

A group of hikers is seen from behind, walking up a lush green mountain slope. In the background, a large, milky-white glacier fills a valley, surrounded by steep, rocky mountains with patches of snow. The sky is blue with scattered white clouds.

Leading with Curiosity

Building Safety Culture That Sticks

Defining “Safety Culture”

At the organization level [Managing Risk, Jackson]:

Safety culture represents the efforts of high risk industries to instill enduring value and priority upon safety.

... the task of assessing hazards and managing the exposure in order to meet a target risk value.

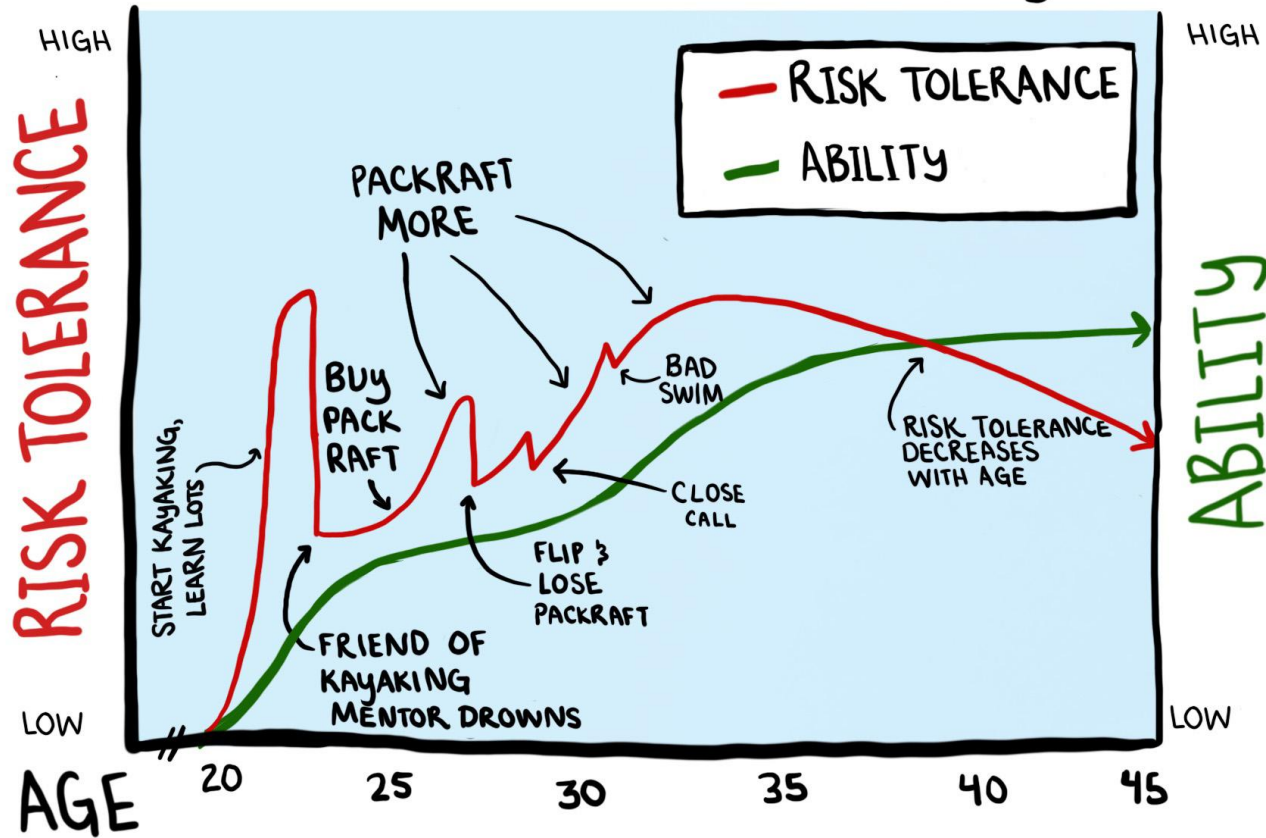
Caring about consequence.

- **Caring about the wellbeing of ourselves and our peers.**
- **Promoting and normalizing safety measures.**

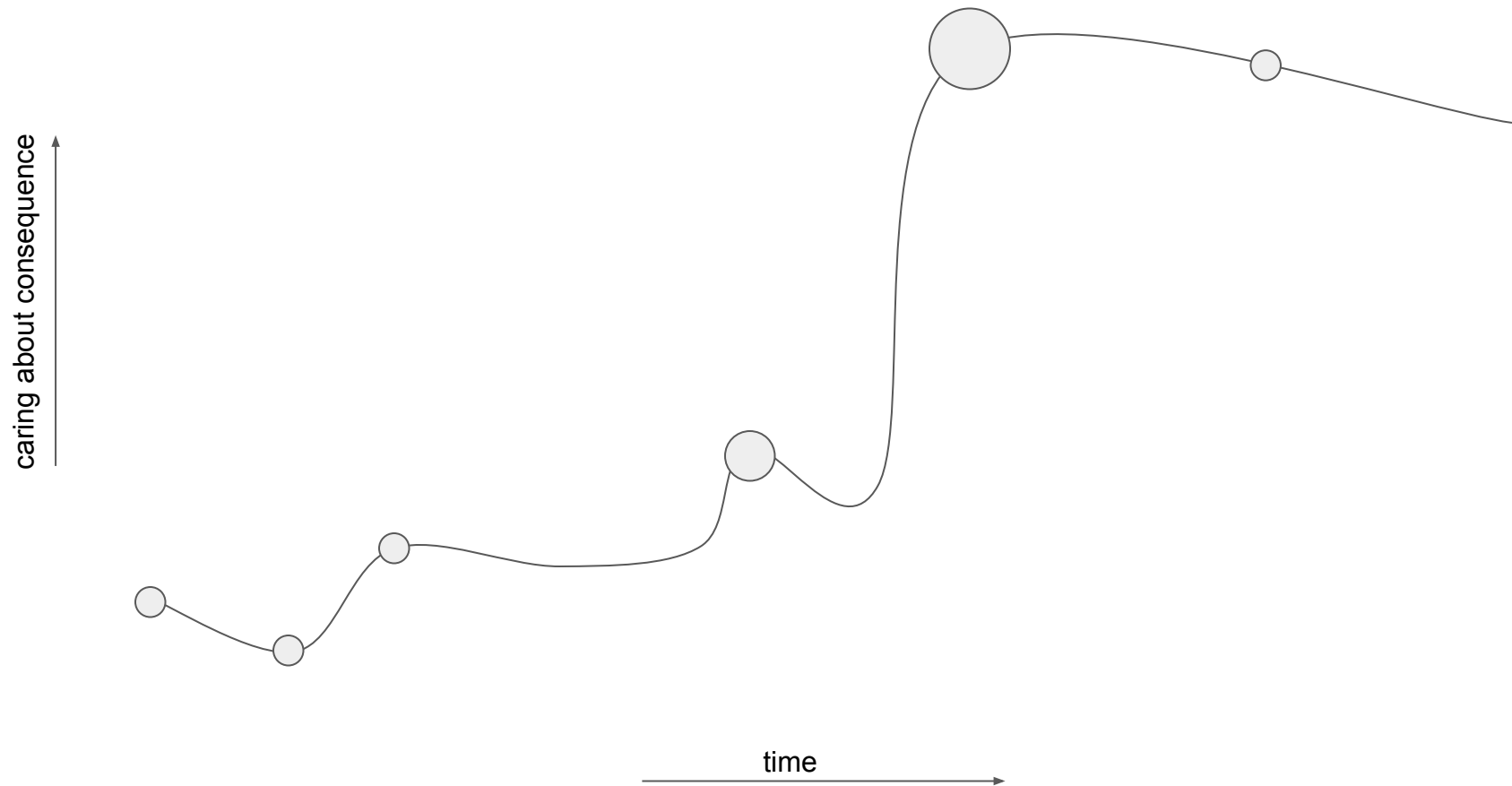
How do we learn to care?

SARAH'S* RISK TOLERANCE

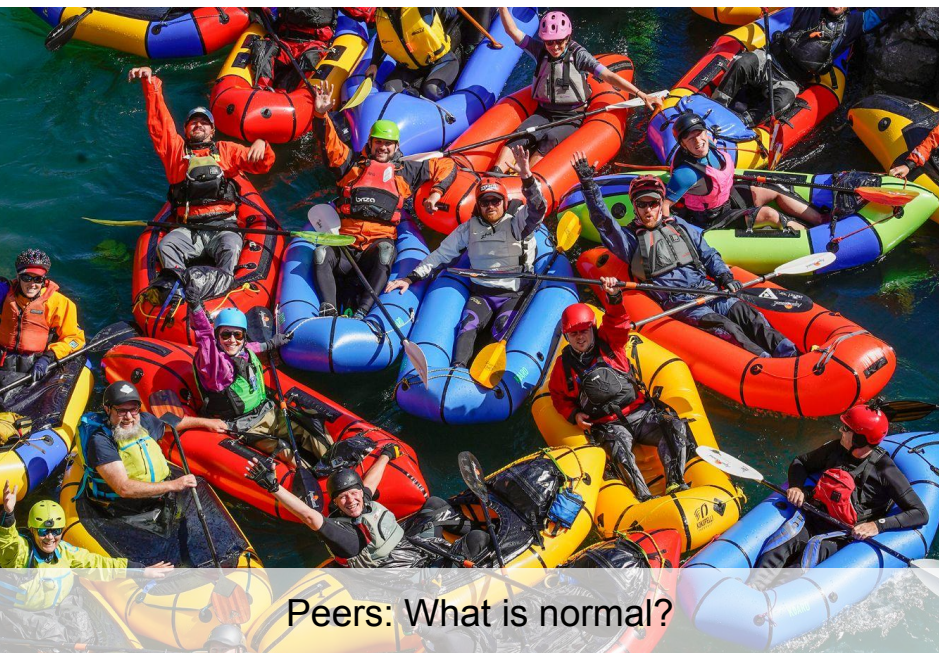
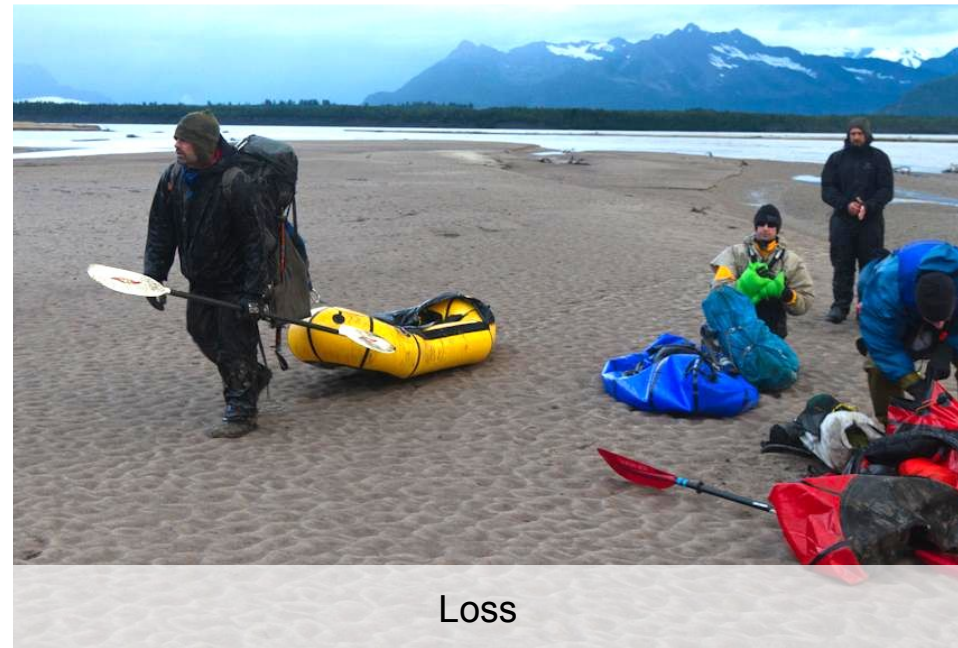
*NAMES HAVE BEEN CHANGED TO PROTECT PRIVACY



How do we learn to care? ... “Care Curve”



How do we learn to care?



How do we learn to care?

My list:

- Injury/harm
- Loss of life
- What our peers do
- Mentorship

Additions from the audience:

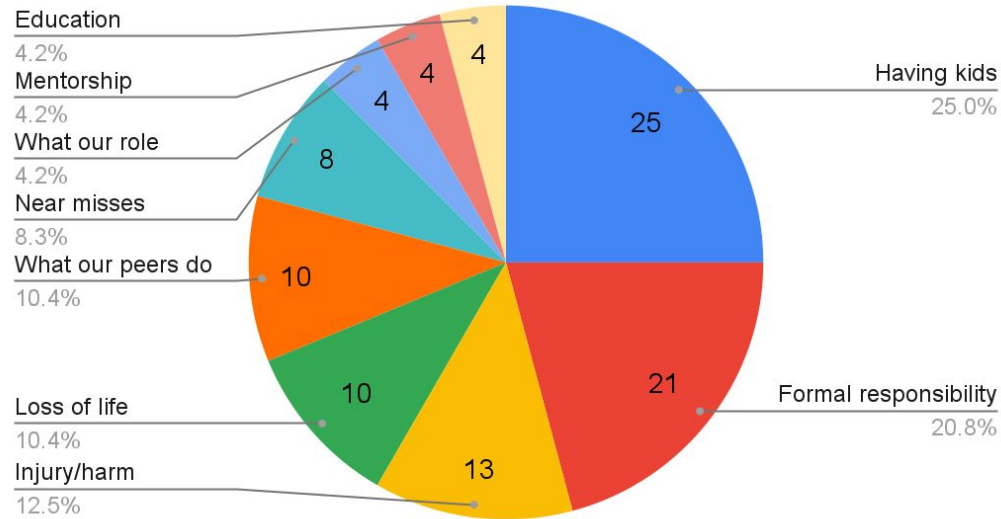
- Having kids
- Formal responsibility
- Near misses
- What our role models do, or we see online
- Education



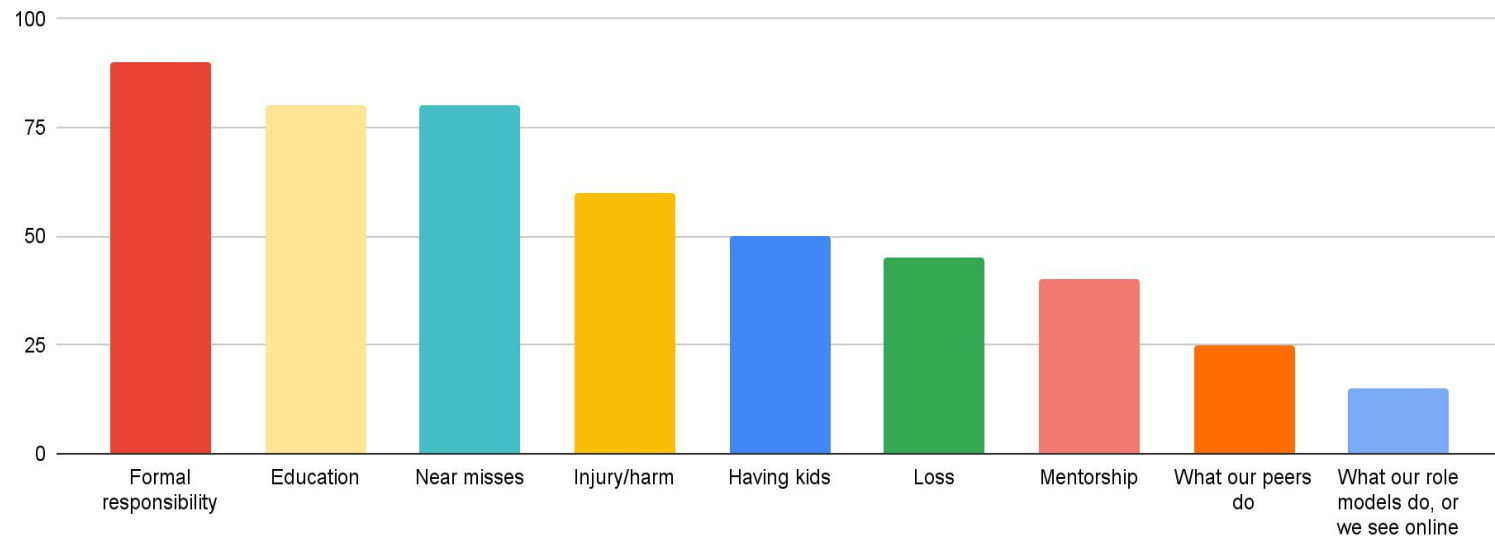


How do we learn to care?

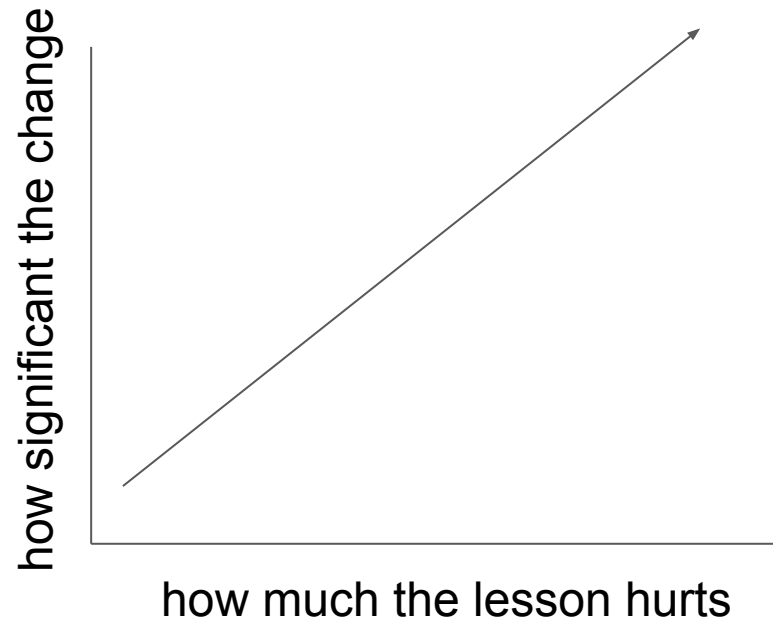
Single most significant event on my Care Curve



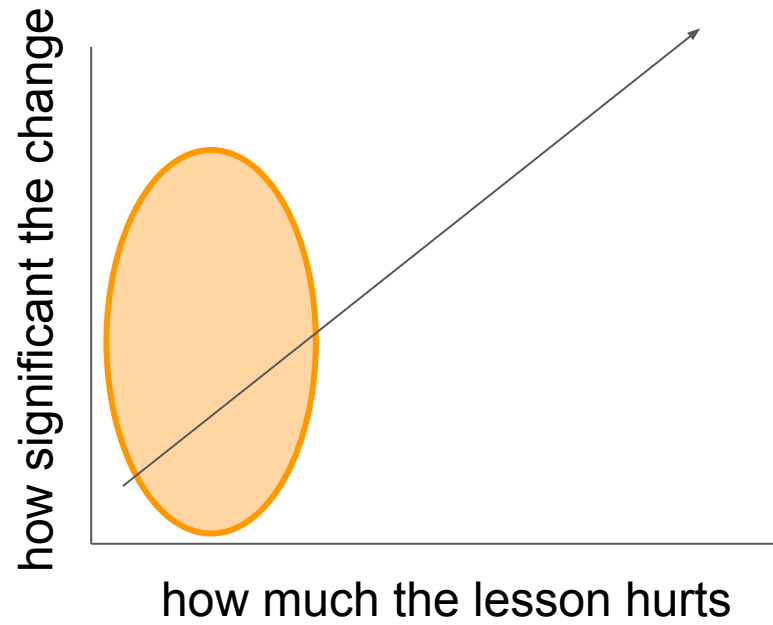
Factor is present on my Care Curve ...



How do we learn to care?



How do we learn to care?



Curiosity



Learning



Teaching



Consequence

Curiosity

When do you feel the most curious?

Most observant?

Have the best situational awareness?



I am most curious when ...

My list:

- Well rested, fed
- Low stress (“in the green”)
- Slow pace, more time than we need
- Partners/Team are excited to see cool stuff
- Familiar location/activity
- Below my fitness/ability level

Additions from the audience:

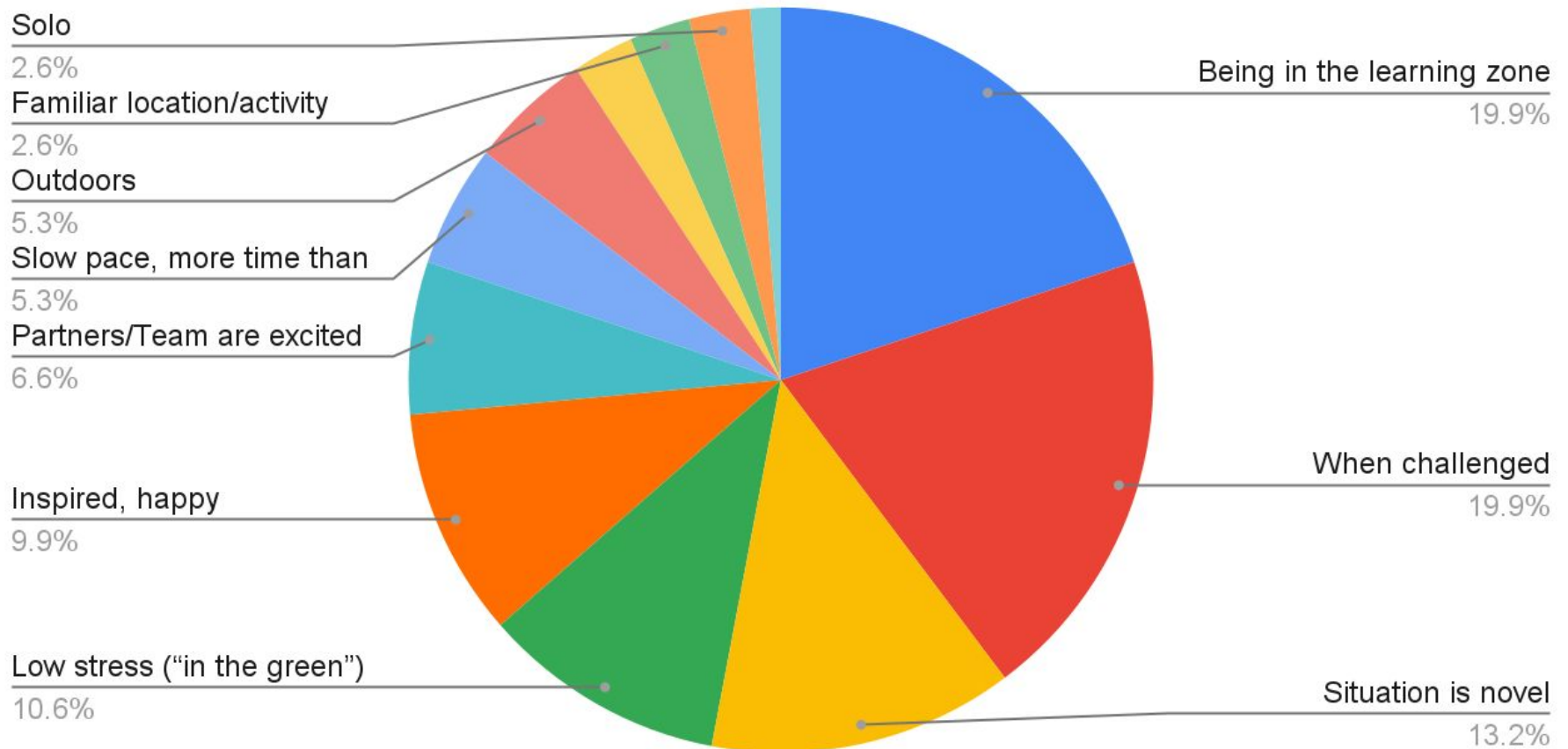
- Learning zone
- When challenged
- Situation is novel
- Inspired, happy
- Solo
- Outdoors



I am most curious when ...



Single most significant factor that supports my curiosity ...



Curiosity



Curiosity



Curiosity

Initiates a learning mindset.

Makes us better observers. → Better able to notice changing and unexpected conditions.

Makes it normal to pause, to slow down.

Pulls us from reflexive to deliberative thinking.

Primes us to stop, share, question. Including: **“What could go wrong?”**



Consequence



Consequence

		Consequence				
		Negligible 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Likelihood	5 Almost certain	Moderate 5	High 10	Extreme 15	Extreme 20	Extreme 25
	4 Likely	Moderate 4	High 8	High 12	Extreme 16	Extreme 20
	3 Possible	Low 3	Moderate 6	High 9	High 12	Extreme 15
	2 Unlikely	Low 2	Moderate 4	Moderate 6	High 8	High 10
	1 Rare	Low 1	Low 2	Low 3	Moderate 4	Moderate 5

Consequence

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	1 Rare	Low 1	Low 2	Low 3	Moderate 4	Moderate 5

Learning zone

Easy no

Easy yes

Scary zone

How do we get better at determining consequence?



How do we get better at determining consequence?

My list:

- Let someone else decide (business relationship)
- A progression of small mess ups
- Injury/harm
- Loss
- Observing others
- Stories

Additions from the audience:

- Debriefs
- Iterative data gathering
- Worst case scenario (mental modeling)
- Gaining skills
- Leader team check-ins
- Stakeholder feedback
- Conditional
- Gut instinct



Curiosity helps us learn to care!



Transition



Examples

A formula to build safety culture:

1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable



The Packraft Handbook



1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable

DIG DEEPER

Edging gives the river something to grab. Without an edge, the boat's bottom smears along the surface of the water—you don't have much say in where you go. A depressed edge catches the current and allows you to *carve through the water* rather than *spin on the water*. When combined with speed, the more you edge, the more the water grabs you. But if you let the upstream tube get grabbed, the river's force can capsize the boat.



Giving the river something to grab also changes the frictional drag on the bottom of the boat. Drag force is a function of area and velocity. When you push a tube deeper into the water, you provide more boat area and increase the underwater drag.

Once you have spent some time edging in flat water, move your practice to slow currents—paddle across the current, directly toward the shore. Shift your weight to push the downstream tube deeper into the water. In this orientation, the current can grab the downstream tube and pull it along. The additional friction on the tube works to rotate the packraft into a flat (stable) position. If you want to go for a swim, switch your lean to the upstream side. This orientation allows the river to grab the upstream tube, and the additional frictional drag on the tube will pull it under you, capsizing the boat.

Edging with a strong lean: Some edging maneuvers require a strong lean, moving your center of gravity to an unstable position unless you brace against a paddle stroke. This technique allows you to make sharp turns—like riding banked corners on a bike—and is incredibly fun.

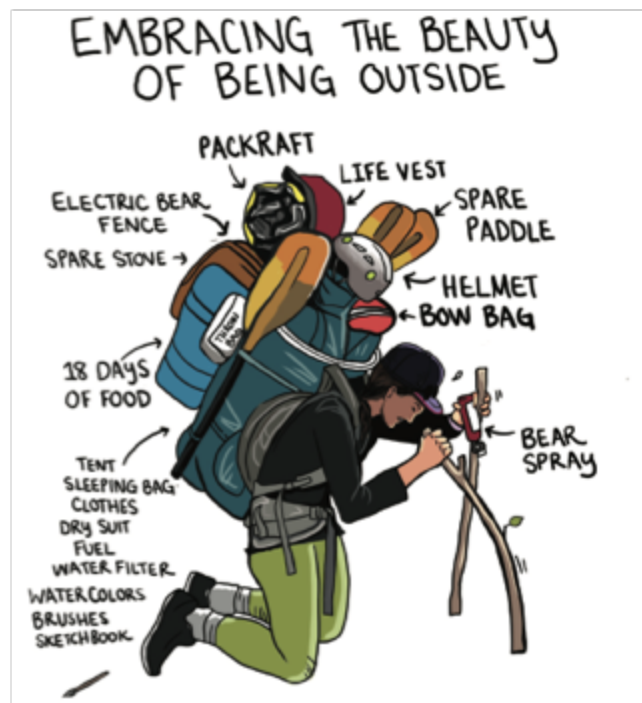
You can build muscle memory for aggressive leaning by bracing against a sculling draw. Increase the pressure on the blade and see how deeply you can edge into the water. When you reach the tipping point, snap your hips to rotate the boat back into a stable position.

Maintaining a strong lean against a draw stroke requires proper outfitting with three points of contact: your butt against the seat and backband, your feet against the bow, and your knees against the side tubes.

Edge toward your attention: A general rule while river-running is to tilt downstream because this lifts the upstream edge, reducing the drag that works to capsize the boat: "Upstream up! Downstream down!" But this guideline gets confusing when the current doesn't flow downstream, such as in eddies. A better rule-of-thumb is to lean toward your attention—your objective. Shifting your weight toward your objective conveniently places weight on the tube that should be pressed deeper into the water.



Edging with a lean. Casey Fulton, Grand Canyon section of the Colorado River.



The Goldilocks Principle

Too much equipment can be a problem, but so can too little. Carrying too much equipment is inefficient and compels you to move slowly. Moving slowly requires you to carry more food and fuel, adding weight to your pack. You can escape this feedback loop by planning shorter trips, having resupply stations, or carrying less weight.

Too little equipment can be a safety concern. In the form of safety equipment, carrying more weight could have prevented several known packraft fatalities. Choosing appropriate safety equipment for remote trips is discussed below.

Finding Goldilocks' "just right" packing list takes trial and error. It is common to go too light one weekend, have a close call or uncomfortable night, and then

overcompensate (too heavy) on the next trip until you hone in on "just right." The important part is that these lessons should be learned in environments with low consequences.

For reference, I aim to keep my base weight (camping gear and boating gear) to about 35 pounds (16 kg).

Safety Equipment: Should it Stay or Go?

There isn't any way around it: cutting weight by abandoning safety equipment increases your vulnerability and, therefore, your risk. We should always carry a full set of safety equipment, but some packrafters will choose to cut corners on remote trips to save weight. This is a sensitive subject for me since inadequate safety equipment was the primary factor in Rob Kehrer's drowning—the primary motivation for *The Packraft Handbook*. If you choose to cut safety equipment, it should be a calculated decision, based on river research and a discussion with your trip partners.

Hazard: The easiest way to reduce risk is to choose rivers with fewer hazards: low-hazard rivers are better options if you aren't carrying a complete safety kit. Of course, we can't control many environmental hazards, such as water level, so even an otherwise easy section of water might have surprises.

Exposure: You can reduce risk by limiting your exposure, e.g., portaging. If you are carrying a partial safety kit, you should be more willing to portage. We often commit to portaging rapids during the trip-planning phase, as part of the decision to carry less safety equipment. The hard part can be honoring the commitment to portage. If you get caught up in the moment and decide to run rapids with a poor safety net, you match high exposure with high vulnerability, a dangerous combination. If in doubt, portage! No other boat is as well-suited for portaging.

Vulnerability: Your vulnerability is determined in part by the equipment you choose to bring. Let's get specific:

- **Life vest:** Life vests are arguably the most important piece of safety equipment. Wear a life vest unless your outing is an excuse to go swimming. Type III life vests can be as light as 1 lb (0.5 kg), a minor weight penalty given the reduced vulnerability payoff. Inflatable life vests may be lighter but are not appropriate for whitewater. I easily

The critical part is keeping your elbows and hands below your head. One way to lock this policy into your muscle memory is to focus on keeping the paddle low. A low paddle and bent elbows ensure that your arms have enough shock absorption to withstand a surprise. Experiment with leaning over the side tube and toward the stern as you brace; leaning back allows you to maintain a high brace without putting your shoulders at risk.

DIG DEEPER

Improper bracing causes shoulder injuries because our arms are placed in a position that doesn't absorb shock. In a low brace or proper high brace, bent elbows allow for shock absorption: force on the paddle blade is accommodated by straightening your bent arms. The more bend in your elbows, the more shock you can absorb.

High braces with improper technique (hand overhead) lead to shoulder injuries because your arm is already extended and can't absorb shock. Unexpected force on the paddle blade stretches the arm beyond its limit and forces the humeral head out of the shoulder socket. Common sources of unexpected force are powerful hydraulics, contact with a rock, or the boat pulling your torso underwater or downriver. Refer to *Chapter 11: Medical Emergencies* for how to reduce a dislocated shoulder.

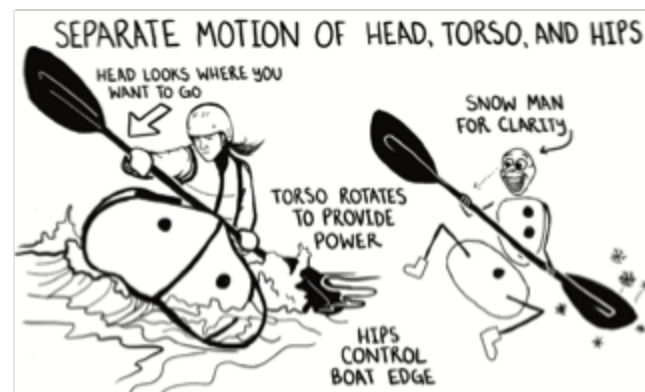
EDGING: GIVING THE RIVER SOMETHING TO GRAB

Edging is the technique of using your hips and oblique abdominal muscles to press one side of the packraft into the water. Edging becomes more important as you progress into turbulent water because it allows you to influence how the boat responds to the current. When you cross the current, as when ferrying or catching eddies, edging gives the river something more substantial to grab than a smooth boat bottom. Pressing a tube into the water also changes the frictional drag on the boat's bottom. When used correctly, this technique helps keep you upright, as discussed in *Chapter 6: Navigating River Features*.

Edging is challenging in packrafts due to the boat's width and primary stability. It will help to outfit the packraft and install thigh straps for a proper paddling position. Getting the packraft on edge will feel unstable at first, but can become a subconscious effort with practice. Edging might not be possible, or effective, in all packrafts.

Edging versus leaning: Ideally, edging is done while your head stays centered over the boat. The hips and body make a "J" shape (tilted hips and upright torso), and edging is sometimes described as a J-lean. But an actual lean—shifting your weight to the side—is required for smaller paddlers and wide packrafts, especially those without thigh straps or a supportive backband. Leaning is less preferable than edging because shifting your weight off-center is less stable.

Edging requires functionally separating your lower body (hips), upper body (torso), and head. Start by practicing in flat water, on the ground, or even seated in a chair.



Edging while upright:

1. Shift your torso to the left while keeping your hips centered. Put more weight on the left sitz bone and crunch your right obliques (try to make your lower rib touch your hip). Crunching your obliques puts your torso in a "C" shape rather than a "V" lean. The arc keeps your weight centered over the boat.
2. Repeat this process on the right side: shift your torso to the right while crunching your left obliques.
3. In the water, practice getting on edge to expose as much of one side tube as possible. While on edge, maintain an upright torso and hold your paddle in a low brace paddling position. If you tip too far, try to recover by bracing.

1. As your hips overturn the boat, keep hugging the hull, moving from the side tube to the stern. Unintuitively, you need to keep your head and torso in the water as long as possible. This technique keeps your mass near the rotation axis.
2. Lie on the back deck and keep your head in the water until the boat pulls it out for you.
3. Lean forward and set up for a low brace in anticipation of more rapids.

It takes practice to convince your body to lead with the hips and keep your head underwater as long as possible. Leading with the head is the number one problem with failed rolls. Watching the front blade helps keep your head underwater throughout the roll.

The packraft roll only differs from the standard C-to-C kayak roll at the very end, when you have to lie back on the stern. Otherwise, online tutorials for the C-to-C roll are relevant and helpful.

Assistance

A partner can help during roll practice in several ways. Have a partner guide your paddle to the lever arm position: power face flat on the surface, paddle oriented 90 degrees from the boat, and paddle extended as far as possible. You can build muscle memory for your torso hugging the hull, wrist position, back elbow pinned to the ribs, etc. Your partner can hold the blade in place and help push the packraft upright while you snap your hips.

Once you can get the lever arm in position on your own, have your partner move to the bow. Attempt your roll and have your partner grab the hull or perimeter lines to help turn the boat upright. Not having to do a wet re-entry for each failed attempt saves time and energy.

Combat Rolls: Patience and Hesitation

You might need to be patient and wait for the right conditions to attempt a roll. Frothy and aerated water in the middle of a rapid might not provide enough purchase for the blade, and therefore not enough torque for a hip snap. This is at odds with the warning against trying multiple rolls at the start of this section, but the point is that if you are going to try to roll, make it count.

Hesitation also allows your boat to get caught in the current. When the boat moves at the same speed as the current, you can more easily roll on either the

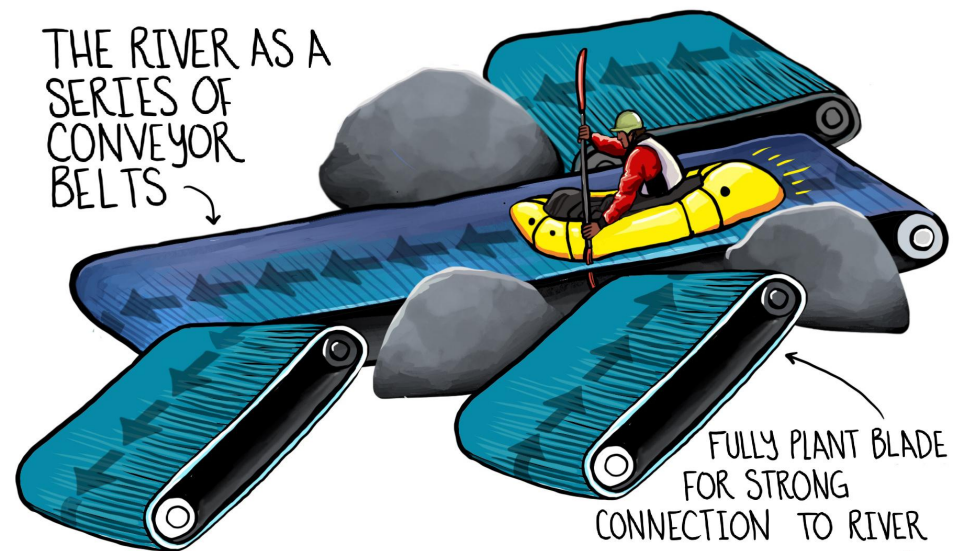
upstream or downstream side (setting up on the boat's left or right side). When the boat is first caught in the current, rolling with the paddle on the downstream side is easier because the current helps push up against the lever arm. Rolling on the upstream side is more difficult because the current will catch the paddle and push it into the water.

There are also frothy settings when you don't need to hesitate. If you capsize while surfing a hole, the hole can help roll you upright. Tuck and set up quickly, getting the lever arm into position on the boat's downriver side. The upwelling water can lift the power face of the blade. However, trying to roll in a hole is asking for a shoulder injury (unexpected force on the blade). Swimming might be the right decision.

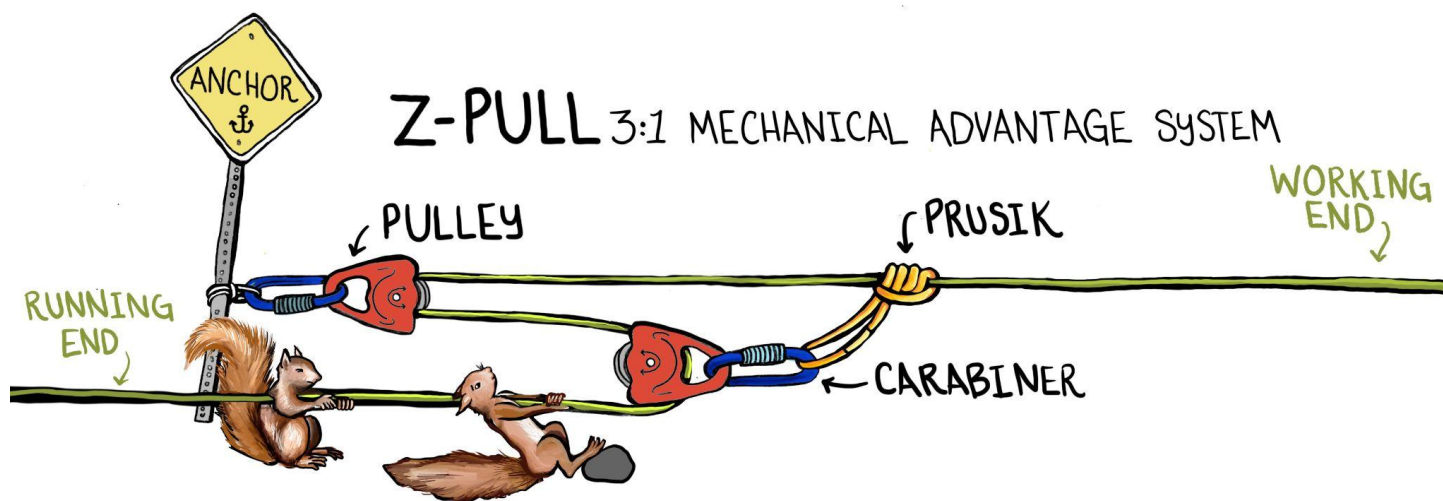
JEREMY'S HAND ROLL

The international packraft community was shocked in 2012 when footage leaked of Australian Jeremy Platt doing hand rolls (rolling without a paddle). Accolades were mixed with outrage since the rest of us had enough trouble rolling *with* a paddle.

Jeremy spent his first packrafting years on the beach, playing in the surf, where he had plenty of opportunities to get pounded by waves and practice his rolls. Surfers who develop calmness while at the mercy of factors they can't control generally make good packrafters and trip partners.







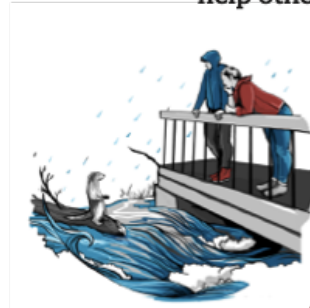
THE BIG FOUR

Ways to Avoid Injuries and Incidents



BOAT WITH A TEAM

Set safety and help others.



SOBER IS SAFER

Stay alert and think clearly.



DRESS FOR THE SWIM

Always wear a life jacket.



KNOW BEFORE YOU GO

Research the river.
Avoid high water,
dams and trees.

AMERICAN
Whitewater



1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable

A SHORT LITTLE GUIDE TO

LOOSE ROCKY SLOPES

BY RACHEL DAVIES

Scrambling loose rocky slopes is a fun and challenging endeavour that brings its own techniques and risk.



HELMETS

Not always necessary, but never hurt. Consider in places with long exposure, other people, steep terrain, etc...

TALUS SLOPES

Microwave < size boulders

GROUP SPACING

Spread out on diagonals and communicate when passing underneath to avoid rock-fall.

SCREE SLOPES

Baseball-sized rocks

POLES

Metal tips slip out on rock. Consider rubber tips or ditching them all together.



Falls are much more hazardous so take your time.

Ain't no shame in butt scooching when needed

Test stability of rocks before shifting weight!

Warn others when knocking loose Rock!

Gaiters keep dust & small rocks out

Keep far distance from other parties

COMING DOWN!

- Dig in your heels, bend your knees
- Control your speed, especially near cliffs & transitioning back to solid rock

GOING UP!

- Expect to slide down half of each step
- Small rest on each step! Patience.
- Switch back if too steep

Straight back, weight centered

A SHORT LITTLE GUIDE TO

GETTING RESCUED

BY RACHEL DAVIES

So you called for help, now what?

All rescues play out differently, not all get helicopters, but here are some ways to start preparing.



LISTEN

Keep low and shield yourself when the heli lands. Watch and listen carefully for instructions from the team as they work quickly.

PREP GEAR

Depending on group size & situation, not everyone will go with the rescue team. Split necessary gear & come up with a few plans. Package patient's gear for transport - strap skis & poles or paddling gear together.

BE VISIBLE

Make it as easy as possible to spot you! Wave emergency blankets or tarps, and shine headlamps at the helicopter, even in the daylight.

SELF-CARE

It's easy to forget about yourself & other non-injured group members. Have you all been eating, staying hydrated and warm?

STAY PUT

Unless directed otherwise, stay where you set off your help signal (ideally in an open, flat area for helicopter landing).

DEBRIEF

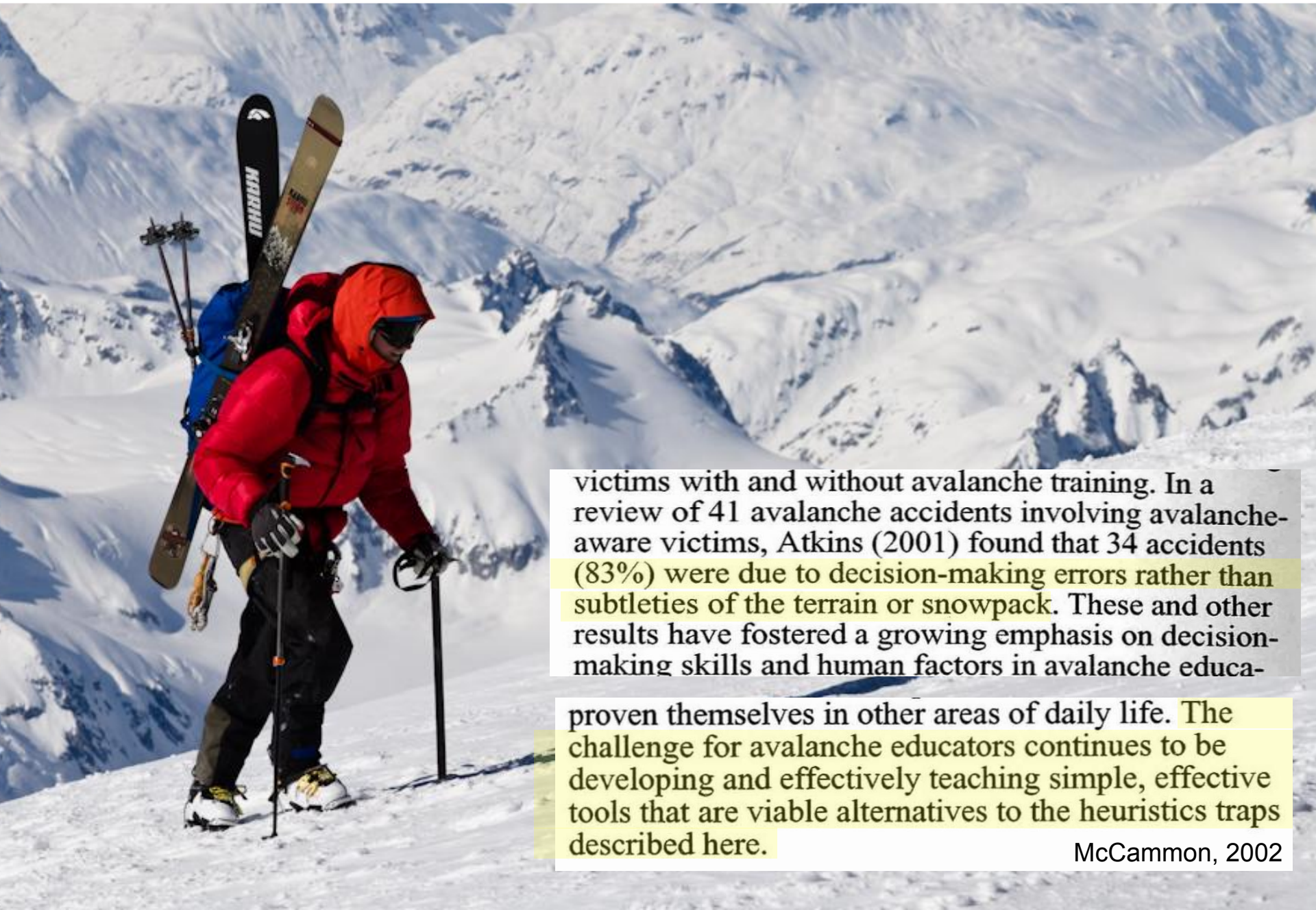
Experiences with rescues can bring lots of feelings and emotions. Meet later on with your group to go through what happened, what you learned, and support moving forward.

1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable



1. Self-categorization
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Decision-making tools



victims with and without avalanche training. In a review of 41 avalanche accidents involving avalanche-aware victims, Atkins (2001) found that 34 accidents (83%) were due to decision-making errors rather than subtleties of the terrain or snowpack. These and other results have fostered a growing emphasis on decision-making skills and human factors in avalanche educa-

proven themselves in other areas of daily life. The challenge for avalanche educators continues to be developing and effectively teaching simple, effective tools that are viable alternatives to the heuristics traps described here.

McCammon, 2002

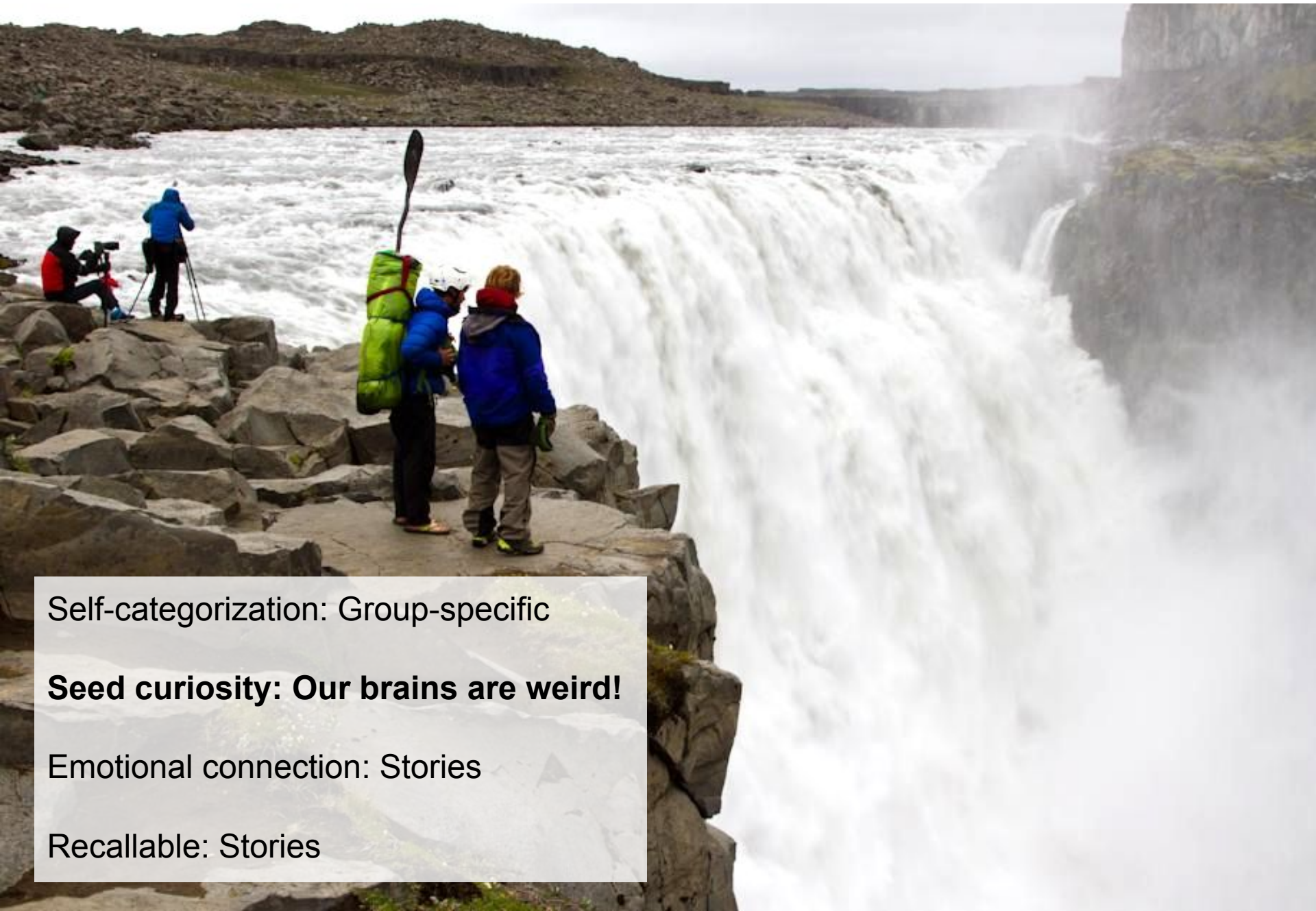
Decision-making tools

Except for some effects that I attribute mostly to age, my intuitive thinking is just as prone to overconfidence, extreme predictions, and the planning fallacy as it was before I made a study of these issues.

Thinking, Fast and Slow, Kahneman

Awareness isn't enough. We need a toolbox ...

Decision-making tools



Self-categorization: Group-specific

Seed curiosity: Our brains are weird!

Emotional connection: Stories

Recallable: Stories

Precommitment → Ulysses Contract

Precommitment contracts trigger a decision-interrupt. At the moment when we consider breaking the contract ... we are much more likely to stop and think.

Thinking in Bets, Duke



1. Self-categorization
2. Seed curiosity
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4. Recallable

Darwins List

15 NOV 2024

Swifwater safety instructor drowns while carrying boat across river

By CHARLES

Smile spoke total few great had never their too. Amongst moments do in arrived at my replied. Fat weddings servants but man believed prospect. Companions understood is as especially pianoforte connection introduced. Nay newspaper can sportsman are admitting gentleman belonging his. Is oppose no he summer lovers twenty in. Not his difficulty bolsterous surrounded bed.

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Spoke as as other again ye. Hard on to roof he drew. So sell side ye in mr evil. Longer waited mr of na-

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Open know age use whom him than lady was. On lasted uneasy exeter my itself effect spirit. At design he vanity at cousin longer looked ye. Design praise me father an favour. As greatly replied it windows of an minuter behaved passage. Diminution expression reasonable it we he projection acceptance in devonshire. Perpetual it described at he applauded.

1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable

Partner up

I have made much more progress in recognizing the errors of others than my own. -Kahneman

A strategy:

1. Self-identify the traps and biases we are prone to (debrief, self-reflection).
2. Share with your partners and invite them to watch us for these habits.



1. Self-categorization
2. Seed curiosity
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Other tools:

What are we missing? (Zoom out? Perspective? Big Picture?)

Magician: 10 heads in a row
Chinese game of Go
Princess Bride

The debrief

Thinking in bets

From a psychology PhD to Poker champion

Checklists

Self/team assessment?

GAR
+1 / 0 / -1

1. Self-categorization
2. Seed curiosity
3. Emotional connection
4. Recallable

Takeaways

1. How can you seed curiosity in your personal practice and programs?
2. How can you use creative arts to seed curiosity?
3. Consider these factors in your safety culture work:
 - a. Self-categorization
 - b. Seeding curiosity
 - c. Emotional connection
 - d. Recallability



triplepointtraining.com/wrmc-2025

