

CORRESPONDENCE.

THE NOTATION OF PENSION FUND PROBLEMS.

To the Editor of the Journal of the Institute of Actuaries.

SIR,—It will probably not cause surprise if I dissent from the views on this subject expressed by Mr. Lidstone in his letter in the April number of the *Journal*. I quite think that it may be possible later on to simplify the notation relating to Pension Fund problems, but the time has not yet come, and I do not think any good purpose would be served by the Council of the Institute trying at present to prescribe an official notation. So far not much has been written on Pension Fund problems, and we have not yet had sufficient experience as to what would be the best notation. It was long before an official notation was adopted in other branches of actuarial enquiry, and the Council of the Institute took up the matter only when a general agreement, more or less complete, had already been arrived at. Similarly, in the case of Pension Funds, we must, I think, wait until further experience has been gained.

Mr. Lidstone's suggested symbols are an illustration of this point. He proposes to use six good symbols where I use only one, and with our short alphabet we cannot afford such extravagance. It is difficult enough now to find a sufficiency of symbols, and when the investigation of Pension Fund problems has further developed, the difficulty will be increased. Therefore, we must not be prodigal.

I cannot see where difficulty comes in with regard to the symbol *F* for the valuation factors, and my experience is that this symbol, with its affixes, is easily read, and the meaning of it in its various phases is instantly grasped. I may add that this is the view taken by many students and others, who have spoken to me on the subject, and who would deprecate a change. So far from Mr. Lidstone's proposal tending towards lucidity, a great many think it would only produce obscurity.

The case might be different if we could abolish the affixes altogether, but they are required for the commutation symbols, and I do not see how they can be dispensed with there. That being so, there is no harm in retaining them for the valuation factors, thus having a symbol that explains itself at sight.

I remain,

Your obedient Servant,

GEORGE KING.

15, Walbrook, E.C.

1 June 1905.

[Mr. Lidstone asks us to publish the following remarks with reference to the above letter.—ED. *J.I.A.*]

By the courtesy of Mr. King and the Editor of the *Journal*, I have had the opportunity of reading the above letter in proof, and of sending a few words in reply for insertion in the current number

of the *Journal*. It is, of course, not in the least surprising that Mr. King should personally prefer to adhere to the Notation which he himself devised and employs in practice, and which is therefore familiar to him, rather than to adopt any new Notation. The question is, however, one in which differences of opinion may well arise, and it will, no doubt, be eventually settled by the general body of professional opinion after independent consideration of the various Notations which may be suggested. The *Journal* is, perhaps, not a fitting place for a detailed discussion of the subject, and the comparative merits of the two Notations can be sufficiently appreciated by inspection of the symbols given in parallel columns in my letter on p. 209 of the current volume of the *Journal*. I would only add that Mr. King hardly seems entitled to claim that he has used only one symbol, as compared with six suggested by me, when the fact is that his one symbol, namely, F, is so little distinctive that it has to be supplemented by no less than seven subsidiary symbols—in addition to the letters representing ages, which appear equally in both systems.

G. J. L.

ON THE VALUATION OF POLICIES IN GROUPS.

[We have received the following interesting letter from our esteemed Corresponding Member, Herr Altenburger, as to the paper by Mr. F. Bell, published in the present volume of the *Journal*.—Ed. *J.I.A.*]

To the Editor of the Journal of the Institute of Actuaries.

DEAR SIR,—I have read with very great interest the discussion which followed the reading of Mr. Fred. Bell's paper relative to the calculation of reserves in groups; and as my name, and the letters I had the honour to address in this matter to the *Journal* (xxxiv, p. 150; xxxv, p. 332) have been frequently mentioned, I think it necessary to explain my standpoint concerning the valuation of policies.

It is true, that the method dealt with in my letters is almost generally used in Germany and in Austria (not here in Hungary), but this fact is due to the circumstance that Actuaries in these countries have not liberty to make their valuations according to any principles which commend themselves to them, their companies being under the control of governments, which do not permit a free choice of the methods and bases of valuations. In Austria, for example, it is not permissible to use the method invented forty years ago by the late Dr. Zillmer (see *J.I.A.*, xv., p. 420), which is almost identical with the method explained by Dr. Sprague at the Brussels Congress (*Transactions of the First International Congress of Actuaries*, p. 186, *et seq.*), but it is compulsory to make the valuation on a net premium basis, although the rate of interest may be taken as 4 per-cent, even where the funds do not yield a higher rate.

The position of Actuaries is then:—Valuations have to be made annually, the basis of this work is invariable for a long term; is