

EYESIGHT AND TYPOGRAPHY.<sup>1</sup>

THIS report of the British Association Committee on the influence of school-books upon eyesight is full of interest. Its value depends chiefly upon the report of the oculist subcommittee, which was composed of Messrs. Priestley Smith, H. Eason and N. Bishop Harman. Advice upon the technical and trade aspects of printing was given by competent experts.

The subcommittee's report is valuable from the immediate point of view of school-books and also from the point of view of the reading of printed matter in general. Considering the enormous importance of reading and writing to the general public and the large place they occupy in daily life, it is remarkable that so little attention has hitherto been devoted to the physiological and hygienic features of the subject. It would have been a gracious act for the subcommittee to have expressed its indebtedness to the researches of Javal, an indebtedness which is unmistakable. With few exceptions the report recommends the principles advocated by Javal, and the authors have, perhaps wisely, refrained from any experimental researches on their own account. The subject is full of complications, physiological and psychological, and the recommendations made are as good as can be expected in the present state of knowledge.

At the outset of the section on the hygienic requirements the right note is struck in emphasising the fact that the reader recognises whole words and phrases at a glance. This statement expresses the essential difficulty of the scientific investigation and regulation of printing. Too much stress cannot be laid upon the fact that the canons of *visibility* of individual letters do not apply directly to the far more complex problem of the *legibility* of letter groups in words and phrases. It is rightly pointed out that the upper half of a word or letter is usually more important for perception than the lower half. We would emphasise the point more strongly. It is the fundamental factor in legibility, as is easily proved by reading with the lower half of the line covered by a card. Hence we think that the suggestion made to give more distinctive character to the lower half of a larger proportion of letters is unsound.

The general evolution in the shapes of printed letters has been in the direction of increasing the predominant features of the upper halves, so that more letters extend above the line than below, the extension above the line has increased, whilst that below has been curtailed, and so on. These tendencies are in favour of legibility and should not in our opinion be tampered with. For the same reason we are astonished at the statement that "uncial Greek may be recommended as being easy to read (see supplement)." The supplement gives two examples, one in 12-point Porson Greek,

<sup>1</sup> Report on the Influence of School-books upon Eyesight by a Committee of the British Association, presented at the Dundee Meeting, 1912. Copies obtainable from the British Association, Burlington House, London, W. Price 4d.

the other in uncial Greek on long primer body. A glance suffices to show that the former is much more legible.

Owing to the complexity of the correlation of the physiological and psychological factors in reading, such details as the best dimensions of letters and spacing, length of lines and their separation, and so on, are at present matters of compromise. The committee does not give any explicit scientific reasons for the faith that it has, but the typographical table and the rules laid down are eminently sensible. The small type used in Bibles and prayer-books is more than a matter of regret; we should like to have seen it more severely condemned. The remarks on the thorny question of atlases are very good.

We hope that this report will have a widespread influence. It contains much sound advice not only for those who deal in school-books but for all authors and publishers.

## INVESTIGATION OF ATMOSPHERIC POLLUTION.

THE Committee for the Investigation of Atmospheric Pollution, appointed at the International Smoke Abatement Conference and Exhibition held in London last March, has held three meetings in London and has just published what may be regarded as an interim report.

This report states that after careful consideration of all the various methods that have been suggested or tried for measurement of the impurities of the atmosphere, that employed for *The Lancet* investigation of the soot and dust-fall of London in 1910 has been selected as the simplest, and the one most likely to yield satisfactory results under the conditions which will govern the observations that are to be made. The method is based upon the use of an apparatus resembling an enlarged rain-gauge, with a catchment area of 4 sq. ft. This gauge receives all the dust and soot that falls by its own weight or is carried down by the rainfall during the period of its exposure, and on examination of the water which collects in the bottle attached to the apparatus, the amount of total suspended matter, tarry oils, soot, &c., can be determined.

A circular letter has been sent out by the committee to all the more important city and local authorities in the United Kingdom, asking for their cooperation in the application of this method of observation in the districts over which they have administrative powers. This circular has met with a most gratifying response. The authorities of a large number of important cities have already signified their intention of commencing observations on the lines suggested by the committee, and many other authorities are only waiting for further details before promising their support to the movement and cooperation in the work. Birmingham, Bradford, Leicester and Newcastle are the most important of the cities that have definitely promised their support; but there is no doubt that Glasgow, Liverpool,