for any and every kind of school is, in fact, the most difficult and far-reaching of all the tasks which fall to the lot of educational administrators. A second publication of the Board of Education 1 published last month assumes in consequence especial importance, and will be consulted throughout the country with the greatest interest. It is true its instructions and rules apply at present only to the preparation for their career received by teachers destined to rule in elementary schools, but it is useful as indicating the subjects which in the opinion of the Board of Education should engage the attention of the prospective teacher. Moreover, the general principles which apply to the training of teachers for elementary schools are in a large measure applicable to the professional training of their secondary school colleagues. The new regulations for the training of teachers may surely then be taken as indicating what, in the opinion of the Board of Education, should be regarded as of vital importance in any scheme for the professional preparation of every grade of teacher.

It is consequently satisfactory to find that the place of greatest prominence in the group of studies which is to engage the attention of the budding schoolmaster is given to a training in scientific method. To quote the regulations :—

"Much of the instruction which is given in all subjects must necessarily be founded upon the statements and the experience of other persons; but every education which deserves to be called complete must include some training of the student in those systematic methods of enquiry which are necessary for any assured advance in knowledge, and which are the most truly educative of all mental processes. "If this scientific spirit is to find its right expression

"If this scientific spirit is to find its right expression in the teaching given in elementary schools it must be made to imbue the whole study of the intending teacher during his course in the Training College. It must not be confined to any one branch of the curriculum. It is true that, partly as the result of tradition and partly from other reasons, the term 'scientific method' has come to be associated more particularly with the study of natural phenomena. But as a matter of fact, scientific method is of equal importance, and is indeed of ancient application, in the field of history, literature, language and philosophy; and wherever knowledge of these has made advance, it may be discerned that the essential processes of scientific enquiry have been employed."

The specific references to the kind of instruction in science which the Board intends to encourage are deserving of even higher commendation, and if these wishes are carried into effect in the colleges in the case of each and every student in training, it will not be many years before a distinct improvement will be noticed in the teaching given in elementary schools. To refer to the regulations again :--

" But in addition to all this, and particularly in view of the courses which have for many years existed in most of the Training Colleges, a certain special regard must be given to this aspect of instruction and training, in the case of the Natural Science portions of the curriculum. It is in this branch of study that the student can in some ways learn most effectively to depend in some measure upon his own powers, and discover that he need not take everything unverified and on trust upon the statement of text books or lecturers. For by wisely planned and supervised laboratory work the student may be brought into immediate touch with the facts of nature, and learn to find some things out for himself, and to form conclusions upon the results of his own observations. For these reasons the student's work in science should be so arranged that his experiments in the laboratory will precede and lead up to such generalisations in the formal lectures as can safely be established upon what the student has himself observed.'

[AUGUST 11, 1904

It seems to us that the Board of Education has shown a generous appreciation of the value of scientific studies both in the professional training of teachers and in the work of the secondary school. We are promised exactly that for which men of science have frequently and consistently pleaded in these columns. It only remains now to look for the loyal cooperation of school governors and headmasters, and the reproach as to the absurdly bookish nature of English education will soon become merely a matter of history. We earnestly hope that the inspectors and other interpreters of the regulations will be inspired by the same spirit which prompted the framer of most of the sections of the prefatory memoranda to these official publications.

## PHYSICAL DETERIORATION.<sup>1</sup>

E LEVEN months ago the large percentage of rejections for physical causes of recruits for the Army led to the appointment of this committee. The members were the clerk of the council, the inspector of physical training, and the principal assistant secretary to the Board of Education, inspectors of reformatory and industrial schools and of marine recruiting, the assistant secretary of the Scotch Education Department, a representative of the General Registry Office, and a secretary.

The committee was directed "(1) to determine, with the aid of such counsel as the medical profession are able to give, the steps that should be taken to furnish the Government and the nation at large with periodical *data* for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished."

This committee, composed of members of high critical faculty, has been able to focus much of the knowledge of sanitary and social science of the past generation as presented to them by wisely selected witnesses, and has evidently produced an epoch-making report.

A few items from this panorama of lives of women and children of the poorest classes may be quoted as samples of the thoroughness of this report.

While bad physique practically centres round feeding, great care has been exercised in proposing the remedies for underfed children at school, and the report states :—" Education is a great social need which individual citizens are, as a rule, not able to provide for their children on a sufficient scale, but food like clothing and lodging is a personal necessity, which in a well ordered society it is not inherently impossible for parents to provide, and the effort to supplement their deficiencies and to correct the effects of their neglect should aim in the first instance at the restoration of self-respect and enforcement of parental duty."

In the course of a full memorandum by the principal lady inspector of factories referring to employment of mothers in factories and workshops, we read :— "It is impossible, however, not to be impressed by the universal preference amongst the women for factory over domestic life. I was continually being told how greatly they preferred their work in the factory to the minding of children, and how depressed and out of health they became if they were obliged to remain at home. Surprising as this appears at first, it becomes less so on consideration. At thirteen years of age the majority of these women would have begun to work in a factory, to handle their own earnings,

<sup>1</sup> "Regulations for the Training of Teachers and for the Examination of Students in Training Colleges." [Cd. 2134.] Price 4d.

NO. 1815, VOL. 70

<sup>1</sup> Report of the Inter-departmental Committee on Physical Deterioration. (Eyre and Spottiswoode, 1904.) Price 18. 2d. to mix with a large number of people with all the excitement and gossip of factory life. They would thus in most cases grow up entirely ignorant of everything pertaining to domesticity. After marriage, therefore, it is hardly probable that they would willingly relinquish this life to undertake work of which they are in so large a measure ignorant, and which is robbed of all that is to them pleasant and exciting. Until as girls they have been taught to find a pleasure in domestic life, and until there is a greater supply of healthy and suitable recreations and amusements in the reach of all women, to counteract the prevailing squalor and gloom of these pottery towns, it is useless to expect them to relinquish factory life."

Under the heading of alcohol, its devitalising effects are duly noted, and finally attention is directed to their steady decrease owing to wise legislation in Norway and Sweden. "The reverse of the picture presented by France is complete, seeing that besides a diminution in crimes, suicides and deaths from alcoholism and syphilitic diseases, the percentage of conscripts refused has been steadily reduced, showing an elevation in the standard constitution of the people. Thus in Sweden the consumption of spirits containing 50 per cent. of alcohol in 1830 was 46 litres, and in 1890, 6 litres per head. The percentage of rejection of conscripts in 1845 was 34.46, and in 1885, 19.61." The evidence generally is of a cogent character,

The evidence generally is of a cogent character, and has led to many recommendations for the common weal such as seem to be at present opportune. These are summarised under no less than fifty-three headings, which fill eight pages of the Blue-book.

the creation of an Advisory Council, representing the Departments of State, within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be, not only to receive and apply the information derived from the Anthropometric Survey and the Register of Sickness, but also to advise the Government on all legislative and administrative points concerning public health in respect of which State interference might be expedient; and to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front. Such a Council, the composition of which might be modelled to some extent on Le Comité Consultatif d'hygiène publique de France, would be, the Committee believe, of great assistance, especially to the Local Government Board, and would be calculated to supply the knowledge and stimulus which are necessary in order to give to the Public Health side of the Board's administration a prominence which the multiplicity of its other functions may have tended to obscure, and to attract to its work that measure of public interest and support which has perhaps been lacking hitherto." "The Committee are emphatic in recommending

"The Committee are emphatic in recommending that a systematised medical inspection of children at school should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records that no large and expensive medical staff would be necessary. The lines on which the inspection should be conducted are laid down in paragraphs 323-326 of the Report." Many other recommendations like these make provision to inform the authorities; such are :--register of owners of houses; local sanitary authority to report its action or inaction to Local Government Board; Local Government Board to inform all local authorities what the law and the powers it confers are as to insanitary and overcrowded house property; infant mortality rates to be published for particular areas and for particular industries.

Games, exercises, and physical education form the subject of several recommendations.

Existing legal powers should be employed for :—the enforcement of a standard and drastic dealing with overcrowding in certain of the worst districts; smoke pollution; the remedying of the dearth of country cottages; the precautions to procure the purity of milk supply.

New powers, apparently, are called for in regard to :—labour colonies and public nurseries; smoke pollution from dwelling houses; medical inspection of factories, coal mines, workshops; provision of a grate suitable for cooking in every dwelling let for the occupation of a family; prohibiting the sale of tobacco to children below a certain age.

Upon several points the committee ask for further inquiry to be carried out—over-fatigue in women; sterilisation and refrigeration of milk; and some special subjects.

In conclusion, "the committee hope that the facts and opinions they have collected will have some effect in allaying the apprehensions of those who, as it appears on insufficient grounds, have made up their minds that progressive deterioration is to be found among the people generally. At any rate the committee believe that their labours will result in giving matter for reflection to those who realise the importance of evidence towards the determination of issues of such uncertainty and complexity, and that these persons, who they would fain hope are the larger portion of the thinking community, will await the necessary steps being taken to secure that body of well sifted and accurate information, without which it is impossible to arrive at any conclusion of value as to the general problem.

"It may be argued that there is here no immediate remedy, and that years must elapse before the lack of knowledge is supplied; but in regard to those evils the existence of which is admitted, the committee have recognised what can be done in the interval, and are confident that if their recommendations are adopted a considerable distance will have been traversed towards an amendment of the conditions they have described.

"In the carrying out of their recommendations for the rectification of acknowledged evils, the committee do not rely upon any large measure of legislative assistance; the law may with advantage be altered and elaborated in certain respects, but the pathway to improvement lies in another direction. Complacent optimism and administrative indifference must be attacked and overcome, and a large-hearted sentiment of public interest take the place of timorous counsels and sectional prejudice."

The workmanship shown in the elaboration of this report is stimulating. The recommendations bid fair to inaugurate great social amendment. They appeal to the public as much as to our legislators, and afford to all a view of many fields for doing one's duty to one's neighbour, for encouraging good local government, and for raising the standard of citizenship.

NO. 1815, VOL. 70]