

REPORT TO THE PRESIDENT OF THE EVERGREEN STATE COLLEGE

In Sequel to the Narrative Account of the Mount Rainier
Accident of March 4th, 1979, submitted earlier:

A Review of Preparation for the Mount Rainier Climb,
Comments on the Current Outdoor Education Program at
TESC, and Observations on the Question of Risks in
Education.

Submitted June 26, 1979, by the
Accident Review Panel

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INTRODUCTION

This present report is the second half of our findings regarding the fatal accident on Mt. Rainier which took the lives of Willi Unsoeld and Janie Diepenbrock. The first half, previously submitted, gave a detailed narrative of circumstances surrounding the accident. In this second half we address questions concerning the training and preparation for the Mt. Rainier trip and go on to examine the TESC Outdoor Education Program together with the question of using risk as a pedagogical tool.

These subjects are addressed in three parts. Part I reviews the preparation for the Mt. Rainier trip, the equipment used and the organizational problems of such trips. We include in this section recommendations for the conduct of such trips in the future. Part II sets down our impressions of the Outdoor Education Program as presently constituted at TESC and offers suggestions for its future improvement. Part III examines the questions of risks involved in such programs which have been raised in consequence of the accident on Mt. Rainier.

PART I PREPARATION FOR THE WINTER ASCENT OF MT. RAINIER

On balance, the student's training and preparation for the climax of the Mountain Habitat winter quarter schedule, the winter ascent of Mt. Rainier, was adequate and successful. We say this based on the spectacular test the students faced during and after the avalanche accident at Cadaver Gap. Given the very severe weather conditions, the physical and emotional stresses of the accident and a group predominantly inexperienced with a winter glacier environment, the opportunities for the initial accident evolving into a disaster were very good. Some of the students could easily have become separated from the group during the blizzard, the chances of further accidents from crevasses falls, avalanches or simply hypothermia were high, and further injuries or deaths could easily have ensued. The fact that none of this happened, that the group managed to hang together, return safely to Camp Muir and get everyone into safe shelter with no additional injuries or even frostbite is a clear testimony that the basic preparation in equipment and skills was adequate and that the ad hoc leadership which devolved on some of the more experienced students was exercised with skill and courage. We think the group did a first-rate job of survival under stresses far greater than they had any reason to expect and want to give them full recognition for this achievement.

Technical training in winter travel and camping, winter mountaineering and glacier travel was developed through on-campus training in the details of roped climbing and crevasse rescue, then amplified by field trips to Mt. Eleanor and Nisqually Glacier. This was also supplemented by an additional, unscheduled trip to Reflection Lake by some of the students for further practice in winter camping. The final stages of training in winter survival took place during the week prior to the accident as the group ascended by slow stages and several camps to their ultimate high camp on the Ingraham Glacier. From the descriptions of these training exercises and the list of technical skills developed we concluded that this aspect of the preparation was entirely adequate and appropriate to goals of the Mountain Habitat exercise.

The technical equipment for winter camping and mountaineering appears to have been adequate for the size of the group and the kind of mountaineering expected. We do note that only four shovels were carried for a group of 21 persons, perhaps the minimum for even routine camping requirements. By good fortune, some of these shovels were readily available when needed for the avalanche rescue, but this should not be left entirely to luck. At least one shovel per rope team ought to be the minimum for a party travelling in avalanche terrain.

A review of equipment check lists, photos taken during the ascent and student interviews suggests that clothing was for the most part adequate for normal winter conditions but marginal for really severe storms like the one experienced the day of the accident. The check list for personal gear specified wool trousers, wool shirt and wool sweater, parka, wind pants, wool headgear and mittens, but no insulated garments using down or synthetic fibers. Some of the students apparently had the latter as well but we think that for high altitudes in the winter on Mt. Rainier, there ought to be a requirement that everyone be so equipped. The testimony from several students that they suffered severely from the cold on the day of the accident, plus possible developing hypothermia among some of them as a factor in the fatal choice of route, suggests that protective clothing in some cases was marginal at best. Admittedly a severe storm condition existed, but not at a particularly low temperature--it could easily have been a lot worse if the temperature had been 10 or 15 degrees colder. As far as clothing is concerned, a winter ascent of Mt. Rainier ought to be an exercise in full expeditionary mountaineering.

Numerous students complained about difficulty in seeing during the descent in storm conditions, pointing to one deficiency in equipment, adequate eye protection for winter conditions. The check list called for sunglasses, but ranked extra goggles as "nice but not necessary." For such winter conditions we think sunglasses are inadequate and good winter goggles absolutely necessary. Owing to severe icing the party actually experienced on their descent, goggles in that particular instance may or may not have helped, but in many situations with drifting snow at lower temperatures, the protection afforded by goggles like the Smith or B-24 type is essential for safe travel. They ought to be standard equipment for such trips.

The food carried on the week-long trip appears to offer nourishing, well-balanced diet and certainly was more than adequate in quantity. The food list furnished us indicates that strong reliance was placed on staple grains carried in bulk as the mainstay of the diet, departing from the usual practice of using pre-packaged, light-weight foods for such winter expeditions. In fact we note with interest, but not by way of criticism, that with only a few substitutions, canned salmon for pemmican for instance, the food list rather accurately described polar sledging rations from 75 years ago. We have no objection to such a diet for the winter trip up to and including Camp Muir, but do remark that it has a disadvantage for high altitude tent camping in that it requires quite a bit of fuel and a long cooking time. As discussed below in regard to party organization, speed is often desirable at high camp.

The criticisms introduced above we regard as relatively minor--after all the party managed to get along in spite of the few indicated weaknesses. But there is one area in preparation where we see a more serious deficiency, and this is in physical conditioning. Several students dropped out along the way up Mt. Rainier, mostly because of poor condition. Some of the students who carried on all the way testified that they suffered from lack of physical conditioning and would prefer to be better prepared for another trip like this. Winter mountaineering always makes extra physical demands owing to the work of packing extra equipment through highly variable snow conditions, while the altitude effects of climbing Mt. Rainier on people acclimated largely to sea level is well known, even allowing for some altitude adjustment during the several days spent staging up the mountain. When these two factors are combined in a

winter ascent, the effects of poor physical conditioning readily come to the fore. We have the impression that there was no systematic conditioning program for the Mountain Habitat group beyond an accidental byproduct of the preliminary training trips. The students who normally kept in good physical condition continued this way and those who did not failed to revise their habits and suffered accordingly when they got on the mountain. We think any enterprise like the Mountain Habitat goal of climbing Mt. Rainier in winter ought to take a required physical conditioning program as its starting point.

Willi Unsoeld carried an unusually heavy burden of leadership on the Mt. Rainier climb. Some of the students had previous training and experience in mountaineering which stood them in good stead following the accident, but none had previous winter experience on Rainier or similar high-altitude glacier climbs. Unsoeld shared discussions with some of the more experienced people, but the ultimate decisions and burden of leading the whole group fell entirely to him. Coupled with his physical handicap following his hip operation, this placed a heavy load on him indeed. From various information and comments we have received, we understand that he was well aware of this and sought unsuccessfully to get additional mature leadership to help with the climb. Nancy Goforth went along in this capacity for part of the trip, but had to turn back owing to other commitments just when he could have used her help the most. In order to put our comments in perspective, we have to say that it is entirely a matter of conjecture whether additional leadership would have made any difference for the fatal accident. But if no accident had happened and we had been asked to review the Mountain Habitat program strictly as a matter of routine, we would still reach this same conclusion: None of us would want to take this large a group of inexperienced persons on a winter ascent of Mt. Rainier entirely on our own. If any one of us were in the position of organizing such a trip, the first thing we would do would be to secure additional experienced help. Apparently Unsoeld shared this view, but in the final choice had to carry on alone in the absence of available help. We very strongly recommend that any future trips like this be made with an adequate distribution of the leadership burden among several experienced hands.

There is a basic organizational problem when making mountaineering trips with such large groups and this is simply a matter of inertia. Such groups, especially if they contain a good percentage of inexperienced people, take a long time to set up camp, to cook meals, to break camp, to organize into climbing

teams, and just to move around on a mountain. In winter conditions when daylight hours are few, this puts a severe limit on how much can be accomplished in a day and a severe constraint on margins of safety when the weather deteriorates. The high camp party on the Ingraham Glacier encountered exactly these handicaps. By 3:00 PM Saturday afternoon, deteriorating weather coupled with food and fuel limitations made it clear that a retreat from the summit attempt would be necessary. According to testimony we received, by the time this decision had been made, it was "too late to go back to Camp Muir." This was not exactly the case. Two hours of daylight still remained, plenty of time to descend to Camp Muir. What there wasn't enough time for was getting 21 people to break camp, assemble their gear, rope up and get started. This could easily have occupied a full two hours before the first rope team led off down the glacier. We think this kind of winter mountaineering ought to be done in smaller, more mobile groups. The TESC Outdoor Education Program placed strong emphasis on group processes, which we examine in more detail in the next section below. We found on interviewing the participants in the Mountain Habitat group that there was a heavy emphasis on keeping the whole group together as a single team. From the standpoint of developing interpersonal relations this is highly commendable, but in the case of taking the whole group to high camp on Mt. Rainier this is one instance where we see the dedication to group process as highly counterproductive. Given the lack of chance to distribute the leadership, perhaps there was little alternative but to undertake the summit climb as a "committee of the whole," surely another strong argument for broadening the leadership burden.

PART II THE NATURE OF AN OUTDOOR EDUCATION PROGRAM AT TESC

Early in our investigation we became forcefully aware that the fatal accident on Mt. Rainier had brought to focus some long-standing problems concerning the nature and existence of an Outdoor Education (OE) program at TESC. Responding to specific requests from the TESC administration, we set forth here our views on this topic as seen from outsiders' perspectives.

Firstly, we wish to go on record as firmly supporting the idea of OE programs in a liberal arts college like TESC. Such programs offer a constructive balance to a curriculum and meet an obvious and widespread demand on the part

of students. They are especially suitable in the Pacific Northwest, where a wide diversity of environments and ready access to wilderness lie virtually at the college doorstep. We think that TESC would be remiss in its responsibility to the citizens of the State of Washington if it didn't offer some form of OE which took advantage of these spectacular environmental opportunities.

Secondly, we support the idea of extended and sometimes arduous field trips such as the ill-fated one on Mt. Rainier. We do not think trips of this nature, whether to the mountains or other sectors of the Northwest environment, should be abandoned simply because this particular one met with an unfortunate accident.

Thirdly, we see a lot of room for revising and modifying the present OE program and offer our opinions on this in the discussion below.

We get a clear impression that OE programs are as various as the institutions that sponsor them and that just about everyone has their own version of what education oriented to the outdoors ought to be. To summarize the many comments we received from participants in our interview and meetings, the following phrases from our notes stand out: Large emphasis on process--group activities--cohesion in groups--personal relations--work on thought processes and problem-solving--factors of risk--wilderness--holistic understanding of living--natural environment--contrast to intellectual aspects--interaction among people--leadership development--promoting physical and emotional growth--learning to hang in with a job or goal--teaching and learning--physical interdependence--taking responsibility--better awareness of group interactions--teaching leadership quality--learning to take control of ones life--open mind--people can learn where they fit in--trusting own judgment--and so forth.

This list gives us the same impression as the interviews and conversations themselves, namely that the actual outdoor content of all this is rather small. There is an overwhelming emphasis on group processes, personal development, leadership training and general coping with various aspects of life. The "outdoors" happens to be the medium chosen to work through to these goals but in most cases doesn't really seem all that essential to them. While admitting that "outdoors" in the form encountered by the OE program is a fine place to be and has many esthetic attractions, it seems to us that most of these goals could equally well be addressed by a group of people confined in a nuclear

submarine during a three-month submerged cruise.

Obviously there is a very real attraction to the outdoors, especially to those forms of it we can find in the Northwest. This is why most people seem drawn to this or other OE programs in the first place. But once in such a program, many of the participants appear to be swept up in personal growth and interpersonal dynamics. This probably says a lot about the state of society which produces people with large deficits in these areas which go unrecognized until they encounter the "real world" of the outdoors. In this sense the OE program we have examined seems to spend a good deal of its time remedying deficiencies in other areas of education instead of addressing the "outdoor" aspects directly.

We don't mean to put down the whole area of personal growth and group processes. These are essential and important parts of education, all too often neglected in conventional curricula. Each of us knows from his own experience that very valuable lessons can be learned as an outgrowth of outdoor experiences, especially those which have led to stresses shared with a group of companions. But we don't think that the personal and group benefits of an OE program should be a goal in themselves. When one of us expressed this concept to Regon Unsoeld, he replied that this was exactly his father's view as well. Perhaps somewhere along the road there has been some slippage between plan and execution.

Our own experiences have taught us that the many personal and group benefits derived from outdoor experiences have come about as a by-product during pursuit of other goals, whether these be mountain ascents, polar expeditions, scientific research or simply an honest effort to have a good time in a non-artificial environment. We think an OE program is going to have the most lasting benefit when it facilitates personal and group growth during the achievement of other, external goals.

Another way to put all this is to note that the present OE program emphasizes, perhaps unwittingly, self-awareness and interpersonal awareness at the expense of awareness of the natural setting and environment and their historical perspective. It is the latter, after all, that gives both bona fide "outdoor" and cultural content to this kind of education. In this light we want to offer as our major recommendation for the OE program that it introduce a much larger content of academic and intellectual work directed toward the external world that constitutes what we all call "outdoors." One of us (Molenaar) has compiled

some specific suggestions about the ways that the OE activities can be related to each student's and TESC's area of academic interest.

<u>Student Interest and/or Major Field</u>	<u>Suggested Projects or Readings for Field Trips</u>
Anthropology	Library search for existing literature on the history of natives in the area, their culture before arrival of non-Indians, where they dwelled, lived, fished and hunted in the area of the field trip (mountain, desert, or seashore habitat); present-day existence and effects of the white's culture on their way of life.
History	First visit by white man (seamen, fur-trappers, miners, farmers, foresters, industrialists, recreationists); man's use and development of the area (National Forest, National Park, Wilderness Area, etc.)
Resources	Forestry, mineral, fisheries and game, shellfish, wildlife refuges, water power, recreational, etc.
Geology	Area's geologic history, types of rocks and structures forming the peaks, mineral development, glacial system, glacial history, volcanic history, geologic hazards (volcanic, earthquakes, landslides); effects of man's activities (logging causing erosion, sedimentation, etc.)
Flora & Fauna	Native plants, animals, fishlife; effects of man on their increase or decrease; insects
Weather & Climate	Examine record of precipitation (seasonal and long-term) in the area, rain and snowfall, snowfields and glaciers, streamflow regime, long-term trends, effects; study hydrology of the area or approach valleys (surface and ground-water resources)
Geography	Prepare map of area, study existing maps, history of charts and maps (types of maps available): economics of the area or its approach valleys--agriculture, industries.
Environmental Impact	How has man affected the area in the past, and what will be future effects of his present activities in the area (roads, buildings, nuclear plants, dams and reservoirs, logging, recreation, airports, homes, etc.)
Art & Music, Photography	Study local artists and their work in the area: annual art exhibits; local music (hillbilly, rock, etc.) and other cultural programs; books and photos published on the area (books, brochures)

Student Interest an/or
Major Field

Suggested Projects or
Readings for Field Trips

Other

A check thru the college curriculum catalog doubtless would provide many additional ideas on what might be studied to enrich the student's appreciation of the habitat visited.

There is one final aspect of the OE program we would like to address. One of the students interviewed (Kaplan) clearly identified the OE program as a good contrast to the intellectual aspects of TESC curriculum which provided a better balance to his education. We felt this same concept was indirectly stated or implied by many others we talked to. In our view this is a very constructive reason to offer an OE program. We take a firm stand in favor of a balanced education which takes into account a student's intellectual, physical and emotional requirements. An OE program is obviously one way to round out this balance. But why should this opportunity for balance be restricted to the minority of TESC students who sign up for such a program? In what way is this opportunity being offered to the rest of the student body? We raise these questions without being able to offer any clear answers, but do take them as the basis for our recommendation that the current review of the OE program ought to be enlarged to consider whether the TESC curriculum as a whole is as balanced as it might be. Should not an OE program, at least in a somewhat more diluted form, be available to a wider segment of the student body? In an institution where competitive athletics are de-emphasized, perhaps a broad-based outdoor program could offer an attractive substitute for access to the physical conditioning we noted earlier to be lacking.

PART III THE QUESTION OF RISK IN EDUCATION

The question of risk as a pedagogical tool has come under active discussion, particularly through the critique of this subject introduced by Prof. Gulden. This is a serious question for any outdoor education program which needs to be explored. We do not propose answers, only impressions and comments.

Risk in this context has been defined as embracing both physical and emotional risks. We confine our discussion here to physical risks, since these can be more easily perceived and counted. This does not detract from the importance of emotional risks.

There is no such thing as zero risk. What we have to deal with practically is acceptable risk. Specific hazards are the things that can be counted or measured and subjected to statistical analysis, things that might fall in the realm of an insurance actuary. The acceptability of any such given hazard is a value judgment based on the trade-off of risk and perceived benefits. The arguments over risks in pedagogy clearly lie in the realm of value judgments.

There are many high-risk aspects associated with outdoor activities that accompany the educational aspects of such activities. Mountain-climbing and kayaking are two examples. The risks cannot be eliminated without eliminating the activities themselves. We think the prudent attitude is to try to minimize dangers through proper training, provision of adequate equipment and the exercise of common sense when carrying out the activities. Trained leadership is essential to meeting these goals. Novices obviously need to be shielded from risks to some extent at the outset, but a clear goal in any OE program ought to be to develop self-reliance in the face of risks. This can only be done by exposure which increases in appropriate stages with the student's development. We see this as an entirely valid pedagogical tool, the goal being to teach the student to cope with risks, even high ones, on his own. In this, we agree entirely with Prof. Gulden, who would not shield a student from risks because this would deny her the opportunity of a learning experience. This latter position clearly is another use of risk as a pedagogical tool.

Then why is Gulden so vehement in his objection to risk as a pedagogical tool? We see this as an issue that needs redefining, for there seems to be something of an attack on a strawperson involved here. The use of risk as a pedagogical tool, after all, is thoroughly pervasive and very widely practiced, certainly in liberal arts colleges as much as anywhere else. Collegiate athletics is the outstanding example. According to the University of Washington Sports Medicine Office, in the course of a single year 2 out of every 3 participants in high-risk sports (football, basketball, track and the like) sustain some sort of loss-of-time injury. In spite of these risks, physical education departments widely promote the physical and character-building benefits of sports activities as an essential part of education. (In the age of the "inner game," perhaps the spiritual benefits are also coming into their own.) These sports activities are universally seen to benefit the students. And they do involve risks. Students engaged in collegiate sports, especially the more competitive ones, are under very strong peer pressure and various forms of coaching coercion to accept

these risks in exchange for advertised benefits. Risks as teaching tools are obviously very much with us and are widely sanctioned by the whole educational system. Is this what Gulden is attacking? We don't think so. The problem, rather, seems to be with certain kinds of risks exemplified by the Outward Bound philosophy.

In principle, we can't find any difference in risk-taking between the football coach who sends in a quarterback with instructions to give his all for a touchdown and a mountain climbing instructor who sends an outdoor education candidate rappelling down a vertical wall. In both cases, the college student is presumably gaining some character-building benefit and in both cases there is a risk of injury.

The real question we see at issue here is not risk but responsibility.

The quarterback who suffers an injury carrying the ball on an end run does so in the turmoil of 21 other players rushing around the field. The responsibility for cause of the injury is often diffuse and hard to identify, for it may jointly belong to several players. Even if that quarterback privately knows he got hurt because he screwed up somewhere, it is still easy to blame on the exigencies of the game. The coach is in a similar position. He has little direct control over motions of every player on his team, much less over those of the opposing team. Again, responsibility is diffused and no one is going to accuse him of directly causing the injury unless he is grossly negligent by sending in an improperly trained or equipped player. He is also protected by risk-taking in an activity for which there is widely cultural support.

The mountain climber rappelling down a cliff, on the other hand, is very much on her own. If through errors in technique or execution she is injured or killed, there is no way to spread around the uncertainty about who was responsible. The next issue of the AAC's *Accidents in American Mountaineering* will mercilessly point out just what was done wrong and who did it. If the rappeller screwed up, she stands before the world as the one solely responsible. If the instructor improperly anchored the rope or failed to provide a suitable belay, he bears the full responsibility and there is no way to blame it on "the game" or enjoy the shield of cultural approbation.

The same concepts apply equally well to other activities associated with OE, such as spelunking, scuba diving or white-water kayaking, which, like mountaineering, stand in contrast to much of conventional college athletics in that they involve high levels of personal responsibility.

Such uncompromising exposure to responsibility experienced by teacher and student is shared by their institution. Most OE activities are low profile in their practice but very high-profile when anything goes wrong, in contrast to conventional athletics. If a soccer player is injured on the field and has to be carried off on a stretcher, this will receive little public notice beyond possible mention in the sports pages of the local newspapers. If an Evergreen College student is injured on a Mountain Habitat climb of Glacier Peak and has to be carried off on a stretcher, this very likely will attract front-page headlines in the Seattle P.I. The responsibility for risk-oriented teaching in such OE activities is not only highly personal, it also is apt to be highly public. Assumption of such responsibility demands a high level of courage on the part of student, teacher and institution administrators.

The maximum load of personal responsibility for the student comes with the Outward Bound methods, where the solo experience is the core of the character-building process. This deliberately places students completely on their own for a period of time in a wilderness environment. The educational results are often beneficial, but the risks are high for both physical suffering and psychological freak-out. The real question at issue here seems to be whether students, faculty and administration in a liberal arts college should as a matter of policy assume these levels of personal responsibility. Gulden's arguments take a strong position for the answer "NO." Our views on the question can be summarized as follows:

- (1) There is no reason why high-risk teaching methods should be arbitrarily excluded. If they are a useful route to clearly identified education goals, they are permissible as long as everyone involved clearly understands in advance just what the risks are and the degree of personal responsibility required.
- (2) Equally, there is no reason why Outward Bound methods should be embraced purely for this own sake. Persons wanting the Outward Bound experience as an end in itself are free to find it in that or similar programs.

- (3) A liberal arts college with an OE program that embraces clear intellectual content and goals might reasonably make careful, selective use of some high-risk methods like those espoused by Outward Bound as long as they contribute to those goals. We do not think high risk methods ought to be adopted simply on the basis of personal taste or to fill a vacuum in the curriculum.