

CORRESPONDENCE

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

30 October 1954

Sirs,

The last paragraph of Chapter x of the *History Of the Decline and Fall of the Roman Empire* reads as follows:

'We have the knowledge of a very curious circumstance, of some use perhaps in the melancholy calculation of human calamities. An exact register was kept at Alexandria, of all the citizens entitled to receive the distribution of corn. It was found, that the ancient number of those comprised between the ages of forty and seventy, had been equal to the whole sum of claimants, from fourteen to fourscore years of age, who remained alive after the reign of Gallienus. Applying this authentic fact to the most correct tables of mortality, it evidently proves, that above half the people of Alexandria had perished; and could we venture to extend the analogy to the other provinces, we might suspect, that war, pestilence and famine, had consumed, in a few years, the moiety of the human species.'

There are two footnotes, one to the name Gallienus which reads 'Euseb. *Hist. Eccles.* vii. 21. The fact is taken from the letters of Dionysius, who, in the time of those troubles, was Bishop of Alexandria' and the other to the final word reads: 'In a great number of parishes 11,000 persons were found between fourteen and eighty; 5365 between forty and seventy. See Buffon, *Histoire Naturelle*, tome, ii, p. 590.' Gallienus died A.D. 268.

Edward Gibbon (1737-1794) wrote the *Decline and Fall* from 1774 onwards, and the preface to the first volume is dated 1 February 1776.

We need not quarrel with Gibbon's remarks as to war, pestilence and famine, but the footnote has an actuarial side. We usually find that the population between ages forty and seventy would be appreciably less than half that between ages fourteen and eighty,

and in a country such as Australia at the end of the nineteenth century the proportion was less than one-third, presumably because of the immigrants of under forty. In Sweden a little before the time when Gibbon wrote, the proportion was also about one-third. Even with a stationary population the ratio can show wide variations according to the age incidence of mortality, but it is rather amusing to note that fourteen to eighty means 66 age groups and forty to seventy means 30 and with 11,000 persons in the former group we should get 5000 in the latter if there were an equal number at each age!

Yours faithfully,

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