basis of these findings one might conclude as follows:

(a) The differences in fertility and marriage partners between farmers and labourers were relatively insignificant, and the differences which do occur are in the direction of higher fertility amongst farmers.

(b) There was no significant change in the mean age at marriage of women during the eighteenth century.

(c) Inasmuch as fertility of labourers' families was lower than that of farmers, the social structural growth of labourers as a proportion of the total population would tend to reduce fertility (the same argument applies to labourers' wives higher mean age at first marriage).

(d) Child mortality fell very significantly during the eighteenth century, which directly contradicts Jones's conclusion that "the burial rate ... seems to have been less important in the overall demographic context".

(e) Child mortality amongst farmers' families was significantly higher than that amongst labourers, contradicting the Malthusian assumption that economic factors must influence mortality by raising it under conditions of relative poverty.

Smallpox in Winchester

With reference to Mr. W.H. Boorman's article on 'Smallpox in Eighteenth Century Winchester', there are just one or two particular points that I would like to make. I have somewhat modified my view about the possibility of inoculation spreading smallpox since I wrote the Economic History Review article (1); my new position will be expounded at some length in a forthcoming book. I now believe that inoculation did occasionally spread smallpox, but only on very rare occasions when the inoculation was a very severe one producing effects similar to natural smallpox. I have always accepted that contemporaries unanimously believed that inoculation spread smallpox, but have argued that this was because they believed it to be a form of natural smallpox rather than because of observations they made about the spread of smallpox from inoculation (evidence on the actual rarity of inoculation spreading smallpox will be found in my book).
Ironically the contemporary belief that inoculation spread smallpox was largely responsible for the 'general' inoculations (i.e. inoculations which covered all the vulnerable population) as they were worried that just a few people inoculated would infect the rest. It was for this reason that the local magistrates proposed fines and imprisonment for those inoculating after April 30th, 1774 in Winchester, and such prohibitions were specifically linked with the idea that all the vulnerable population must be inoculated within a short period - this was part of Dimsdale's plan of 'general' inoculation which was widely carried out at about this time (2). It appears that the mass inoculation carried out in Winchester in 1774 was fairly 'general' seeing that about 900 people were inoculated - this is something that Mr. Boorman could have discussed, by estimating the size of the vulnerable population (starting with estimated total population, then examining whether smallpox was a child's disease in Winchester or not, etc.). When Mr. Boorman states that there was 'an increasing lack of interest (in inoculation) in Winchester' he is probably right, for there was an increasing lack of interest in all places - when there was no threat of an epidemic (the same was true of vaccination during the nineteenth and twentieth centuries and is still true today). When Mr. Boorman writes that the cost of inoculation 'must have restricted the widespread use of the technique to the families and services of the affluent' he is contradicted by his own evidence: among the inoculated were 'nearly four hundred poor persons'. The payment for the inoculation of the poor by the parish became universal in England, and this was not because of any particular humane treatment of the poor, but because of the very high economic cost of the alternative: payment for food, fuel and nursing of the poor when they caught the natural disease, as well as for their burial if they died (see, for example, W.A. Barron, 'Gleanings from Sussex Archives: Brighton and the Smallpox', The Sussex County Magazine, 26 (1952).)

Mr. Boorman's suggestion that the policy of 'isolation' may have been responsible for the apparent decline in smallpox mortality can be tested as follows: if isolation were responsible for the reduction in smallpox mortality, then any smallpox deaths which did occur should be amongst a more or less random section of the population as far as age is concerned, whereas if inoculation were responsible any subsequent smallpox deaths should occur amongst those who had not yet been inoculated, that is mainly amongst young children. I would predict that if Mr. Boorman were to look at the smallpox burials entered for the year 1779 in the Winchester registers he would find that they were mainly of children. As for a possible decline in the virulence of smallpox, all the evidence known to me suggests the
opposite - in particular, the 6 volumes of evidence published by the Royal Commission on Vaccination during the late 1880's and early 1890's. In the last resort, it is difficult to understand why Mr. Boorman rejects the idea that inoculation reduced smallpox mortality, when on his own evidence nearly 900 people were inoculated in the small town of Winchester in just one year, all of whom seemed to have done well (although Mr. Boorman only hints at that.)

Local case studies of smallpox are valuable for an understanding of eighteenth century English demography, and local historians are pre-eminently qualified to carry out this task. In particular, more detailed evidence about mass inoculations taken from newspapers and other local sources would be very welcome, and one hopes that Mr. Boorman will write a further article using this material to describe the mass inoculation in Winchester in 1774.

Yours etc.,

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NOTES


2. Thomas Dimsdale, a fashionable doctor, who inoculated Catherine the Great of Russia, wrote several works on inoculation which were published between 1767 and 1781. (Editor's Note)