading habits and skills. The concept implies that children reach the stage of reading readiness at different chronological ages, and that the teacher is in a position to give individual attention to each child. On the other hand, the risk of frustration and of the development of actual resistance to reading can be avoided by not pressing children to begin too soon.

If reading readiness depends on mental age, some kind of test would seem to be necessary to establish it in the case of each child. In the classroom, however, that is impracticable, and most teachers say that they know by 'instinct' when the appropriate time has arrived. In this respect, indications suggest that parents are taking less interest in their children's reading than in former times: even so, clashes between schools and parents' ambitions for their children are by no means uncommon, while the

best results are obtained when there is active co-operation between school and home.

R. Lynn relates reading readiness to the process of mental maturation, which, in the minds of many people, is a biological phenomenon that cannot be speeded up; and a good many observers hold that before the mental age of 6-8 a child is capable of recognizing simple outline figures but not matters of detail. Lynn considers that statements like these underrate children's capacity for perception, particularly since it has been shown that they can distinguish between nonsense letters, like squares, triangles and irregular shapes, at a mental age of 4-41. He quotes a number of cases of children who have taken the first steps in reading as early as 16-18 months, the record for this apparently being held by Francis Galton, who could recognize all the capital letters when only one year old. In two of these cases, however, the children lost interest in reading soon after they had begun.

A fairly common difficulty which children experience is in distinguishing between reversals (n and u) and between mirror images (d and b). It has been shown that certain animals, such as rats and octopuses, have trouble of the same kind. With children, there is some evidence that this problem may be capable of solution through practice under suitable care.

To J. A. Downing the question, should we, is separate from that of can we teach children of young age to read. He believes that the problem-solving schemata of