

LIFE INSURANCE MATTERS

An Article Intended to Give an Idea of the Subject

THE MORTALITY TABLES

Premium, Reserve and Endowment Policies Explained—Few Understand System—One American Company has Four and a Half Times as much as France.

In the United States to-day there is in force nearly \$15,000,000,000 worth of life insurance. This vast sum is nearly twice as great as the sum total of life insurance in force in England, Germany, France and Russia.

Scientific life insurance is based upon the knowledge that there is a natural law governing the mortality of the race by which may be determined the average lifetime of a large number of persons at a given age. True, it cannot be predicted in what year any particular individual will die, but it may be determined with approximate accuracy how many persons out of a given number will die at any specified age.

If the mortality records of any community are studied and the various ages noted at which the several deaths have occurred, it will be found that the yearly mortality is governed by a law which is practically invariable. Suppose, for example, that such an observation covers a period of time sufficient to include the history of 100,000 lives. Of these a certain number will be found dying at age 20, a larger number at age 30, and so on at the various ages, the extreme limit of life reached by any one being in the neighborhood of 100 years.

As a result of systematic study of mortality records, life insurance companies have incorporated the results of their computations into what are called mortality tables. These tables reveal at a glance the inexorable workings of the natural law governing the mortality of the race. They show how many in any large number of persons born will live to age 30, how many to age 40 and how many to any other age. They also show the number that will die at each age and the average lifetime remaining to those still alive.

In the simplest form of life insurance a number of persons combine to create a common fund to be drawn upon in providing for the families of deceased members of the organization. This organization is called a mutual life insurance company, and a contract is made by the company with each member, fixing the amount to be paid in the event of his death to some member of his family, who is called the beneficiary.

One of the most popular forms of insurance to-day is endowment insurance. It has been devised for the person who may wish to make some provision for his own future as well as for the future of his descendants. An endowment policy is one which is payable to the insured himself if he lives through a specified number of years or to a stated age, or payable to his beneficiary in the event of his death before the specified period. There is a twenty-year endowment, a thirty-year endowment and so on.

At age 35 each of the 81,822 members of a company takes out a ten-year pure endowment policy of \$1,000. During the next ten years the 7,849 members who die will receive nothing. At the end of that period the 74,173 survivors will be paid a total of \$74,173,000. Find the present worth of this sum and proceed as in computing the net single and net annual premiums for ordinary life.

The net single premium for such an endowment policy is \$642.65. This amount in ten years at 3% per cent. compound interest will amount to only \$908.52 instead of the face value of the policy, \$1,000. This difference is made up by the premiums forfeited by the members who die during the term and who get nothing. Here comes in what is known as forfeiture in life insurance.

To obtain the net single premium of the more popular form of endowment, known as ten and twenty year endowment, suppose that each of the 81,822 members of the company, besides carrying pure endowment policies also carry term insurance of like amount covering the same period of ten years. Then each of the 7,849 persons who die during the ten years will receive \$1,000 and thus by combining the premium of a policy the net single premium of a regular endowment is obtained.

There are innumerable other forms of policies, but these are representative and suffice to show how the premiums of all policies result from computations based upon the mortality table and the expenses incident to the running of a life insurance company.

The reserve in life insurance is simply the insurance fund or mortality fund of the company, from which all death claims are paid. The reserve is made up of the net annual premiums and the money these premiums will earn at 3% per cent. compound interest. Neither net premiums nor the interest thereon can be devoted under the law to any other use than to the payment of death claims.

Anthony J. Henson.

So Easy.

Falling in love is just like falling into any other pitfall. It is easy to fall in, but sometimes hard to climb out.

TEN MILE ARTIFICIAL LAKE.

One of the Results of the Government's Great Irrigation Plans. When the National Irrigation Congress met in Portland it heard a report on the irrigation work carried on at Belle Fourche, S. D. There are larger undertakings upon which parts of the \$25,000,000 appropriated by Congress are being spent, but at no place are the possibilities for reclaiming land greater. In the tract segregated for irrigation there are 465,000 acres, on both sides of the Belle Fourche River.

The project has under way the construction of two immense dams. The first will be more than 400 feet in length and will serve to divert the waters of the Belle Fourche River, Grow, Owl, Indian Horse, and Willow creeks into a canal leading to the main reservoir. This canal will be six and a half miles long, forty feet wide at the bottom and fifty-eight feet wide at the waterline. The dam to hold back the water in the main reservoir will be between 4,000 and 5,000 feet in length, 125 feet high, 500 feet thick at the base and 100 feet wide on top. The total cost will be \$3,000,000.

This obstruction will impound a lake ten miles long and three miles wide at its broadest point. The country which will surround this artificial lake is most picturesque, being among the foothills of the famous Black Hills.

Writes Flywheel Insurance.

Only one company issues flywheel insurance because only one man can write it. He is monarch of all his inspectors survey, his right there is none to dispute. Two years ago he was a professor in a small engineering college with some theories and figures of his own about flywheels.

His success is largely due to his own formula, for flywheel insurance is almost pure mathematics. When a wheel is revolved at a high enough speed the centrifugal force exceeds the centripetal and the wheel flies apart. Solid cast iron explodes when the speed at the rim is, roughly, three miles a minute. A thick rim explodes just as easily as a thin one of the same material. Wood explodes at a greater speed, jointed iron at a less.

The underwriter allows a rim speed of a mile a minute, one third the explosion rate, as a safe limit for solid iron wheels. This permits a two foot pulley wheel sixteen revolutions a second, while it keeps a sixteen foot flywheel down to two. A jointed wheel is allowed still less. The underwriter has only to name the number of revolutions he authorizes, and to proportion his premium to the size of the wheel. The larger the wheel, of course, the more destructive its explosion. Leslie's Magazine.



M. Bathner.

Norway's statesman and soldier, urged that no concessions be made to Sweden. He is the Government's auditor.

Tailor's Life Saving Coat.

A London tailor has invented a new life saving coat and gaiters, with which it is possible for a person clothed therein to maintain an upright position when immersed in the water, even if not possessing any knowledge of swimming.

The coat resembles in appearance an ordinary pilot coat, but it is fitted with an air belt, which is inflated with air through a tube. The gaiters each weigh two pounds and are fitted with two brass wings or blades fastened to the back of the heel. As the wearer moves his feet in the water these wings open and shut, and not only propel the wearer along like oars but enable him to maintain an upright position from the waist upward in the water.

A practical demonstration of the utility of the invention was recently undertaken in the River Thames by the inventor and its efficiency and life saving qualities clearly shown, even when moving against the tide. Scientific American.

Digging for Fish.

The natives of certain parts of India are in the habit every year, in the summer, of digging the dry river banks for fish, which they dig out by hundreds, just as they would potatoes. The lumps are broken open, and the fish, perhaps 8 or 10 inches long, will be found alive, and often frisky, as if just removed from its supposed native element, the water.

In Switzerland there is a law which forbids the sale of hats measuring more than eighteen inches in diameter, and artificial flowers and foreign feathers are also, in most cantons, heavily penalized.

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THE CATHOLIC JOURNAL, ROCHESTER, N. Y.

CONSOLATION.

By S. MACNAUGHTAN.

Mrs. Jefferson was not more than thirty-five years of age, and she had spent fourteen years of married life in India. She had seen three of her children buried in an unhealthy station, and had been to England once, seven years before, to take two little girls home to be educated. It was on her return voyage from visiting her children that I met her.

She was not communicative, and I found out very little about her during our long chats. Perhaps I am egotistical and talk a good deal about myself when I get a patient listener. Be that as it may, I gleaned nothing of Mrs. Jefferson's own history from her, and at last I determined to ask the captain of the ship if he knew anything about her.

"It is odd that you should ask me that," said Captain Hargreaves, "for it was only to-day that I began to recall Mrs. Jefferson to my recollection. She told me her maiden name this morning, and said that she had travelled out with me once before, and I recollect the circumstances immediately.

She was going out to be married to this man Jefferson and a very pretty girl she was in those days, though one would hardly guess it now to look at her—one gets accustomed to that sort of thing on board



"I want to thank you," these P. and O. vessels—one year a pretty girl with pink cheeks and her lover's photograph on her cabin table going out to be married and to be happy ever afterward, and a few years later the same girl with all the roses washed out of her cheeks bringing home a little boy or girl to say good by to them in England, and to go back to some plantation in the hills, where, perhaps, her husband's is the only white face she sees for most days in the year."

"I hope Jefferson was the right sort of a man."
"So far as I can hear," said Capt. Hargreaves, "he is very much the

reverse." He took to drink, I believe, and this little woman doesn't have the best of times with him.

It was horribly hot weather—quite exhausting for ladies. Mrs. Jefferson had been confined to her cabin for some days with a bad attack of fever and headache. She looked pathetically small and weak when she came on deck again, and curled herself up in my big deck chair, which I had prepared with cushions for her, giving me at the same time a look so full of gratitude that it was enough to make a man feel ashamed of himself.

After dinner the next day she walked up to me and offering me her hand said:

"I want to thank you for your goodness to me on this voyage. Her voice was so low and gentle that I had to lean forward to catch exactly what she said. "Perhaps you don't know," she said slowly, "quite what your friendship has been to me."

"For seven years I have lived for nothing but this visit home to England. When anything in my life was a little disappointing I always said to myself: 'I have the children to go back to. And every week I had their precious, foolish, little letters, which told me so little and kept me hungering to see them.'"

"They have been brought up in a very prim household," went on the gentle voice, "in which love, I fear, is not a thing that is reckoned over or encouraged. They rather despised me for laughing and crying over them when we met."

After a while she went on quite quietly, and told me that her husband had sent for her to return to him, and she had been obliged to leave the children.

"Of course a man wants his wife in a solitary life like ours," she went on, excusingly. "And so I said good by to them. . . . I don't think any one was very sorry when I came away."

"We live quite an isolated life at the tea garden," she said presently, "but I left a little dog there of which I am very fond. . . . I am afraid you will think me very morbid and imaginative," she added in her deprecatory little way, "but I think I have based all my possibilities of bearing things upon the question of whether or not my dog knows me again and is glad to see me."

"You will let me know," I said huskily, and found to my surprise that I could say no more.

"Yes, I will let you know," said Mrs. Jefferson.

And one day I got a little note from her which said: "The dog knew me," and that was all.

Beautiful Language.
"Gracious! such language from a baby!"
"Awful, isn't it? You see her nurse has been taking her to her sister's every day or so for a visit."
"Her sister must have a parrot?"
"No; she has a husband."
Houston Post.

NOBODY WAS LOOKING

Above us shone the mournful moon—before us gleamed the ice. And silently we skated along by the side of Dorothea, our arms crossing her dear arms and hand in hand.

"George," said Dorothea, "I could skate like this all night!"

We sighed.

"Couldn't you?" she asked.

We merely sighed again and skated on.

Above us shone the steadfast moon and past us rushed the trees, leafless, despondent and pointing a trembling accusation with their skeleton fingers to the cold and wintry sky.

"George," said Dorothea, "you shouldn't have tried, you know!"

"Tried what?" we cried. "What did I try?"

"You know what you tried!"

"Don't neither!" we grumbled.

"Do, too! Look!"

We looked at her. She puckered her rosy little mouth and chirped.

"That's what you tried!" she gently reproved us.

Then brazenly we laughed, and still we skated on.

Above us shone the watchful moon and at us leaped the breeze, whirling around us, dashing past us, snappy, brisk, sharp; and off again as quickly as it came.

"Isn't it fine?" shouted Dorothea.

"Your cheeks are just like two red roses!" we cried (looking.)

"Such a lovely night!"

"Two red and ruby roses!" we sharply cried again.

"And your mouth!"—we shouted and then (with malice) paused.

"Yes, George?" she asked.

And silently we skated on.

"George," she repeated, "What about my mouth?"

"Look!" we cried.

She looked at us. And boldly then we pursed our lips and chirped.

"Oh, George!" she cried, and the roses grew full-blown.

"Keep away!"

"Ah, Dorothea!"

"George, you just stay right where you are!"

"Why?" we asked.

"I'm going to show you how to make a figure 8!"

"You don't know how!" we cried, indignant at the pretext.

"Bet I do!"

"Bet you don't!"

"All right!" she murmured. "What do you want to bet, George?"

"Well," we considered, "if you win we'll go to the matinee Saturday and if I win—and her we looked her in the eye and sheepishly we chirped.

"George," she warned us (and referring to the figure 8). "I really did learn how to do it this afternoon."

"I don't mind saying," we hastily remarked, "that I'm going to take you to a matinee on Saturday anyhow."

And then it was that Dorothea tried to make a figure 8, but failed. Indeed, she would have fallen if we had not been there to catch her.

"Now!" we whispered.

"Is anybody looking?" she whispered back.

Above us shone the moon, tenderly, caressingly, gloatingly and—well, there was nobody looking.

The Russian Volunteer.

It is often said that Russians are soldiers "born," occasionally, however, one is made to order. An English visitor to Moscow was in one of the side streets recently when his attention was attracted by the scuffling of feet, the swish of a whip and the sound of loud words.

Looking across the way, he saw a stocky fellow in a blouse flat on the ground and stoutly resisting the efforts of two soldiers to set him on his feet and make him go along.

The Englishman turned to a man in official uniform at his side, who also was watching the struggle, but without excitement or interest.

"What's the trouble?" asked the Englishman.

The official shrugged his shoulders. "There's no trouble," he replied. "It's only a peasant turning volunteer."—Youth's Companion.

The broker who paid \$82,500 for a Stock Exchange seat recently calculated that the privilege costs him between \$13 and \$14 for every day in exultant elevation.

"Do you think anybody is looking?"

"No, Dorothea! and over we careened to the left, our right feet both uplifted now and scornful of the ice.

"I am so glad!"

"Why, Dorothea?" and over to the right again.

"Because—(and over we went to the left,—if anybody had been looking)—(to the right)—"it would have been a pity"—(to the left)—"that you made such a failure of it!"

And then quite suddenly we stopped.

Above us shone the smiling moon. From the bank the leafless trees looked down at us and waved a gentle encouragement as they passed the news in soft and rustling whispers.

"Dorothea!"

Too Bad to Tell.

Teacher—What does b-u-l-l-y spell?

Tommy—Dunno.

Teacher—Come, come! Suppose a great big boy were to strike a little fellow, what would you call him?

I don't dast ter tell yer, ma'am.

—Golden Days.



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