ed to examine their policies and discover their real relations with the companies, it may save disappointment or subsequent trouble.

The paper begins with a reference to the origin of annuities a couple of hundred years ago, and passes to the earliest attempts at life assurance. Speaking of contingent annuities the author says: "To take individual lives which, as units, belong to the region of contingency and by patient and persevering aggregation and computation deduce laws of average which define the precise prospective value of each life, stands forth as one of the sublimest achievements of the mathematician. Thereby science has been laid under tribute to philanthropy."

To condense the historical portion of the essay, we note that mortality tables were made by the Germans in the 14th century, and England began them early in the 16th. Founded upon the Bills of Morta ity came Capt. John Graunt's "Observations" in 1664, and Sir Wm. Petty's deductions; in 1693 Dr. Halley's Calculations upon the German records. In 1738, Kerrseboom of Holland and in 1746 Deparcieux of France added their contributions. Later in the last century came Hodgson and Simpson and Price, the latter of whom elaborated the well known "Northampton Tables." By 1821 the experience of the insurance companies had furnished the data for the "Carlisle Table," and next came, in 1841, the "Combined Experience and Actuaries' Table," so generally relied upon to show the expectation of life. There is also in considerable use, on this side the Atlantic, the "American Experience and Actuaries' Table," which is a combination of the English tables and the first thirty years' experience of the Mutual Life of New York.

All this slow and steady growth of statistics goes to show how arbitrary are the formulæ on which insurance premiums rest. "The divergence in premium cannot therefore be very wide," says Mr. Moore, "between honest and capable competitors granting the same contract. The adventurer who claims to effect the same end at half the cost, promises what neither the Witch of Endor nor the Sorcerers of Egypt could accomplish." The component parts of a premium are described by the essayist to be the net premium, based upon the table of mortality reduced by unerring compound interest. Next comes the "loading" as it is termed, which includes the expenses of conducting the company, and is also intended to provide for adverse deviations in the experience of the company. We give the remainder of the paper in full:—

Those who wisely administer legitimate life insurance upon honestly constructed premiums, giving clearly defined and well-understood contracts, deserve both praise and patronage. Ordinary life policies are well understood; and may be purchased by payments during life or a stated number of years, either with or without profits.

Endowments make a wise provision for the insured at some specified time in the future. Premiums, therefore, are constructed in like manner to life premiums. The endowment period fixes the "expectation;" for instance, take a 20-year endowment—exactly the same premium required for ordinary life policy at age 52 when expectation is twenty (19·5) years, would at age 40 purchase a 20-year endowment. Upon younger lives the reduction in this endowment premium is scarcely appreciable, amounting in the youngest to less than ten per cent. of what it is at age 40. This slight reduction is the equivalent for the increased expectation as affecting the definite maturity of the contract. So, too, on passing age 40, appropriate additions are made to compensate for the ever shortening expectation.

Term Policies being only temporary, are not based upon the death of all, but only upon that percentage dying within the specified term in accordance with which principle the premium is made up. Within their sphere they are useful and commendable. For all life purposes they are open to the serious objection that each renewal term becomes increasingly oppressive, contrary to the wise arrangement of having equated premiums, or if anything, decreasing as the productive years go by. There are many cases in which term policies are convenient. Some of these are heirs whose legacies are conditioned upon their attaining a certain age. Contractors upon whose life the profitable accomplishment of any undertaking may depend. Co-partners whose death before the lapse of a certain time would mean serious loss. Term policies admit of gross abuse in the hands of unscrupulous agents. Such abuse has come under my own observation. It seems almost incredible that a gentleman who has held the responsible and honorable position of a minister of the crown should have been the victim. He effected a ten thousand dollar insurance with a leading company on the understanding that the contract was to be a ten payment life, and his policy was carefully laid away with this conviction. It turned out, however to be a ten year term policy, which, if he survived the ten years left him without a dollar of insurance; and that at an uninsurable age. Others may have a similarly unpleasant interruption to their complaceucy.

Let us now glance at a few of the contrivances by which insurance necromancers profess to transmute pence into pounds. It is to be regretted that wealthy and well-established companies should allow the exigency of competition to drive them into brigandage. To its honor be it named that the Mutual Life of New York after adopting a Tontine System and finding that it inflicted serious injustice—had the courage of their convictions and discontinued its use. What is 'Tontine'? The name is derived from the originator, one Tonti, a native of Naples. His system consisted of regular payments into a sort of pool; failure to pay forfeited all claim thereon, and at the end of a certain period the "pot" was divided among those who had kept up their payments. It reverses the the order and makes the person his own insurer, without the hope of an average—which is simply —gambling. Let us look at what is styled a Tontine Savings Fund Policy, fifteen annual payments, fifteen years Tontine. What does it do? Definitely it insures against death during 15 years—which a term policy would do for about half the money. What does it do afterwards? That is a conundrum! During the currency of the 15 years the insured guarantees that he will not expect any profit additions if he dies—that living he will not fail in his payments—that discontinuing he will not expect either surrender value or paid up policy. These things are clearly set forth, and a speculator has a right to take chances if he chooses—Here is a paradox. He procures insurance with one breath, and with the next insures himself. What should your payments buy? In the case before us they would buy a paid up life policy in fifteen years with profit, the premium being exactly the same in each instance. After you have given the entire consideration for a paid up policy covering not only the face of your policy but considerable bonus additions, and, being a participating policy still increasing —you are asked which of four things you will do.

A prominent gentleman in our city who holds one of these policies was asked by me, What do do you consider this policy is doing for you? and here is the purport of his replies: 1 Insurance payable at death for $5000, and when 15 payments are made I may let it continue as such an insurance with nothing more to pay, besides drawing my expected surplus. 2. There being a large surplus accumulated I may at end of 15 years apply it to the purchase of insurance at death, which I am informed would amount to about another $5000. 3. I may withdraw such surplus, say $2,500 or in addition commute the original contract, say another $2,500—which at end of the 15 years would give me a cash endowment of something over $5000. Not one of these objects is secured by the contract, although enumerated with the utmost particularity, and with still more preposterous results, in the letter of a general agent which I have in my pocket.

Turning now to the consideration of the contract, we find that when you have completed 15 payments, there is one of four things you shall do. I shall now venture a few comments on these four options

1. You can withdraw the policy's "entire share of assets," consisting of what? "The accumulated reserve and surplus *apportioned*." The reserve is that fractional part of the premium, which every company must set aside in order to remain solvent. Besides this you can have what surplus they find it convenient to give. The very thing that other companies would do on ordinary contracts not only at the end of fifteen years, but also at any year during its currency, the latter privilege in no way prejudicing the former; but if you don't like this,

2. You may convert the same into a paid-up policy. For what amount? Fifteen years reserve on an ordinary life contract would fall far short of buying a paid up policy for the amount insured. The charmer says, "please don't forget the surplus." Ah, yes, sure enough, but perhaps—where everything is so gloriously indefinite—we had better wait until we see it. If, however (and here is a choice piece of sarcasm) the reserve and surplus should purchase a paid-up policy exceeding the original amount (which care is taken not to promise) then pass a medical examination *first*. After paying in 15 instalments the full consideration for a policy covering the original amount with profit additions, this pretty piece of machinery says, "you can't get what you have paid for unless a medical examiner says you are in good health at the end of the chapter." If you don't like this, and here the burlesque thickens.

3. You may use this indestructible, ubiquitous versatile Tontine dividend to "reduce the subsequent premiums!" what subsequent premiums? why "falling due upon this policy." Here is a revelation that after the fifteen years, premiums will have to be paid, or the insurance ceases. Singular advantage of paying premiums beyond where other companies would require them! And now we come to the last horn of this double dilemma.

4. You can withdraw what surplus it has suited the company to give you, and if you want to keep the "policy in force" you must do so on the ordinary plan. Ominous option! when other companies for the same consideration would put into your hands, a fully paid-up policy for the $5,000, which in no way would interfere with your privilege—nay right—of withdrawing the surplus which belongs to you. I have said enough but am glad that, except as a policy-holder, I am not interested in any life company, otherwise my motives might be impugned. This mirage is luring on many eager pursuers to a cruel disappointment, when, aged and helpless, they reach for the substance and grasp only a shadow.

There are various deceits to which time will not not permit a reference but many who are now relying upon these contracts will find that the rod upon which they are leaning, like the viper of Egypt, turns to a serpent when freed from the jugglery of agents.

Mr. Wm. McCabe, Manager of the North American Mutual Life Assurance Company, took exception to some of the statements advanced by Mr. Moore, and more particularly his com-