Disability Benefits in Life Insurance Policies.

BY

J. H. WOODWARD.

I.

This paper is a brief description of prevailing practices in underwriting the disability hazard as an incident to the issue of life insurance policies. It offers nothing original but is intended primarily to be of assistance to students who may feel disposed to gain some acquaintance with this subject but whose interests do not lead them into a study of its technical refinements. An attempt is also made to summarize the history of the disability clause and to interpret in a few words its economic significance.

II.

It is doubtful whether the disability clause originated in a conscious desire to make the fullest possible use of the system of life insurance as a means for insuring human values. It was at first urged by its advocates mainly as a good "talking point" for selling life insurance. Its opponents viewed it as a dangerous "novelty" and a "frill" of questionable worth. Few today, however, will deny that it is a feature of definite social value which, in its more-or-less perfected form, has won for itself a permanent place in the American system of life insurance. Yet, on reflection, the strange thing is not that the disability clause, once introduced, should have had so uninterrupted a development and advanced so rapidly in popular favor, but that the wonderful potentialities of the life insurance system as a means for furnishing a more nearly complete protection against the hazards of death, disablement and old age had not sooner been realized and acted upon.

A fundamental difficulty in supplying the community with the insurance protection that it needs is the problem of expense. No considerable volume of voluntary insurance can be built up in the absence of an organization of trained men whose function it is to

secure the business, and no more important problem today confronts the institution of corporate insurance than that of how to make a given amount of effort expended by these men have a maximum social value—that is, result in a maximum amount of insurance protection.

The chief economic advantage of having disability insurance written in connection with life insurance is the saving in expense. The life insurance companies in any event incur such expense as is incidental to securing life insurance. At slight additional expense they can supply protection against the more serious cases of sickness or disability. In addition to the commission paid to the agent, the issue of a life insurance policy involves the expense of a medical examination and of an inspection report. It is clear that if we have a medical examination and an inspection report we can sell disability insurance on the basis of a much more careful selection and gradation of risks than any company attempting to issue such insurance without these advantages could hope to achieve. Furthermore, the effort of selling a limited amount of disability insurance at the same time that life insurance is sold is little, if any, greater than the effort of selling life insurance alone. Indeed, the original motive for incorporating the disability clause in the life insurance contract was to make the sale of that contract easier than would be the sale of the life insurance without it. Further advantages are that when disability insurance is issued in connection with life insurance the acquisition cost is paid only once, the renewal expense is relatively low, and, finally, that the purchase of a substantial amount of life insurance along with the disability benefit is an evidence of good faith and tends to improve the moral hazard.

There is no serious conflict, however, between the disability coverage provided as an incident to life insurance and that supplied under the usual plans of personal accident and health insurance. Policies of the latter sort cover a much wider field since they indemnify for the lesser disabilities as well as the greater ones. Thus such contracts ordinarily include surgical and hospital benefits, lump sum indemnities for specific injuries, temporary benefits for partial disabilities as well as life annuities for total disabilities arising from accident. Some of the more liberal health policies now provide for a life annuity for total disability arising from disease but more often the coverage for non-accidental disability is

limited to a period of 52 weeks. The cost of such all-embracing protection is necessarily considerable. Much of this cost arises from the frequency of minor disabilities and from the expense of adjusting such cases. But these minor disabilities do not have the catastrophic character of a protracted disablement, nor do they exert so disrupting an effect on family life.

The history of sickness insurance shows the great difficulty and expense of administering from a central office the adjustment of a multitude of small claims. For this reason, if for no other, a wholesale and indiscriminate entry of a life insurance company into the field of accident and health insurance, while it may be desirable, is nevertheless a very different matter from a full use of its peculiar advantages for furnishing protection against those long term disablements which, although of comparatively rare occurrence, have the gravest economic consequences.

III.

The first form of disability benefit to be incorporated in life insurance policies was the waiver-of-premium clause providing that after the occurrence of permanent and total disability no further premiums would be payable but the contract would go on increasing in value in the same manner as though premiums were being paid. The Fidelity Mutual adopted such a clause in 1896 and the Travelers in 1904. The idea was not a new one, however, as it had been more or less extensively employed on the continent of Europe.

It was soon recognized that a mere waiver of premium was not sufficient. The family of the insured was in many cases worse off on the occurrence of the permanent disability of the bread-winner than if the bread-winner had died. Not merely was there a complete discontinuance of income: there was, besides, a heavy additional expense. To meet this situation the contract was next improved so as to provide for its maturity in instalments on the occurrence of disability. There are many interesting features in such an arrangement to which, however, we shall not advert, since this stage in the development of the clause seems likely to prove only temporary.

It presently appeared that the instalment idea was only a compromise solution. In the event of becoming permanently incapacitated the insured needed not merely that premiums should cease and that he should commence to receive payments under his policy,

but he needed to be certain that those payments would continue throughout his life, however protracted might be his period of invalidism. Finally, he needed to have the principal sum of the policy paid in full to his family at his death without any deductions whatever on account of payments made or premiums waived by way of disability benefit.

Out of these requirements was born the so-called waiver-and-annuity clause, which, in spite of imperfections in the coverage still to be overcome, marks the farthest advance in insurance protection which any life insurance contract has yet attained. It has largely displaced the disability instalment benefit and is the predominating type today. As is well known, the waiver-and-annuity clause provides, in addition to waiver of premium upon the occurrence of disability, an annuity, generally of ten dollars per month or $120 per year for each $1,000 principal sum, during the continuance of disability, the sum insured to be payable in full at death just as though disability had not occurred.

One of the difficulties to be overcome in arranging for insurance protection against disability is that at the higher ages disability becomes indistinguishable from mere senility or old age and as the higher ages are approached the rate of disablement increases so rapidly as to make insurance at those ages very expensive. Fortunately the need for disability protection is greatest at the ages where its cost is least: at the older ages of the insured the children in his family are generally old enough to support themselves. At first there was considerable difference in the practice of the companies as to the age up to which the risk of disability was covered. It varied from 55 to 70. Gradually, however, prevailing practice has settled upon 60 as the age before which disability must occur if the benefit is to be paid.

We are all familiar with the old Latin expression: *Natura non facit saltum*—an assertion of the essentially continuous nature of most natural processes. And so it is a little difficult to reconcile the fact that if a man becomes disabled at age 59 he will receive a life annuity while if he becomes disabled at age 60 he will not. However, a line has to be drawn somewhere if the cost of this insurance is to be kept within reasonable limits. The almost universal use of age 60 as the limiting age for disability coverage suggests the use of an endowment at 60 wherever the risk of dependency in old age is of special importance.

Under the waiver-of-premium clause there is not usually a complete discontinuance of the benefit where disability occurs at age 60 or over, one method of treatment being to waive the premiums but provide that the insurance in force shall be reduced by the amount of the premiums waived.

A factor in the disability clause which is of great importance is what is often termed the "probationary period"—that is, the time which must elapse after the occurrence of disability before the benefit attaches. It is obvious that the existence of such a provision tends to rule out of consideration disabilities of short duration. The most common requirement is that premiums will be waived commencing with the next premium falling due after receipt of due proof of a permanent total disability which, at the time of making the proof, must have existed for a period of 60 days. A frequent requirement in the matter of the annuity benefit is that such annuity is to commence six months after receipt of such proof. The probationary period may be taken as somewhat analogous to the "waiting period" under workmen's compensation laws. It is justifiable since it greatly reduces the number of small claims to be adjusted, makes the cost of the insurance less, and tends to confine this benefit to those more serious cases which are in greater need of it. Strictly speaking, practically every one becomes totally and permanently disabled for some time before he dies, the only exceptions being those who are instantaneously killed.

IV.

Those desiring a full understanding of the actuarial intricacies involved in the computation of premiums and reserves for disability benefits will find a wealth of material in numerous papers which have been contributed to actuarial societies. For casualty students and underwriters, however, a brief non-mathematical statement of how such a benefit is looked at from the actuarial standpoint and some remarks on the nature of the underlying statistics which are required may not be without interest.

Suppose we have before us an ordinary life policy to which it is desired to attach a clause providing for the waiver of premiums in the event of total and permanent disability occurring before age 60. We note first that the benefit is an annuity, the annual amount of which is equal to the gross premium payable under the ordinary life policy. This annuity commences at the disablement of an

active life and terminates at the death of a disabled life: it is an annuity during disablement. The extra annual premium for the benefit is payable until age 60 as long as the life, now active, remains active, and ceases when he dies or becomes disabled. Hence to get the annual premium we also need to know the value of an annuity on an active life payable until death or disablement. Dividing the first of these annuity values by the second gives us the required net extra premium for the benefit. Premiums for other types of disability benefit can be computed in a similar manner. The premium reserve may be viewed as the difference between the net single premium for the benefit at the attained age of the insured and the present value of the future net premiums. This refers to active lives. After a disability claim has arisen the reserve consists of an annuity to a disabled life for the amount of the benefit.

In order to compute values for the necessary annuities we must have statistics showing:

1. The rate of disablement among active lives;
2. The rate of mortality among disabled lives;
3. The rate of mortality among active lives.

The disability table in general use in this country is the table known as Hunter's Disability Table which was prepared by Mr. Arthur Hunter from the experience of several large fraternal societies in the United States which commenced a good many years ago to grant disability benefits. Ultimately the companies will undoubtedly have a table based upon their own experience. For the time being the existing table appears to be giving satisfactory results. The rates at which active lives become disabled, according to Mr. Hunter's table, are, per ten thousand exposed to risk, as follows:

Age	Disability Rate per 10,000 Exposed.
20	5.1
30	5.6
40	8.3
50	17.0
60	54.0
65	123.9

These rates are much lower than the rates of invalidity shown by European experience, based chiefly on the experience of certain mutual organizations for insuring particular trade groups. Fully

satisfactory reasons why American statistics show so much lighter rates of disability than European statistics have never been advanced, although this is probably due partly to the preponderance of hazardous occupations in the foreign experience, but chiefly to a different definition or conception as to what constitutes disability. This last factor is of more importance than might be supposed.

The other statistical information which we require is the rate of mortality among disabled lives. The main peculiarity of this mortality is that for the period of time immediately succeeding the occurrence of disability the rate depends primarily on the nature of the disability rather than on the age of the individual. As the time since the occurrence of disability increases, the rate of mortality among the disabled shows a tendency to decrease until a certain point is reached, after which it begins to increase with age. This subject is very complicated and a satisfactory practical solution was reached by Mr. Hunter by excluding from his table the experience during the policy year following the occurrence of disability.

On this basis the rates of mortality per thousand among disabled lives are as follows:

Age.	Disabled Lives Death Rate per 1,000	"Mixed" Lives (American Experience) Death Rate per 1,000.
20	205	7.8
30	106	8.4
40	85	9.8
50	91	13.8
60	111	26.7
70	115	62.0

In the parallel column is given the American Experience rates of mortality for the purpose of comparison, and it may be readily perceived what an important factor is the rate of mortality among the disabled in determining the premiums and reserves under this business. An interesting feature is the high rate of mortality at the younger ages, probably due to the preponderance of tuberculosis cases at those ages.

The accounting problems to which the incorporation of disability benefits in life contracts gives rise are of special interest in that they both emphasize the importance of a correct concept of the various kinds of disability benefits and serve to illustrate many of the more subtle principles of insurance accounting. The most

helpful way in which to approach a disability accounting problem is to suppose the disability part of the contract to be issued by an entirely separate company which receives the extra premiums, maintains the necessary reserves and pays the claims under the disability benefit. This point of view is also indispensable to the correct drafting of disability clauses.

V.

The adoption of the disability benefit has brought new problems to the claim departments of life insurance companies—problems of a difficult kind which have hitherto been principally confined to the claim departments of casualty companies. The fact of death and the identity of the deceased is a matter susceptible of relatively easy proof. The existence and extent of disability within the meaning of the policy contract is a much more complicated problem. However liberal or the reverse may be the company's interpretation of its contract, there must be somewhere a boundary about which the border line cases will cluster.

It is the duty of the claim adjuster to see that the claimant, however ignorant he may be of his rights, gets the full amount to which he is legally and equitably entitled under his contract of insurance. This is just as much his obligation as it is to see that the other policyholders of the company are not injured through the allowance of fraudulent or unreasonable demands. It is the practice of at least one of the large companies granting the disability benefit to go back in every case where a death claim has been presented arising from insanity and find out whether or not the insured, if he had made an application for disability benefits, would have been entitled to a waiver of his premiums or to the payment of an annuity. If he would have been so entitled, regardless of his technical non-compliance with the contract in the matter of proof, the amounts of these benefits are added to the death claim which is paid to his beneficiary. It is in the interest of every living and healthy policyholder that a company should settle its claims in this spirit of liberality. It costs not much more than does strict insistence on the technical requirements of the contract and the money so spent is vastly more effective in building up good will than if it were saved and later paid out to the healthy and active policyholders as an increase in their dividends.

When we think of disability as related to its cause, we are apt to

think first of disability arising from accident. As a matter of fact, however, only about three or four per cent. of a company's disability claims arise from this cause. The two major causes of disability are tuberculosis and insanity or mental infirmity. Probably a third of a company's claims under the disability clause will be tuberculosis claims and about a quarter of the claims will be insanity claims. Paralysis is the third most important cause of disability.

As to tuberculosis, it is evident that there is wide opportunity under the present wording of the disability clause for the practice of companies to differ. The contract requires that disability shall not merely be total but shall be permanent. Obviously it is difficult or impossible to show that tuberculosis will presumably progress to a fatal termination until some time after the condition has arisen. A liberal interpretation of the contract, however, requires that claims should be admitted as soon as the disease has produced incapacity to labor and the insured has given up his work and placed himself in a sanitarium or under treatment designed to arrest its progress.

Another difficult question in the adjustment of claims is the requirement of the contract that the insured shall not merely be permanently and continuously prevented from engaging in his usual and customary occupation but that he must be permanently and continuously prevented from engaging in *any occupation whatsoever* for remuneration or profit. This leads us to a discussion of the general question of what constitutes permanent and total disability within the meaning of the contract.

VI.

The Bureau of War Risk Insurance has defined total disability as "any impairment of mind or body which renders it impossible for the disabled soldier to follow continuously any substantially gainful occupation. Total disability shall be deemed permanent whenever it is founded on conditions which render it reasonably certain that it will continue throughout the life of the person suffering from it." The Compulsory Health Insurance bill passed by the New York Senate in April, 1919, defined disability as "inability to pursue the usual gainful occupation" of the insured. The German compulsory insurance law defines in-

validity as total when the earning power of the insured is reduced to one-third of the normal.

It has been held by the Indiana Court of Appeals (Ind. Life Endowment Co. *vs.* Read, 54 Ind. App. 450) that if the policy entitled the insured to recover if he becomes totally and permanently disabled from performing any kind of manual labor upon which he depends for a livelihood, the insured can recover if he becomes totally and permanently disabled from following any business by which he might reasonably earn a livelihood. Again, in order that disability may be construed to be total it is not necessary that the insured should be absolutely helpless. Total disability is a relative matter and is held to depend on the peculiar circumstances of each case and on the nature of the occupation and the capabilites of the person injured. The real test is loss of earning power.

An investigation of the causes of permanent total disability indicate that a large majority of them would incapacitate a man from performing the duties of any occupation whatever as well as the duties of his regular occupation. This gives ground for hoping that some way may be found to safely remove the present limitations so as to make the benefits apply to total disability from performing the duties of the insured's regular occupation.

VII.

Several important points must be kept in mind by a company's home office in underwriting disability benefits. In order to obtain a favorable experience under such insurance it is in the first place necessary to minimize the effect of selection against the company by issuing a very large amount of it. The clause itself must be liberal, attractive and unambiguous, and the agents and the public must be kept educated as to its value. Application forms, ratebooks and canvassing literature should be so arranged that affirmative action is necessary on the part of the applicant if the policy is *not* to contain the disability clause. Generally speaking, applicants should, as it were, have the disability benefit thrust upon them unless they specifically ask that it be omitted from their contracts.

But it should be borne in mind that this insurance is in the nature of indemnity for loss of earning power and that for practical purposes this means indemnity against the loss of ability to earn money. It is very much easier to *overinsure* a man under a

disability clause than under a life insurance policy. No companies grant the disability annuity benefit on any larger an amount of life insurance than $25,000 which carries with it a monthly disability annuity of $250. If, however, the applicant carries such insurance in several different companies it is easy to see how he might provide himself with an income which would make disability financially profitable to him. It is not necessary to impute any dishonest intent in such cases to perceive that total disability is likely to begin earlier and last longer than where the insured himself carries a substantial part of the hazard. The disability annuity benefit ought never to be granted for an amount disproportionate to the applicant's salary or wages.

Having determined that the amount of the benefit applied for falls well within the limits of the insurable interest, the next question is as to the physical and occupational eligibility of the applicant.

There are several types of cases where the disability benefit should be granted with great caution, if at all. We have seen that the principal cause of disability is tuberculosis. Hence the benefit should not be granted at regular rates to underweights at the younger ages unless the family history and other features of the risk are exceptionally good. Mr. R. G. Hunter has recently pointed out* that in the case of tubercular family history the disability rate bears "a much higher percentage to the normal disability rate than the mortality rate due to tubercular family history does to the normal mortality rate." Next to tuberculosis, insanity and paralysis are the most frequent causes of disability. It follows that the benefit should not be granted at standard rates where there is a personal history of mental or nervous disorder or of any leutic infection or where there is more than one case of insanity or nervous disease in the family history.

Another group to which the benefit should not be granted is unmarried women who are not in receipt of a salary or wages. Where a disability clause is attached to a policy issued to a woman, it should provide that the clause shall be cancelled upon the marriage of the insured. There are doubtless self-supporting married women to whom the benefit might safely be granted, but these are not to be readily distinguished from the others.

* Record of the American Institute of Actuaries, Vol. IX, page 29.

A difficult question, similar to the same one raised in connection with workmen's compensation laws, is what to do with applicants who are already partially disabled—who have lost the sight of one eye, the use of one arm, hand or leg. Obviously the risk of total blindness or total dismemberment is greatly increased in such cases, and although the number of cases is not great, still the financial consequences are apt to be considerable because of the exceptionally low rate of mortality among the disabled of this type. The existing impairment has two effects: it increases the liability to accidents in general and it specifically increases the liability to total blindness or dismemberment. The safest practice is, of course, not to grant the benefit to such an applicant. On the other hand, it is not very praiseworthy to evade the performance of a service when with a little additional trouble some satisfactory way of meeting the difficulty can be found. Many companies modify the clause in such cases, so that the loss of another eye or member will not constitute a valid disability claim—sometimes with an increase of 50 per cent. in the premium to cover the additional extra hazard.

The question of what to do with the disability benefit in the case of hazardous or unhealthy occupations is a difficult one because of lack of sufficient statistical information. When the occupation is such as to greatly increase the chances of disability, either through accident or disease, the benefits cannot safely be granted. In intermediate cases they may be granted in consideration of an extra premium predicated on the degree of extra risk assumed.

VIII.

The progress and evolution of the disability clause has been rapid and a high standard of accomplishment has been set in this field. There is no reason to suppose, however, that further improvements in the coverage and a wider adoption of this feature may not be anticipated. Indeed, one of the large companies has very recently announced a modification of its disability clause under which any disability which is total and has had a continuous duration of three months is construed to be "permanent" until recovery. This is a wholly admirable provision which will doubtless be extensively adopted. It is not improbable that some safe way will presently be found to insure against total incapacity to

perform the duties of the insured's regular vocation as distinguished from total disability to perform any kind of work whatsoever for remuneration or profit.

All of these improvements which have a permanent social and economic value take their place among the innumerable human achievements which, taken by themselves, may seem trivial, but which taken together make up the sum total of human progress.