

## Research Update

There is growing acknowledgement among scientists who study decision-making that our decisions are influenced by much more than our careful consideration of rational choices based on our evaluation of objective data. This phenomenon appears to be especially pronounced in situations where the outcome of the decision is less than certain, such as when deciding whether or not to ski a given slope. Therefore, it is not surprising that contemporary concepts of avalanche decision-making strategies include a human factors component.

During the 2008/2009 season, AIARE supported a research project that explored the influence of a set of human factors believed to influence the decision to ski a slope in the backcountry. The human factors selected for this study were drawn in part from Ian McCammon's (2004) study of *heuristic traps*. He identified six heuristic traps and argued that these influential mental shortcuts, or "rules of thumb," guide decision-making in the backcountry. Along with a set of heuristic oriented factors, the 2008/2009 study also examined the influence of forecasted avalanche conditions and each skier's tendency to take risks. The findings support the notion that good decision-making in hazardous backcountry terrain depends on a combination of both environmental and human factors.

In response to the results of this study, backcountry skiers should consider the range of factors that influence their decision-making and avoid "traps" by remaining aware of, not only the current environmental conditions, but also the social, psychological, and personality factors that can influence decisions to ski a slope. For example, in this study, skiers were influenced more by the forecasted avalanche conditions, than by the heuristics. That said, 5 of the 6 "traps" proposed by McCammon were found to significantly influence decisions. The most influential heuristic "trap" was 1) the desire to ski untracked snow, followed by, 2) whether or not the terrain was familiar, 3) whether or not their group had a recognizable leader, 4) whether or not they saw other skiers, and 5) whether or not they felt committed to ski a particular slope. In addition to that list, each skier's own unique risk taking tendencies were found to significantly influence decisions to ski. The combination of these and potentially other factors not identified within this study, amounts to a highly complex, multifaceted decision-making process in avalanche terrain. Recreational backcountry travelers are advised to discuss openly with their touring partners, and guides with their co-workers, how these factors might influence themselves and the people with whom they ski.

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