FEAR: Good, Bad or Ugly?

By Christopher Ortiz, High 5 Adventure Learning Center, 2011

A Prelude to the Amygdala

Several years ago I had a neurologist as a chaperone for participants in a challenge course experience I was facilitating. He and I talked at length about the experience and he started to share with me in simple terms how the body and mind processes fear. I was fascinated. As he described the process of our brains "hijacking" our bodies until the brain decides if we really should be scared, I immediately saw direct connections between the ways we facilitate challenge course experiences and what was happening inside the brain and body of our participants. I had to know more.

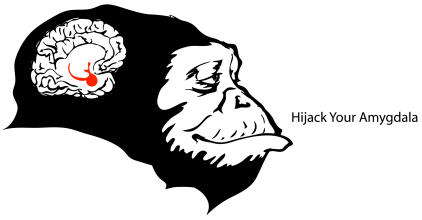
Since then, I have stumbled upon numerous websites and articles on the subject that I will share with you at the end of this series but, in short, I discovered that humans are hard wired for fight or flight response. That was a term I had heard but I don't think I ever fully understood its meaning. Simply put, when we sense things in our daily life, our brain (specifically the Amygdala) is constantly scanning for danger. When we are faced with a potentially scary or dangerous experience, the Amygdala hijacks the body, preparing us to either fight or flee(in primitive terms).

On the challenge course, when participants start to push themselves outside of their comfort zone, the Amygdala is on watch. If the situation escalates beyond a challenge into something more emotionally volatile in the mind of the participant, they get hijacked. I would guess that on the challenge course it does not happen all at once but incrementally in small little battles of the mind that build over time. If the participant and facilitator ignore the signs, the end result could be someone frozen in fear atop of a zip platform or pamper pole.

After reading hundreds of pages of material I began to formulate a bit of a hypothesis. Nothing earth shattering but I felt like I was stumbling upon actual scientific proof that proper sequencing and program design was essential to the success of our challenge course participants. If we expose participants to an ideal program design and guide them through a process where their team and facilitator supports them fully, we could have them climb to that point of challenge, to stand in the face of fear and succeed, whatever success means for that individual participant. This ultimately is what has gotten me interested in learning about the psychological and physiological underpinnings of fear. This is what has born this three part series on fear as it relates to adventure education through my eyes.

Dr. Relly Nadler (of True North Leadership, Inc.) said "The power of emotions overwhelms rationality. That is why when we are emotionally upset or stressed we can't think straight." When we are scared, we can't access parts of our brain or memory. Think about that next time you have someone shaking on the end of your belay rope.

Hijacking the Amygdala



Background

I have given you some background as to how I came to be interested in fear and its connections with work on challenge courses. My next challenge will be to explain the process our body and minds go through in an emotionally charged situation. How we react, how we process, why we freeze up, shake, make funny faces… Why?

I'll first put this into context of the challenge course. On the challenge course we're faced with three participant types; someone with no previous experience on a challenge course, someone with a previous negative experience or someone who has been on a challenge course and had a positive experience. As we delve into what is happening in the brain and body during a potentially threatening situation, it will be important to think about what these different participants types are experiencing.

Note: In the description that follows, I have left out all of the technical terms that describe where these processes are happening. If you are interested in the biology and science of things like the Thalamus, Hippocampus or Prefrontal Cortex, I recommend visiting these websites: (http://www.fearexhibit.org/) & (http://www.cns.nyu.edu/home/ledoux/Ledouxlab.html).

The Amygdala and Emotional Threat System

When we experience a physical sensation (a loud unexpected noise, sight of a ladder leading up a 50 foot pole) our brain crudely processes this information and sends it on two paths. The shorter path sends this crude information directly to the amygdala to be scanned for threats. The amygdala is always watching (kind of like Santa). If the amygdala were to detect a threat, the amygdala orchestrates a quick involuntary response by stopping normal motion and freezing us up, as well as flooding our body with hormones, which causes increases in heart rate and blood pressure, and sweating, not to mention the anxious facial expression. Primitively speaking, the amygdala reduces the possibility of attracting attention of a predator, preparing us to fight or flee and warning those around us of potential danger (this is important on the challenge course as we will learn). Simultaneously, but at a much slower relative speed, the information traveling the longer path is being processed more fully. This is kind of like waiting for the Polaroid picture to fully develop revealing who had their eyes closed. This more refined image gets compared to previous emotional situations and input from your conscious memory. The amygdala then either confirms the threat or stands down. This immediate response by the amygdala is known as an amygdala hijack. Our amygdala takes over our bodies until a potential threat can be fully vetted.

Implicit and Explicit Memory

The amygdala also works in concert with other parts of the brain to store a memory of this emotional event, which in turn will influence similar future situations. These memories are called implicit memories. We have 2 basic types of memories, Implicit and Explicit. Implicit memories are memories tied to emotional experiences, unconscious memories that are more reactionary. They're drawn upon to create the automatic physical response to emotional events that resemble similar situations from our past. Explicit memories are facts, details, and recollections that make up our conscious memory and the things we

typically associate with memory. These memories give us a clearer picture and context of a potential threat… the very memories that are suppressed during an amygdala Hijack. A strong amygdala hijack can actually impair our working or explicit memory. The powers of emotions overwhelm our rationality. We can't think straight. The information we so desperately need to confirm or deny the threat is clouded when the situation is overly traumatic.

Emotional Recall
It is believed that the hormones released by the fear system strengthen the memory path in our brains so that we can recall emotional experiences more easily. This, I believe, is our opportunity when it comes to growth on a challenge course. The challenge course can create emotionally charged situations and during which, facilitators can create positive experiences, with stronger connections to memory. In turn, if we create a negative emotional experience… that too will be strongly connected our memory of the event.

Another interesting tidbit about fear is that it is contagious. The experience your first participant has on any given element will likely educate the amygdala of future participants. That anxious facial expression you make when you are scared is triggering an emotional response from others around you as their amygdalae are also on guard scanning for threats.

The amygdala of a participant standing at the foot of a ladder preparing to climb and who has never experienced a challenge course before has only previous emotional experiences that resemble those to which they are now facing. If this person has no negative emotional memories that resemble this current situation or better yet, a positive previous challenge course experience, the amygdala will scan for threats and find none. However, if this person perhaps fell off of a ladder, 2 stories up while cleaning out the gutters; standing at the foot of a ladder would represent an emotional threat. This person's amygdala would likely respond similarly to someone who had a negative challenge course experience, even thought the actual situation has many variables that are different than that past experience (harness, rope, no jammed gutters).

Opportunity for Facilitation
This is where the facilitators come in. It seems unlikely that we can affect the initial amygdala hijack. However, if we have guided this participant through our program in such a way that they are trusting of the group, understand the strength in the safety system and feel emotionally supported, we are providing the elicit memory with enough information to stave off the hijack, informing the amygdala to stand down. Participants new to challenge courses are forming memory based on the experience we give them. The problem comes when we fail to educate the participant and guide them into a space of support, we provide them with no defense. We let them get hijacked.

In Dr. Joseph Ledoux's book, *The Emotional Brain* he writes, "The amygdala's emotional memories, as we've seen, are indelibly burned into its circuits. The best we can hope to do is to regulate their expression. And the way we do this by getting the cortex to control the amygdala." In the next section, Taming the Amygdala, I will talk about how you as a facilitator can help your participants get control.

Taming the Amygdala

History
Early in my career as a challenge course facilitator, I think I had a telemarketer's philosophy when facilitating on a challenge course. This was probably due to the fact that I was once told by a friend who work for a period of time as a telemarketer, that he was not allowed to hang up the phone until the person on the other end said no three times. I adopted that attitude to my challenge course work. If a participant got part way up a tree and asked to come down, I would ask them if they were sure. If the participant continued to say they wanted to come down, I would then encourage them to reach up just one more staple or rung. I would only *let* them come down if the participant refused to climb further three times. At the time, I thought I was helping these participants reach their potential. I thought I was helping them by being an external voice that encouraged them to push past their fear. As I reflected on this practice later in my career I realized I had not been facilitating for the participant's need and goals at all. I was only paying attention to my own perception of what they needed, or worse, what I expected from them. It felt like a selfish way to facilitate.

Adventure Foundations
The challenge course has the ability to offer participants an opportunity to push outside of their comfort zone, into that next zone of challenge or growth. That growth means all the more if we can create an environment that allows the participant to come to it on his or her own terms. We don't know what is an appropriate challenge for each individual so we need to create a program that provides a supportive, trustworthy community. We need to allow each individual to feel they have choice and control. We must also give time to reflect and learn from experiences so that we can commit them to memory for use in future situations.

These are the very foundations of adventure education, nothing new. However, no matter how well we sequence our program or create a supportive environment for our groups, participants will still get scared on the challenge course. It is part of the experience and part of the growth potential. But what is happening to participants as they step out of their comfort zone and begin to slide down that slippery slope from challenge to panic? What would we see?

The Signs of Fear
The signs that someone is scared when they are already at height can be a bit more obvious than the more subtle signals a participant gives us before they even leave the ground. As a participant approaches a climb, you may start to notice a quivering voice or distracted look. They may repeat questions or ask questions to which they already know the answer. They might appear scatterbrained, forgetting to do something they have done numerous times before.

As they climb, more physical body reactions become more noticeable. Their body position may tend to be much lower than normal or they may attempt to maintain contact with something solid. They may ask to crawl on an incline log or catwalk or have an oddly stooped stance on a high cable. They may stand relatively steady but keeps a finger on the tree for security. These are all signs you need to be paying attention to.

Refocusing the brain
If you can recognize these signs and can notice when a participant about to have an amygdala hijacked, you have some tools that can help the participant work with the fear and grow because of the challenge. The objective is to refocus the participant's brain by

activating other regions of the brain, allowing the participant to gain access to these portions of the brain that have the information needed to work through the fear, the very areas the amygdala is suppressing in its fight or flight response.

The first thing you can do is having the person stop what they are doing. They may have already done this for you but if not, get them to stop and refocus their attention away from the task at hand. The next step is to have them breath. Again, this hopefully is already happening, but pausing to focus intentionally on breathing will begin to help to refocus the brain.

Once you have them focused away from the task for a moment, you can begin to ask questions. Asking the participant what they are feeling or what they are thinking helps them to put a label to the fear and acknowledge it. You may have heard the phrase, name it to tame it. You have to identify the fear to work through it. Another trick at this point is to help them appreciate something. This may seem odd at a time like this but if you can get them to appreciate the situation or appreciate anything. This will help, as evidently the brain is not capable of fearing and appreciating simultaneously.

You now have the opportunity to activate the other regions of the brain by asking some goal setting questions. "What do you want to do next?" This may be when the participant says, "I want to come down." Great… you have a plan and you engaged other regions of the brain in decision-making. You can now help them evaluate what they are currently doing and how it is working or not working toward their goal of coming down off the course. You now have the brain accessing explicit memory and facts, applying them toward the end goal the participant wants to achieve.

Anecdotal Evidence… or a story to make my point

I would not be so confident in the above techniques if I had not witnessed it first hand. Ironically, the scenario below occurred before I had read about most of these techniques.

During a training I was leading, one of the participants froze half way across the catwalk. Thinking back, there were many of the tell tale signs to which I was not paying attention. There she was, not moving forward or backward, crouched low and clinging to her rope. She was also not speaking, just shaking her head yes or no to questions.

At this point, her friend did something unexpected. Her friend asked the woman where her camera was. This question began to distract the frozen woman from the situation for a moment. Her friend then began to remark that she just had to get a picture to show her family. "Your husband and kids will never believe it if I don't get a picture of you". This statement triggered appreciation, appreciation for her family. Long story short, after a few more probing questions about the where-abouts of the camera and a few more remarks about how proud her family would be, the previously frozen woman stood erect, smiled for a picture and lowered off the log without a second thought. It was remarkable. Her friend diverted the brains activity away from the amygdala, allowing her to regain access to other portions of her brain and memory the amygdala was clouding.

We had a great discussion about this after the woman was back on the ground. We need to take time to process these emotional memories that are indelibly burned into the circuits of our brain, hopefully making the information more readily available in similar future situations.

Changing as a Facilitator
A lot has changed over the years in my facilitation style and in how I design my programs. Some of that change is based on my understanding of fear and how the mind and body process that fear. I focus my attention on the group's goals and the individuals needs and design my program to support the process. When I recognize someone is nervous in my program and hesitating as they climb on a high challenge course element, I may still ask a question, but the questions have changed. When someone asks to come down from a high challenge course element, the only follow up question is, how would you like to do that. No further questions. I feel more success, accomplishment and empowerment is available a participant from asserting their wishes and being heard, listened to, and supported by their group.

Closing
I have just begun to scratch the surface of the research being done in the area of fear and emotion. Quite honestly, it is a bit overwhelming. My hope in writing this article was not to give you all the answers but to hopefully intrigue you enough to seek more information. If you facilitate on a challenge course, lead wilderness expeditions or simply live life, you are faced with fears. Understanding what is happening, even on a surface level, has helped me understand so much about my own personal reactions to situations. These steps I have outlined above are not the secret code for releasing the grip of the amygdala on the body. They are merely a few tips that may work if you find yourself or one of your participants being hijacked. With great knowledge comes great responsibility. When we take people out onto our challenge course we have a tremendous responsibility, not only for their physical safety but their emotional safety as well.
Facilitate with compassion, facilitate trust, facilitate adventure!

Bibliography and Resources

Dr. Joseph Ledoux - http://www.cns.nyu.edu/ledoux/

- Ledoux, Joseph, The Emotional Brain: The Mysterious Underpinnings of Emotional Life. New York, Simon & Schuster, 1996

Daniel Goleman, Emotional Intellegence - http://danielgoleman.info/

- Goleman, Daniel. Emotional Intelligence: Why It can Matter More Than IQ. New York: Bantam Books, 1995
- Goleman, Daniel. Working with Emotional Intelligence. New York: Bantam Books, 1998

Nadler, Relly. "What Was I Thinking? Handling the Hijack." Business Management, Issue 16, Human Capital. http://www.busmanagement.com/article/What-Was-I-Thinking-Handling-the-Hijack/

Horowitz, Shel. "Emotional Intelligence - Stop Amygdala Hijackings." University of Massachusetts Family Business Center
http://www.umass.edu/fambiz/articles/values_culture/primal_leadership.html

Goosebumps! the science of fear - http://www.fearexhibit.org/brain