Many of the companies claiming that they charge no extra are of a type which will follow the fourth course; but it seems clear that the best practice would be to exclude the disability risk and allow a fair reduction from the premium otherwise payable. When this is done it is surely clear that *an extra must be included in the normal premium if a deduction can be made when the benefit is withheld.* It might be feasible to charge an extra disability premium; but there is as yet no scientific basis for any such practice.

OLD AGE LIMITATION.

Another of the points on which great differences exist relates to the age at which the disability feature terminates. The limitation of the benefit in old age is desirable because it is difficult, in many cases impossible, to distinguish at the older ages between permanent disability and mere senility. Indeed, if the benefit be granted at all ages policyholders retiring from business might claim that they were doing so on account of physical or mental incapacity, thereby placing a heavy burden upon insurance companies, especially in connection with policies on the Whole Life plan. If this limitation were abolished the disability premium would have to be largely increased; indeed it would probably result not only in higher premiums, but also in the refusal to grant any policy under which there would be premium payments after an age to be scientifically fixed, probably about 75. The most common age of limitation is now 60 as already indicated. About two-thirds of the companies have adopted this age. A very small number —about 10 p.c.—stipulate that the benefit shall cease at 55, and most of these charge no specific extra. Three or four companies use age 65, and a still smaller number age 70.

But a considerable number of companies have apparently drawn their policies loosely and without specifying any particular age at which the benefit will cease to operate. This seems unaccountable and wrong if Ordinary Life policies are sold at the older ages. If a company were to stipulate that all of its policies should be in a form under which premiums would cease at age 70, or at age 75 at the latest, there might be justification for the method in which some contracts are drawn. But if Ordinary Life policies are sold at the older ages the negligence of such companies is extreme and heavy losses are likely to result. To illustrate this, we find that at age 55 if the benefit cease at age 60 the net premium is quite moderate—a little over $1.00; if the benefit were carried to age 65 this extra premium would be about double, and if it were carried to age 80 an extra premium approaching $15 would be required. These latter figures are approximate only; but sufficiently close for illustrative purposes. Needless to say companies do not charge any such extra premiums.

OTHER SAFEGUARDS.

Even this danger may be reasonably well avoided if the only disability benefit be the payment of the sum insured by fixed instalments, and if policies with this restricted benefit be issued only at the younger ages or on limited payment forms. This also is done; but by relatively a small number of companies. Moreover, some companies stipulate that in event of disability after age 60 the premiums which would have fallen due thereafter shall be charged as an indebtedness against the sum insured. If the entire premium were charged in this way it is conceivable that the indebtedness, even without interest, might exceed the sum insured. To avoid this objectionable condition the premiums after disability may be charged, not on the original sum insured or face value, but on the face value less existing indebtedness. The premiums after disability will thereby decrease, and some balance of value will always be available for the beneficiary.

SCIENTIFIC BASIS.

As the original idea was imported from Germany it was natural that actuaries should look to the same country for a scientific basis, since mere impressions —even intelligent impressions—do not enable us to deal with such questions in a businesslike way. Some of the earliest tables of disability premiums were therefore based upon statistics compiled in Germany. These first statistics of invalidity dealt with the experience of railway employees; and, as no limitation was placed upon the age at which the disability benefit could be claimed, the necessary extra premium became very high at the older ages. Indeed, at age 65 it ran up to, roughtly, $300 per $1,000, because after that age it is often impossible to distinguish true invalidity from senility or even from a mere difficulty of securing work. Moreover, railroad service is one from which the aged are compelled to retire before actual senility—hence the excessively high disability premiums from that particular experience. Some useful statistics were also derived from the experience of British Friendly Societies, 1861-1870; but both these tables have been discarded in this country in favor of statistics drawn from several large Fraternal Orders, because it became evident that the German railroads and British Friendly Societies did not supply suitable data for current conditions in this country. Statistics were compiled from the records of the Maccabees of the World by Mr. Abb Landis, and these, combined with the experience of one or two other Fraternal Orders, have been brought into proper scientific shape. The experience during the early years after medical examination for insurance was excluded in the latest investigation by Mr. Arthur Hunter so that the rates adopted as "standard" by the New York Insurance Department represent an "ultimate" rate of disability which should furnish a safe basis of operation, free from danger, and without doing injustice to other policyholders. The standard net rates adopted by the Insurance Department of New York indicate that the net premium required at age 20 for the waiver of Ordinary Life 3 p.c. net premiums per $1,000, in event of disability before age 60, is but 10 cents; at age 40 it is increased to 32 cents; and at age 55 it is $1.12. For the waiver of a 20 Payment net premium, the net extra at age 20 is but 6 cents; at age 40 it is 25 cents; and at age 55 it is $1.16. These premiums are scientifically computed, and are the best yet available, although admittedly based upon statistics which do not necessarily conform to the conditions under which the benefit is now being conferred by old line life companies.

PITFALLS.

Even when accurate net premiums have been computed, these would merely insure the waiver of *net* premiums only; while many of the companies agree to waive participating premiums and to pay the same dividends when the premiums are thus waived as would be paid if the policies were being maintained from year to year in the usual course of events. The net standard premium to insure the waiter of a net