

You aren't at the mercy of your emotions -- your brain creates them

Lisa Feldman-Barrett (LFB) TED talk from 2018 <https://www.youtube.com/watch?v=0gks6ceq4eQ>

First, I need to let you know that there are two sections cut from the text of the talk:

1. Where LFB describes the 'stone-faced' look on Boston Marathon bomber Dzhokhar Tsarnaev's face (with an image for us to look at), and her assumption that a jury is supposed to look for remorse when deciding between a life sentence and the death penalty.
and
2. Where LFB shows us an image that we can't make out, then fills in the image with color and detail and we can see that it is a snake. When she removes the color again, and we only see 'blobs' - as she calls them, we still 'see' the snake. An exercise in overcoming what she calls 'experiential blindness.'

THE REST OF THE TRANSCRIPT:

As a scientist, I have to tell you that jurors do not and cannot detect remorse, or any other emotion in anybody ever. Neither can I, and neither can you, and that's because emotions are not what we think they are.

They are not universally expressed and recognized.
They are not hardwired brain reactions that are uncontrollable.

We have misunderstood the nature of emotion for a very long time, and understanding what emotions really are has important consequences for all of us.

I have studied emotions as a scientist for the past 25 years and in my lab we have probed human faces by measuring electrical signals that cause your facial muscles to contract to make facial expressions. We have scrutinized the human body in emotion. We have analyzed hundreds of physiology studies involving thousands of test subjects. We've scanned hundreds of brains, and examined every brain imaging study on emotion that has been published in the past 20 years. And the results of all of this research are overwhelmingly consistent.

It may feel to you like your emotions are hardwired and they just trigger and happen to you, but they don't.

You might believe that you're born with emotion circuits, but you're not. In fact, no brain on this planet contains emotion circuits.

So what are emotions, really? Emotions are guesses.

They are guesses that your brain constructs in the moment where billions of brain cells are working together. And you have more control over those guesses than you might imagine that you do.

Now, if that sounds crazy, I'm right there with you, because frankly, if I hadn't seen decades of evidence for myself, I am fairly sure that I wouldn't believe it either. The bottom line is that emotions are not built into your brain at birth. They are just built.

Predictions are basically the way your brain works. It's business as usual for your brain. Predictions are the basis of every experience that you have. They are the basis of every action that you take. In fact, predictions are what allow you to understand the words that I'm speaking as they come out of my mouth.

Predictions are primal. They help us to make sense of the world in a quick and efficient way. Your brain does not react to the world. Using past experience, your brain predicts and constructs your experience of the world.

The ways that we see emotions in others are deeply rooted in predictions. To us, it feels like we just look at someone's face, and we can read the emotion that is in their facial expressions the way that we would read words on a page. But we're using past experience, based on similar situations, to try to make meaning. You're making meaning of facial movements like the curl of a lip or the raise of an eyebrow. And that stone-faced stare? A stone-faced stare might mean that someone is stoically accepting defeat.

So the lesson here is that the emotions that you seem to detect in other people actually come from what's inside your own head.

This is true in the courtroom, the classroom, the bedroom, and in the boardroom.

Here's my concern: tech companies like Google, Facebook, etc. -- are spending millions of research dollars to build emotion-detection systems, but they are fundamentally asking the wrong question. They're trying to detect emotions in the face and the body, but emotions aren't in your face and body.

Physical movements have no intrinsic emotional meaning. We make them meaningful. We connect them to the context and that makes them meaningful.

That's how we know that a smile might mean sadness and a cry might mean happiness, and a stoic, still face might mean that you are angrily plotting the demise of your enemy.

The way that you experience your own emotion is exactly the same process. Your brain is basically making predictions; guesses that it's constructing in the moment with billions of neurons working together.

Your brain does come prewired to make some feelings. Simple feelings that come from the physiology of your body. When you're born, you can make feelings like calmness and agitation, excitement, comfort, discomfort. But these simple feelings are not emotions; they're actually with you every waking moment of your life. They are simple summaries of what's going on inside your body, kind of like a barometer, but they have very little detail, and you need that detail to know what to do next.

What do you do about these feelings? And so how does your brain give you that detail? That's what predictions are.

Predictions link the sensations in your body - that give you these simple feelings - with what's going on around you in the world, so that you know what to do. Sometimes, those constructions are emotions.

So for example, if you were to walk into a bakery, your brain might predict that you will encounter the delicious aroma of freshly baked chocolate chip cookies. (I know my brain would!) Our brains might then cause our stomachs to churn a little bit, to prepare for eating those cookies.

If we are correct, and some cookies have just come out of the oven, then our brains will construct hunger and prepare us to munch down those cookies and digest them in a very efficient way.

But here's the thing: that churning stomach, if it occurs in a different situation, it can have a completely different meaning.

If your brain were to predict a churning stomach in, say, a hospital room while you're waiting for test results, then your brain will be constructing dread or worry or anxiety, and it might cause you to, maybe, wring your hands or take a deep breath or even cry.

Right? Same physical sensation, same churning stomach, different experience.

The lesson here is that emotions which seem to happen to you are actually made by you.

You are not at the mercy of mythical emotion circuits which are buried deep inside some ancient part of your brain. You have more control over your emotions than you think you do.

I don't mean that you can just snap your fingers and change how you feel the way that you would change your clothes, but your brain is wired so that if you change the ingredients that your brain uses to make emotion, then you can transform your emotional life.

If you change those ingredients today, you're basically teaching your brain how to predict differently tomorrow, and this is what I call being the architect of your experience.

Here's an example. All of us have had a nervous feeling before a test, right? But some people experience crippling anxiety before a test. They have test anxiety. Based on past experiences of taking tests, their brains predict a hammering heartbeat, sweaty hands, so much so that they are unable to actually take the test.

They don't perform well, and sometimes they not only fail courses but they actually might fail college.

But a hammering heartbeat is not necessarily anxiety. It could be that your body is preparing to do battle and ace that test...or, give a talk in front of hundreds of people on a stage where you're being filmed!

Research shows that when students learn to make this kind of energized determination, they perform better on tests. And determination seeds their brain to predict differently in the future so that they can get their butterflies flying in formation and not only pass tests, but pass courses and finish college, which has a huge impact on their future earning potential.

I call this emotional intelligence in action. You can cultivate this emotional intelligence yourself and use it in your everyday life.

The next time that you feel intense distress, ask yourself: Could this have a purely physical cause? Is it possible that you can transform emotional suffering into just mere physical discomfort? I am not suggesting to you that you can just perform a couple of Jedi mind tricks and talk yourself out of being depressed or anxious or any kind of serious condition.

But I am telling you that you have more control over your emotions than you might imagine, and that you have the capacity to turn down the dial on emotional suffering and its consequences for your life by learning how to construct your experiences differently.

And all of us can do this and with a little practice, we can get really good at it, like driving. At first, it takes a lot of effort, but eventually it becomes pretty automatic.

I find this to be really empowering and inspiring...but I have to also warn you that it does come with some fine print, because more control also means more responsibility. If you are not at the mercy of mythical emotion circuits buried deep inside your brain somewhere and trigger automatically, then who is responsible when you behave badly? You are...because the actions and the experiences that you have today become your brain's predictions for tomorrow.

Sometimes we are responsible for something not because we're to blame, but because we're the only ones who can change it. The idea that we are responsible for our own emotions seems very hard to swallow. But what I'm suggesting to you is you don't have to choke on that idea. You just take a deep breath, maybe get yourself a glass of water if you need to, and embrace it.

Embrace that responsibility, because it is the path to a healthier body, a more just and informed legal system, and a more flexible and potent emotional life.

One Edit

3:46

To see what I mean, have a look at this. Right now, your brain is working like crazy. Your neurons are firing like mad trying to make meaning out of this so that you see something other than black and white blobs.

Your brain is sifting through a lifetime of experience, making thousands of guesses at the same time, weighing the probabilities, trying to answer the question, "What is this most like?" not "What is it?" but "What is this most like in my past experience?" And this is all happening in the blink of an eye.

Now if your brain is still struggling to find a good match and you still see black and white blobs, then you are in a state called "experiential blindness," and I am going to cure you of your blindness.

So now many of you see a snake, and why is that? Because as your brain is sifting through your past experience, there's new knowledge there, the knowledge that came from the photograph.

And what's really cool is that that knowledge which you just acquired moments ago is changing how you experience these blobs right now. So your brain is constructing the image of a snake where there is no snake, and this kind of a hallucination is what neuroscientists like me call "predictions."

