the difficulty of breathing becomes intense, and there is always danger that such patients may die practically suffocated. I have myself seen one such death. But in cases where the disease is limited to one apex, or where the disease is chiefly catarrhal, and where there is no very intense cachexia or acute febrile symptoms, and the patient's muscular strength is good; or where the disease, though more advanced, is stationary and the general debility is not great; in such cases, removal to a mountain climate is likely to be of much service.*

The next question is, How does mountain-air act in these cases? It must, in the first place, be borne in mind that in these sparsely inhabited districts we find precisely the opposite social conditions to those under which pulmonary consumption becomes developed. The air is, as I have already said, antiseptic; it is clear, bright, and pure; and there is an almost entire absence of those organic particles which play such an important part in promoting putrefaction. The stimulating and tonic properties of the air rouse the patient to increased muscular activity and promote general nutritive changes. The temperature of the air, though lower, is more equable in the mountains than in the plains. The annual and daily oscillations of temperature are less. The rarefaction of the air necessitates greater activity of the respiratory organs; the air-cells dilate more thoroughly, and the walls of the chest become expanded; the inspirations are more profound, to compensate for the thinness of the inspired air. It follows that there is less stagnation of air in the lungs, and diffusion of the gases set free at the pulmonary surface is favoured.

These are probably but a few of the conditions which contribute to the efficacy of mountain-climates, and I regret to be compelled to pass over many other interesting explanations that have been offered as to the action of mountain-air; and, in bringing this paper to a close, I beg to say I am very conscious of its fragmentary character. But I thought the modern treatment of phthisis an important subject for the consideration of this Association, and that I might, at any rate, be instrumental in inducing others to take up some of the points to which I have alluded and work them out to a more thorough issue; for I believe, in medicine as in morals, there is no better rule than the scriptural one: "Prove all things; hold fast that which is good."

ON LIFE-ASSURANCE AND SUICIDE.

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IN looking over the rules of a few insurance societies, I could not avoid observing the want of unanimity which prevailed with respect to the manner in which they deal with suicides whose lives have been insured. This induced me to take up the subject, and obtain all the information I could from the different offices in England and Scotland. My information is gained from eighty-one out of ninety-two offices, and from the actuaries or secretaries of several of these I have received valuable assistance and useful facts. The ways are so various in which the different companies treat this subject, that it is not easy to classify them briefly. The general rule is, that a life-policy is forfeited by suicide, whether the assured has been of unsound mind or not; and the following rule occurs so frequently, that it may be quoted to represent a very large proportion, which I cannot accurately ascertain, of all the insurance companies.

"Assurances in this company made by persons on their own lives who shall die by their own act, whether sane or insane, or by duelling, or by the hands of justice, shall become void so far as respects such persons, but shall remain in force so far as any other person or persons shall then have acquired a *bona fide* interest therein by assignment or by legal or equitable lien; the extent of such interest to be proved to the satisfaction of the directors."

Some offices act literally upon this rule, whilst others, retaining the

rule, modify it according to individual cases, so that their practice is more liberal than the rule itself warrants. Some of the companies return a portion or the whole of the premiums paid, others pay part or the whole of the sum assured, the directors judging according to circumstances; some refuse to pay anything, if the suicide be shown to be sane; others, again, make no difference between the sane and the insane. Occasionally, the directors weigh the evidence as to *felo de se* and judge accordingly. A few are more liberal and pay in full, as though the assured had died a natural death; and a considerable proportion pay the policy, if a certain time have elapsed after the insurance has been effected. The following table shows the numbers, as far as I can obtain them accurately.

5 always pay without any conditions, and these are the Mutual,

New York, Northern, Positive, and Standard.

2 pay after 6 months' insurance.

8 " 12 or 13 months' insurance.

4 " 3 years' insurance.

1 " 4 years' "

12 " 5 years' "

1 " 7 years' "

48 pay according to the discretion of the directors.

81 Total.

In the last class, the payments are more or less liberal, and the directors do that which seems right to them, and act according to circumstances. There is much uncertainty in this practice, for there appears to be no distinct principle involved which is allowed to guide them in their mode of dealing with the insured. In those companies in which the policy becomes a positive one after the lapse of a certain time, if the assured commit suicide before that time, the directors are willing, in some instances, to take the case into consideration and to return part or the whole of the premiums, or make some allowance. Very few of them, however, look upon the matter as a question of disease, or consider that there is great difficulty in ascertaining that the person who has committed suicide is really of sound mind. Coroners' inquests are not to be relied upon for such a purpose, as it is now comparatively rare to return the verdict as one of *felo de se*. The expression, "Died by their own hands", has been suggested to form part of the rule on this subject; but this term is objectionable, as it would include accidental deaths, including a recent case where an outward application was taken by mistake for medicine. There is, however, a decided tendency amongst insurance offices to regard the act of suicide as the result of disease. Without absolutely saying that, in every case, it ought to be so regarded, it is very certain that there are few exceptions; for, even where the act is the result of a sudden reverse of fortune or domestic calamity, the shock to the nervous system is so great as to prevent the individual from recovering from the effects and thus bearing his misfortunes. Such cases as these are as much to be pitied as any other, and it is sad to see that assurance companies act on a principle which increases the distress of a family, instead of being the means of producing some measure of comfort. The result of my inquiries has fully satisfied me that insurance societies have made too great a bugbear of suicide, and have probably rather injured their business than otherwise by making such penal rules as are generally adopted, although their practice has usually been more lenient. The suicide has also been associated with persons who have been hanged by process of law: a still more objectionable circumstance, thus associating persons of unfortunate and diseased minds with the worst criminals. As there are some honourable and liberal exceptions to these views, it is only fair to give the names of those offices which have adopted a humane system, and one more in accordance with medical science; and, therefore, I have given above the names of those companies which now pay the policies without any conditions. The New York office states that "suicide, being considered an evidence of insanity, does not cause a forfeiture of policies". The Mutual has some valuable remarks in the report of the directors, which afford the best evidence to be obtained that the dread of suicide by insurance societies has been caused by themselves. From the prospectus of the Mutual, I quote the following passage.

"Suicides are abhorrent to the English mind, and in this country at least it may be safely held that suicide is always the result of a diseased mind. The new rule, freeing policies from the risk of being vitiated by suicide, came into force six years ago; the experience of the Society as to suicide over five periods of six years each is as follows.

1844-1849 ...	Percentage of suicide to claims ...	1.7
1850-1855 ...	" " ...	1.0
1856-1861 ...	" " ...	2.3
1862-1867 ...	" " ...	1.9
1868-1873 ...	" " ...	0.9

* I have lately received a letter from a patient who is now (November) at Davos, in the Grisons, intending to pass the winter there. He writes: "I have been feeling improvement, and especially have felt better since the cold began a week or two ago. I feel my nerves (or what I imagine to be so) quieted and strengthened. I find the cold much less trying than in the Engadine. I have not had any swelling of the feet or ankles since coming here, and I eat and sleep very well, and can take more exercise than before." I mention this case, because it is the second I have had under my own care in which phthisical disease had already reached an advanced stage before trial was made of change to a high mountain valley. In this patient, the whole of the upper lobe of one lung is the seat of induration, with excavation at the apex. In this, as in the other case I allude to, the first noticeable change in the physical signs was a rapid disappearance of the moist rales, the area of dulness remaining unchanged. Some cold and windy weather in the Engadine in August, soon after his arrival, tried him greatly, and his circulation became seriously embarrassed, as was evidenced by lividity of the surface and swelling of the feet and ankles. These symptoms, serious as they were, and showing how much lung-tissue was disabled, have now long since disappeared.

"These figures are somewhat remarkable, and, although it would be absurd to suppose that the new rule prevented suicide, yet it is clear that it has not stimulated it as a practice. The experience of the Mutual thus shows that the risk of an Englishman taking away his own life, in order that his family may reap the benefit of his assurance money, has been hitherto overestimated, and that it is, in fact, so small as to be inappreciable."

On the other side, one manager writes to me and says that he has "long had an impression that the usual condition of forfeiture may in some cases operate as a protection to the assured, presenting a consideration that may influence a very morbid mind to abstain from an act which it is otherwise disposed to commit". This opinion is not supported by any facts, but it is not at all unreasonable. Of the two companies which act upon the liberal principle of only waiting six months before declaring the policy positive, or nearly so, the Scottish Provident Institution has some important observations in its report, which I shall quote. It says: "According to a strict view, suicide should be a cause of forfeiture only where it has been committed with the intention of defrauding the assurers. But the extreme difficulty of obtaining proof that such was the object has rendered it necessary to adopt a broader rule, which has varied in the regulations of different assurance societies. In some, there is a forfeiture, if the party assured die by his own hand, although the act would not amount to *felo de se*; while, in others, it was provided that he must be held *felo de se*, and, therefore, of sound mind. The former rule is adverse to every dictate of justice and sound feeling; for, if the suicide be insane, although his hand be the instrument, his malady is the true cause of death as much as if he died through cholera or fever."

There is another point on which there seems to have been a general agreement amongst the directors of insurance companies; that is, the necessity of taking some precaution that a person should not insure his life with the deliberate intention of relieving himself from the cares and troubles of this life, whilst, at the same time, his concern for those he leaves behind him is such as to impel him to insure his life. It is difficult to obtain instances sufficient to prove anything certain on this subject, as the only evidence at my disposal is given in the prospectus of the Mutual Society, quoted above, and these facts show that a more liberal arrangement does not increase the number of suicides amongst the assured. As there are only five offices which make their policy certain without any conditions, it is impossible to give many facts; but it appears to me that the occurrence of such a business-like and deliberate design of suicide must be very unusual, and would imply an amount of "method in madness" which is extremely rare, or which does not exist at all. In the opinion of the directors of the Caledonian, which is one of the liberal companies, requiring only a delay of six months before accepting the policy as a positive one, "the probability is, that the act of self-destruction would, in such circumstances, follow closely the taking out of the policy, and the knowledge that no payment would be made, if death occurred in that way within six months, would naturally deter a person having an intention of the kind from assuring with this company."

There is still another subject on which directors have been generally unanimous, according to the reports which I have received. They appear to have been more influenced by a commercial spirit in framing their rules than by a concern for the welfare of the family of the person assured. In more than one-half of the reports—and the proportion is really greater—it is stated that the policy shall remain in force, under any circumstances whatever, where any other person shall have acquired a *bonâ fide* interest in it by assignment or by legal or equitable lien. Now, surely this is exhibiting a much greater tenderness for the creditors of the assured individual than for his sorrowing and perhaps suffering wife and children. If the directors, in the interest of their respective companies, can afford to make such an invariable rule as this with regard to business matters, they can well afford to make a more liberal arrangement for the family of the deceased. The secretary of one company is fully aware of this anomaly, and writes to me thus: "The general rule in these cases—viz., to pay in full only to third parties who have given due notice of their interest in the policy—must often work great hardship to the widow and family, who are not generally dealt with on terms as liberal as those which are accorded to persons who are merely purchasers, and may make a large profit on the transaction." Where the policy, therefore, is alienated, the parties recover the full value of the policy; but, where it is not alienated, the family of the deceased must take their chance of obtaining even the return of the premiums paid, and these without interest. This seems unkind and unjust to the survivors, as the object for which an insurance is usually made is really defeated. The would-be suicide can generally alienate his policy, and so render it perfectly safe.

I have not been able to ascertain the annual number of suicides and

particulars respecting them. From one society, however, I have been favoured with such details, and the number of deaths of this class was twenty-seven during thirty-six years. In very few of the cases, real *felo de se* could not be proved; for, in some instances, the persons were found drowned, others were obviously insane, whilst in some the cause of death appears to have been accidental.

As it is impossible and undesirable, in the course of this paper, to give in detail the mass of information which I have obtained, I shall condense my conclusions into the following statements.

1. The present rules and practice of insurance societies is thoroughly irregular and uncertain, no distinct principle being uniformly acted upon, except that those to whom a policy is alienated are most tenderly considered.

2. The idea of a person's assuring his life, and then deliberately committing suicide, is of such rare occurrence as only to justify very moderate precautions.

3. The fact of a person having insured his life prevents him from committing suicide is a very questionable statement, and has not been proved by any known facts.

4. The present restrictions are severe and unreasonable towards those who are almost always of unsound mind, and ought to be done away with or materially modified.

I would recommend, therefore, an uniform practice, which would meet the views and objections of the insurance societies, and would be far preferable to the present state of things. In order to prevent a person from insuring his life and immediately committing suicide, my opinion is, that in every case the full amount of the policy should be paid after thirteen months; that is, when two annual premiums have been paid. This would be a sufficient protection to the offices, and, if death took place, it would not appear so great a loss to the family, to whom the premiums might be returned. After thirteen months, the policy should be a positive one, and the question of soundness or unsoundness of mind should not be raised at all. Directors would find it advantageous rather than otherwise to come to an agreement on this subject, and it is not likely, with such a few cases, that any increase of premium would be required. A very slight increase, however, would be better than the present uncertainty; and it is strongly urged upon directors of insurance societies to adopt an uniform rule in dealing with deaths from suicide, and thus to remove a reproach which at present exists.

CASE OF CARIES OF THE TROCHANTER MAJOR SUCCESSFULLY REMOVED WITH THE CHISEL AND MALLET.

By THOMAS ANNANDALE, F.R.S.E.,

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I PUBLISH a note of the following case, as it is an addition to the already recorded instances of caries confined to the trochanter major without any involvement of the hip-joint, and also as an illustration of the advantages of the chisel and mallet in removing bone from situations not easy of access to the saw. I am inclined to think that the disease in the present case had its origin in inflammation and suppuration of the bursa, lying between the trochanter major and the insertion of the gluteus minimus muscle.

D. McCrae, aged 25, was admitted into the Infirmary under my care on May 17th, 1876. For more than three years previously to his admission, he had suffered from pain in the region of the great trochanter and hip-joint, and he had been repeatedly blistered over the painful part, but without benefit. Three months ago, a swelling formed on the inner side of the corresponding thigh immediately below the groin, and has since steadily increased in size.

When examined, the patient was found to have flattening of the buttock on the affected side, and there was well marked fullness over the great trochanter. There was tenderness on pressure over this process, but the movements of the hip-joint caused no pain. The swelling in the thigh was a large abscess. On May 25th, the abscess was opened with antiseptic precautions, and the wound dressed in the usual way. Six weeks after the operation, the patient was sent to the convalescent hospital, the wound not being completely closed, but discharging only a small quantity of thin pus.

On July 31st, the patient's symptoms were much the same as before, and the wound was discharging more freely.

On August 25th, the trochanter major was exposed by a free incision, and then it was found that a portion of its anterior and external surfaces was affected with caries. The disease was superficial, and involved a surface measuring about two inches in length and one in