

ENHANCEMENT OF REALISM IN AVALANCHE RESCUE DOG TRAINING EXERCISES

Jamie Maddox^I

ABSTRACT

Attainment of realism in simulated avalanche burials for purposes of dog training is restricted by factors in two realms. These two realms are basically represented by the different but interfacing perspectives seen by dog and handler. Creating for both dog and handler a sensory picture which closely approximates an actual avalanche accident is a difficult undertaking. This close approximation is important in evaluating a team's ability to perform in a real rescue situation. The purpose of this discussion will therefore be to put forth some ideas and suggestions which we have experimented with or considered for the enhancement of realism in the training situation.

INTRODUCTION

The game of finding the buried human which we play with our partners is conducted within clearly defined guidelines. While the body of this discussion is oriented toward advanced exercises with experienced teams, the underlying principles should be employed as soon as is practical in earlier training.

THE CHALLENGE

Effective avalanche rescue dog training involves a compromise between creation of the real event and adherence to safety procedures.

The "real event" is defined for the purpose of a primary goal in advanced training as the complete burial of a single human victim in an avalanche, with a single dog/handler team responding. Further advanced training should introduce additional complications one at a time in a systematic, ord-

^I. Director, Alpine Meadows Avalanche Rescue Dog Program, Alpine Meadows, Box 5279, Tahoe City, CA 95730 USA.

erly manner.

Safety guidelines are derived from experience and analysis of what can possibly go wrong in a training exercise with intentional burial. Possibilities include an unforeseen avalanche, panic on the victim's part, medical emergency, equipment failure, non-responsive victim, public safety problems, and collapse of the hole in which the victim is buried.

The Real Event

In contrast with training exercises, the real event includes the following elements:

- 1) Surprise
- 2) Victim's location is not known
- 3) No significant scent other than victim's is present at the outset
- 4) Complication of the scent picture occurs as the rescue proceeds
- 5) Weather and snow conditions are uncontrollable factors
- 6) The snow surface is fresh, undisturbed debris with no visible or scent tracks
- 7) Escalation of the rescue effort to involvement of additional manpower, equipment, supplies, and other dog teams
- 8) The role of the dog team as a component of the overall effort and not the only or primary rescue resource
- 9) A sense of urgency and immediacy which is impossible to duplicate in training and which may preclude reward of the dog's performance.

We need to examine ways of making our training exercises approximate the real event as closely as possible. This is the only way to maximize the team's efficiency for a real rescue effort. Distractions to dog and handler resulting from the contrasts between practice and reality should be minimized. Man's power of inductive reasoning helps him to see around these distractions, but we cannot expect the dog to arrive at the same conclusions. He will see things in his own way, and close duplication of reality is the best insurance that we are really teaching him what we think we are in the most efficient way.

If it was possible to safely bury a victim intentionally in a controlled avalanche of predictable proportion, the gap between the real event and best simulation would be narrowed considerably. In the meantime, our challenge is to satisfy the dictates of safety, yet arrive at a good, constructive simulation which comes as close as possible to reality from the differing viewpoints of man and dog.

How are these points of view different? Man and dog

share most faculties but possess widely varying sensitivities. Power of inductive reasoning has been mentioned. Dog's vast superiority at scenting is the most obvious other difference we must overcome in designing effective exercises. We must thoughtfully and carefully analyze what we are doing with regard to the scent picture. Logical thinking and knowledge of dog psychology, snow, and scent mechanics are the only tools we have to compensate for our lack of direct awareness of what our partners are sensing.

Safety

A few potential safety problems have been mentioned above. Generally, anything deviating from the planned course of the exercise at hand can represent a safety problem. The safety guidelines of the training program should provide measures to deal with any such situation.

Standard elements of any program should include:

1) Planning: Each exercise should be thought through before it is implemented. Possibilities should be considered in advance to try to avoid surprises and possibly having to abort the problem. This implies the position of one individual in the capacity of head trainer and planner, which is indeed a good idea. At least for each problem, there should be one person who is clearly in charge. Since advanced problems can frequently be complicated to orchestrate, it is useful to have someone in a central position. This should not be the handler working the problem at hand, but possibly another handler from the group. The position should also include the function of safety officer, insuring that the exercise unfolds according to the established guidelines.

2) Training/education: All personnel in the program need to cultivate a strong working knowledge of snow, avalanches, and rescue procedures plus related information. An experience requirement is a likely consideration.

3) Procedures: These are the heart of the safety guidelines. Some procedures which should be included in a program for the sake of safety include:

- each victim has a beacon
- someone on the scene knows the victim's exact location
- victims are always given a radio
- victims are equipped with proper outerwear, hat, goggles, and pad
- exercise to be aborted upon any deviation from plan

4) Victim screening: Any potential victim should be given at least a minimum of orientation as to what he can expect his experience to be like. Remember, the first time in a hole can be unnerving to even the most hardened avalanche buster. There are more than a few whose unquestioned bravery on the cornice does not carry over, or should I say under, into the hole. A few probing questions can uncover the possibility of

the closet claustrophobe who should probably not be buried.

5) Site selection: Obviously, freedom from further hazard is a consideration. Public safety must also be considered if exercises are being conducted within a ski area.

6) Adequate personnel: Appointment of a safety officer, victim spotter or observer, and assurance of adequate support and backup personnel are necessary.

7) Adequate equipment: All equipment necessary not just to conduct the exercise, but to conduct an organized rescue effort, should be available.

8) Training time: A time should be set aside from the regular routine, specifically for dog training. A couple of hours per week per dog should be adequate as maintenance training for a search-qualified dog.

A PROBLEM

We have considered elements of the real avalanche accident and points of safety procedure. Now we will look back on these considerations and design as realistic an exercise as possible, given our constraints.

What follows is a description of the setup of a straightforward problem for an advanced dog. The setup will take into account measures to simulate realism as closely as possible from both human and canine viewpoints.

A suitable site is selected. Fresh avalanche debris is best. Lacking that, at least the runout of a real avalanche track is acceptable. The idea behind using real debris is that the dog will learn to use it to define his search area, thus streamlining the efficiency of the team. If the dog learns to find victims in flat, undisturbed snow, he may think he should search that kind of snow at the real scene. Public safety is a consideration in site selection. If holes are to be left unattended within a ski area they should be marked.

A hole is dug by the intended victim according to safety guidelines. Digging a sizable hole in the snow is a big effort and will contaminate the hole and immediate area heavily with the digger's scent. It is best in terms of realism if that scent is the same as the one buried in the hole. Leaving the hole to "cool off" overnight may not be very effective; scent-carrying particles left on the snow will rapidly be cooled without losing their potential to re-release scent as soon as they are warmed up by the next body to occupy the hole^{II}. The idea is to eliminate the possibility of the dog's cluing in on the "dual scent" as an indication of the victim's location. The hole should be dug with as

^{II}Syrotuck, Scent and the Scenting Dog

little disturbance to the surface of the avalanche as possible, including the hole itself and any tracks into or out of the site. The victim should preferably be a total stranger to the dog, although this is a luxury that can be hard to find. The victim either waits at the scene to be buried immediately or marks the hole and returns later with the burier.

The burier, who is either another handler or an informed, experienced helper, arrives at the site and buries the victim. Immediately before or after burial, or both, he places surface or buried articles as required by the design of the problem. He also contaminates as much of the whole area of the exercise as possible with his own scent. This is done by walking on foot or on skis about the area, and by lying down or sitting in the snow in various places. Other scent distractions such as spit or urine may be placed at this time if dictated by the design of the problem. The main idea, however, is to spread the scent of the burier out over the whole scene to avoid the concentration of "dual scent" at the exact burial site. The usefulness of this additional scent as a clue to the dog will be eliminated if the scent is present all over the problem scene. Tracking to the burial site will not be possible.

At this point the public may enter the picture again. If the exercise is in a ski area, the person in charge on the scene should keep a watchful eye out for skiers and inform them as to what is going on, if necessary. Such passing skiers can sometimes be recruited as part of the exercise as observers or even a mock probe line. This practice is useful as an element of problems for advanced dogs to develop the habit of working around strange personnel without becoming distracted. Field sessions of avalanche classes are excellent sources of such observers and occasionally victims.

As a final touch, the burier uses his shovel to fling loose snow in a layer over the precise burial site. Variations are sideslipping snow over the area or, in the rare event that conditions are just right, skicutting a small sluff or piece of hangfire over the burial site. The latter can often be done on steep slopes in the spring. Obviously, a great deal of experience with snow and avalanches is a prerequisite to any such activity. Occasionally the chance to implement an exotic complication presents itself. We were able to bury holes with a huge snowblower mounted on a grooming machine last season. As a novelty such exercises are interesting, but the day-to-day on-the-hill training is most important.

Once the stage is set and any articles, observers, probers, etc. are in position, the dog team is called in. The element of surprise may be employed here if the team has been intentionally left uninformed as to time and place and details,

or even that an exercise is going to happen. It is difficult to stage surprise problems, but very useful in polishing the response of experienced teams. Response by alternate handlers is conveniently tested by surprise problems.

As soon as possible after the exercise the handler should make his notes on the problem, with particular attention to the direction he wants to take and any elements he wants to incorporate the next time. Input from any trained observers should be noted. An intelligent analysis of the last problem is the key to making the next one as productive as possible.

CONCLUSION

Within the bounds dictated by prudent safety procedures, it is possible to create exercises with a reasonable degree of realism as seen from both canine and human viewpoints. The bit of extra effort and planning required to complete as natural a visual and scent picture as possible is worth the degree of communication and performance inspired in our rewarding work with our four-legged partners.