

TRAIN YOUR BRAIN #10
FROM ANXIETY TO SECURITY
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Introduction

Tonight we're going to take a crack at anxiety, which is pretty well-trod territory, in a creative, counter-intuitive way.

First let's gather ourselves in silence. Bring your attention inward which, happily, will wake up your parasympathetic nervous system. You might like to close your eyes, or leave them open, whatever you're comfortable with. As always, feel free to ignore our suggestions. Focus attention on the internal sensation of breathing, the feeling of the air inside your lungs, the muscles in the interior of your chest expanding and contracting.

Isn't it remarkable how just five minutes can make such a change? It's an illustration of the fundamental principle and focus of this course, which is using your mind skillfully to activate brain and bodily states that support your overall well-being and that of everyone whose life you touch. It's that basic cycle of using the mind to influence the brain to benefit the whole being.

Experiencing Anxiety

We'd like to share some exercises that will help show you where in your own brain the emotions of anxiety and security live. Most of the time, when anxiety and panic arise we are not aware. We find ourselves in the middle. So what we're going to do is have you greet as many people in the room as you can in the next five minutes. Walk around, and take ten to twenty seconds to introduce yourself to each person. Introduce yourself to people you've never met before, not people you already know, sharing however much you're comfortable with in the brief time allotted. Watch yourself and watch the others as they introduce themselves to you.

Now bring conversations to a close and take your seats. Close your eyes, gently come back into a quiet space and review the last five minutes. What happened? What does your body feel like in general? Your heart rate and sweat glands? Are you aware of any tension? What's in your back? Your belly? What's in your heart? How is your breathing? What desires were stirred up and are gone? Notice what changed. Notice what stayed.

Evolutionary Neuropsychology of the Threat Response

In evolutionary terms, why did we become anxious? A short reason is that it helps us to have grandchildren. Our animal ancestors who could experience a sense of alarm at a threat or the risk of losing rewards were more likely to survive. These creatures lived more often than creatures who were not as worried. The blissed-out squirrel or lizard or bird that doesn't pick up the slither in the bushes gets eaten.

It's remarkable to think about the passing of time. If we're lucky we might live to be a hundred years old. Writing's been in place fifty times that long, or about five thousand years. One hundred centuries takes us back to the beginnings of agriculture. One hundred to 150 thousand years takes us to genetic copies of our species, and two and a half million plus years to tool-using ancestors whose brains were half as big as ours, but plenty big enough to make a stone tool. There have been 80 million plus years of mammals, 650 million years of multi-celled creatures and three and a half billion years or so of single-cell animals. You notice they had a 3 billion year head start on us, which is one reason it's a good idea to watch your stress and take your vitamin C as we head into the cold season.

In an evolutionary framework, anxiety is adaptive. It helps us do one of the fundamental things any organism needs to do if it wants to see the sunrise: approach, avoid, or move on. That's what anxiety is all about. Approach means essentially to eat or mate with. Avoidance is one pole of the classic fight or flight reaction. Moving on simply means looking for something more rewarding to approach. Whether it's an amoeba that engulfs a smaller microbe or a sponge that's filtering sea water all day long, taking in what's good and ejecting what's not, or an infant tasting food she doesn't like and spitting it out, at the most basic level anxiety serves to trigger one of these three basic responses.

How does the brain accomplish this task to know when to approach, when to avoid and when to move on?

(1) The first thing it does is label the phenomenon. This **initial framing** tells us that rustling in the grass is a snake and we respond accordingly. Alternatively, haven't we all had the experience of believing there was a snake in the grass when it was just a rope? Those frightening sounds turn out to be wind benignly pushing branches against the side of the house.

For therapists, most of the action in helping people with anxiety is based on this initial framing. We label things which may not be threats as threatening based on our history. Or we amplify them as threats. Identification is shaped by personal experience.

2) Next comes **feeling tone** which is not emotion but the basic sensation in experience of pleasant, unpleasant or neutral. If you're familiar with Buddhism, the feeling tone is one of the four "Foundations of Mindfulness," one of the four fundamental aspects of experience we need to bring mindfulness to, as well as one of the five fundamental aspects of conscious experience or existence.

Two parts of the brain in particular, the **amygdala** and the **hippocampus** in the limbic system, are constantly and quickly labeling things as pleasant, unpleasant or neutral. They are small, about the size of a knuckle, communicating down the brain stem and up into the frontal lobes and receiving information from many sources, including tons of perceptual information. The initial framing alone triggers arousal of the sympathetic nervous system and sets off a cascade of hormones which is described in the article "Your Parasympathetic Nervous System," based on the first Train Your Brain class.

It's a foundational article which also includes six practices which help to activate the parasympathetic wing of the nervous system, which dampens the sympathetic wing. The two operate together like a see-saw. When PNS goes up, the SNS goes down. When the SNS goes up, it knocks the PNS down. You can read the article on our website at <http://www.wisebrain.org/ParasympatheticNS.pdf>.

At the front of the response to a threat, and very often trying to catch up, comes the influence of the frontal lobes: "Wait. It's not a snake but a rope." or "Hold on. Not all men are evil and bad." Or maybe the frontal lobe action comes in at the front end and elaborates this identification process. Also coming in sometimes late or sometimes at the very beginning is our old friend, the self. When you first hear a rustling in the grass, a rapping at the window, or when you realize you are going to be standing up momentarily and saying hello to strangers, there may not be much sense of 'I' yet. Fairly quickly, however, you can watch the self constellate in response to a threat or an opportunity. That you can watch this happening is itself a great teaching.

Self is not a fixed quantity, but there can be more or less self activation. This constellating sense of self tends to shape our reactions to phenomena, as well as how we think about our own beings. Is self seen as potent and efficacious or frail and outgunned and already mistreated? That sense of self, the experience of self, shapes how we respond at the front end.

3) After feeling tone comes the **sympathetic nervous system activation** and a cascade of hormones of the **hypothalamic – pituitary – adrenal** axis. There's a good description of how these work together in the article on the parasympathetic nervous system just mentioned. You can feel this cascade in your body within seconds, the adrenaline and other stress hormones. What's interesting is that the parasympathetic nervous system can be turned off in an instant, whereas the SNS, especially it's biochemical cascade --

which you can think of as tidal waves of molecules -- stay in your body for minutes, sometimes hours.

Just being emotional is stressful. You've probably had the experience of having an argument or thinking something bad was going to happen, then working through the argument or realizing that the bad event wasn't going to occur, but your body was still affected, sometimes hours later.

Not everything that characterizes us had reproductive advantages for our ancestors. We have capacities and inclinations with no evolutionary advantage at all. So while it's an error to infer that everything we are is a result of evolutionary pressures, nevertheless this perspective is an extremely powerful tool, especially when considering core functions related to survival or mating success.

In hunter-gatherer cultures, infant mortality was 90%, most people died before the age of 35 and the number one cause of adult male death was murder. This kind of harsh environment drives reproductive advantage. Something that gives you a one percent better chance of survival doesn't count for much in a relatively tranquil environment, but in an extremely intense environment, like that of our ancestors, small things add up.

The Frontal Lobes and their relationship to the Hypothalamic-Pituitary-Adrenal Axis

There's a wonderful book by Robert Sapolsky at Stanford called *Why Zebras Don't Get Ulcers*. The zebra's H-P-A axis is activated when the lion jumps out of the bush, but 30 seconds later the zebra has successfully run away and is very comfortably, very parasympathetically, eating and digesting grass down by the water hole a quarter mile off. Unlike us, zebras don't give themselves ulcers by worrying. Why is that?

The frontal lobes are our major evolutionary advantage. They enabled us to project into the future and see the consequences of our behavior in an extremely harsh environment, where evolutionary pressures are powerfully driving for evolutionary advantage. In that kind of environment, the frontal lobes, using memory as a guide, can create scenarios that get us into recursive loops. That's what Post-Traumatic Stress Disorder is, the brain saying "Here it comes again. Here it comes again."

The Big Six

What do you do once the PNS is activated is what we call the big six. These are basic reactions to threats or frustration in pursuit of goals or desires. The big six happen in the body, and involve subtle patterns of organization. For example, if you're in fight mode, blood will flow into your chest muscles and arms. If you're fleeing, it's the thigh

muscles that get an increase in blood flow. These are objective phenomena that can be measured.

The big six are listed in your handout, which is also available on the Wise Brain web site. They are:

1. Fight
2. Flight
3. Freeze
4. Appease
5. Tend
6. Befriend

These basic responses to threatening situations, which we share with other species, have gotten a bad rap. We tend to think of them as something to avoid or overcome, especially the first three. What we want to do is counter-intuitive. We're going to mine these basic patterns of reaction for good coping skills. After all, they got us to the top of the food chain. They're what we have learned over billions of years of evolution. How can we apply these to become more skillful dealing with things that make us fearful, anxious, worried or alarmed?

Fighting and Fleeing

Bring to mind one or more things that make you anxious. It may be one or more of the Buddha's "three great messengers," sickness, old age and death. It may be conflict with someone you love, a difficult challenge at work or something you'd like to do that frightens you.

The class handout (which is reprinted at the bottom of this article) lists some wholesome aspects of the big six, such as setting boundaries unilaterally or speaking up and naming what is true. Take a few minutes to think about ways to bring the coping skills of healthy fighting to bear on a situation that make you anxious. What can you mine from the handout list and apply to a situation or aspect of yourself that makes you anxious? You can write these down or hold them in your mind, whichever you prefer.

Now with that same situation in mind, or you could shift it to a different situation: What could be ways of coping that come from healthy fleeing? Again, in writing or in your own mind, use this as a systematic way to review strategies for the future, ways you could be more skillful or effective in dealing with a threatening or difficult situation.

Freezing and Appeasing

The second pairing of the six is freezing and appeasing. Bring to mind the same or a different emotional state that promotes anxiety and look at the ways you could cope with the situation using healthy freezing.

What does it mean to freeze in response to a threat? What is served by freezing? You might think, for example, of the rabbit in the underbrush. If the rabbit freezes the hawk can't see it. Frogs and amphibians don't see shape, only motion, so if flies could freeze, frogs would starve.

Now bring to mind some ways you can cope with an anxiety-producing situation with some healthy appeasement. Is there a way to appease individuals, the situation or your own internal dynamic that could help you skillfully move forward? You also might find it useful to note how these healthy freezing and appeasing makes you feel.

One advantage of freezing is that it buys you time for more of your resources to come forward. The frontal lobes are a rheostat for your emotions. People who have lost functioning of the frontal lobes are left with an on and off switch. Our frontal lobes allow us to deploy the six different responses when dealing with threats and risks of loss.

The skill of empathy is embedded in everything that comes under the heading of appeasement in the wholesome sense. Empathy gives us a lot of valuable information, so we benefit ourselves when we feel empathy for another. The most fundamental and valuable sense we give to another in any communication is the sense that they have been understood. Signal received. I got the message. Without this, no communication loop can be closed. Empathy is the basis for all human exchange.

Tending and Befriending

Think again about a situation that makes you anxious, fearful or alarmed. How could you increase your coping through tending? Through nurturing, healing, caring?

Now consider befriending. How can befriending help you to cope better? Notice that there's a lot of overlap between tending and befriending. These are not rigid categories, so don't feel like you need to strictly adhere to them. Something in particular to think about is befriending yourself, particularly those parts of yourself that feel frightened. Often we're ashamed of these and scorn them. What happens when you befriend them?

When you reflect, when you step back and get a feeling for what it's like to be you ask the question: Who are you when you cope with these difficulties? What are some of the internal senses of yourself, what's activated or enlivened when you cope with things in the different ways we've outlined?

Resilience and capability are feelings, experiences in the body, states of being. A few hundred years from now neuroscientists will probably have a picture of the brain in a state of capability. Your task is to remember that feeling of capability so you can trigger it, or go back home to it again.

At the deepest level, below the level of all these tools, is the hand that wields the tool. It's that sense of capability, of leaning into a situation, addressing it, mobilizing inner resources to deal with it. What's does this feel like?

The important point is that no matter which coping skill you choose, there's always something you can do. Even in freezing there is the powerful state of creating space. In freezing, we're actually creating space to make room for different possibilities. The feeling of learned helplessness is only a few layers deep, and we can change it. If we can hold on to the feeling of capability, we can learn to transfer this from one area of our lives to another.

Conclusion

There are many ways to deal with anxiety. There's a limit to what we can cover in two and a quarter hours, however, and tonight we wanted to look at the evolutionary repertoire that lizards, monkeys, squirrels and birds use and then apply it in a light-hearted and nimble way to ourselves.

Probably none of us is going to completely reverse our lives over what was said or written tonight, but there are many lessons on those slips of paper for each of you individually.

As a way of centering on these lessons, let's get back into quiet reflective space. How do we take these lessons with us when the class is over? The best way is an intention.

Take a deep breath, feel the energy come into your body and then let it out in a long slow exhale. Settle into the ground of your body and your being. Of all the skillful means you wrote down or thought about, notice which one seems to have the greatest resonance for you right now. Take that as an intention: "For the next week or month I will make this skillful means manifest at some level in some new way in my life." Feel the capability, confidence and faith involved in doing that. That's all it takes. And so bow to yourself for having the insight and the courage to carry this on.

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From Frank Herbert's Dune:

I must not fear.

*Fear is the mind-killer.
Fear is the little-death that brings total obliteration.
I will face my fear.
I will permit it to pass over me and through me.
And when it has gone past I will turn the inner eye to see its path.
Where the fear has gone there will be nothing.
Only I will remain.*

Healthy Coping

Fighting

- Speaking up and naming what is true; “speaking truth to power”
- Saying no
- Setting boundaries
- Setting conditions or ground rules for your own participation
- Arguing with anxiety-provoking beliefs inside you

Fleeing

- Leaving what is not working
- Looking elsewhere for what will support you
- Stepping back, disengaging, going to “separate corners”
- Abandoning anxious thoughts inside you

Freezing

- Stopping, halting, “time out,” “suspending operations”
- Observing
- Silence
- Not making a bad situation worse, not being provocative
- Buying yourself time
- Restraint (*sila*)
- Waiting, patience, letting things come
- Creating space for new possibilities

Appeasing

- Acknowledging their grievances
- Taking maximum personal responsibility
- Genuine apology (for what deserves one)
- Making agreements for the future, committing to being more skillful
- Making amends for the past
- “Gracious gifts”
- Doing what you can to reduce *their* anxieties (which could fuel their aggression)

Tending

- Building up your own resources over time applicable to the specific issue, threat, etc.
- Building up *other* resources, wherever you can
- Nurturing, healing, caring for the factors in others that make you anxious (so they diminish)

Befriending

- Accept the reality of what makes you anxious
- Make friends with what frightens you (as appropriate, to be sure)
- Recognize and be kind to the inner child/inner being of those who make you anxious
- Befriend your own inner child/inner being
- Bring a sense of humor to a difficult situation