

Re-examining the Risk Paradox

By Preston B. Cline

Introduction

In May of 1974, Willi Unsoeld, who was a philosopher, mountaineer, and experiential educator gave a talk concerning Adventure Education to a group in Kaiserslautern, Germany. During that talk he told the following story:

"We used to tell them in Outward bound, when a parent would come and ask us "Can you *guarantee* the safety of our son, Johnny?" And we finally decided to meet it head on. We would say, "No. We certainly can't Ma'am. We guarantee you the genuine chance of his death. And if we could guarantee his safety, the program would not be worth running. We do make one guarantee, as one parent to another. If you succeed in protecting your boy, as you are doing now, and as it's your motherly duty to do, you know, we applaud your watchdog tenacity. You should be protecting him. But if you succeed, we guarantee you the death of his soul!" (Miles and Priest 1990)

Jasper Hunt, used this quote in an article he wrote on the Philosophy of Adventure Education. He was utilizing the quote to illustrate the concept of the risk paradox. The paradox describes the razors edge we must walk in trying to keep our clients safe while at the same time exposing them to risk. At first glance, the paradox seems valid, as any program manager who has had to run and adventure education program could probably tell you. Yet, if we were to try to operationalize a solution to the paradox, we would first have to define both safe and risk. It is here, upon closer examination of the working definitions that there is in fact no paradox at all.

Examining the Etymology

"To judge the extent to which today's methods of dealing with risk are either a benefit or a threat, we must know the whole story, from its very beginnings. We must know why people of past times did-or did not-try to tame risk, how they approached the task, what modes of thinking and language emerged from the experience, and how their activities interacted with other events, large and small, to change the course and culture. Such a perceptive will bring us to a deeper understanding of where we stand, and where we may be heading (Bernstein 1996)."

Salvus

As Unsoeld pointed out, it is entirely reasonable for Johnny's mother to want to keep him safe. The question, however, is what did she mean by safe? The word itself has changed very little from its Latin root *Salvus*, which simply meant "uninjured, entire, healthy" (Simpson, Weiner et al. 1989). Today, most dictionaries define the word safe in some variation of the following: "Free and Wilderness Risk Management

secure from danger, harm, injury and risk." The challenge is that if that is what Johnny's mother really meant, she would have never left the house, or picked up the phone in the first place. Each of us, in our own life, arrive at what Gerald Wilde refers to as "Risk Homeostasis." That is to say that on the continuum of uncertainty between total safety and absolute danger, we have each arrived at a level of safety that is acceptable. If events beyond our control begin to move us toward perceived danger we will alter our behavior to return to our "Target level of Risk"(Wilde 1994)When Johnny's mother asked if they could guarantee Johnny's safety, she was not speaking of a universal static idea of safe. She was speaking about her internal definition of safe. In other words, in her mind, Johnny skinning his knee, or catching a cold or having his heart broken by a pretty girl might be perfectly "safe" but she might consider swimming to be absolutely unsafe. In replying, Unsoeld was not replying to her specific definition of safe, but one he assumed she was using.

To understand Unsoeld's position on safe and risk we need to understand that he was a philosopher trained in the Greek Classics.

"Unsoeld agrees with Plato that risk is a legitimate educational tool. Adventure educators in general also agree. To guarantee that risk has been completely eliminated from an adventure education program would be to contradict oneself. Adventure logically implies risk. ...Unsoeld's understanding is that the universe is so constructed that complete safety is a metaphysical impossibility. To succeed in securing complete safety is to deny reality(Miles and Priest 1990)."

Kindunos

While Unsoeld agreed with Plato that risk was a "legitimate educational tool, we need to remember that in Plato's time there was an entirely different worldview in regard to risk and man's influence on his own destiny or fate. The word and definition that Plato was using: [Kindunos meaning: danger, hazard, venture (Scott 1940)] was conceptually different from the word and definition that Unsoeld was using (Risk: Potential for loss). For Kindunos reflected the inherent duality of risk between venture (or adventure) and danger. More importantly, however, in the world that existed prior to probability theory, the future was seen to be entirely up to the whim of the gods.

Around 140 B.C., some 300 years after the death of Plato, a person named Apollodorus is attributed to writing The Library. Within it can be found the story of how the Greek Gods came into power.

"And then the Cyclopes gave Zeus thunder, lightning and thunderbolt; they gave Pluto a helmet; and they gave Poseidon a trident. Armed with these weapons they overcame the

Titans, threw them into Tartarus and made the Hundred-Handers their guards. As for themselves they cast lots for the kingship and Zeus received power in the sky, Poseidon power in the sea and Pluto power in Hades (Apollodorus and Frazer 1921)."

By drawing "lots" the gods showed that even they were not exempt from the powers of the Morai, or as we know them the three sisters of fate (the Fates: Clotho, Atropos and Lachesis). The Fates are the three sisters in charge of the destiny of both men and gods (Grimal 1985). The expression "do not tempt fate" comes from that time, meaning: do not anger the gods through foolishness or pride, or they will cut your lot short. To live in ancient Greece was to understand that while you could make decisions in your life that would affect your destiny, ultimately it was within the context of your pre-ordained fate.

Periculum

As Ancient Greek faded into Latin (Kindunos) became Periculum: 1. a way through, passage, a trial, experiment, attempt, proof, essay (class. cf. disorimen). 2. Risk, hazard, danger, peril (which accompanies an attempt; the common signif. of the word) 3. to run the risk of one's life, to get into danger, to release from danger, to do a thing at one's own risk, Dig. 23, 5, 16 : (Andrews 1879)

The duality of risk remains in the definition with authors often using the word to denote a bold or courageous gesture. In the writings of Tacitus, in 109 A.D., he uses the verb form of Periculum (Periclitando), to describe one of the tribes of Germany: "Though surrounded by a host of most powerful tribes, they are safe, not by submitting, but by daring (Periclitando) the perils of war (Tacitus reprinted 1942)."

As the debate between fate and free will were to dominate much of the later centuries it is important to note that there is another lesser known sister of the Fates, who was said to hold power over the other three and as such, rule the universe. Her name was "Tykhe", or as she was also known, "Fortune" (Grimal 1985).

For the next 1,200 years people would continue to view all uncertainty within the context of Fate. The goddess "Tykhe" would be adopted by the Romans and transformed in to the "Fortuna," the goddess of fate and chance.

Risicum

Somewhere around 14th century the word "Periculum" evolves into the Latin "Risicum (Andrews 1879)."

"The election of the sovereign of the city of Hortana in the year 1359: This said sovereign should come with his aforementioned officials, attendants and steeds, two days before his investiture ceremony and with respect to every risk (Risicum) and chance (fortunem) of the sovereign himself in coming, remaining and returning (Du Cange 1678)."

The word "Risicum" or "Risiscus" is defined by Du Cange, in 1678 as; danger, venture or risk, crisis. The duality of risk continues to remain within the definition. At the time the word venture indicated a daring choice in the face of uncertainty. It is where the expression, "Nothing ventured, nothing gained" originates.

For a number of reasons, that are not covered within this text, around the 16th century Europeans began to understand that they did have some small measure of effect on their own future. Evidence of this can be seen in the evolution of the word Prudence: "Prudence, both the word and the idea, changed meaning about the 16th century. In courtly language, prudence denoted cowardice, the lowliness of the frugal, devoid of honor, selfish. The meaning switched. The prudent were the wise who accepted the moral duty of attending to the future," of saving for a rainy day, the virtue of foresight (Hacking 2001)."

Risicare and Risico

For the virtue of foresight to exist there must first have some notion that future is somewhat predictable. Then in 1557 the word Risicum is translated into Italian and bifurcates into "Risicare", a verb and "Risico" a noun. It was the first time that the dual nature of Risk was actually separated into two words.

"Risicare: To risk, to venture, to dare. "Nothing ventured, nothing gained." Risico: danger, to run the risk of, hazardous. "You risk with the possibility to bear or undergo self damage or injury or inconvenience or loss, particularly of property value or self worth or integrity (Battaglia 1961)."

While the word "venture" remains in the definition, it is supplemented with the phrase "to dare," to define context.

Just as it is today the difference between being daring or foolish is often determined by the outcome. If you succeed in an uncertain arena you are a hero; if you fail you are foolhardy. The trouble is that we have to make decisions without knowing the outcome, so the question is; how did people in the 1500's judge which choice, in the face of uncertainty, was correct? The fact is that most of the common knowledge about uncertainty came from studies of gambling (David 1962).

"The Church condemned gambling and usury as morally wrong, but it was impossible to disregard the existence of risks in commercial life analogous to gambling risks, and these risks had to be accepted as legal. Hence, a new class of contracts called aleatory contracts came into existence embracing marine insurance, life contingencies, inherent expectations, lotteries, and risky investments in business. The basis of such contracts became the specification of conditions of equity of the parties involved, which required assessment of risks combined with the possible gains and losses. An aleatory contract thus corresponded to a fair game, that is, a game in which participants have equal expectations (Hald 1990)."

The involvement that gambling has played in the evolution of risk can be seen in one of the words that is most often used to define it; Hazard. "'Hazard' is generally attributed to an origin in Arabic, *al-zahr* (= the dice, though this is not in classic Arab dictionaries). Arabic *khatar* does mean 'to bet, or gamble,' and the word *azar* appears in Spanish around 1100 A.D. denoting a game of chance; and thence proceeds through French *hasard* into English with the same meaning (Handmer 1992)." Thus decisions in life and business were often based on the rules related to gambling. This was the traditional way of facing uncertainty and in fact,

"Philosophical notions about what happens only most of the time, and about varying degrees of certainty connected with this unreliable experience date from antiquity, as do games of chance. But before circa 1650 no one attempted to quantify any of these senses of probability (Gigerenzer 1989)."

Changing the Paradigm

"In July of 1654 Blaise Pascal wrote to Pierre Fermat about a gambling problem which came to be known as the problem of Points: Two players are interrupted in the midst of a game of chance, with the score uneven at that point. How should the stake be divided? The ensuing correspondence between the two French mathematicians counts as the founding document in mathematical probability (Gigerenzer 1989)."

In solving their little gambling problem Pascal and Fermat were to fundamentally change the way human beings perceived their world. For the first time in history human beings could quantify the probability of a future event. In doing so they are able to show that Risk and Uncertainty are not the same thing, and that human beings can influence their own destiny. It is critical to note, however, that the primary application of probability theory in the following centuries would be to determine the probability of loss. It is not capable of explaining why someone would want to take a risk, only the potential harm that might come with that risk.

Risque

Instead of simply depending on luck or good fortune people could now quantify the probability of loss in a specific future event. Evidence of the impact that Pascal and Fermat had on society can be seen in the fact that the word *Risque*, derived from the Italian *Risicare* was introduced into the French language only three years later, in 1657.

Risque: 1. Danger, eventual, more or less foreseeable. Danger, hazard, peril 2. Eventuality of a future event, uncertain or of an undetermined duration, not depending exclusively on the will of the parties, and capable of causing the loss of an object or other damage. 3. The fact of exposing oneself to danger (in the hope of obtaining an advantage) (Robert and Rey 1985).

Because scientists could now quantify the potential for loss in mathematical terms, they dismissed all other approaches to dealing with risk as superstitious and

invalid. The result is that while there was a paradigm shift within the scientific subset of mathematicians, normal lay people continued to view choices in the face of uncertainty as they always had, a matter of chance, fate and luck. Yet, with the majority of technical writing about risk concerning maritime insurance, risk went from being a daring adventure to potential for loss. It took on a predominantly negative connotation that would stay with it until current times. While at the same time creating a disparity between how scientists viewed risk and how lay people viewed risk.

Risk

Only 4 years after the appearance of *Risque*, in 1661, Thomas Blount publishes the *Glossographia*; an early English dictionary records the word *Risk* (*Risque*) for the first time in the English language (1). *Risque*: Peril, jeopardy, danger, hazard, chance (Blount 1661).

1. This is according to the Oxford English Dictionary. The Author has actually found citations of Risque appearing in English Law cases as early as 1565. The citations have been submitted to the Oxford English Dictionary for their review.

It is interesting to note that Blount was a Strict Roman Catholic attorney living in England immediately after the reformation. Because of his beliefs he was unable to find work, and so decided to write the dictionary (Chrisomalis 2003). It is important to note that Blount's interaction with the concept of *Risk* would not be, for example, as a ship captain, but rather as an attorney dealing with the litigation of insurance policies. Much as it is today, the legal field derived their definition from the field of insurance underwriting. Then, as it is now, the insurance field viewed risk in terms of potential loss of revenue; any attempt to reduce risk was seen as a positive thing. The ultimate result is that the English language came to understand only half of the concept of risk: the potential for loss. The problem is that when people encounter uncertainty in their life, they are unlikely to approach it purely from the standpoint of quantifiable probabilities. Issues such as courage, whimsy, serendipity can play a role in the decision making process of a layperson. Consequently, there has been and continues to be paradoxes and exceptions that plague the English definition.

Present Day Concepts of Risk

"Many of you here remember that when our Society for Risk Analysis was brand new, one of the first things it did was to establish a committee to define the word "risk" *This committee labored for 4 years and then gave up...* (Kaplan 1997)."

In a recent survey by David Hall, 22 separate academic and professional disciples were found to have 46 working definitions of risk (Hall 2002). In an additional study, 186 risk management professionals (1) completed a survey concerning their definitions of risk (Hall 2001). 54% indicated that the organization they were associated with defined risk as "Uncertain event with a negative effect." While %34 defined it as "Uncertain event with negative or positive effect." When asked about their personal definition of risk, however, only %33 of the

respondents defined risk as "Uncertain event with a negative effect." While 46% defined risk as "Uncertain event with negative or positive effect." The results of these studies indicate that there are not only differences between fields of study on how to define risk, but within field of study.

2. *These Risk Management Professionals were from fields other than Adventure Education.*

The resulting lack of clarity has led not only to conceptual errors, but also to conflicted attempts at resolving social problems. For example, in the field of adolescent development, Dr. Marvin Zuckerman, the psychologist who pioneered sensation-seeking theory, claims that we are genetically predisposed to risk taking. That it has been an integral part of our evolution as a species (Zuckerman 2000). John Tooby, an evolutionary psychologist, theorizes that with early hunter-gatherer risk takers were more likely to survive and therefore pass on the trait (Greenfeld 1999). Dr Lynn Ponton, author of *The Romance of Risk: Why teenagers do the things they do* states that; "When we assume that all adolescent risk-taking is bad, we fail to recognize both very real dangers some risks pose and the tremendous benefits that others can yield (Ponton 1997)." A number of researchers in the field of adolescent development have agreed that adolescents need to take some sort of risks to achieve their adult identity. The problem is that more and more local and regional governments have defined risk taking in wholly negative terms and have sought to legislate against risk taking behaviors. "The period of adolescence, in particular for boys, is a time for experimentation, risk taking, and recklessness that would lead to the arrest of almost everyone if the law were applied strictly (Benson and Pittman 2001)."

Adventure Education and Risk

When we look back at the discussion between Unsoeld and the mother, we need to consider both the context and the stakeholders. We have the mother; we have an administrator of Adventure Education program (Unsoeld) who is accountable to the insurance company, attorneys, and society as a whole. The paradox that Hunt was referring to was not so much a paradox, as a fundamental misunderstanding. Adventure Education does not simply embrace part of risk but rather it embraces the full duality of risk, both the potential for loss and the adventure. We are, however, still accountable to those, such as attorneys and insurance

agents who view only one side of risk, that is to say the potential for loss. In some cases, however, instead of simply being accountable to them, we are being dictated to by them. The danger with this, is that if you follow that theoretical framework to its logical conclusion insurance companies would have us taking no risks at all, and thereby destroy the character of the experiences we provide. This is not to say, we should not continue to engage in meaningful dialogue with all of the stakeholders involved in our program, but rather that we should start to consider defining risk for ourselves, in a manner that supports both our ideals and our goals.

In December of 2003, the revised Oryx (now Greenwood) Educational Dictionary will be released. In it the definition of risk (in the context of education) will be:

Risk: A primary catalyst in the journey between ignorance and knowledge is the duality of hazard and adventure. The potential for this event to have a negative, neutral or positive outcome is determined by the context, motivation and agency of the learner. This multidimensional process can occur physically, psychological, emotionally, intellectually and spiritually (*This definition was submitted to the dictionary by the author*) (Collins III 2003).

This definition remains a work in progress. It is, however, a first step in helping our industry define itself, rather than being defined by others.

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