

[Once more we must express our gratitude to Herr Bauer for his absorbing narrative. We have described the Bavarian 1929 attempt and retreat as 'a feat without parallel, perhaps, in all the annals of mountaineering.'

This verdict has been accepted generally. To comment at length on the great 1931 struggle would be mere presumption. It will be sufficient to state that for skill, endurance, cold-blooded courage and especially for *judgment*, the expedition will stand as the classical model for all time.—*Editor, 'A.J.'*]

ACCIDENTS.

By W. N. LING.

(Read before the Alpine Club, March 1, 1932.)

THIS is naturally a gloomy time of year, and I presume that is why I have been commanded by the Honorary Secretary, with the connivance of the ex-President, to address you on the rather gruesome subject which forms the title of my paper to-night. There are many amongst you who are much better qualified than I can claim to be to deal with this subject, and I am only the victim selected to open the discussion which I hope will be fruitful in bringing this serious question to the notice of the largely increasing number of those who frequent the mountains.

The appalling lists of casualties which are compiled at the end of each season show the need of some warning. Last year over 200 deaths were recorded, and the insurance figures of the D. & Oe. A.-V. alone for 1930 showed over 700 accidents, of which 76 were fatal—this for one Club alone.

In the early days of the pioneers, accidents were comparatively rare, and this may partly be accounted for by the fact that the number of climbers was much less than to-day, and that the sport was followed only by those who recognized the risk and went out to the Alps adequately trained and accompanied by skilled and competent guides.

Far be it from me to decry guideless climbing when practised under proper conditions after adequate experience has been gained, either with good guides, or with skilled amateurs who may rank as guides, but there is no doubt that the great increase in the number of accidents is due to the fact that large numbers

of keen young climbers, whose experience consists only of rock-climbing below snow-level, consider that they are competent to tackle anything and proceed to put that belief into practice with fatal results. How to deal with snow and ice conditions, and rocks above snow-level, which may be iced, can only be learnt by gradual experience under competent leaders, and the fact that a man has successfully ascended the Matterhorn under favourable conditions does not qualify him for attacking a much lesser mountain under bad conditions of mountain and weather.

Let us examine, then, the causes of accidents inherent firstly in the mountains themselves and secondly in the climbers, and the rules to be observed for the avoidance of such accidents.

In the mountains themselves the question of weather bulks largely. On high mountains one cannot afford to disregard this. After a spell of bad weather with new snow the mountains require time to 'arrange themselves,' as the French say, yet how often does one see, immediately it has ceased snowing, parties starting out for huts, and attempting a big climb the following day, often with fatal results. On low ground it does not matter so much, and in the Highlands of Scotland, if one waited for fine weather, one would get very little climbing. But even there caution is necessary, as was shown only last spring, when a party of young climbers, not properly equipped, persevered in the face of bad weather, got stuck on the mountain and were only saved from disaster by the courage and devotion of a keeper who brought down one of the party who had collapsed from exposure.

A good guide or amateur will not start in bad weather, and will turn if he sees it coming on. The study of the barometer is important, and it is well to carry a good aneroid and to set it on arrival at the hut. I remember an occasion, crossing Mt. Blanc from the S., when the warning of the aneroid enabled us to avoid trouble with a storm which lasted three days.

Under this heading also may be considered the question of snow conditions. After a heavy fall of snow the mountains are dangerous until the new snow has had time to consolidate and become attached to the layer of old snow beneath it, and slopes which would normally be considered safe become liable to avalanches. These may seem to be commonplaces, but it is astonishing how often these conditions are disregarded. In a short holiday it is a temptation not to waste any time, but it is better to be alive at the cost of one less peak in the

bag. Another danger of the mountains arises from falling stones, which sounds Hibernian! This is a risk which one can never entirely guard against, but a quick eye will notice where stones have fallen or are likely to fall, and, if possible, such a place should be avoided. If it has to be crossed it should be done quickly and one of the party should be on the watch to warn the climber who is moving. Even so, absence of body is better than presence of mind. Crevasses and corniches are other dangers of the mountains, and while the presence of these may be guessed by expert mountaineers, even the most experienced may be deceived, and the rope should always be used where there is any question; besides, one can travel much more quickly and easily than when constant probing with the axe is necessary. The top of a cornice makes easier walking, but the temptation should be resisted and a safe margin allowed. The sight of the glacier a thousand or more feet below through the little blue hole made by the axe is picturesque but alarming. These are the main sources of the accidents due to the mountains.

In the case of the climbers themselves, the chief causes of accidents are lack of training, physical and mental, lack of capacity, and lack of experience.

The exhilaration produced by the air and surroundings of the Alps is apt to make one forget that wind and limbs and heart need to be tuned up before long and arduous expeditions are undertaken, more especially after possibly eleven months' of sedentary life in towns, and it really pays to devote a few days at the beginning of a holiday to shorter and easier expeditions. In a long expedition it may be necessary to move fast to avoid being benighted, or to take advantage of the conditions of the snow and light, and a slow and weary member of a party may be a source of danger both to himself and his companions, while a tired man is apt to be careless and not to have complete control over his balance, and a slip may easily occur. Constant watchfulness must be exercised from the time one leaves the hut till one returns, and then mind one does not trip over the doorstep or mat! Another potential cause of accidents is careless handling of the rope. A trailing rope may dislodge stones and, in the case of a slip, the running out of the slack may give a jerk, which is difficult to withstand. The climber who leaves no stone unturned to reach the summit is a danger not only to his own party, but to other parties on the mountain.

In the case of an amateur party, at least two should be

experienced climbers who are fully qualified to lead. A single good leader is not enough, as, if anything should happen to him, the remainder would not know what to do, or how to extricate themselves from the difficulty, or to be able to return safely to fetch help.

This brings us naturally to the question of rescue parties, and the methods to be employed. The Alpine distress signal should be known to all climbers, though I cannot recall instances where it has been reported as successfully used. Some of you may be able to refute this. The general cause of a rescue party is the non-return of the climbers, and in this connection it is most important that the objective of the expedition should be stated or put in the book when leaving the hut. Too often the rescue party arrives too late, while there are many instances, as for example the case of the Aiguilles Rouges at Arolla last year, where a party was provisioned from an aeroplane and finally rescued after four days on the mountains in storm and tempest by a party of guides and friends who had become alarmed at their long absence.¹

An adequate supply of food with a margin for emergencies should be carried, with some provision for cooking soup or tea, and spare woollen garments also in the case of a night out in bad weather, while every climber should carry some necessary repair outfit in the form of bandages and iodine in case of minor injuries, and some knowledge of first-aid should be acquired. Last summer our party came across instances of most of the rules mentioned being broken: solitary men going across crevassed glaciers, others inadequately clothed, and we had to repair a man who had skinned his arm badly in a crevasse and had neither iodine nor bandage. Some of our medical members might enlarge upon this.

In the case of being carried down by an avalanche, the victim should endeavour to hold up his axe at arm's length to show his position to his friends who may have escaped being overwhelmed, and by a swimming action try to keep, at any rate, his head free. Where a climber falls into a crevasse, some plan should have been previously arranged, such as the use of the stirrup-rope, for getting out. In the case of a sudden thunderstorm catching a party on a ridge, the ridge must be

¹ During the discussion following this paper, a member stated that the food and provisions dropped by the aeroplane did not land within range of the party in distress! But this is in keeping with the true facts of aeroplane bombing (see p. 37).—*Editor*.

left² at almost any cost, as this minimizes the risk of being struck by lightning.

In most of the Alpine centres rescue stations have now been established, and here again is another problem. If a request for help has been sent, of course the question does not arise, but there may be occasions when a rescue party is officious and unnecessary. The question of remuneration is also a difficult one, though I believe that some system of regulations has been drafted by some of the Continental Clubs.

Well, gentlemen, I think I have gone over most of the ground, but no doubt there are many other points and instances which may occur to you, and I hope that a free and open discussion may lead to an emphasizing of avoidable dangers and to some diminution of the lamentable and ever-growing toll of life and limb which saddens us at the close of every climbing season.

BY CLAUDE WILSON.

THE meeting on 'Technicalities' (May 27, 1929), to which delegates from kindred clubs were invited to attend and to share in the discussion, was an innovation in our proceedings, and gave the impression to many of us that similar meetings might be usefully held from time to time at which general questions of mountaineering could be discussed from as wide an angle as possible, and conclusions perhaps reached which might possibly leaven the lump of opinion throughout the Climbing Clubs of the world.

The appalling increase both of fatalities and disabling accidents during the last few years seemed to point to 'Accidents' as a desirable subject for discussion.

Mr. Ling has opened the subject from a generalized standpoint which may well lead to a wide discussion in which the causes, the avoidance, and the immediate measures of dealing with accidents may be mixed up with the question of rescue parties³ (needless and officious on the one hand, and urgently necessary on the other); and of the remuneration of such parties. And I hope that all these points will be discussed.

The few remarks I am about to make will be confined to the causes and avoidance of accidents, and if we can this evening, whether by resolution or otherwise, arrive at any general agreement which can be succinctly recorded in the JOURNAL,

² This was, however, considered inadvisable in many cases by several members.—*Editor.*

³ See *A.J.* 43, 323.

it may be noted by other Clubs throughout the world, possibly leading to discussions elsewhere, and to some generalized condemnation of the two or three underlying causes which account for about 90 per cent. of all accidents. The 10 per cent. of legitimate accidents may always remain; though probably most of these even could be averted, if the unexpected risks could be foreseen; and they generally can be. Most of us have had escapes which would have ended otherwise but for the precautions and instant measures taken; though we will all admit that good luck often has been the final element in deciding the issue.

The avoidance of accidents is primarily mixed up with a knowledge of what constitute the dangers of mountaineering, and the dangers are always the same. They may be grouped under two main headings:

I. DANGERS INHERENT IN THE MOUNTAINS.

- (a) *Weather.* Starting in bad or threatening weather, or before the effects of bad weather have passed off. Not turning back when it is clearly wise to do so. Unexpected storms.
The first is imprudent but not irremediable.
The second is culpable.
The third is misfortune pure and simple.
- (b) *Snow conditions.* Fresh snow on steep slopes, risking avalanches, and hiding crevasses and bergschrunds. *Föhn*: causing the same risks on otherwise safe snow. Avalanches of various kinds from the above or other causes. Corniches. Snow bridges.
- (c) *Falling stones* (from above) and the giving way of hand- or foot-holds.

II. DANGERS INTRODUCED BY THE CLIMBERS.

- (a) Lack of knowledge of general principles—leading to dangers of all kinds.
- (b) Insufficient guiding power per rope, culminating in the complete ignorance of the entire party.
- (c) Failure to use the rope at all, and improper use of it when roped.
- (d) Inadequate clothing (very common in the Eastern Alps), leading to suffering, inefficiency, and death from exposure.
- (e) A slip—on rock, snow or ice.
- (f) Climbing *alone*.

The inexperienced often slip in the most unexpected places, while the most experienced have slipped on what seemed easy ground, sometimes with fatal consequences. The rope properly used is the salvation. In very difficult situations the best climbers know that they *may* slip, and insist on a belay whenever possible. Though competent climbers seldom slip where a slip would matter, I suppose it is axiomatic that in all such situations one out of two or two out of three should be stanced firmly enough, whether on rock, snow or ice, to check the slip. The situations where this is impossible are few and far between, although they do exist.

The foregoing list of dangers might be extended or subdivided, but will serve. The dangers can be epitomized on a half-sheet of paper. It is but seldom that any one factor suffices to cause a catastrophe. Two at least generally combine: insufficient clothing and bad weather; a slip—unroped—causing one death or, with an improperly used rope, perhaps dragging down a whole party.

If what I have said is agreed to and acted on, there would be very few accidents. But they occur annually by the hundred. My estimate is that at least 90 per cent. are avoidable. What are the essential underlying causes? I think they may be reduced to two: inexperienced novices venturing on high mountains; and experienced climbers neglecting precautions upon which there is general agreement. A very few words on each of these headings will suffice.

(1) *Inexperienced beginners*, inadequately clothed and equipped, venturing in all weathers above the snow line, or attempting to climb difficult or dangerous rocks, account for perhaps 99 per cent. of the terrible yearly record in the D. & Oe. A.-V. *Mitteilungen* to which Mr. Ling has called attention. Somewhat similar records could perhaps be ascribed to other Associations and Clubs both in Europe and elsewhere. The habit of some Clubs of combining insurance with membership, and without any evidence of qualification, though in many ways estimable, may perhaps place a premium on imprudence. I doubt if 1 per cent. of the members of some Clubs could draw up a simple list of the dangers such as I have sketched, or pass an elementary examination on 'How to avoid and deal with Alpine accidents.'

(2) *Practised mountaineers taking unjustifiable risks*. Here I find myself on difficult ground. But this seems to become more and more a fruitful source of catastrophe; and it must be faced. Obviously all the dangers can be risked, if desired,

by the most experienced. But 'those who live in glass houses should not throw stones.' I have run many risks myself—perhaps most of us have; and we recognize that luck has been on our side. On the other hand I, and those with whom I have climbed, have seldom deliberately contravened the generally accepted rules which, if respected by all, would materially reduce the deplorable mortality associated with Alpine climbing.

I can well remember with satisfaction my party's attacks upon the Dent du Requin and in finding new routes, say, up the Schreckhorn and the Jumeaux de Val Tournanche. All of these expeditions were well reconnoitred, and only on the Jumeaux do I think we ran any undue risk, and that only for a few minutes in crossing a couloir.

Nowadays but few new routes remain except those which we, and others, deliberately barred. With the Hironnelles, Tronchey and the latest two Wetterhorn climbs, the last or almost the last of the great arêtes have been conquered; and the arêtes are the natural safe routes on all great mountains.

The present generation may be unfortunate in having practically nothing left to conquer in the Alps. The 'Indexes,' the 'Pouces,' the 'Crocodiles' and 'Scissors' have been climbed and named almost *ad nauseam*, and even the warts are beginning to receive names (mostly quite unsuitable). This may be well for 'local guide-books'; and diagrams of rock-faces may legitimately be covered with lines and letters like those of Doe Crag, Gimmer, and the Gritstone Cliffs. But these are for off-days. The great Alps are conquered, and this should be recognized; though one fears that the tempting face of the Grandes Jorasses, and a few other possibilities (or impossibilities) which I refrain from naming, may yet claim more victims.

I say no more of the search for new routes and new records. For the rest my feeling is that weather and snow conditions tend to become deplorably ignored, and that the guiding strength, professional or amateur, per rope is often dangerously inadequate.

Lastly, I must say that my experience does not support Mr. Smythe's view that crusted snow is not liable to avalanche in the Alps; while the doctrine that crampons, so time-saving on hard snow, can be trusted without step-cutting on steep ice, bare or loosely snow-covered, is, in my view, a highly dangerous one.⁴ I have occupied more time than I intended. We trust

⁴ This was agreed to generally in the subsequent discussion.

that the discussion will be free and fearless. It is for the younger generation to justify or censure the methods which to me seem to underlie the rising death-roll. Every effort was made to procure an opening address from this angle, but it failed. Ling and I recognize that we both belong to the old school, of which one hears rumours that they could not 'climb'; they were mere 'mountaineers' with an unworthy and cowardly bias towards safety first. The result was, however, that they sometimes scaled their mountain and frequently returned alive. Consequently we are not repentant; we hold to the faith that while technique will always be open to experiment and variation, the underlying principles of mountaineering remain fundamental and immutable, not to be ignored without needless risk, without needless mortality, nor without damage to the fair name of our ideal Recreation.

THE DISCUSSION.

THE PRESIDENT, in opening the meeting, said: I should like to utter a word of greeting to the representatives or members of kindred clubs who are present this evening. We are delighted to see them in our hall, and we hope very much that in the discussion which will ensue they will contribute anything that they wish on the important matters we have to consider.

Mr. LING and Dr. WILSON then read their papers.

Dr. Wilson, before reading his paper, said: With regard to the paper just read to us by Mr. Ling, I have only one criticism to make, and that is with regard to his advice to leave the ridge in the event of a thunderstorm. Once I was on the Matterhorn when a thunderstorm came on as we were on the top. It came up the Italian side, and we could not do otherwise than stick to the ridge. I am not at all sure that we were not safer on the ridge, because during the storm enormous masses of rock were broken off and thundered down on all sides. I think that our risk of being hit by stones was greater had we ventured away from the ridge than our risk of being struck by lightning while remaining there.

(1) Mr. M. N. CLARKE said: One point I should like to touch upon which has not been mentioned by either of the openers, and that is as to the ideal number of people on the rope. I rather hesitate to express an opinion, but I think the ideal number is three on rock or four on snow. If there are more than three on rock the party tends to be rather large. But I have seen just a couple of amateurs on the rope, or one amateur and one guide, and I think that is wrong. I was on the Matterhorn in 1926 when a couple of young Swiss were killed. They had come up the Z'mutt ridge of the Matterhorn and were descending the ordinary way. Both of them were exceedingly

tired, and one of them slipped and dragged the other down. I think that if there had been three on the rope that accident would never have occurred, as the third climber would have held the second, and the second would have held the first, at any rate until help arrived.

Then there is another point with regard to waiting for the snow to settle. The average Swiss season is two fine days and then a break, and if you start on the first fine day you know with absolute certainty that you will be able to do your climb on the second fine day. I know that I should never have done Monte Rosa⁵ had I not followed that principle. Of course, there are deplorable exceptions, like last summer, which could hardly be called a summer at all. Naturally, you have to choose your climb.

(2) Dr. T. G. LONGSTAFF said: I think it is very hard to lay down anything like rules about climbing—rules as to avoiding dangers, rules as to what is justifiable and what is not. But to my mind you cannot say that any mountain or any route up it is unjustifiable. Of course, if even the most experienced of us is careless he may come to disaster. But the thing is that every climb depends on its conditions. Equally I do not know any mountain that cannot be unsafe. I was on Mt. Avril last summer with a member of this Club, who is also a member of the Climbers' Club, and the mountain proved extremely dangerous. It is a mountain that normally one can ride up on a mule, but the quantity and character of the snow made it dangerous. I do not think, therefore, that it can be said that any mountain is safe or unsafe *qua* mountain. It depends upon the condition of the mountain.

I will confine myself to one example. Many years ago, in the last century, when we used to climb, we followed Conway's Zermatt Pocket Book, and there it was written that the E. face of the Dom was a dangerous climb. This view was taken because the face had been climbed very few times, and on those occasions fine weather was chosen, when all the snow had gone, so that the mountain rained stones. I went with a guide who had never seen the mountain, and we had the luck to have a pretty heavy snowfall previous to our climb, and, going up after two days, we never saw a stone fall. The N. face of the Matterhorn is probably much safer with snow on it.

The other great consideration is the party itself. It is not the climb which is unjustifiable, but it may well be an ill-chosen and ill-assorted party. The first thing is really for a climber to learn his own powers, not merely his mastery of the technical question of climbing, but his power to stand exposure to cold and bad weather, which is just as important. The very sad death of a young member on the last Oxford Expedition to Behring Straits was due to the fact that the young fellow did not know that he could not stand a blizzard.

The second most important thing for a climber to learn is when

⁵ But Monte Rosa can be climbed in almost any condition of the mountain.—*Editor*.

to turn back. It is much better to turn back too soon than too late. I should also like to qualify what has been said about guides. I think there are very few first-rate guides indeed. I think, also, that the first-rate guide is always better than the first-rate amateur, just as any boxer will tell you that a good big 'un is always better than a good little 'un. But there are very few first-rate guides.⁶ The majority of the guides, I think, in the Alps are not good, and there are a very large number of very bad guides and very bad porters.

To get back to the subject of accidents, which I meant to talk about, I have had considerable experience of these. I remember falling off the Naso on the Lyskamm, and I also fell off the top of the 'Moine' ridge of the Aiguille Verte, and both those instances furnish very good points for my little 'sermon.' My moral is that it depends on the party. You want to be very careful with whom you climb. In that first fall I was with Rolleston and Cajrati, and they never knew that I had fallen off. That is the sort of party you want to climb with! On the second occasion we were doing a horizontal traverse on a corniced ice ridge that interrupts the rocks—about 130 yards of traverse—and we could not get on to the ridge because there was a corniche there. We were descending. The leading professional, who was extremely bad, tumbled over backwards and went down the slope, and when he came under me, I followed him. The last man, however, fell over on the other side, and so it did not matter. Again, as I say, that is the sort of chap you want to climb with!

(3) Mr. H. S. BULLOCK said: May I bear out Dr. Longstaff's contention that 'it all depends'? I was climbing for a very short time with Dr. Longstaff alone. I was a little bit more experienced on snow and ice than he, and he a great deal more experienced on rock than I. Everything I attempted when I was leading he said was totally unjustifiable, and everything he attempted when he was leading I also said was totally unjustifiable! So that it is the personal element that comes in and dominates the situation.

Another point is the importance of food, which has not been referred to. On one important occasion my mother sent me off with what she took to be brandy for use in case of emergency. I felt extremely sick on the mountain and took a great gulp of it, only to find that it was strong methylated spirit!

One other episode. I was on the top of Eigerjoch when three storms seemed to have met. What should I have done in these circumstances? Mr. Weston was leading, a chamois-hunter came second, and he was clasping a great rock and said that he was never going to move again; I was third, and my hair was standing on end. We should not have taken a chamois-hunter with us who was afraid of a thunderstorm. But I can give you one piece of advice as to the

⁶ In our opinion the present total of first-class—*Swiss*—guides is higher than at any previous time.—*Editor*.

right treatment of a chamois-hunter in such circumstances, namely, to swear at him in Japanese !

(4) Mr. E. S. HERBERT said : One thing touched upon by Dr. Wilson in his paper is, I think, a very fruitful cause of accidents, namely, the use of crampons. On slopes where one ought to cut steps, a very large number of the accidents are due to a perfect mania for using crampons under conditions which are unsuitable for them. In good conditions crampons are very useful indeed, but in anything like soft snow, whether there is ice underneath it or not, they are simply death-traps. Crampons are much worse than the ordinary sole of a nailed boot. A very large number of accidents which happen on descents are due to the use of crampons. It is an awful nuisance to keep putting them on and taking them off again on a mountain, and therefore people tend to keep them on much too long, when conditions are quite unsuitable for their use. In descending, I personally always feel that my heels are going to go up, but the mere fact of having crampons on the feet gives to many people a false sense of security. If they had boots on they would be going carefully and with the usual precautions. Crampons tend to make people fail to exercise the necessary care. I can think of several accidents which I am sure must have been due to the use of crampons under entirely unsuitable conditions. If you are cutting steps in the ordinary way it is better not to have crampons on at all, because you have to cut such big steps if you are going to use the crampons at all satisfactorily. You must have a step large enough to put your crampon down flat. Crampons are too much used in the Alps. Some guides are too fond of them,⁷ and the inexperienced amateur has a sort of mania for them. I feel sure that a large number of accidents which take place to guideless parties in these days are due to crampons either being used for too long under good conditions, or being used when they ought not to be employed at all.

(5) Mr. G. A. SOLLY said : I was hoping when Mr. Ling opened this discussion that he would tell us the truth, the whole truth and nothing but the truth. I think that most of the speakers have told us nearly the whole truth, but if we could get the absolute truth and experience of everybody here we should have a most interesting discussion.

I should like to mention two occasions on which I have been hit by a stone on the mountain-side. One was in my earliest days, before I was a member of this Club. We were crossing the couloir below the gap on the Zinal-Rothhorn, when a number of little stones came down. We had three guides and there were two climbers. Everybody on each side of me went for safety, but I had a taut rope on both

⁷ The majority of latter-day Chamonix professionals are poor step-cutters, hence their need of 'artificial aids.' The 'modern' amateur, bereft of his spikes, is often helpless on an ordinary snow slope. See *La Montagne*, 1932, pp. 147-56.—*Editor*.

sides of me in the middle of the couloir! It was a small stone which hit me, but I had a bruise on my knee for a week. The other was more serious, and presented an occasion when it was more difficult to make a decision. It was something like ten years ago when we were on the Col des Maisons Blanches; this is now a horrible place, and most climbers take another pass to the south side of it. We were going down from the side of a glacier, and there was a considerable patch of good, deep snow about two yards from the edge of the glacier. After thinking the matter over and looking at the situation, I saw that it would be much quicker if we could go down it; there were no marks of any recent stonefalls on it, and during the half-hour we had been there no stones had fallen. I decided, therefore, to go down. It so happened that there was a serious stonefall during the descent. The stone hit me and hurt me, but I could walk. We got back to shelter, and after that some frightful stones came down. Yet there had been no stones at all for half an hour before and no trace of any for the previous week or so. It is very difficult to judge whether it is better to take a certain slight risk for a shorter time or a still smaller risk for a longer time. It must depend on individual judgment. It turned out badly in my own case, but then you must judge by your own experience. It is a sort of danger which is almost unavoidable.

There has been a great deal of talk about the dangers of lightning. In my earlier days I had a lot of experience in that respect. On one occasion it involved a night out on the Dent Blanche. That was forty years ago, and the episode is recorded in our JOURNAL.⁸ I had a talk about that time with Mr. John Hopkinson, then a leading electrical engineer, and he came to the conclusion that our safety in part was due to the fact that we had wet clothing. Lightning takes the easiest way it can get, and if the clothing is wet it will go down the clothing in preference to going through the body. That is a theory which on that occasion seemed to be borne out. Mr. Haskett-Smith, who is with us to-night, on that very day was burned three quarters of the way round his neck. It may be that the burning—or at least the discolouration—did not go entirely round the neck, and, therefore, did not cause his death or serious injury, because in some way the lightning took a path through his clothing, which was wet.⁹ I think that is probably the explanation.

Another time I was in a very bad lightning storm in the Caucasus. We were on the ridge, and we got some sort of shelter. But Mr. Woolley, who, incidentally, was more bald than I, declared that his hair was made to stand on end by the lightning to such an extent that it lifted up his cap! That storm came on us unawares when we were 15,000 ft. up, and we had to wait for a couple of hours, and did not get down that night. I think we must take it that the risk of

⁸ *Loc. cit.* 15, 404–17.

⁹ Cf. *A.J.* 38, 97; 42, 139 and footnote 4.

lightning in a case like that is unavoidable. It is one of the risks which has to be taken, though I do not know that it really means very much danger.

The question of two or three or four on the rope has been brought forward. I think one ought to go three, if the climb takes one any distance from the base, and if it is a big mountain. If there are three, and an accident occurs to one of them, at any rate one of the others can go down for help, whereas if there are two the other does not like to leave an injured man alone. I may mention this, that once myself, and once a lady of the party, going over a queer place, had to call out to the others, 'Look out! I am falling,' and in that case everybody was absolutely ready, and it did not matter the least bit. The mere crossing of a slippery or dangerous place if the rest of the party are ready and are warned is a reasonable risk to run. It is when people are not ready, and a man goes down, that it is a very dangerous thing. Someone has said that it is all right if the third is safe. I think it is a difficult thing for the third to hold two. If the second is safe coming down he can hold one, but I am not sure that in such a case as that the third could hold the two if they both went.¹⁰ In really dangerous terrain you want them all safe.

(6) Lt.-Col. J. D. HILLS said: May I say how much I appreciate the honour of having been invited here to-night as representing one of the kindred clubs, and I am sure there is nothing sinister in the fact that the first paper to which the kindred clubs have been invited—or at least I myself have been invited—is on the subject of 'Accidents'! I should like to say two things. First of all, I should like to put in a plea for the keen young climber who has only practised on English rocks. I do not think that statistics will show that very many accidents—in fact, more than a small percentage of the accidents—have been caused by keen young English rock-climbers not obeying the rules. We are dealing with a large number of accidents which have not befallen Englishmen at all, and I do not think that any resolution we might pass here to-night would have any effect in that respect.

With regard to one accident mentioned on the Aiguilles Rouges, the newspaper accounts were wrong. No food was successfully dropped from an aeroplane—the basket must have gone some distance away. Further, the rescue party did not start because of a local quarrel between the two hotels!

(7) Col. E. O'BRIEN said: I should like to have heard a great deal more about this question of two on a rope, particularly in rock-climbing. It strikes me, looking back over a series of years in the Swiss Alps, that this system of two on a rope has extended very much recently, and one notices it particularly in Zermatt, on the Matterhorn, and other rocky peaks there, when one constantly sees totally inexperienced climbers being taken up mountains like the

¹⁰ See, however, *A.J.* 25, 4; 31, 261; and especially 40, 309-10.

Matterhorn and the Weisshorn by a single guide. The only time I have been up the Matterhorn by the ordinary route there were two climbers, each of whom had a guide, and in each case there were two on the rope. It happened to be a particularly fine day, the mountain was in good condition, and there did not seem to be much risk; but I have been in other situations where there have been two on the rope with a guide, and felt extremely helpless. At one step on the Matterhorn, where I was in a perfectly secure position, the guide who was climbing that step had extraordinary difficulty in getting up it, and certainly, if he had come off, I could not possibly have held him. I should like to know, further, supposing the leader does fall off, either through a hold breaking away or possibly through getting into an impossible situation, whether there is any possibility of the second man holding him even with a belay, if the latter is 30 or 40 ft. below.¹¹ I should like to have heard more this evening about that aspect of the matter.

I might just mention, in connection with crampons, that I had a curious experience in crossing the Crast' Agüzza with two Engadine guides. Both the guides retained their crampons on the rocks as well as on the snow, and I certainly felt a considerable sense of insecurity in crossing some of the slabs on that ascent.

(8) Mr. E. H. F. BRADBY said: One point not mentioned is the psychological element. The justifiability of a thing to a great extent depends upon the attitude of mind with which it is approached. As to whether a man is justified in risking his life or not is a very difficult problem on which a great deal could be said on both sides. But it seems to me that there is another question which arises here, namely, that a man may think he is justified in risking his life, and may ask what it has to do with anyone else, but if he joins the climbing fraternity he ought to have enough consideration not to do anything which brings mountaineering into disrepute. Of course, there is another side to that. Two young men may go on a very dangerous face, which they know to be dangerous, and then comes the question that, if anything goes wrong, they will require assistance. Is it right that they should risk other people's lives in order to render them assistance? I do not think it is. They may say, 'Well, we did not expect them to render assistance,' but then the ordinary and proper tradition of mountaineering is that if anyone is in any difficulty others are bound to go to his assistance. Therefore one may, by one's own carelessness, or otherwise, risk other people's lives. That is an important point.¹²

The other thing that occurred to me is that, really, many of these accidents arise through a spirit of competition. There seems to be

¹¹ This is, of course, the *tendo Achillis* of mountaineering. The last man on the rope can generally be safeguarded in the descent, not so the leader in the ascent, save in exceptional instances.—*Editor*.

¹² Cf. *A.J.* 43, 400-3.

a great deal of competition in climbing now, which must be a bad thing. Climbing is an amusement. I often wonder whether those people who really do dangerous climbs would have done them had they not been published and no one knew anything about them.¹³ When I say dangerous I do not mean the mountain that is very difficult technically, because a competent party can always or very nearly always overcome difficulties, but I mean the mountain which is dangerous from falling stones and falling ice, which no skill can avoid, and where really it is purely luck whether you go through or not. I think that such desire for publicity may be a very fruitful cause of accidents. Another thing which appears to me is that, of course, one has to consider in going on a dangerous face that one's example may lead other people to do likewise.

(9) Mr. P. J. H. UNNA said: Reference has been made to the great number of accidents at the present day, but I hope the inference will not be drawn that the young climber of the present day is, therefore, more incompetent or reckless than his predecessors.¹⁴ The fact is that where one climb was done fifty years ago now ten or twenty climbs are done, and I do not believe, if the percentage is taken, the incidence of accidents is any higher than it was fifty years ago.

(10) Mr. T. S. BLAKENEY said: On the question of the number on the rope, there seems to be rather a divergence between precept and example. Opinion seems to be in favour of more than two on the rope, but the example of one's fathers before us appears to be in favour of two. Dr. Longstaff climbed very successfully in many places with only two on the rope, and he has shown that it would have been better if there had been only two in other situations. On the S. face of Mont Blanc a good many climbers have gone only two on the rope. I think it is Walter Larden who, in his book, mentions that when it comes to the leading man falling, it really depends on the next man whether he is going to be saved, not on the third or fourth man. If the second man does not save him probably the party is going to be carried down, because it is extremely difficult for the third man to hold two.

Mention was made by one speaker of ascents of the Matterhorn by one incompetent amateur with apparently one incompetent guide. Perhaps the cause of this practice in this post-war period is the rather extortionate charges for guides. It is an expensive matter to take two guides. For many people who go to Switzerland it is as much as they can do to afford one guide, and either they must give up mountaineering altogether or go with one guide. Nowadays many Continental climbers cannot afford the expense of guides at all. That ought to be taken into consideration.

¹³ Cf. *A.J.* 43, 400-3.

¹⁴ Mr. Unna is probably referring chiefly to the British contingent, but speaking generally, whatever his incompetence may be, there is no question of the young climber's increased recklessness.—*Editor.*

Dr. WILSON sums up as follows :¹⁵

On the invitation of the Editor, I have undertaken, after reading the draft of the discussion, to briefly sum up, comment on, and reply to any matters that occur to me. I make a selection :

On three points there would seem to be very general agreement—(1) that competition and the publicity attaching thereto should be condemned *universally*; (2) the misuse of crampons is a fertile source of mishap; and (3) it is agreed that it is wise to turn back too soon rather than too late.

On many questions individual points have been raised by one speaker or another. Mr. Unna's belief that the percentage of accidents has not increased since the early days when climbers were counted by dozens as now by hundreds is interesting and perhaps debatable. That needless risks are now increasingly incurred will, I think, be generally agreed to; but that young British climbers have had much to do with the increasing mortality is, as Colonel Hills suggests, by no means proven.

I was much interested in Mr. John Hopkinson's pronouncement, quoted by Mr. Solly, that lightning will find earth through wet clothes rather than through the body. This may well be so; and if Mr. Haskett-Smith had turned down the brim of his hat over his neck he might have escaped the burn. The point is one of practical importance. Dr. Longstaff thinks that there are a lot of really bad guides, a view with which I find myself in general agreement, while also concurring with Colonel Strutt that there are now more first-rate guides than there ever were. Perhaps there may be fifty who will be at home among the mountains the world over: but this is a drop in the bucket out of the hundreds of local guides who seldom move out of their own valley. The bulk of these are reliable men and their intimate knowledge of local paths and routes is very valuable, but some of them are only capable of leading on well-trodden routes which they know by heart. Those of us who have a prior call upon the cream seldom realize the poor chance that a tyro has of securing the services of a first-rate guide. I have been with a few really bad guides and I fear them: though on the ordinary ways up their local mountains in fine weather even they are all right, and, after all, that is all that nine out of ten of their employers require.

Dr. Longstaff's experiences are full of interest and of warning, and some of his conclusions must commend themselves to all. But when he says that no route up any mountain is inherently unjustifiable I join issue. I think one could make a bee-line up the Wetterhorn immediately below the menacing overhang of the Hühnergutz Glacier. Routes have been made on other mountains almost as mad, and some have been successful, but not in my view justifiable, however perfect the conditions. Again, that every climb depends

¹⁵ Owing to want of time, Dr. Wilson was unable to reply at the meeting.—*Editor*.

on the conditions is, of course, a truism : but a knowledge of the principles of mountaineering does not evade the questions of fog, storm or fresh snow. As to the last much depends on whether two inches or two feet have fallen, and whether it is followed by a N. wind or by Föhn. New snow two days after a heavy fall may make the E. face of the Dom easier and safer in the early morning. But in the afternoon it will bring down stones on steep rocks, while the dangers of avalanches and crevasses may for some days put many snow climbs out of bounds. 'Rules' in sports can never be hard and fast as in games, but a knowledge of general principles will dictate the proper course in any given case.

The question that has evoked the largest number of comments in the discussion refers to the constitution of the party, and more especially to the problem of 'two on a rope.' Mr. Blakeney has pointed out that some of the finest expeditions in the Alps and in the Caucasus have been made by parties of two, and certainly on any expedition anywhere two first-rate men are ideal, provided nothing serious goes wrong. Further, on the ordinary routes in frequented districts, the local guides know every step and every crevasse, and other parties are generally within call. In the Eastern Alps, the Ortler for instance, the rule has always been 'one guide, one tourist'; and it is not surprising that the system has extended to Zermatt and other districts. The mishaps attributable to this source are, I think, not numerous, and C. E. Mathews' classic words 'Whatever number is right, two is unquestionably wrong,'¹⁶ are no longer regarded as a canon.

But the question of the constitution of a climbing party is one which lends itself to thoughtful speculation. That three, or four, good men make, generally speaking, the safest party will be conceded; as also Dr. Longstaff's dictum, 'You can't be too careful whom you climb with'—provided you are thinking only of yourself. For serious climbs 'Be one of a strong party.' But how about taking out beginners? My own party's rule, when we relaxed, used to be 'one beginner between two safe men' on anything more than a glacier picnic: and I have seen many incidents and known of others which point to the wisdom of some such rule.

The education of the tyro is involved in these considerations. He too should be careful as to whom he climbs with. If his companions are experienced amateurs he will naturally trust them not to lead him into avoidable danger: and most of us realize our responsibility in this matter. If, however, a beginner is thrown on his own resources he will be wise to seek advice before engaging a guide or guides. If he can afford two decent guides he will be safe: with *one* he *may* be. If he can find a friend or make friends with another beginner and so form a party of four (with two guides) the best education will be secured at the cost of one guide apiece.

¹⁶ *A.J.* 11, 81.

The question of instructional groups or 'classes' is one to which the S.A.C. has devoted much thought and substantial backing, and some of the very best guides are engaged to train the beginner. What proportion of young members take advantage of this opportunity I do not know: but I fear it is a small one. Our own compatriots are doing somewhat similar work. In all such enterprises, instruction in sound principles and safe technique are obviously the first lessons to be taught and learned. Christian Klucker was one of the guides who was annually secured by the S.A.C. for these classes; and no one impressed more emphatically than he did, both in precept and example, the lessons that the mountains have to teach. Those who learned from him will not belittle the dangers of the mountains, nor the joy of climbing; and if they follow up the lessons learned from him they will make the finest expeditions with a minimum of accidents.

THE PRESIDENT: I am sure we are very much obliged to Mr. Ling and Dr. Wilson for initiating this discussion. There are only two things I should like to say. In my experience I can endorse what Dr. Longstaff has said about the composition of the party, and that it should be homogeneous. I think a party should consist more or less of people of the same calibre. I had a very serious experience myself pointing in that way, on a mountain in Dauphiné. When we came up the final ridge we found a Frenchman and his guide. They were incapable of going on and they asked to be tied on to us. That was done, but they nearly killed us. It was a good lesson to the effect that one ought not to take on casual people in that way.

I am sure you will join with me in giving to Mr. Ling and Dr. Wilson a hearty vote of thanks.

The vote of thanks was accorded by acclamation, and the meeting terminated.

SOME REFLEXIONS ON THE EDUCATION OF THE MOUNTAINEER AND ITS BEARING ON ACCIDENTS.¹⁷

BY DOUGLAS L. BUSK.

BEFORE embarking on the subject of accidents the limitations of this paper must be made clear. In common with deep-sea yachting, mountaineering is a sport and not a game, it is an art and not a science. Unlike a game mountaineering has no hard and fast rules, and unlike a science it is concerned with no rigid mathematical laws, except perhaps the law of gravity. But if there are no rules there are instead certain precepts

¹⁷ This paper represents the views of a young mountaineer.—*Editor.*

that one does well not to ignore. Even these, however, are extremely elastic and one is beset with great difficulties if one attempts to commit them to paper. The resulting thesis is, moreover, likely to defeat its own ends by being too dogmatic, for in mountaineering, as in every other form of human endeavour, circumstances alter cases. Sometimes, of course, it is possible to lay down a definite law—that the rope should be worn on snow-covered glaciers, for instance—but usually the personal element, which is quite incalculable, enters in to such an extent that it is out of the question to be precise. Who for instance would be bold enough to say definitely that—well, that the knee should not be used in rock-climbing, for example; ‘it all depends.’

So it is with this paper. Various precepts are here outlined, but they must in the nature of things be generalizations from the particular, and, as we know, ‘all generalizations are false including this one.’ This paper must not, then, be regarded as an overweening attempt to codify mountaineering law in regard to accidents. It should rather be considered as a basis of discussion, the fulminate, if you will, that is to set off the dynamite of debate.

One further point should be noted: it may well be complained that this paper is nothing but a clumsy collection of truisms. The only defence, and this is fairly adequate, is that truisms have a remarkable faculty for being overlooked.

So much by way of introduction.

No discussion on the subject of accidents can be complete unless it takes into account the three aspects of the question. First, what are the dangers of the mountains; secondly, in the event of an accident occurring what is the party to do; thirdly, how can the mountaineer so learn his craft as best to avoid the inevitable dangers of the sport? The first subdivision is familiar to everyone. We all know that avalanches and falling stones are dangerous, and those interested in questions of incidence and mortality can best be referred to the annual review in the pages of the D. & Oe. A.-V. *Mitteilungen*, where the morbid will find enough figures to make them thrill agreeably with horror. The second aspect of the problem is largely technical, depending as it does on medical knowledge. Common sense also enters into it, of course, but in the main no discussion on the procedure to be followed if an accident occurs can be as profitable as an hour spent in studying a couple of good mountaineering and medical text-books. The third sub-

division is by far the most important—how are we to acquire the skill and knowledge to avoid accidents? It is on this basis that this paper has been written.

Accidents, according to all the best authorities, are either objective or subjective. The former are caused by things that hit you (such as stones, avalanches, or—your leader's ice axe), or by things that give way under you (here one may instance snow bridges and bad rock), or finally by bad weather. Subjective accidents, on the other hand, are caused by poor physical condition, lack of skill, or insufficient equipment.

Having thus arbitrarily divided accidents into two categories, it remains to show that these two main species are really intermingled and indistinguishable. Lack of skill, for instance, is at the back of most objective accidents. The things that hit you, except perhaps the aforesaid ice axe, and the things that give way under you can to some extent be avoided by starting at the right time, while the effects of bad weather can be mitigated by diligent study of the barometer and above all by knowing when to turn back. The question of a reserve of power in the party, which may be considered subjective, also arises in the case of bad weather.

It is thus fairly clear that it is difficult and even unprofitable to attempt to divide accidents into watertight compartments. All that can safely be said is that there are parties who, after their fashion, have accidents, and others who, after theirs, do not. How then is the mountaineer to avoid the dangers that threaten him? By increasing his skill he will clearly reduce them to a minimum; but this is no answer. How is he to improve his mountaineering? That, it is submitted, is the kernel of the problem.

Let us take an imaginary climber, an absolute novice for choice; how is his climbing education best effected?

There are two rival theories that are sufficiently important to merit considerable study: one view often put forward is that the only way to learn to climb soundly is behind a first-class guide. There are various obvious advantages to this theory: our novice will see perfect technique; he will, perhaps, have more chance of being successful in his climbs; he will run the minimum risk; he will do what one may call bigger and better climbs, if this is an advantage, for if he attempts the great peaks immediately he may be so much out of his depth that he will be unable to appreciate either his mountain, or the skill required to conquer it. There are, on the other hand, manifold disadvantages to this method: few guides are

good teachers, you must watch for yourself without being prompted, in a word you see the how but not the why ; the minimized risk may be a disadvantage, since, unless told, our novice may not realize that there is any risk at all ; the beginner will learn nothing about an oft-neglected and very important branch of mountaineering, rope-management, since the guide will do it all ; climbing with a good guide may lead a man to overestimate his powers, both moral and physical ; finally, there are the two slighter disadvantages that our novice runs the risk of being hurried over his climbs and that he may encounter difficulties owing to his inability to understand the uncouth dialect affected by his bear-leader. Nowadays, however, almost all guides speak some English.¹⁸

So much for guides.

Another body of opinion holds that the beginner should start his climbing career with experienced amateurs. The advantages of this method are : our novice is taught to pull his weight in the team from the very outset, and since in their day his mentors have experienced the same troubles, they are better able to appreciate and therefore to allow for them than is a guide ; the essential point is, however, that the beginner learns not only how things are done but why they are done.

There are, of course, some disadvantages to this method : even if our novice climbs on a rope composed solely of presidents and ex-presidents of the Alpine Club things are probably not quite as well done as they would be if he climbed with guides, the risks are perhaps greater, the enjoyment of the climbs may be partly spoilt by what are known transatlantically as 'chores' (the little cares and duties of hut life), there may be a higher percentage of 'failures' : this is two-edged, a temperamental beginner may be very disappointed over an unsuccessful attempt ; another, mentally sturdier, may realize that as much enjoyment and knowledge can be derived from a 'failure' as from a 'success' ; finally, and this is rather vital, one must not forget the lack of suitable amateurs who are prepared to give up their time and harrow mind and body in setting the feet of our novice on the proper path. Many beginners have had the good fortune to benefit from the advice and skill of older climbers, and I feel I can speak for all the younger members of this Club when I say that we will always remember those of an earlier generation who helped us on our first ventures

¹⁸ While a few English know something of a foreign tongue !—
Editor.

among the great hills ; their skill ¹⁹ may be open to question, but their enthusiasm for the mountains and their appreciation of youth are not ; we will not lightly forget them.

These, then, are the two rival theories ; what conclusions can we draw from them ? Obviously the best method of effecting a sound mountaineering education and thus avoiding accidents is a combination of the two. Our novice should begin between a first-class guide and an experienced amateur. The former would show *how* things ought to be done, while the latter would explain *why* they were done. This is, however, beyond the dreams of most ; first-class guides are rare ²⁰ and dear ; experienced and complaisant amateurs grow not on every peak ; the combination is almost unthinkable, and in these hard times our novice would be lucky to have *one*, almost indecently fortunate to have both. It is thus evident that it is not easy to begin climbing in the right way and most beginners are forced to make a choice.

Our novice may, of course, have already begun his climbing career in the British Isles, where, even if he has done no more, he will at least have learnt the first principles of balance in rock-climbing and have obtained confidence in bad weather. He will also have acquired some skill in handling a rope in interrupted climbing, which will be a basis for the far more difficult art of rope-management in continuous climbing of the type encountered in the Alps. An Alpine novice with some experience of British rocks has thus an initial advantage that will stand him in very good stead when he reaches Switzerland, but, whether the beginner has climbed in England or not, the question still arises as to how he can best begin his *Alpine* education.

Initially (*i.e.* for his first season or at least for the first few weeks), it would seem better for our novice to climb with amateurs, so long as they are sufficiently experienced for the climbs undertaken. Following this method valuable work has been done since the war by the Oxford and Cambridge Mountaineering Clubs and by the Climbers' Club, who meet year by year in the Alps and who in a modest way and usually in the most modest of districts turn out real mountaineers—future grist for the A.C. mill.

Once the feet of our anonymous beginner have been placed on the right path by our experienced and equally nameless

¹⁹ Cf. p. 32.—*Editor.*

²⁰ Cf. p. 34, footnote No. 6.—*Editor.*

amateur, he will do well, if he can afford it, to engage a good guide for a season or part thereof. By now he will at least have learnt what to look out for and will be in an infinitely better position to appreciate the superior skill of the guide and the bigger climbs he will no doubt do.

While we are still discussing our novice let us not forget one further point : it is essential if he is ever to become a sound mountaineer that he should learn to lead early. Naturally his first efforts at the business end of the rope should be confined to the easiest of 'cow' peaks, with, moreover, a better man behind him, but nevertheless he must lead from the outset if he is ever to amount to anything. In this connection it is perhaps worth pointing out that it is hardly fair to the average guide to expect him to allow his 'Herr' to lead. Personally, I am fortunate ; my favourite guide lets me lead when I feel like it, that perhaps is why he is my favourite guide, but I count myself unduly lucky and am careful never to abuse the privilege.

Meanwhile our novice should not neglect mountaineering literature. It is impossible to overestimate the value of the knowledge that can be derived from our late President's work or a book like Geoffrey Young's *Mountain Craft*, and, while few will attempt to rival Captain Farrar's encyclopædic knowledge of climbs past, present and possible, any beginner will do well to make himself familiar with the great climbs of the past as told in the 'A.J.' in 'Peaks, Passes, and Glaciers' and in other classics.

Having gone through this period of training for three seasons or so our novice may now be considered a medium climber. Accidents, however, are no respecters of persons and also happen to this class of climber. We must therefore continue our discussion and endeavour to decide how the moderate mountaineer may best avoid the dangers inherent in our sport.

Our anonymous hero will now be climbing either with guides or without. In the former case his task is simplified since there will be much that he can leave to the professional, indeed he runs the risk of becoming merely a passenger. This is no mean danger, for a passenger may rapidly grow careless and trust to his guide even more than is wise. If the climbs undertaken are in the guide's own district, there will obviously be little need for the amateur to do any reconnoitring, but if the guide is in a region strange to him his 'Monsieur' should help. There are maps and guide-books to be read, and our climber should not hesitate to make use of the knowledge he has gaine

as a result of his own experience. His prognostications may at first be wrong, indeed they probably will be, but at least he will have attempted a little constructive thought and will run no risk of mental atrophy. Co-operation between guide and amateur may sometimes be rendered difficult by the language question already mentioned, but the amateur should nevertheless attempt it from the beginning. There are moreover occasions when the disparity between guide and amateur is evened out. In mist or fog, for instance, the amateur must pull his weight. He may be leading downhill and it will be up to him to do his share of route-finding. Especially true is this when map or compass work is required, for to many guides, particularly the older ones, this branch of mountaineering holds all the esoteric secrets of the Eleusinian mysteries.

Our hero may, on the other hand, be climbing guideless. In this case the responsibility is his alone and he should not forget it. There is one cardinal rule for guideless mountaineers. It is this: a guideless rope should only attempt climbs very considerably easier than those they would be prepared to undertake with professional assistance, and even for these they should allow much longer times. If our climber is to follow this rule it is clear that he must have no false idea of his own capabilities, so the second rule of guideless mountaineering is one of the oldest in the world, 'know thyself.' Every mountaineer should appreciate the fluctuations in what Geoffrey Young has called his 'standard of the day'; for if a man does not know and is not prepared to face his own limitations, if he does not understand the difference between the moral and physical support of the rope, he is little short of a public menace. Self-deception is very easy; it is sometimes difficult after one has climbed the 'Mummery' crack behind a good guide to persuade oneself that one could not have led it, and there are many who do not realize that one must be able, on an exacting ascent, to climb as safely for the last four hours as for the first. In this connection the importance of adequate physical training for the peak undertaken may again be emphasized.

So much for what may be called the moral obligations of the guideless climber. There are, however, other factors.

Equipment is, for instance, a serious responsibility in a guideless party, for the professional is likely to know far better than the amateur what will be required for any particular peak. Crampons, which incidentally should never be used by a novice for at least his first season, provide a good example of this;

even after having read the guide-book it is sometimes difficult to know whether crampons will be worth their weight. On the principle of never being caught bending some folk carry crampons up many thousand useless feet; other parties, no doubt, go to the opposite extreme and do not take them on climbs where they would be of immense value. The equipment question is, too, all the more important in that weight is a great consideration for guideless parties.

All members of a guideless rope have a duty as regards reconnaissance. This term is used in its broadest sense to include reading up the guide-book and map, discussion with local wiseacres (of whose advice it is, however, as well to be wary), about conditions at the moment, etc. Even when one has reached the hut, reconnoitring continues; there is the path, which will be followed by lantern, to be explored, and times to be worked out with a large margin. Times should, moreover, be watched carefully during the climb.

As regards weather; well, we can all tap a barometer and this is a duty we should never ignore. There is much also to be learned from the wind and other guides to local weather conditions. Here again, reference should be made to the text-books. Once embarked on the climb a very important question arises if the weather becomes threatening. So much depends in this case on the strength of the party that it is dangerous to generalize, but on the whole it may be said that in the case of divided opinion the safer course should be followed, *i.e.* the party should not be afraid to admit 'defeat.' There are few things more disappointing than to turn back and later to see the weather clear. One feels, perhaps, that a little more courage would have won the peak and all the keen regrets of lost opportunity throng the mind, but to the sound mountaineer every such rebuff is a valuable lesson from which experience can be gained.

These then are some of the responsibilities of the moderate mountaineer whether guided or guideless. The main consideration that emerges is that the party led by a professional *need* not but *may* be a team; the guideless rope, if it is to climb safely, *must* be a team.

We have now followed our mountaineer through his career from the novice to the intermediate stage. If he survives thus far there is hope that one day he will become an expert. There, however, one must come to an unhesitating stop. *Ex hypothesi* the expert is able to judge conditions for himself, probably (and not unnaturally) he is set in his ways and it would be

presumption to instruct him. In any case there is no conceivable reason why he should pay any attention to this paper.

We may now proceed to examine the conclusions that can be drawn from the foregoing pages.

To the main question as to what risks are justifiable and what are not, it is extremely difficult to find an answer. The problem is one for each party to settle for themselves, but this must not be taken to mean that the climber need not investigate thoroughly the dangers he may run on any particular climb. I would like, moreover, while we are discussing the question of risks, to quote a passage from the *Guide des Alpes Valaisannes*; of a certain climb it is written: 'Il est immoral de recourir à des professionnels pour suivre cet itinéraire.'²¹ In plain English this means that some climbs are so dangerous that, while the mountaineer is entitled to kill himself on them alone or, if need be, with his friends, he should not involve some innocent peasant in his downfall. It is hardly necessary to labour this point.

Though the question of risks whether justifiable or otherwise has been thus briefly dismissed, we can agree when discussing accidents in detail that there are certain factors that enable the climber to avoid them. The first is a sound mountaineering education on the lines already sketched out; the second is professional assistance, or, of course, the two may be combined. None of these, however, constitute a complete guarantee that no accident will befall the party, but at least if anything untoward does occur it is usually an accident in the true sense of the word, an unforeseeable catastrophe. Moreover, if the rules mentioned above have been followed the party will certainly know far better how to deal with the situation. As has already been said, it is not here proposed to examine what should be done in the event of an accident; full details of the correct procedure can be found in any mountaineering text-book. This paper is designed to deal mainly with matters not included in the text-books.

For this reason no apology is made for returning to the question of the two main divisions of climbing—guided and guideless. It would be a mistake to imply that either method must necessarily be better or safer than the other. Rigid adherence to the view that guided climbing is the only sound and therefore the only justifiable method is moreover bound to prevent many would-be climbers from starting at all, for it must

²¹ *Loc. cit.* ii. 280, 281; *A.J.* 41, 441.

not be forgotten that there are many who could never afford professional assistance. As well say that it is no use trying to learn to drive a car unless one has a Rolls-Royce. Leaving finance apart, however, in the general question as to whether guideless climbing is justifiable, the personal element again enters in to such an extent that it is impossible to generalize. There are some who without guides would never have skill to climb anything more complicated than the Riffelhorn and whose love for the hills is nevertheless as strong as any man's; others who prefer to avoid the minor discomforts incidental to guideless climbing by relying on professional assistance. On the other hand there are many who believe, as our late President remarked at a recent meeting of the Club, that adventure is not incompatible with safety first! They prefer, if one may use a nautical metaphor, to paddle their own canoe, they enjoy the responsibilities of leadership and believe that a climb with friends, carried through by their own unaided efforts, is the greatest thing that the mountains offer to those who love them and who follow their ways.

The main conclusion one can reach is that there is no reason why guideless climbing should be more dangerous than guided, *so long as the rules of the game are observed*. The trouble is that nowadays these rules are continually broken, though perhaps not so frequently by British as by Continental climbers. This again brings out the importance of training the young idea in the way it should go. To promote Alpine climbing among young Englishmen and to keep British mountaineering free from the blemish of avoidable accidents should be the task of all of us. The number of British Alpine climbers is of necessity limited and in no way comparable with the somewhat irresponsible hordes of Continental mountaineers, and the A.C. is in a position to wield an immense influence. Co-operation and sympathy between all mountaineers are, however, a condition precedent to any success in this direction, and we must do our best to put an end to all dissension. Guided climbers are sometimes prone to express their distrust of the guideless activities of others, while guideless mountaineers have been known to show their scorn of professional assistance. So long as there exists this lack of understanding between the two groups, so long will genuine co-operation be impossible; and as one who has a foot in each camp I would like, in bringing this paper to a close, to make a plea for unity, for broad-mindedness and for sympathy with the methods and also with the circumstances of others.

Some of us climb with guides and some without ; some of us swear by tricounis and others pin their faith to crampons ; some even—and these do not perhaps always receive the recognition they deserve—mountaineer²² on ski ; but we are all united by the common love of the hills which is the *fons et origo* of our Club. The A.C. is the oldest of all Alpine clubs. It was founded by young men and it should be its proudest boast that it is the youngest in spirit.

IN THE MONT BLANC MASSIF AND THE OBERLAND.

By Miss MIRIAM E. O'BRIEN.

II.—IN THE BERNESE OBERLAND.

THE Oberland, although one of my more recent 'discoveries'—I went there for the first time in 1929—has risen rapidly to a very high place in my affection, and of the dozen climbs that I was fortunate enough to accomplish there in 1929 and 1930, the most interesting of all was the traverse of the Dreieckhörner ridge.

Dreieckhorn, S.E. and N.E. Ridges.

The S.E. ridge of the Dreieckhorn, seen from the Aletsch Glacier near the Concordia hut or from farther south, seems to bristle with innumerable spires and needles of such slenderness that one wonders how they manage to stand erect. Adolf Rubi, although he had noticed these needles when he played as a child around the hut where his father was keeper, had never been over to visit them and thought, moreover, that part of the ridge S. of the Klein Dreieckhorn had not been accomplished. In 1930, when we were looking for rocks to climb, this seemed like a splendid field for exploration.

At 03.30 on the morning of August 29, Adolf and I left the Concordia hut and descended the Gross Aletsch Glacier towards the Olmenhorn. Leaving the glacier near the *k* in 'Beim 1^{ten} Dreieck' on the Siegfried map, we continued in a general S.W. direction up grass and scree slopes, passing one band of

²² *Mountaineering* on ski has always received due recognition. See *A.J.* 21, 441-55 ; 24, 553-64 ; 34, 399-401 ; 43, 283-88.—*Editor.*