Time to confront the bear in outdoor program safety; aligning what we now know with what we're currently doing. One practitioner's call to action.

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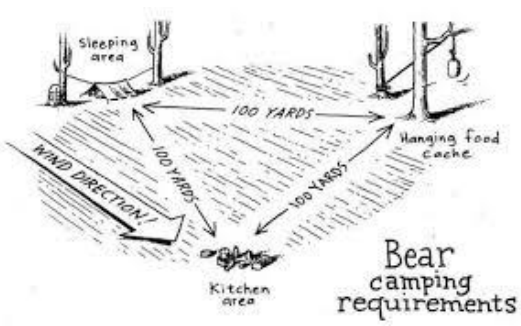
If you come across a bear in the woods, should you be submissive, or try to intimidate it? Living and working as a professional outdoor educator in the United States some fifteen years ago, my key performance indicator was to ensure all my students returned in one piece. However, as a non-native who grew up in a country where midges and gnats posed the major threat to serenity in the outdoors, the consequences of getting the choice wrong around confronting or demonstrating submission to the bear, always terrified me. Thankfully, the subject of 'bear safety' was a key component of our trip leader staff training, and we had the perfect teacher for it, in the form of New York State Forest Ranger Rudge. Ranger Rudge would drive her big red truck up to our camp every year to give the same talk. Every year, her uniform was perfectly ironed, crisped to within an inch of its life, and somehow to a young outdoor educator, this always felt amusing to me, given her day job involved hiking, trail work and probably lots of sweat and dirt. Amongst the many things Ranger Rudge instilled in me, including the fear of God, was the quiet and effective role-modelling of the importance of looking and acting professionally, whatever situation you find yourself in.

Underneath the surface of Ranger Rudge's perfectly pressed uniform however, were the permanent and visible reminders of a painful interaction with a bear. Both her and her hiking partner, on a personal trip many years before, had been attacked by a grizzly, and both had suffered serious injuries as a result. Ranger Rudge would calmly share her experience and then, without a word, roll up her trouser leg and display her large scar to the new crop of eager (and quickly terrified) trip leaders, many of whom had no previous understanding of bears, except perhaps through Grizzly Adams tales. She talked about the importance of the 'triangle' in bear risk management; separating your camp kitchen, your tents and your food storage into three distinct locations.



Fast forward twenty plus years, and bear safety, along with those valuable lessons learned from Ranger Rudge, would again become a strong motivation to advocate for a new form of safety progression in outdoor education. In 2017, the questions I have no longer surround whether we should either submit to, or stand up to the bear. The question for me now relates to our willingness, as a profession, to consider entering into alternative dialogues in relation to how we choose to understand accidents, and identify sources of risk in our work.

Disconnect between research and practice in safety management

There's no doubt though that such a step will be difficult and one for which there's little immediate rewards to reap. In fact, there will be more work, increased costs, more headaches and more challenges. On the other side of this change, however, will come significant gains – in safety, in reputation and most importantly, in the ability to look ourselves in the mirror, personally and collectively, and know that we are doing all we can to enable our students to achieve the valuable outcomes we know that can accompany participation in our programs. Further, we can also look our staff working with those students in the eye and demonstrate to them, that we truly walk our talk.

Curriculum development and our collective approach to facilitating learning in the outdoors has evolved significantly in the past few decades. If we were to ask our parents, and their parents to describe their experiences on school camps, scouts, summer camp, and other facilitated outdoor experiences, it's quite likely that some aspects of their experiences are very different to those we plan today. No longer do the 'mountains speak for themselves' solely. The curriculum we plan, advocate and teach today has evolved from the days where 30kms of walking and being cold, wet, tired and hungry were the essential components of the school outdoor education program. Today, specific and tailored lesson plans relating to the development of opportunities for students to improve their GRIT score, develop a stronger growth mindset, or acquire more resilience, are common. All these developments have emerged directly from research, and as a profession, we have translated them into actionable learning opportunities. It seems fair to say that not too many of us working in the outdoor education profession disagree with such research progression and practice translation, and in fact, many of us are fervent supporters of it. We both feel, and see, that our students gain meaningfully from such experiences where the outdoor activity is used as a medium for impacting and translating important learning about self, others and the natural world.

However, in my opinion, the same cannot be said about how we manage risk. If we are honest, we'll see that we are still teaching, promoting and defending positions relating to predicting

and managing risk that were developed and advocated several decades ago. We still largely and wholeheartedly, hold onto the perspective that a well-trained individual, the instructor, is *the* determining factor in the safety outcomes of a program or activity. Conversely, when things go wrong, instructor judgement and decision making for example, are common go-to explanations referenced in the investigation reports, if indeed, we spend the time doing them. This focus on the individual at the sharp end, as either the 'protector' of safety, or the villain after an accident, could not be further removed from the modern, validated and current position as to how accidents occur. We, the outdoor education profession, have much to learn.

There's no doubt that the above is a bold and general statement, and it is not made lightly. Rather, it is voiced from significant personal and professional experience over a twenty-year period, most of which has been specifically in risk management in the outdoors. There was, for example, a long stint as a dedicated risk manager at one of the largest outdoor education organisations in the world, as well as over twelve years as a risk management consultant who has had the privilege and immense responsibility of seeing (and hopefully supporting) many organisations at their most vulnerable, either following an incident, or when they're being investigated by the health and safety regulators. Mixing those professional experiences in with lots of field leadership, various committee involvement to review and draft standards, expert witness experience, defendant experience in court, years of attending risk conferences, a master's degree in risk and crisis management, a forthcoming PhD in human factors and, the advantage of global learning and professional networks. Without doubt though, the most important catalyst to learning about, and adopting the perspective that we are not as good as we can, or should be, when it comes to managing risk, has been formed by both personal and friend's experiences of those times when our students and staff did not come home, and the absolute tragedy accompanying such incidents for everyone involved, and over a long period of time.

The problem with 'Human Error'

The problem for using, or advocating 'human error' as a cause, or indeed the primary cause, of accidents, is that it fails to appreciate that humans are but only one part of the 'system'. Let's look briefly at the typical 'actors' within an outdoor education 'system' (this is general but representative): Let's start with the humans – here we find for example, the students, the outdoor education provider staff, the accompanying teacher, coordinators, the parents, the management of the school, and the organisation, the Education Department, the hirer of the equipment, the school council approving the

program, the regulators, the land managers, the universities and TAFE's that have trained the staff, and a few others may be thrown in the mix.

Next, we can see that the system also includes technical equipment – e.g. boats, radios, phones, vehicles, IPads, the high ropes course, the ropes, the life jackets, the carabiners, the stoves, the first aid kits, and the food. Additional aspects of the system include the procedures, policies, risk assessments, medical forms, permission slips, venue specific information, recruitment processes, staff turnover, time pressures, performance feedback processes, emergency management plans and, training curriculum and records.

Add to this even more components that make up the 'system' – the 'soft' aspects, including organisational culture, norms, collective understanding, feeling of support, beliefs about raising concerns and locus of control in addressing issues, and views around fairness, blame and accountability. These factors above, are all key influencers as to how a system behaves and operates.

It's about the interactions

We know from research that where there are lots of 'actors' – both human and technical, that accidents, and indeed, safety, emerge from decisions and actions made at all levels of the 'system', and from the outcomes of the interactions between these various 'actors'. These decisions and actions can be separated by significant time and space from the scene of the accident itself.

Let's look at an example of an accident in outdoor education, where perhaps at first glance, it would be easy to pin blame on the instructor for poor planning and decision making. Conceivably too, we may also have a crack at the accompanying school teacher for failing to ensure they had adequate resources…

> *A decision made at national parks regulatory level to limit campsites to eight people in all national park campsites (due to environmental concerns) has impacted an outdoor program who has contracted a school with ratios of ten students to one teacher (and one of their staff). The organisation has not recruited enough staff and even if they had, the school does not have the budget to pay for it. The planning process continues for the program and when allocating planned campsites, it becomes apparent that the sites are approximately 1 km from each other. The centre manager tells the group leader in their pre briefing that their group will need to camp separately by having ¾ of the group at their site and having the school staff and the remaining students camp at the second site. It should be ok though as all the cooking etc. can be done at one site. It's just sleeping there that is the issue. The manager tells the group*

leader they could lose their parks licence if this doesn't go to plan so don't 'screw up". The risk assessment is silent on the plan as, "the major risks have been addressed - e.g. cooking, fire etc. – they will only happen at one site with full supervision". On the first night of the program at 3am, a student camping at the site with the teacher is bitten by a jumping jack ant whilst going to the bathroom. The teacher is awakened by the student but due to the only first aid kit and phone being with the group leader 1 km away, the student goes into anaphylactic shock. Thankfully, due to a student being in the group with their own two Epipens and knowledge of the illness, the student's life is saved. They are evacuated and make a full recovery. The staff member is counselled and 'retrained' in 'effective supervision' before recommencing their work. The school staff member is unable to return to work for three months on mental health grounds and will not participate, at her and her employer's decision, in any future school outdoor education programs. The school principal and business manager, after lots of angry parent phone calls and a 'full investigation, decide to end the relationship with the outdoor education centre and choose another provider who operates in the same area instead.

This incident is a classic example of what safety scientists term a 'systems incident'. It's clear that the contributory factors related to this incident occurred many months before, and involved many other actors, actions, decisions and interactions, prior to those made that night at the campsite.

Why is this important and why is it so hard to look up and out?

This challenge is not related to the outdoor education profession alone. In fact, according to aviation safety researcher Steven Shorrock (http://humanisticbydesign.blogspot.com), 70 – 90% of all aircraft accidents are still primarily attributed to human error. Shorrock states that it's very tempting for investigators to choose a cause that is most close in time and place to the accident – typically that's always a person. Even though those people at the 'sharp – end', for example, the instructor, the pilot, the doctor, or the train driver, are at the end of a very complex web of actions and decisions, and although there are many other actions and factors that lead right back to design decisions, policy and procedure decisions and regulation decisions for example, (think land manager decision to cap campsites as one of these factors), the people at the sharp end are there when the accident happens. Consequently, it's very tempting to make their immediate actions a primary cause, and label it 'human error'.

The eye opener

If human error, or terms such as 'poor judgement', 'decision making', 'carelessness', etc. are determined to be the reasons why an accident happened, the common go-to remedial measures are typically re-training, or reminding people to be more careful, or in some cases, adopting disciplinary actions against the staff member. However, such steps will have very limited impact. This is because of something termed 'local rationality'. Local rationality is a term used to explain, that as humans, we do things that seem completely rational to us at that particular time, and in that specific context. For example, in the incident described above, the instructor made a decision in relation to where people would sleep (they were told they had to separate by their boss), who would have the first aid kit (they were the leader, and their job in their policy documents was to have the first aid kit with them at all times), and which students would camp with the teacher (they didn't know the child had a pre-existing allergy to jumping jacks as it had not been disclosed by the parents). In short, it made perfect sense, at that time, to them, to make the decisions, and take the actions they did.

For us, as outdoor education managers and leaders, our questions and intentions following an incident should not be to find out, why on earth our staff did what they did, but rather attempt to understand, *why did it make sense for them at that time,* to do what they did. Asking this question gives us clues as to how to prevent these accidents in the future. Quite simply, if we don't look up and beyond the immediate, the same contributory factors that led to the accident occurring will remain in the system, waiting for someone else to run into them. Taking the individual out (either through punishment or retraining), will not prevent these accidents from reoccurring.

Hang on though, what about accountability?

It may be tempting to think about this approach outlined above, the 'no-blame' approach, being somewhat lacking in accountability. For example, if someone does something wrong that helps cause an accident, surely they must be held accountable?

Absolutely.

However, let's explore about another well-known term found in other professions where safety management is crucial – that of, 'Just Culture'. In short, just culture is simply the realisation and acceptance in the end that no one goes to work to have an accident (Shorrock, http://humanisticbydesign.blogspot.com). What that means is that individuals should not be unfairly

blamed for *ordinary actions and decisions* that could be made by anyone, in the course of their work, even when things go wrong.

The measuring stick though is when it is accepted by everyone associated with it, that an action is completely unacceptable, then it absolutely needs addressing, and personal accountability is paramount – an example of this is working under the influence of drugs or alcohol, or knowingly violating rules in some way. A 'Just culture' recognises the need for both fairness and organisational learning, with balance and accountability. A just culture will help you, and everyone in your organisation, to know what's acceptable and what's not.

This understanding is so important around the investigation of incidents. A fair approach must be taken, and in the vast majority of cases, there *will* be problems with the system (culture around reporting, time pressures, staff turnover, lack of understanding of job roles, expectations, relationships with clients etc.), that helped contribute to the accident. Further, if individuals feel they will be made scapegoats or blamed unfairly, they will adopt, purely for survival, self-protective or cover up behaviours. They'll retreat into their own roles and functions, and safety will be highly compromised. This is no good for anyone.

What can we do to adopt more of a 'systems approach'?

UPLOADS

UPLOADS represents a nine-year project established initially by three outdoor education managers from different organisations, sitting around a kitchen table, and posing the question, "Do we really understand why the incidents we are seeing in our programs are happening"? We knew back then that there was a lot more to them than 'poor judgement' and 'bad decision making', but we didn't know how to find it out. The only research sources we had were from coronial reports, newspapers, and our own experience. After contacting Monash University Accident Research Centre and posing our question to them, a program of research with some of the best and most current safety researchers in the world assembled together. UPLOADS was born. The program was so innovative that two successive Australian Research Council Grants were won to help fund the research. Today we have multiple outdoor organisations, and The University of the Sunshine Coast and Federation University included as research partners. Most importantly, however, this project emerged from the ground up and was a genuine attempt to prevent injury-causing incidents, and truly be able to look ourselves in the mirror and say we were doing all we could to both prevent harm, and achieve valuable educational outcomes. We knew, as a bunch of managers, that we needed to

bring our safety practice in line with current, validated research, just like we were doing with our educational outcomes curriculum.

So What, Now What?

Over the past nine years, the organisations involved in the UPLOADS project have learned a lot. Here's a list of suggestions for you and your organisation to consider adopting to assist you become more systems focused, and in so doing, building a more resilient and just culture.

1. Sign your organisation up to UPLOADS - you'll learn the skills to analyse your data to help identify the systems factors involved. You'll also get regular information related to other incidents, associated learnings and take away by safety scientists and fellow practitioners. Plus, it's free; Go here to sign up for the national trial or to get more information: https://www.surveymonkey.com/s/UPLOADS, or alternatively, contact Dr Amanda Clacy (Research Fellow), Phone: +617 5456 5904, Email: aclacy@usc.edu.au
2. Read more on the topic from people outside of outdoor education – writers such as Sidney Dekker and Steven Shorrock have very accessible blogs, you tube videos and regular contributions that are extremely helpful – www.safetydifferently.com, http://humanisticbydesign.blogspot.com, http://sidneydekker.com/
3. Change and adapt your curriculum in staff trainings, risk and safety management curriculums at TAFE and University to include systems thinking – there are resources here for this: https://uploadsproject.files.wordpress.com/2014/05/uploads-manual-part-1-the-uploads-approach-to-accident-analysis1.pdf
4. Take a systems approach when you investigate incidents – go here for resources https://uploadsproject.files.wordpress.com/2015/03/interview-questions-learning-from-outdoor-incidents.pdf
5. Go to and support outdoor and risk management conferences – the wilderness risk management conference, run by NOLS and the WRMC committee, is excellent. If you can't make it there, read the proceedings here, https://www.nols.edu/en/courses/risk-services/wilderness-risk-management-conference/
6. Realise that there will be an initial increased investment – time, resources, brain etc. – it will pay off in the medium term. I can attest to this fully in my own organisation. Get in touch if you want more perspective on this – dallatc@oeg.edu.au
7. When an incident occurs, ask "Why did it make sense to them to do, say, think, feel, that"? This is a very very different question to the alternative, which focuses on the old, human error/blame approach.

8. Realise that this is hard, that changing perspectives is hard and that sometimes, you'll struggle as fear takes hold. Incidents are not good for anyone but our jobs as leaders is to role model, to listen and hear, and to take the time to really understand why something happened. Give yourself and your team a break.
9. Build a network of colleagues around you who can support you – this can be a lonely profession, especially when accidents occur. Stay connected and reach out.

Finally, the answer to the bear question. It's simply that the choice you make will completely depend on the type of bear you encounter. Context is everything. Ditto with accident understanding and prevention. By looking up and out at the whole system and understanding the context in which we, or our staff, find ourselves, we are better placed to see the whole picture. Only then can we purport to have all the information we need. It's time to open our eyes wider, and align what we and the researchers currently know about how accidents occur, with the things we are doing to prevent and learn from them.