

two tables, which is \$273,000, is divided by the number of years comprised in them, that is 9, the average of the combined tables will be \$30.33, which is obviously correct.

Mr. J. Howard Hunter, N.A., K.C., registrar of Friendly Societies, made some interesting remarks on this topic in an address to the Canadian Friendly Association. He declared these societies were being vexed by the "Average" fallacy. The fact that, an arithmetical average can be formed of 3 abstract numbers does not imply that if these three numbers are attached to three concrete objects, the average of the abstract numbers will represent an average of the three concrete objects, or have any relation to them. The average of 3, 4 and 8 is 5, but the average of 3 pounds of fish, 4 pounds of fowl, and 8 pounds of mutton is certainly not 5 pounds of fish, fowl or mutton.

Before any average can be taken of concrete things, they must be not only of the same kind, but of the same quality. Otherwise mistakes may be fatal.

This question of average has most seriously confused and misled friendly societies. A member of one boasts "the average age of all our members is only 35," and he infers the death rate as if all the members were 35 years of age. This, says Mr. Hunter, "is completely delusive."

Mr. Dexter, superintendent of the Mutual Life of New York, illustrates this by taking the case of a society of 100,000 members, 50,000 aged 20, 50,000 aged 50, whose average age is 35. The deaths in one year in 100,000 members, each aged 35, would be 895. The deaths in 50,000 members each aged 20 would be 390, and in 50,000 aged 50 would be 689. This would make the total deaths 1,079, as against 895 under the other computation, and the society which made the false average would be out of its estimate by 184 deaths in one year. As Mr. Hunter points out, "The death rate in any society depends, not upon the average age of the members but upon the several ages of the individual members."

Another most persistent fallacy is that of founding premium rates on the rough sort of average known as, the "Expectancy of Life." Against this a warning was given in the Ontario insurance report some years ago. But, "this fallacy, which in some persons resists all exorcism involves a total misapplication of the Expectation Table. The use of compound interest is inseparable from the calculation of the value and amount of future premiums. But the increase of mortality proceeds at such an irregular rate of acceleration that the calculation must be made from year to year, instead of upon the basis of the average time involved. If the premiums were calculated upon the "Expectation of Life" the shortage in the expected premiums would be serious. To illustrate this a table of

American experience at $4\frac{1}{2}$ per cent. with an addition to show the shortage is given. We have given only 4 of the years of this table, as our space is too narrow for the whole.

Ages.	10 yrs.	20 yrs.	30 yrs.	45 yrs.
Expectation in even yrs.	49	42	35	25
Net annual prem. for all life insurance of \$1,000	9.973	11.976	15.336	25.986
Amount of \$1 per year during expectation.				
Int. $4\frac{1}{2}$ %.....	117.5030	124.2764	85.1640	46.5706
Amount expected to be paid by Socy. in prem. and net.....	1770.24	1487.08	1306.07	1210.18
Deficiency in amount actually received....	770.24	487.08	306.07	218.18

"Taking from this table," says Mr. Hunter, "the case of a member entering at 20 years of age, the error against the society would be \$487.08. The result is that, where you calculate premiums on the 'Expectation' as a financial basis, you are misled as to the moneys that will enure to the society. Even as an estimate, it is wildly wrong."

The rock upon which so many fraternal societies have been wrecked, the rock towards which some are now sailing direct, is a disregard of actuarial principles, which usually arises from ignorance of what those principles are and on what they founded.

THE BANKING SYSTEM OF CANADA AS COMPARED WITH THE SYSTEM OF THE UNITED STATES.

THE CAPITALISATION OF CANADIAN AND OF AMERICAN BANKS COMPARED; THE SMALL AMOUNT OF CAPITAL OF UNITED STATES BANKS A WEAKNESS AND DANGER; THE CURRENCY SYSTEM OF THE COUNTRIES CONTRASTED; CANADA'S SAFE AND ELASTIC, AMERICA'S SAFE BUT NON-ELASTIC; THE BRANCH BANK SYSTEM OF CANADA EULOGISED AND ITS SUPERIORITY DEMONSTRATED; THE INSPECTION OF BANKS, AND CASH RESERVES; A VERY ABLE ADDRESS WHICH WAS HIGHLY APPRECIATED.

The Canadian Club, Ottawa, has heard a number of excellent papers read and addresses delivered. On the 25th ult., Mr. Duncan M. Stewart general manager of the Sovereign Bank, delivered a highly interesting address before the members of this Club in which he described the salient features of the banking systems of Canada and of the United States which he contrasted and compared.

In his introductory remarks he dwelt upon the beneficial effects of disseminating knowledge and conveying correct information to the people concerning questions of a public nature relative to the institutions of the country, especially those vitally associated with commercial interests. Anything that tends to create a feeling of distrust in public institutions must be detrimental to the best interests of a country and demoralizing to its people. It is,