(decrements engagement and marriage) based on this data would be very small. If the experience of the same group of lives were investigated with death and marriage as the only decrements normal marriage rates would be obtained and the force of marriage in a single decrement (marriage) table based on this experience would be very different from the force of marriage in the double decrement table referred to above.

Let us now turn to Karup's demonstration, and consider exactly what he proves. He considers two identical bodies of lives aged $x+t$ and shows that the force of decrement α *at age $x+t$* is the same whether the lives are subject to the decrement α only or to two decrements α and β. (This fact can be demonstrated much more easily and is always true provided all forces of decrement are finite.) Karup does not prove, and it cannot be generally proved, that the same equality holds at any later time when the bodies of lives are no longer identical owing to the operation of the different decrements.

I advise Part III students to waste no further time on this theorem of Karup's. In case anyone is tempted to work through the theorem line by line, however, I would warn him that the functions d_x^β in the expression for K (formula (5)) are *not*, as the notation suggests, functions of a single decrement table where β is the only decrement.

Yours faithfully,

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Valuations for Estate Duty

The Joint Editors   26 *January* 1949
The Journal of the Institute of
  Actuaries Students' Society

Sirs,

In the very interesting and informative notes on valuations for Estate Duty purposes Mr Goodchild refers on p. 83 of Part 2, Vol. VIII of the *Journal*, to the basis of valuation in the case of joint annuities.

At the time when I imagine those notes were written the practice on the death of an annuitant other than the last survivor was for the Revenue to claim Estate Duty only in respect of the annuity or the deceased's share thereof passing to the other annuitants, and duty was assessed on the market value of the amount or share for the remaining lives. On the death of the last survivor duty was and still is charged on the basis of the cesser of interest in respect of the capital producing the annuity but the practice has now been changed with regard to the deaths of the previous annuitants.

The *Law Society's Gazette* draws attention to the change and understands that the Board of Inland Revenue have been advised that duty is chargeable under Section $2(1)(b)$ of the Finance Act, 1894, upon the capital set free by the cesser of the annuity or share of annuity, and estate duty will in future be claimed on this basis.

This ruling is, of course, of great importance, and it is interesting to note that the claim is likely to be contested in the Courts.

Yours faithfully,

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