

# The Merging of Risk Analysis and Adventure Education.

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## Alternative approaches to Risk Analysis

Historically, adventure education has relied on the risk analysis tools and lexicon of the insurance and legal industries (Cline 2003). While it is important to remain responsive to the needs of these industries, it is also important to recognize the significant limitations these tools and lexicon pose to adventure education. As one of the few industries to use the concept of risk intentionally, that is to say as a "legitimate educational tool" (Miles and Priest 1990), we need to consider the broader implications of adopting imprecise tools and language. To rely on a definition of risk that is value negative ("the potential for loss")(Cline 2003), we are forced not only to accept the Risk Paradox (Miles and Priest 1990), but also to hold an untenable long-term position. It follows that if "risk" is bad and "safe" is good, then we are subtly and inexorably moving toward "safe" at the cost of the very programs we deliver. Rather, we should adopt a value neutral definition of risk, such as: "Human interaction with uncertainty" (Cline 2004), we can then begin to consider the role that uncertainty plays in the educational-curriculum that we

offer. In other words, what are the educational goals involved in intentionally interacting with uncertainty?

## Why do we need to consider alternatives?

In late January, of 1998 an international group of scientists, government officials, lawyers, labor and grass-roots environmental activists met in Wisconsin to discuss a new paradigm for Environmental Risk Management. After meeting for two days, the group issued a consensus statement advocating for what they called "The Precautionary Principle."

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically (News 2000)."

In a briefing given to White House Officials in June of 1999 the precautionary principle was defined this way:

**Scientific Uncertainty** (e.g. Ignorance, Indeterminacy, Statistical Uncertainties)  
+  
**Suspected Harm** (eg. Serious, Irreversible, Cumulative)  
=  
**Precautionary Action** (e.g. Preventative, Anticipatory)

(Raffensperger 1999)

The challenge with the Precautionary Principle is that where there is uncertainty, one *cannot* rule out potential harm. The question, of course, is what does this have to do with Adventure Education? The answer appeared in February of this year in an article posted on [www.outdoored.com](http://www.outdoored.com):

"The second biggest teaching union (in Britain) advised its 223,000 members yesterday to stop taking children on school trips because "society

no longer appears to accept the concept of a genuine accident".(Clare 2004)

For many reasons, the notion that a trip could be filled with uncertainty is becoming unacceptable to at least a portion of the general population. As a result we as an industry are going to have to change how we communicate and manage the risks we encounter as part of our programming. One of the ways to do this would be to change our relationship with uncertainty itself.

## Changing the Question

For years our industry has relied on the "Expert-Judgment Strategy" for dealing with questions of risk. "That one can always make a legitimate distinction between 'actual risk' calculated by experts and so-called 'perceived risk' postulated by laypersons." (Shrader-Frechette 1990) The fact is, however, that environmental risk analysts have already concluded that "ALL risks are perceived"(Shrader-Frechette 1990)The result is that just because we claim that a particular activity or environment is "safe" doesn't make it so. Furthermore, the reliance on the "Expert-Judgment Strategy" by inexperienced staff members has real operational consequences. For example, if staff members are faced with a decision in the field that falls outside of their training or staff manual they are forced to rely on their decision making skills. If their premise is "Is it safe?" they are really asking a highly contextual, highly subjective question. As Wilde points out in "Target Risk" everyone has his or her own internal level of "safe."(Wilde 1994) Truthfully, however, the staff is most likely asking the question "would my boss think it was safe?" Put another way, "Will I get in trouble for this?" The obvious problem with this thinking is that it is relying on a fear-based decision making process to deal with a typically ambiguous choice. If, however, we removed the "safe" premise and instead had the staff ask "does this support what we are trying to help the client accomplish?" It stands to reason that the client wishes to remain uninjured, so the "safe" question is answered as a matter of course. More importantly, however, instead of reacting out of fear, we are empowering our staff to intentionally interact with uncertainty under expressed boundaries with a clear defendable purpose. The role of the Risk Manager then goes from being a person who punishes mistakes, or simply says no all of the time, to a person who develops systems, the staff, and the clients themselves to interact with uncertainty in a sustainable manner.

## Developing Skill Sets

Operational risk management in adventure education has often been the attempt to quantify a finite set of variables-- Equipment, Environment, Human, etc.--to minimize the potential for loss. The fact is, however, that "Most people in the field of risk management or accident investigation will agree that the human element comprises the largest portion of the accident equation" (Ajango 2000)One of the historical obstacles in trying to understand the "human element" within formal risk analysis is the premise that people make rational choices in the face of uncertainty.

*"Proponents of formal risk analysis tend to view affective responses to risk as irrational. Current wisdom disputes this view. The rational and the experiential systems operate in parallel and each seems to depend on the other for guidance. Studies have demonstrated that analytical reasoning cannot be effective unless it is guided by emotion and affect. Rational decision making requires proper integration of both modes of thought" (Slovic 2002).*

When we, or our clients, intentionally interact with uncertainty, we do so with a combination of affective (emotional) and cognitive (intellectual) responses. It is this complex group of factors that NASA has been pursuing in its "Human Factor Research." It is the study, among other things, about how human beings make critical decisions in the face of uncertainty.

*"There is no dearth of evidence in every day life that people apprehend reality in two fundamentally different ways, one variously labeled intuitive, automatic, natural, nonverbal, narrative and experiential, and the other analytical, deliberative, verbal, and rational(Epstein 1994)."*

A major focus in Human Factor Research is the concept of "Error Management". This is based not on the premise that people making decisions *might* make errors (mistakes), but that they *will* make errors. The result is that teams are taught to highlight rather than hide the

errors they make so they can identify and fix flaws in the system or flawed habits. In this way they become "self-correcting teams". By focusing on Error Management skills sets, as part of both our staff training and program curriculum, we begin including the clients in risk analysis process while at the same time providing them with important life skills.

### **The Future of Adventure Education**

It very well could be that the reason people seek adventure education is not just for the physical experience but also for the skill sets that experience provides. The rate of change in this world, and the uncertainty that accompanies it, continues to accelerate; as a result the skill sets needed to navigate that change

are becoming increasingly important. If we as an industry were able to define, articulate and deliver those skill sets within an adventure education curriculum we would be providing a critical service. In doing so we would also have the definitive reply to those that would utilize the precautionary principle. While it is true that the potential for harm, injury and death will always exist in adventure education, it is also true that the potential for harm, injury and death will continue to exist in every day life. If, however, we are able to help people develop the skill sets for navigating uncertainty, we would not only be reducing the "potential for loss" during our program, but we would be reducing the "potential for loss" in every other part of our clients' lives.

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