condition of things, and have ascertained that it is due in the main to the gross inadequacy of the rates of contribution. How, indeed, can a society expect to permanently meet its engagements if it admits members at all ages, from 18 to 45, at rates of contributions which would be unsafe, if not certainly insufficient, if applied to the youngest entrants alone ? As one of the lodges in this district is the second oldest lodge established by the Manchester Unity in New Zealand, its valuation report possesses a very great and special interest.

The Valuers, Messrs. George Leslie and Peter Black of Dunedin, have, in the case of this District, as in all other cases where a deficiency has resulted, framed recommendations to each lodge with a view to remedying or mitigating the disaster. Stated briefly, these recommendations are in the present case (1) to require from all members, old and new, the contributions which are necessary to provide the promised benefits, and (2) to make a slight reduction in the benefits until the next quinquennial valuation.

It is much to be regretted that, instead of following these recommendations, the District registered in September, 1881, an amendment of rules by which both the sick and funeral benefits were slightly increased, while the contributions were kept at their former amount.

A peculiar and highly-interesting feature of the valuation above referred to is that it includes the first actuarial estimate that has been made in this colony of the value of benefits contingent on widow-hood and orphanage. These benefits, especially those of the latter class, are admitted by all actuaries to offer the most formidable, if not insuperable, difficulties to anything like a precise valuation. The difficulty arises from the large number of contingencies in the way of death, marriage, fertility, and survival, which influence the ultimate pecuniary result, and the absence of appropriate and reliable data for computing the probability of some of these contingencies, notably those of marriage and fertility. Much thought was bestowed by the Valuers on the solution of the difficult problem which thus presented itself to them, and some correspondence, of a private and of a semi-official nature, was necessitated between them and the Actuary attached to this department. It is hoped and believed that the mode of valuation ultimately adopted is a fairly satisfactory one; but it is important to observe that, whatever doubt may exist as to the degree of its accuracy, there can be no question that the limits of possible error are not wide enough to permit of the slightest hope that the particular Widow and Orphan Fund under consideration will be permanently able to discharge its engagements if the present low rate of contributions is maintained. The fact of its insolvency being thus established beyond cavil, the only doubtful question would be as to the exact degree or extent of the deficiency.

Within the last few weeks a series of researches has been made by the Actuary of this department into the statistics of families, with a view to ascertainment of the pecuniary values of orphan benefits. As the results obtained will be of some value when the Widow and Orphan Funds of other New Zealand friendly societies come to be investigated, a brief summary of the results is published, for the information of valuers and of members generally, as Schedule IV. of this report.

The ultimate object of such a research must evidently be to determine the probability that a man, dying at any assigned age, will leave any assigned number of children, having, respectively, any assigned ages. Only then can the values of orphan benefits be precisely computed. Now, as the number of children in a family may vary from 1 to 15 or even 20, and the ages, for the purposes of friendly societies, from 1* to 12,* it is clear that a very large number of separate probabilities have to be calculated for each age at death—that is, for each of about 60 separate ages, for it may be assumed that the possible ages at which a man in the event of death might leave a young family lie somewhere between the extreme limits of 20 and 80. It is true that at the lower end of this range of ages the number of probabilities to be calculated is comparatively small, because it is impossible that the family should be either numerous or beyond the stage of infancy; but still it is evident that alto-gether many hundreds of separate probabilities require to be computed. Now, there are no records in existence in New Zealand which furnish to the statistician the requisite data respecting the families left by men at *death*, but the census enables him to determine approximately† the number and ages of the children to each male living; and, although the rate of mortality among the childless (who are, of course, in most cases unmarried) is known to be higher at each age than that among fathers, the disturb-ance in the proportions so introduced is neither so serious nor so difficult of estimation as to greatly impair the value of the census statistics for the purpose in hand. Mr. Frankland has therefore selected certain districts, assumed to be fairly representative of the city, small town, and country populations respectively, and compiled the statistics which appear in Schedule IV. hereto from the householders' schedules collected at the census of 1881.

It will be seen that the above-named statistics are neither of sufficient magnitude nor yet so arranged as to admit of the computation of precisely those probabilities which were referred to as indispensable for an accurate valuation of orphan benefits. They only assist the valuer to determine what is the probability that a man dying at any assigned age will leave one or more children under the age of fifteen, and what, in the event of his thus leaving a young child or children, would be the average number of such children in each triennial period of age. The probabilities and averages thus obtained, though inadequate to the precise valuation of orphan benefits, are, it is believed, a sufficient basis for such an approximate estimate of the pecuniary magnitude of these risks as is in the present state of our knowledge at all feasible.

Court Pride of Parnell (Thames), of the Ancient Order of Foresters, was also valued as on the 31st December, 1880. The court had at that date 165 members, aged on an average 36 years 19½ weeks, of whom 128 were married. The benefits assured to these members were: 20s. per week during the first 6 months of sickness ; 10s. per week during the second 6 months of continuous sickness ; " a sum weekly (not more than 5s.), as may be agreed upon by the court," for any sickness after a continuous sickness of 12 months ; £20 on the death of a member, and £10 on the death of a mem-ber's wife. The contributions paid to meet these benefits were in accordance with a graduated scale

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* The ages next birthday.

† The number of children so obtained will, of course, be somewhat less than the true number, as a certain proportion of children were not under their parents' roof on the census night.