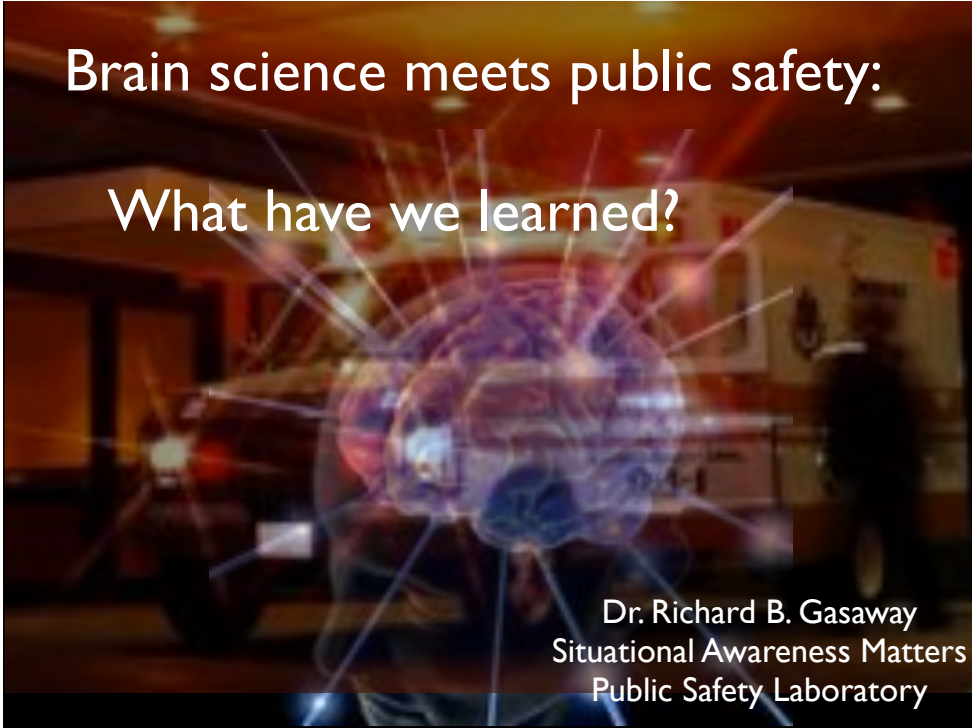


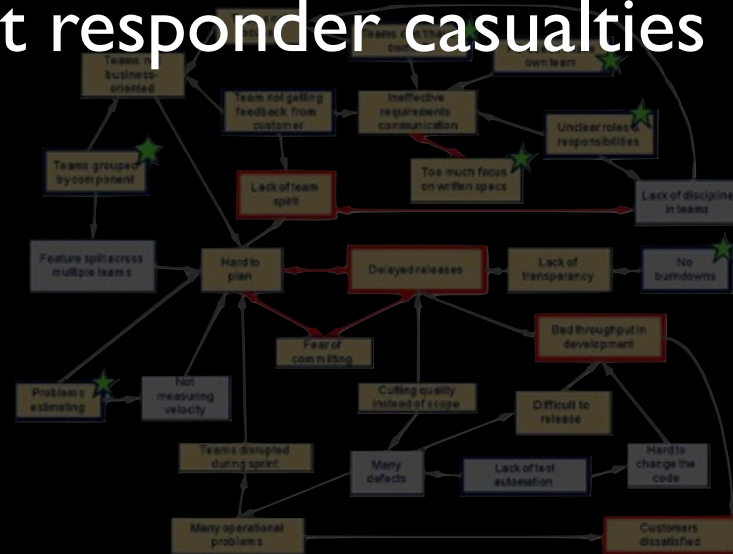


Brain science meets public safety:

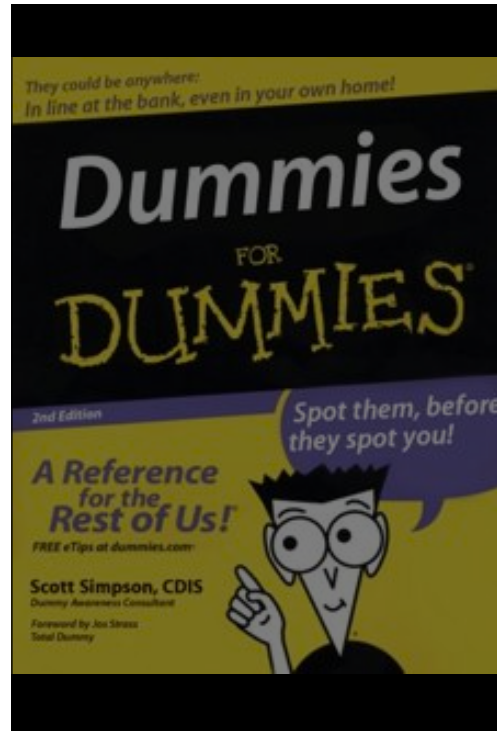
What have we learned?

Dr. Richard B. Gasaway
Situational Awareness Matters
Public Safety Laboratory

Root cause analysis of first responder casualties







Dumb:

Lacking intelligence;

Inability to reason
through a situation;

Thinking or behaving
irrationally.



Momma always said:
“Stupid is _____.”

Do first responders do dumb things
at emergency scenes?

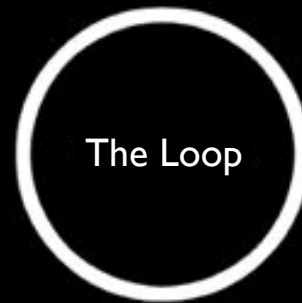
Do responders do dumb
things on emergency
scenes on purpose?

Can a responder do dumb
things accidentally?

Unconscious Incompetence:

**TOTALLY
CLUELESS**

When it comes to understanding
how the brain works...



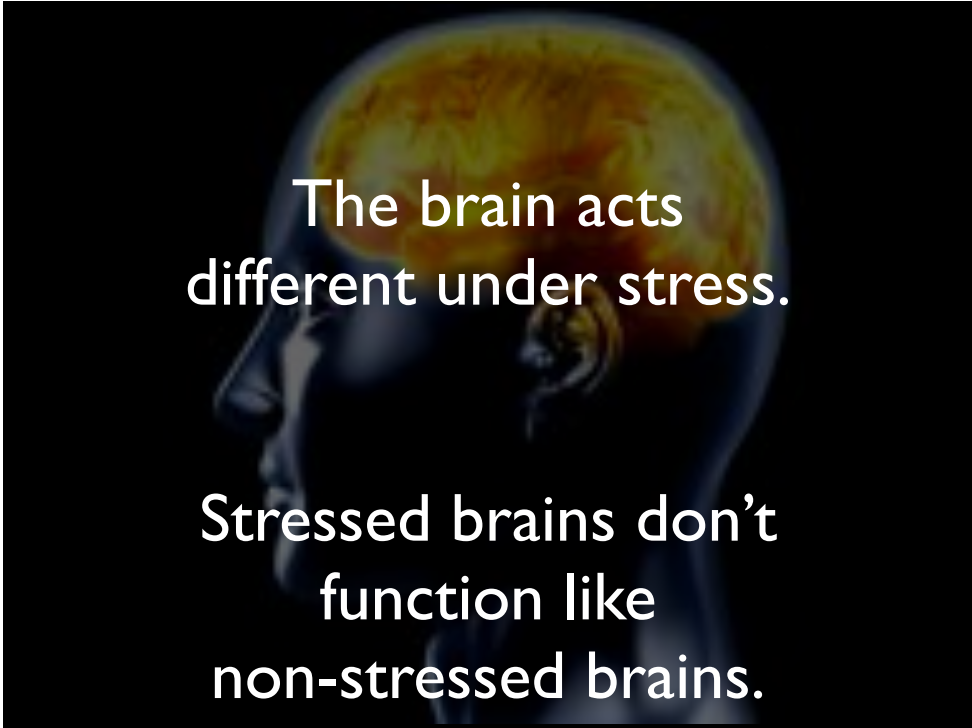
First
Responders

X

This program is designed to...



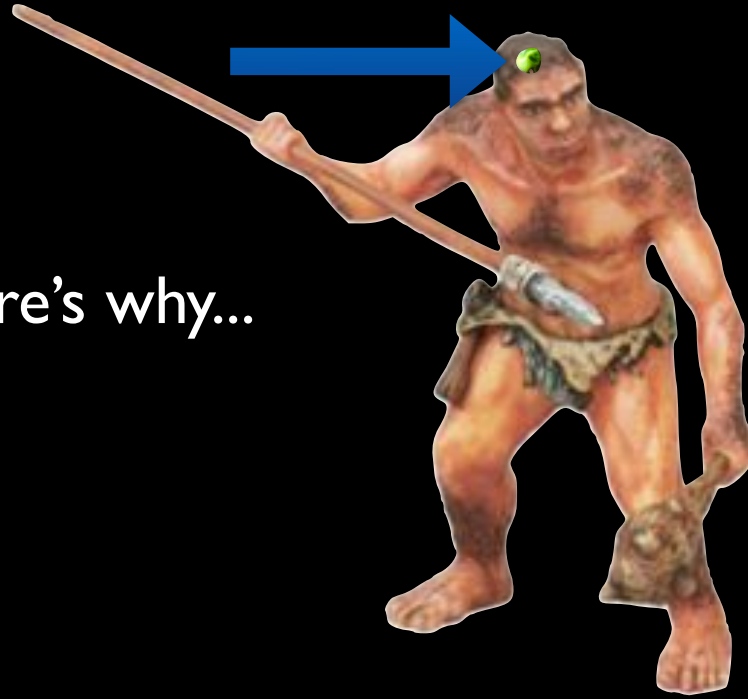
16 things we know about the brain
&
how it can impact the thinking and
actions of first responders .

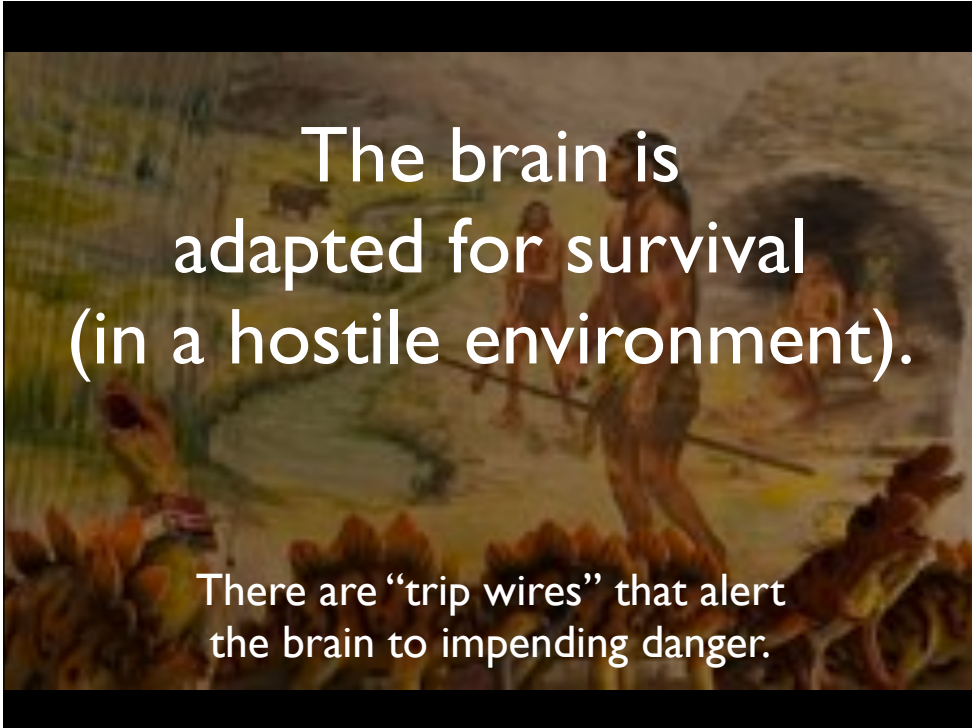


The brain acts
different under stress.

Stressed brains don't
function like
non-stressed brains.

Here's why...



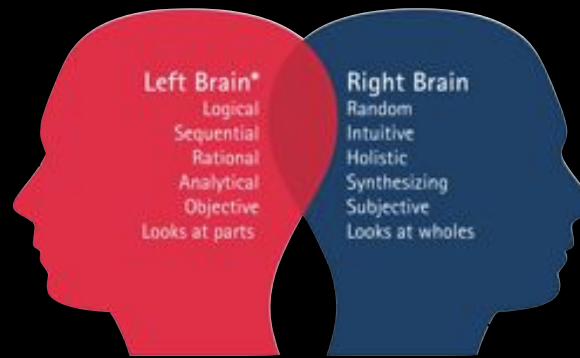
A painting of a prehistoric scene with several people in a landscape. The scene is set in a hilly, open area with some vegetation. In the foreground, there are several people, some of whom appear to be hunting or gathering. In the background, there are more people and some animals, possibly horses or deer. The overall tone is somber and historical.

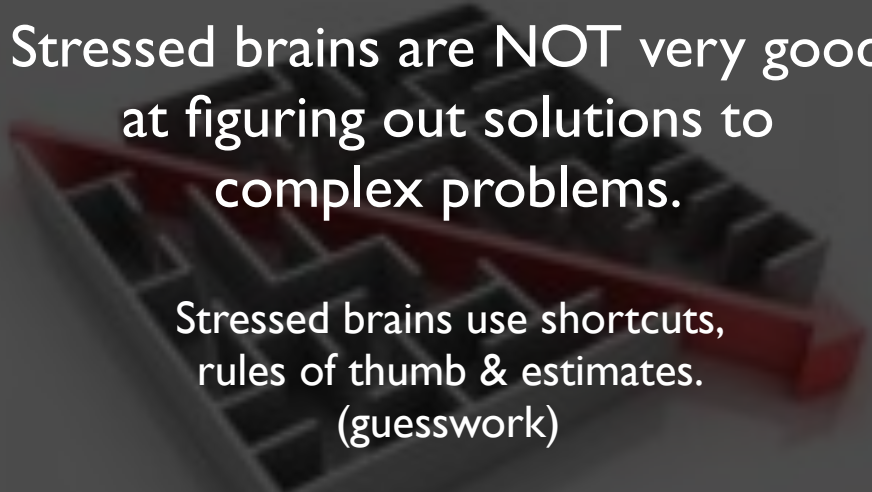
The brain is
adapted for survival
(in a hostile environment).

There are “trip wires” that alert
the brain to impending danger.

Under stress, behavior may
not appear rational.

That's because it's not!

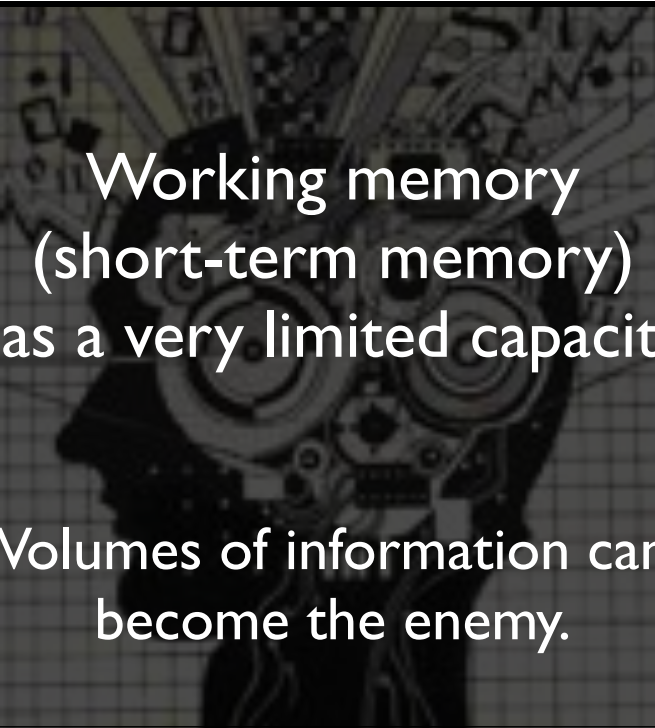




Stressed brains are NOT very good
at figuring out solutions to
complex problems.

Stressed brains use shortcuts,
rules of thumb & estimates.
(guesswork)

Confusion stresses the brain.
And the brain doesn't like confusion.
So it gets to work... making sense of things.



Working memory
(short-term memory)
has a very limited capacity.

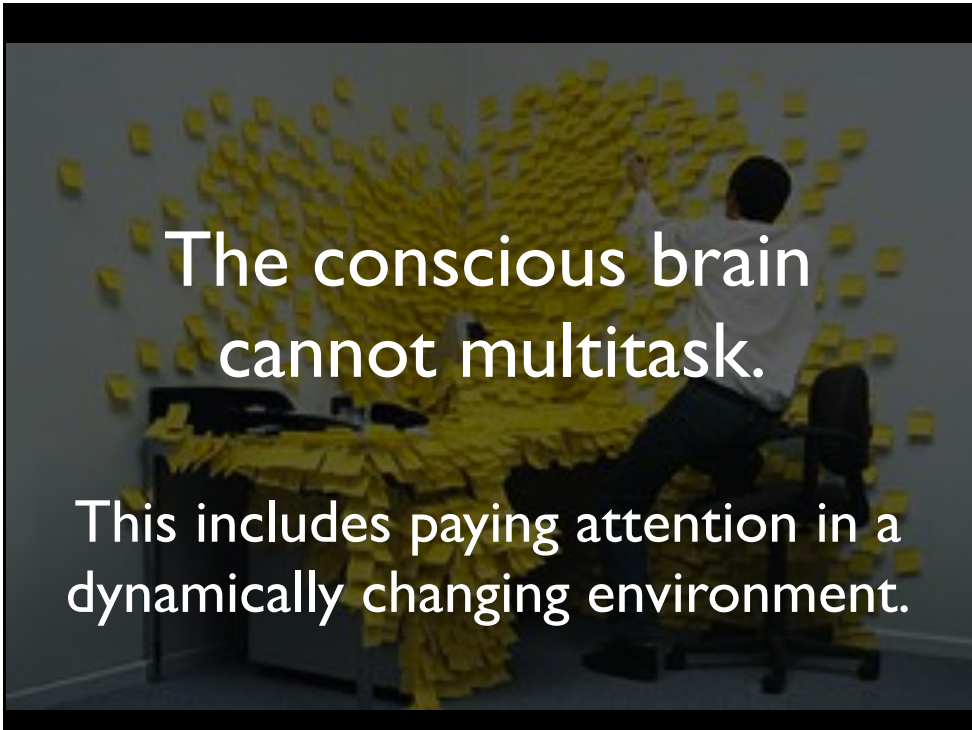
Volumes of information can
become the enemy.

The brain prioritizes incoming information
(Based more on emotional cues than rational logic.)

And you may not be able to control what
information is remembered or forgotten.



HIGH PRIORITY

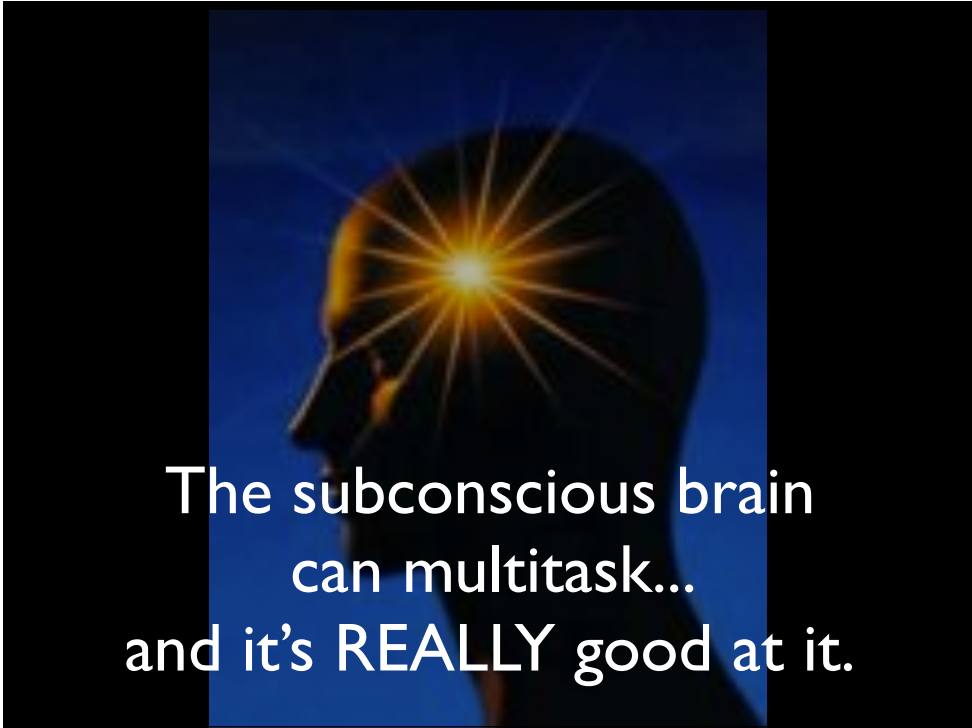
A person is sitting at a desk in a room that is completely covered with yellow sticky notes. The sticky notes are on the walls, the desk, and the floor, creating a chaotic and overwhelming environment. The person is looking at a computer screen, which is also covered with sticky notes. This visual metaphor represents the concept of multitasking and the limitations of the human brain.

The conscious brain
cannot multitask.

This includes paying attention in a
dynamically changing environment.

The Multitasking Myth



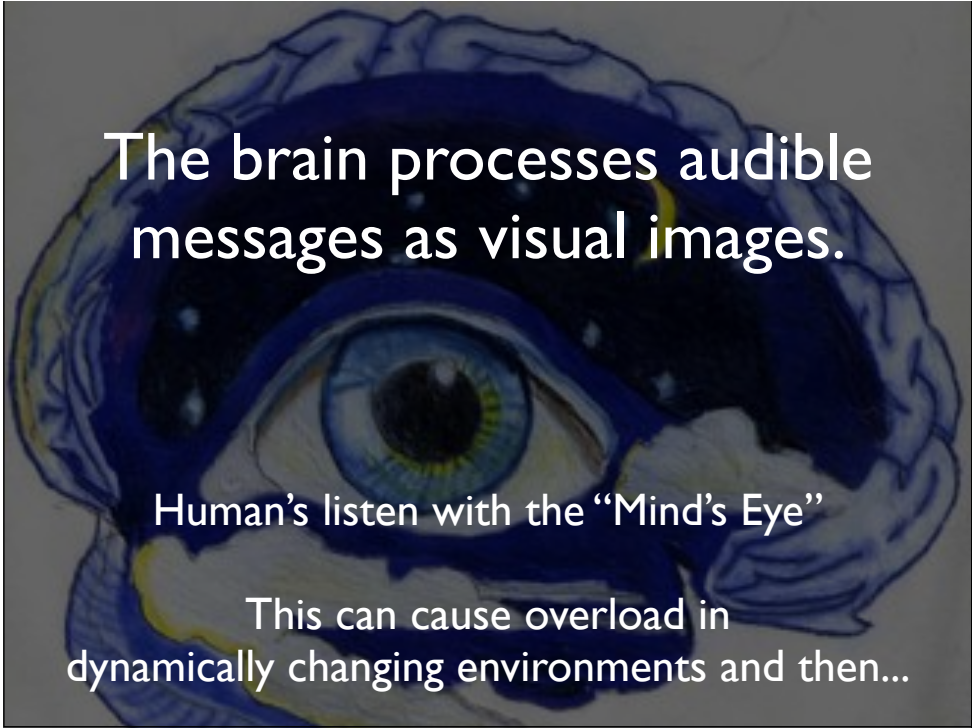
A silhouette of a human head in profile, facing left. Inside the head, there is a bright, glowing yellow-orange light source with multiple sharp rays emanating from it, resembling a starburst or a lightbulb. The background is a dark blue gradient. The text is overlaid on the lower part of the image.

The subconscious brain
can multitask...
and it's REALLY good at it.

Emotions compel behavior.

And the two biggie emotions are...



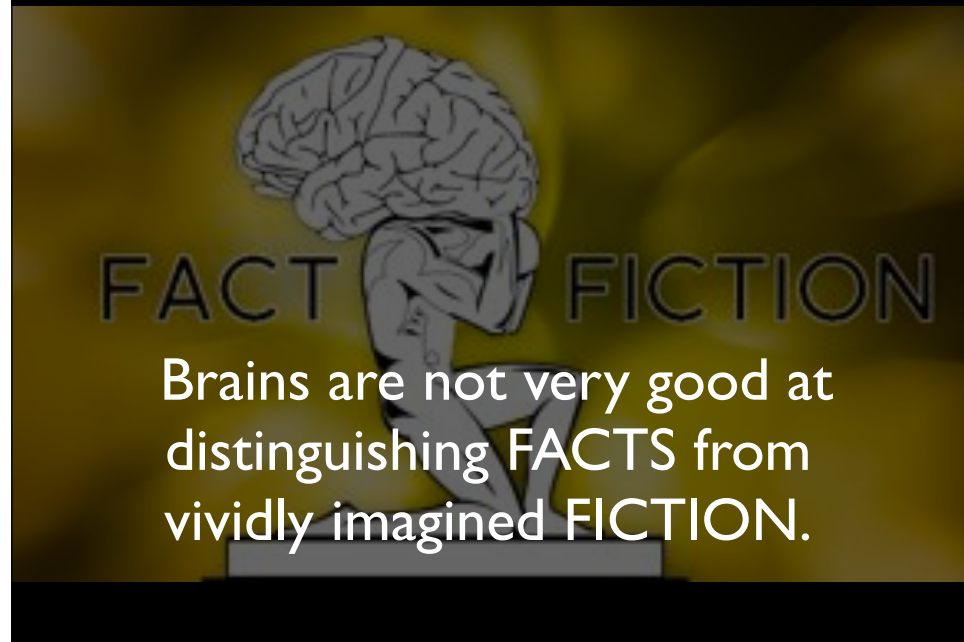


The brain processes audible
messages as visual images.

Human's listen with the "Mind's Eye"

This can cause overload in
dynamically changing environments and then...

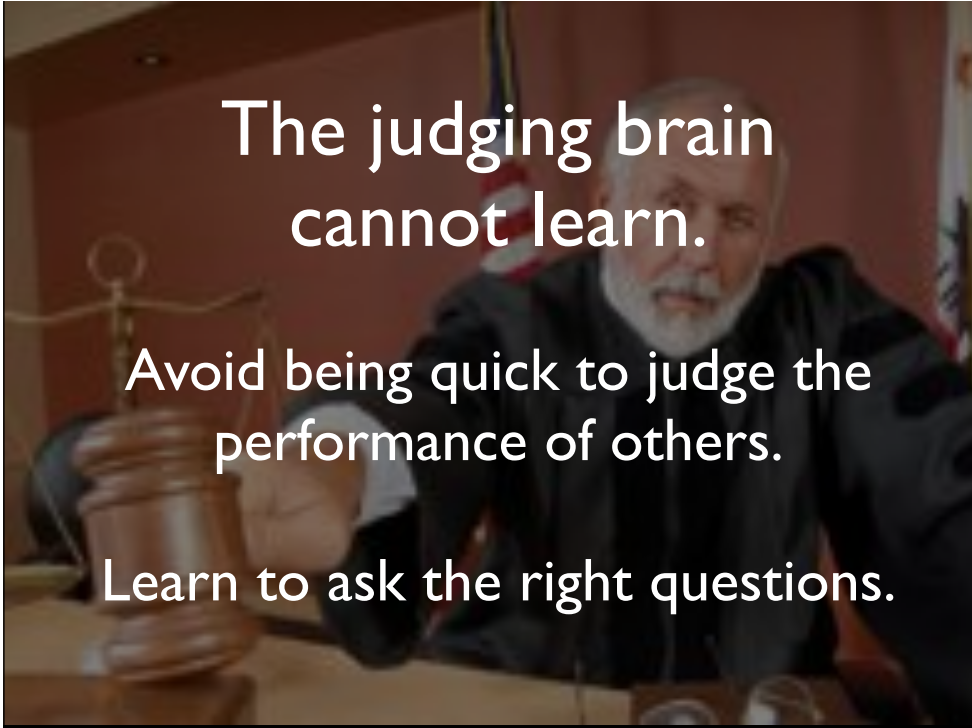
The brain can be fooled into learning.



Brains can be stubborn.



Once locked on to doing something
(like a plan of action)
it can very difficult to change the
mind or to see an alternate solution.

A photograph of a judge with a white beard, wearing a black judicial robe, sitting at a wooden bench. In the foreground, a wooden gavel and a pair of scales of justice are visible. The background shows a courtroom setting with flags.

The judging brain
cannot learn.

Avoid being quick to judge the
performance of others.

Learn to ask the right questions.

Humans are a...

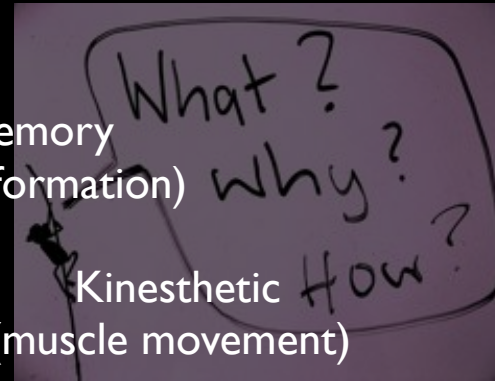


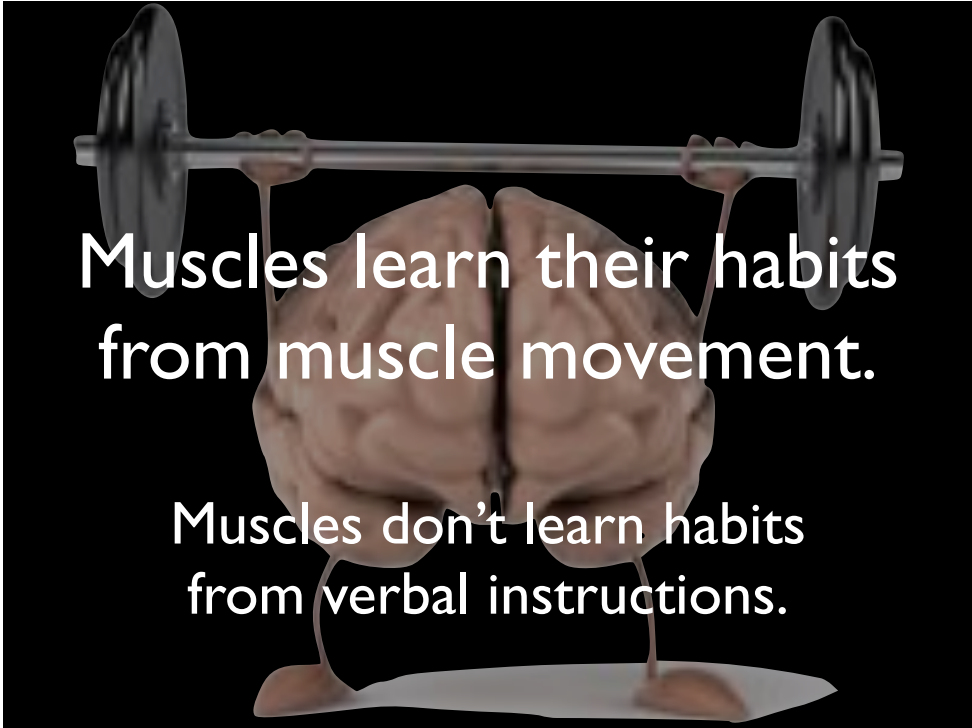
Stress induces automatic habitual performance.

Training and experience develops habits (memory).

Cognitive Memory
(information)

Kinesthetic
(muscle movement)





Muscles learn their habits
from muscle movement.

Muscles don't learn habits
from verbal instructions.

Not understanding how the brain works
can have some strange consequences



The patient care drill...

Not understanding how the brain works
can have some strange consequences



Scene Safe



BSI

The patient care drill...



Thank you to the members of our military..
past and present.





THE
Owner's Manual
FOR YOUR
The Brain



I have a favor to ask...

Pay it forward



Helping you see the bad things coming...
in time to change the outcome.

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