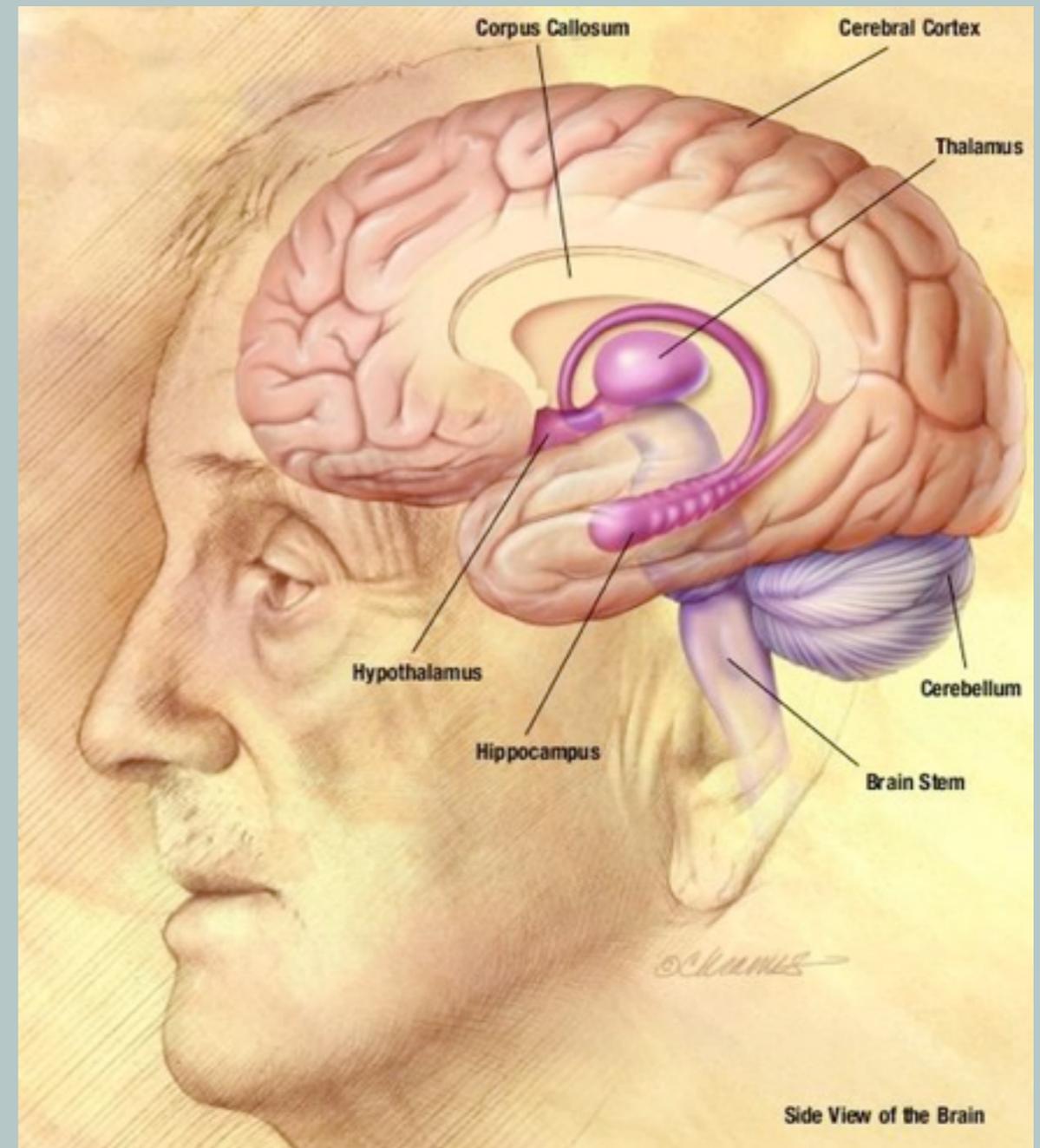


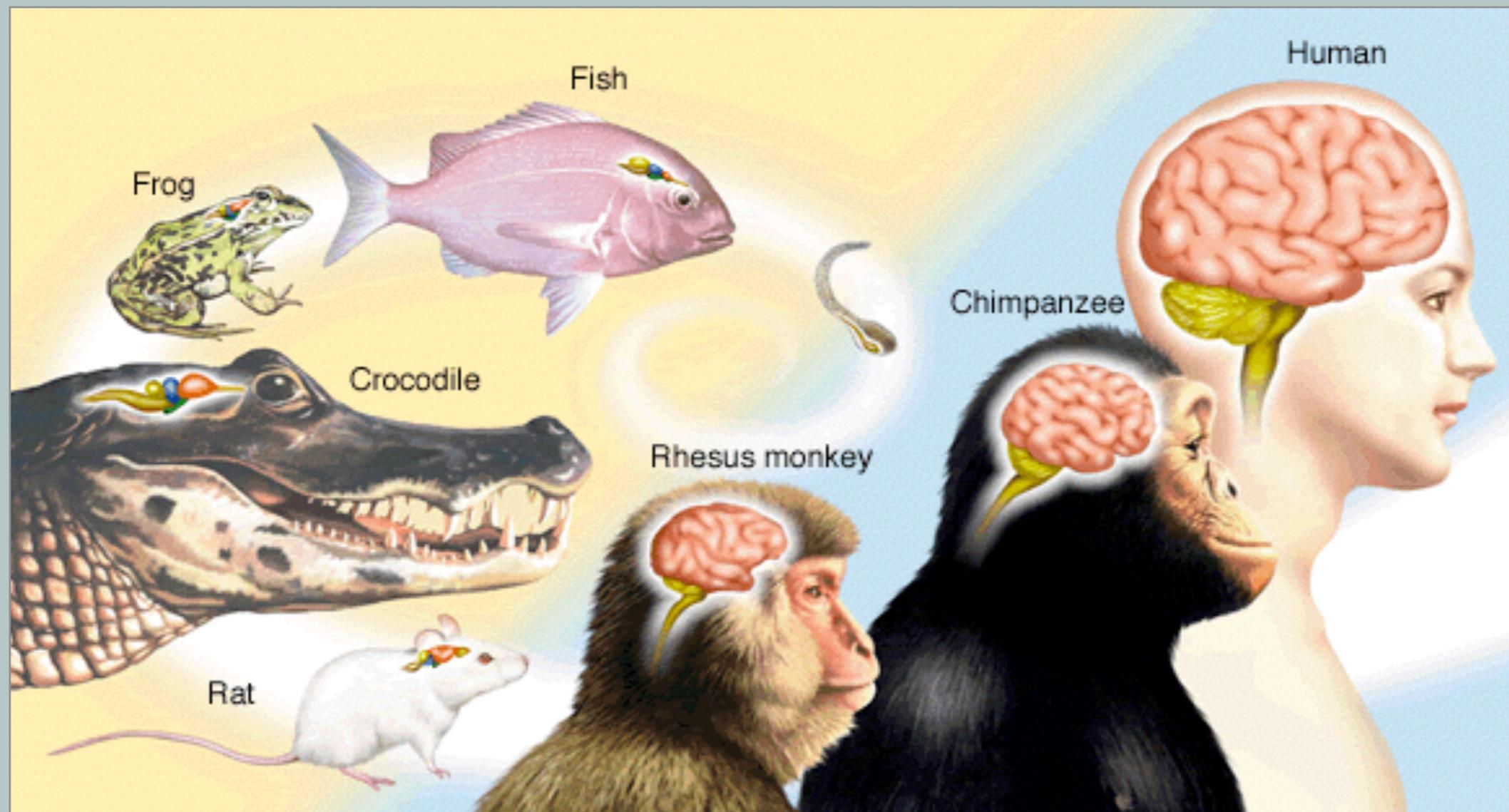
# How Your Brain Works

a 200-million-year success story

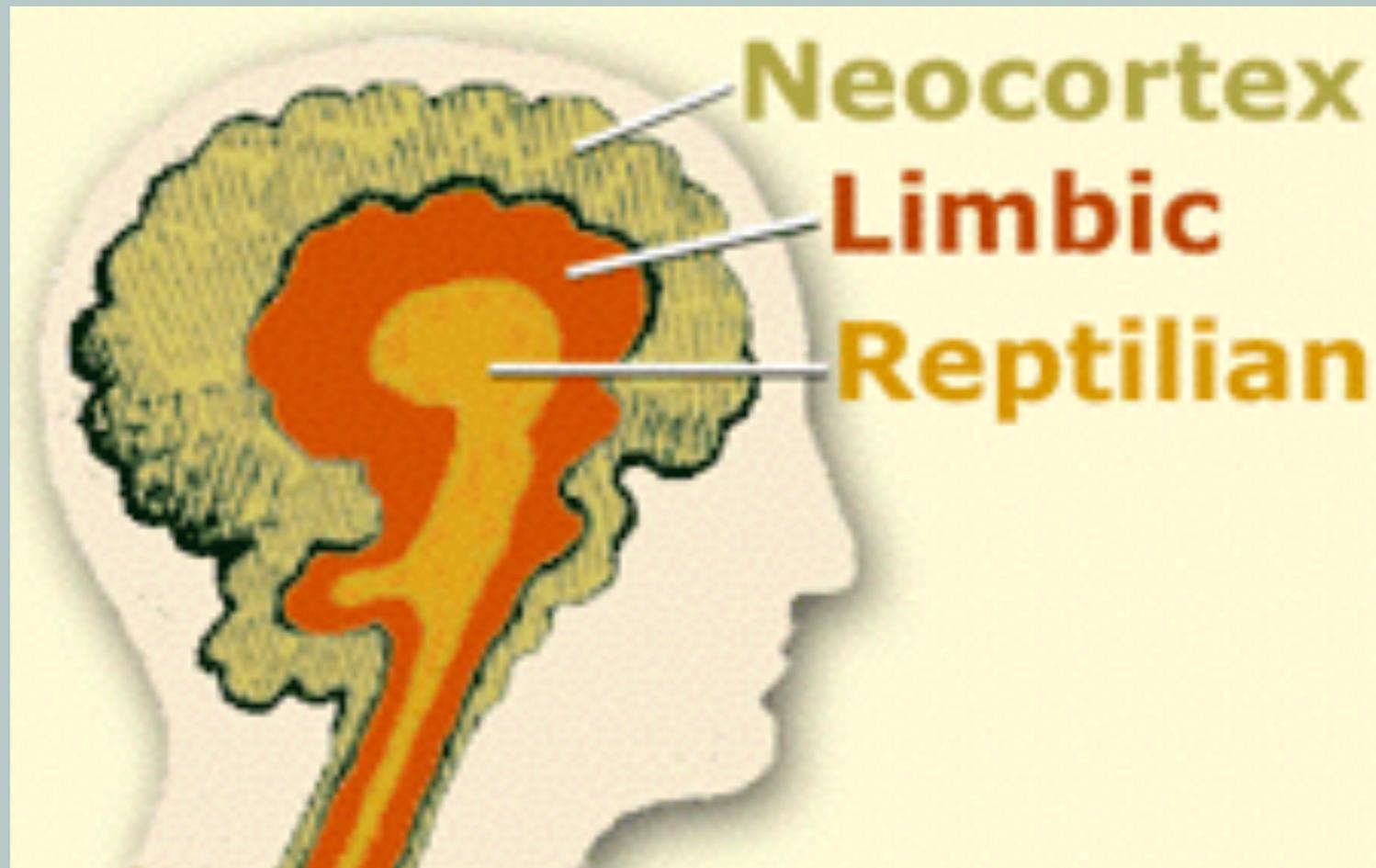
Loretta G. Breuning, PhD



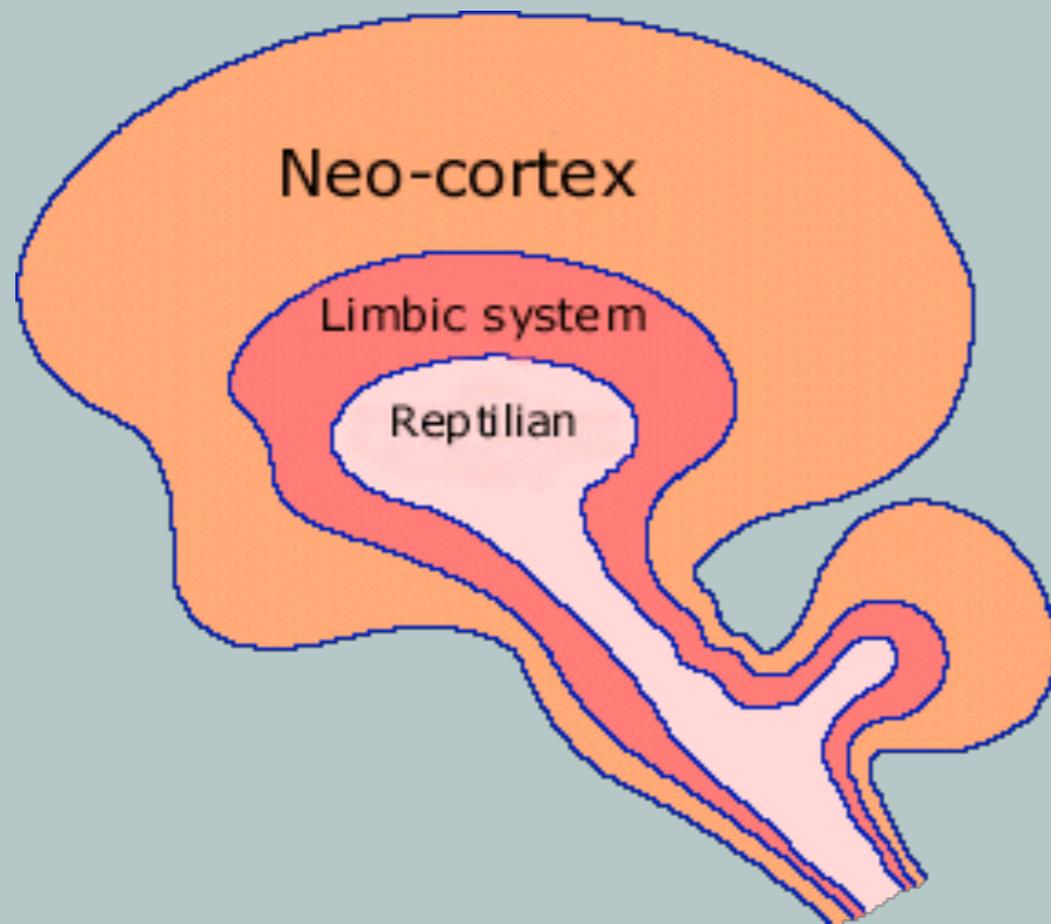
# Humans inherited brain structures from earlier animals and added on.



# You have 3 brains

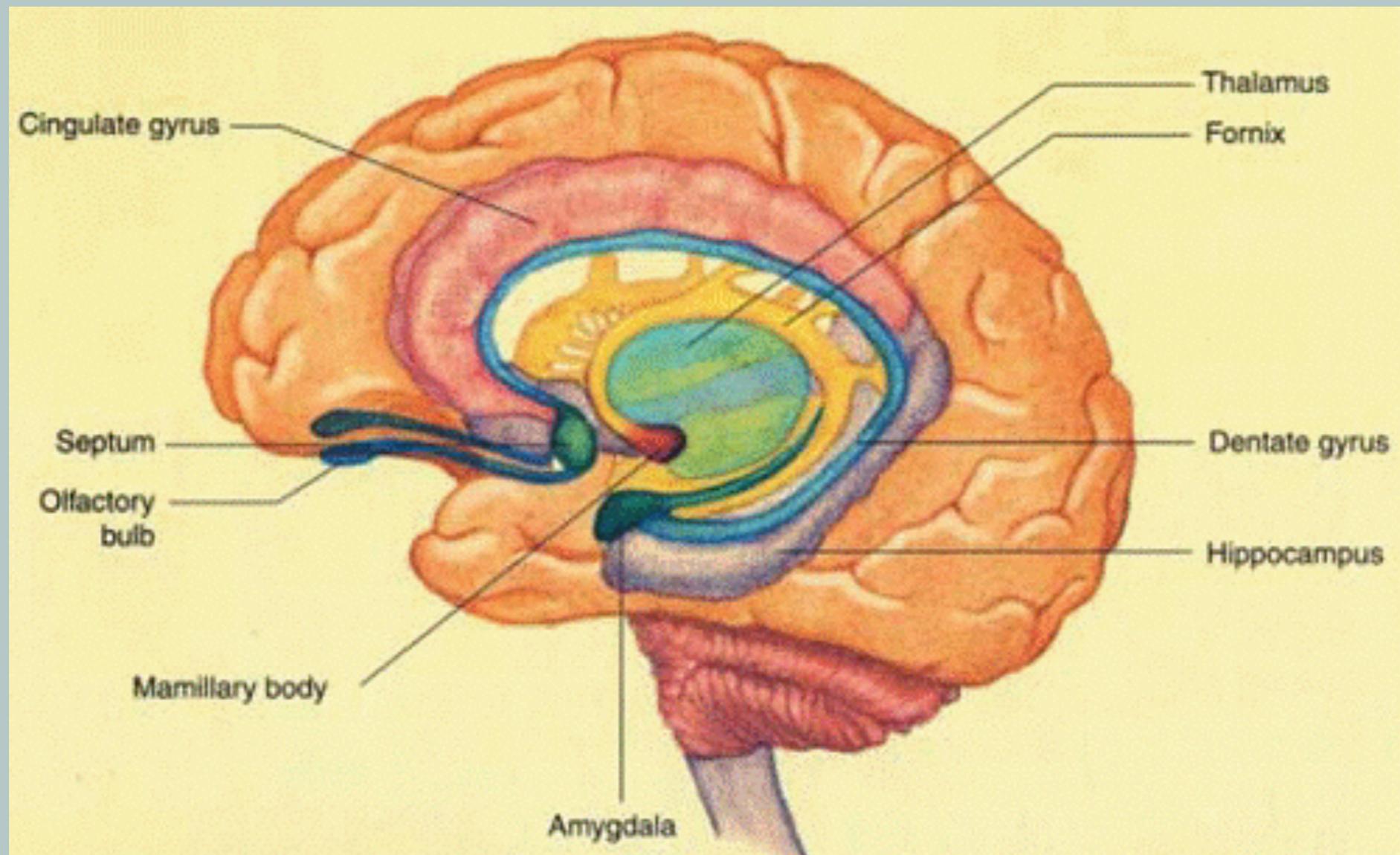


# They're all good

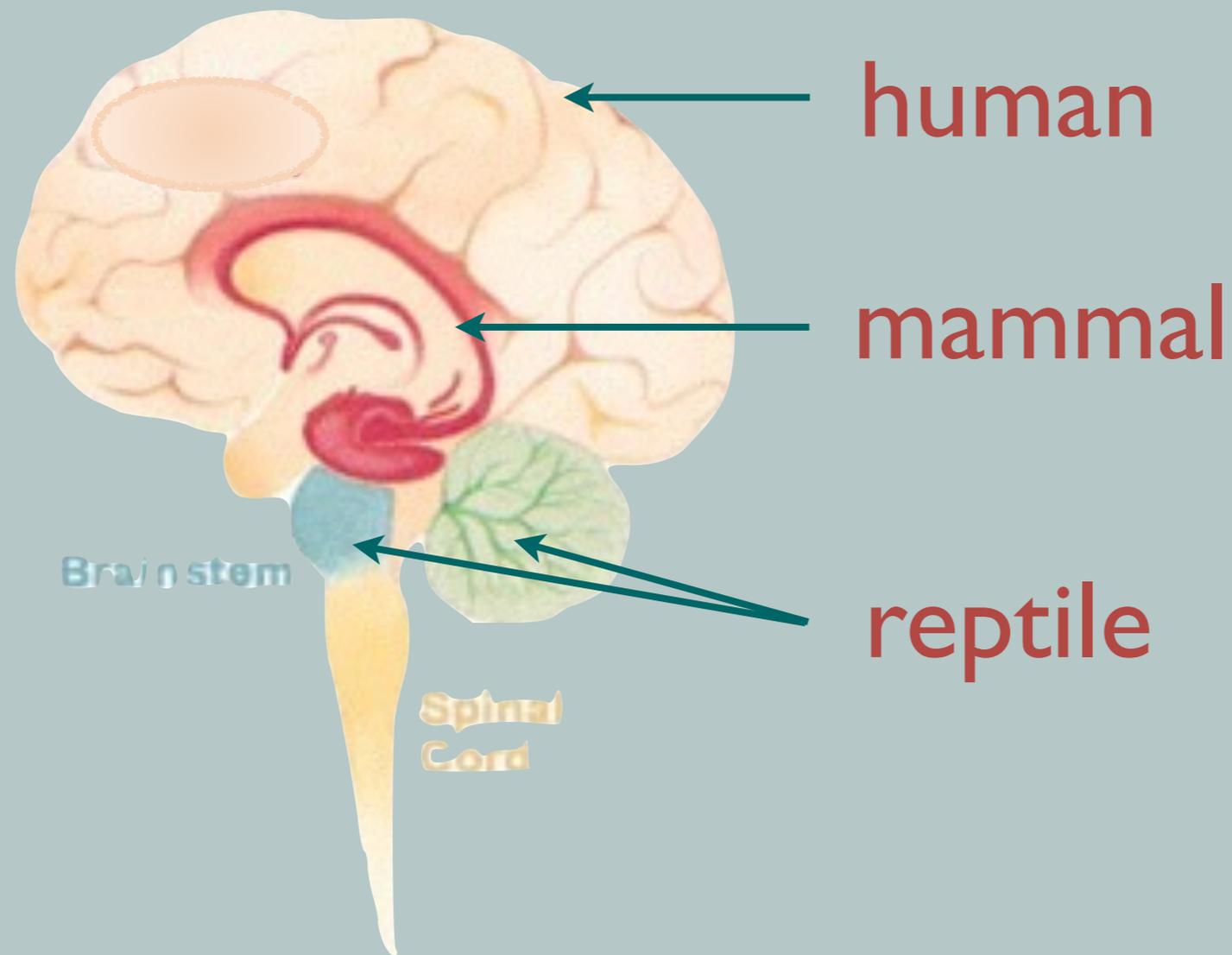


Each of your brains  
has successfully  
promoted survival  
for millions of years.

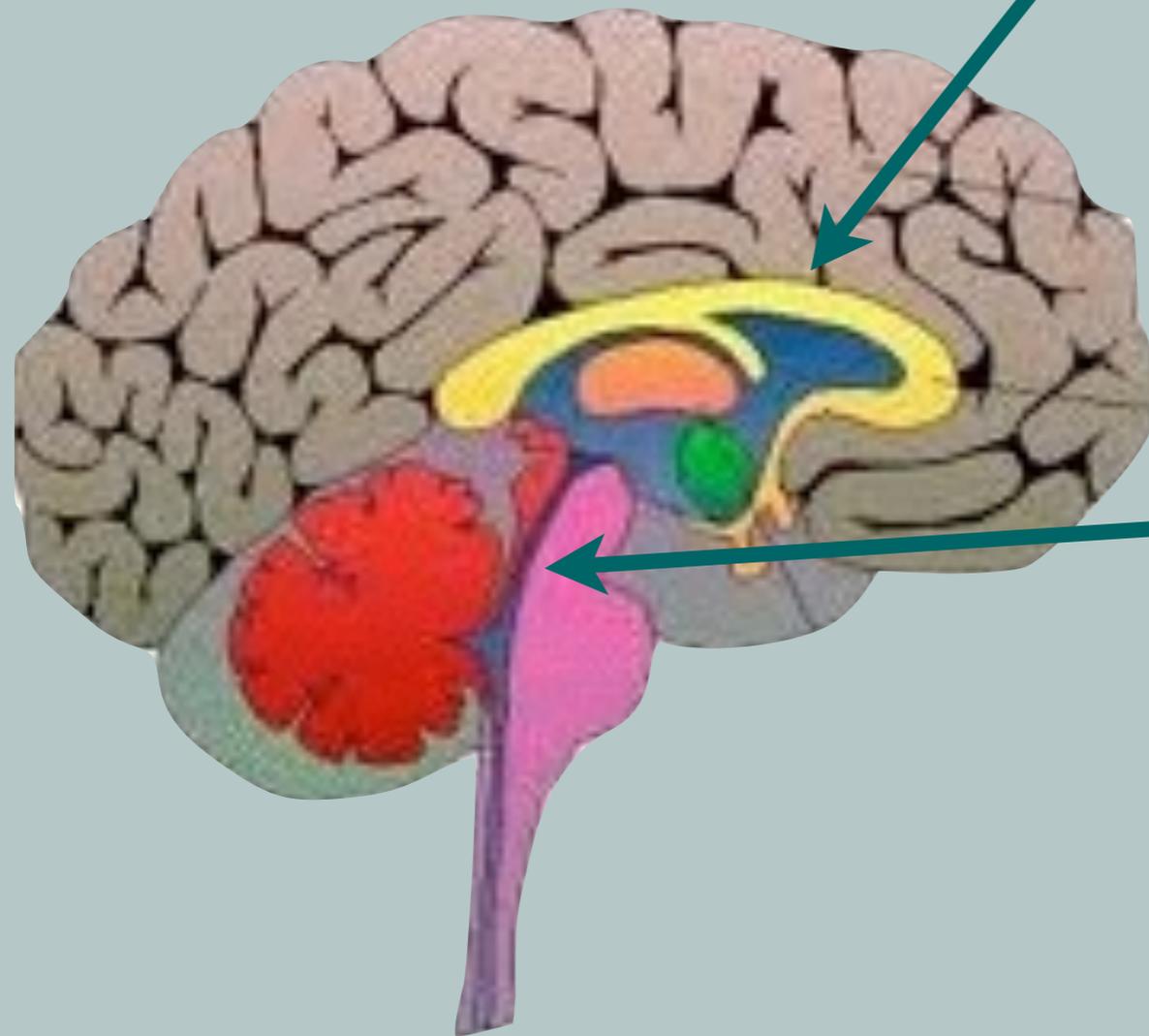
They promote your well-being  
by working together



# Each brain seeks in survival its own way

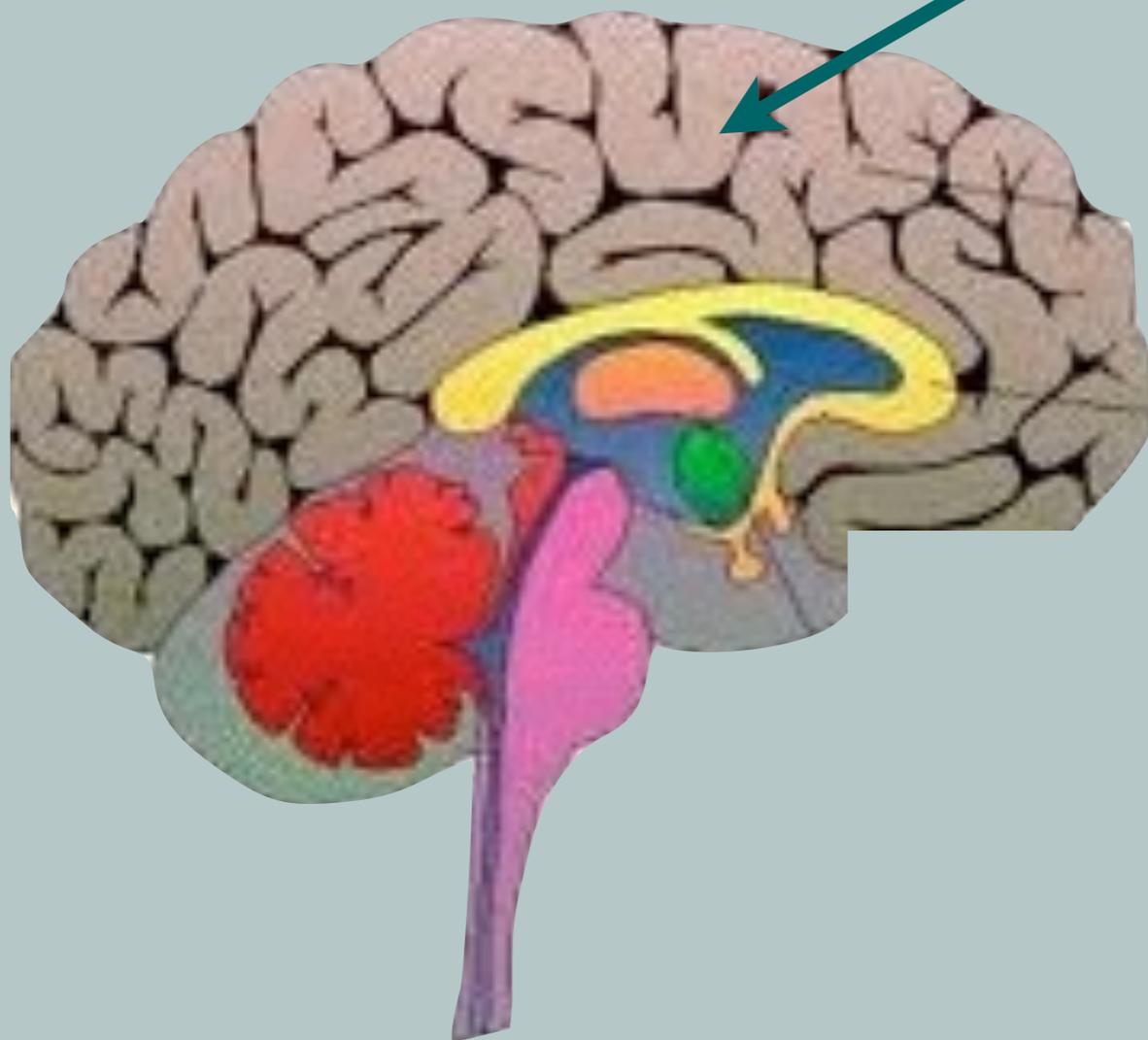


The mammal brain  
seeks survival  
through social bonds.



The reptile brain  
seeks survival by  
reacting to threats.

The human cortex  
seeks survival  
by learning  
from experience.

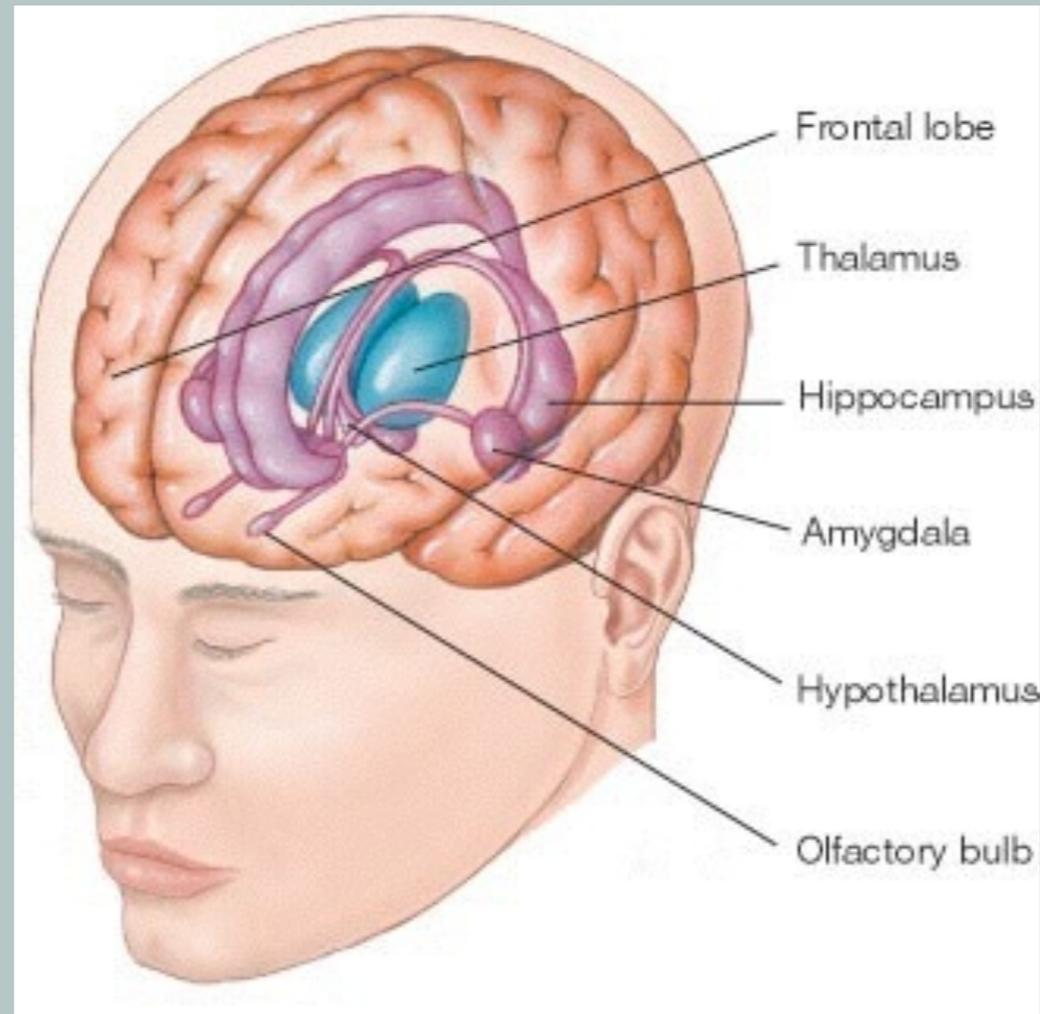


Working together,  
your three brains use experience  
to build social bonds and avoid harm.



But it's not easy.

Your three brains are not on speaking terms  
because the animal brain  
doesn't think in words.



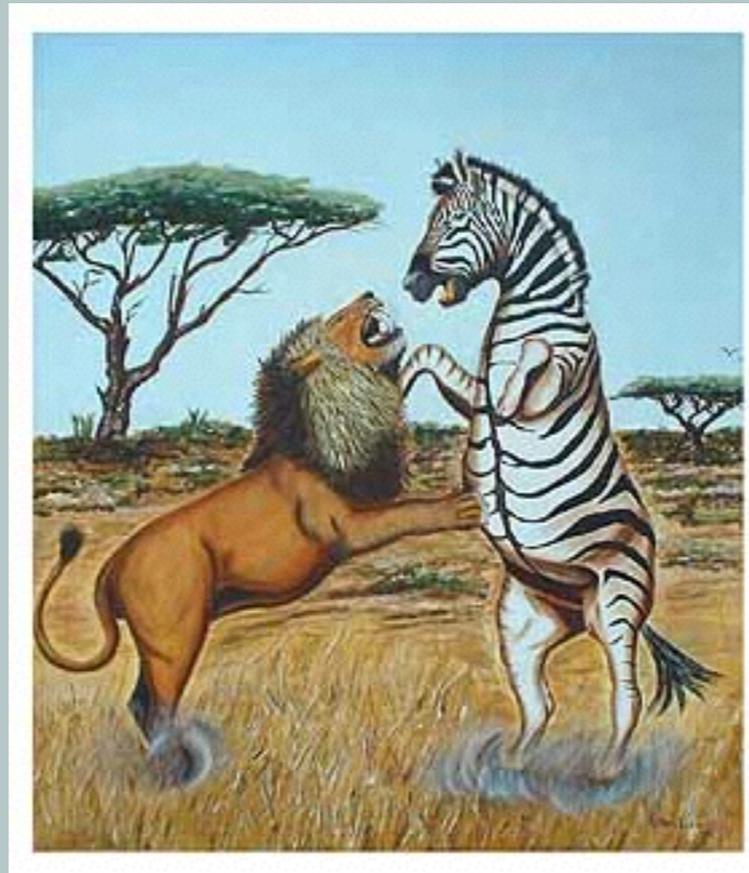
It thinks by releasing neurochemicals into the body. Humans experience these chemicals as emotions.



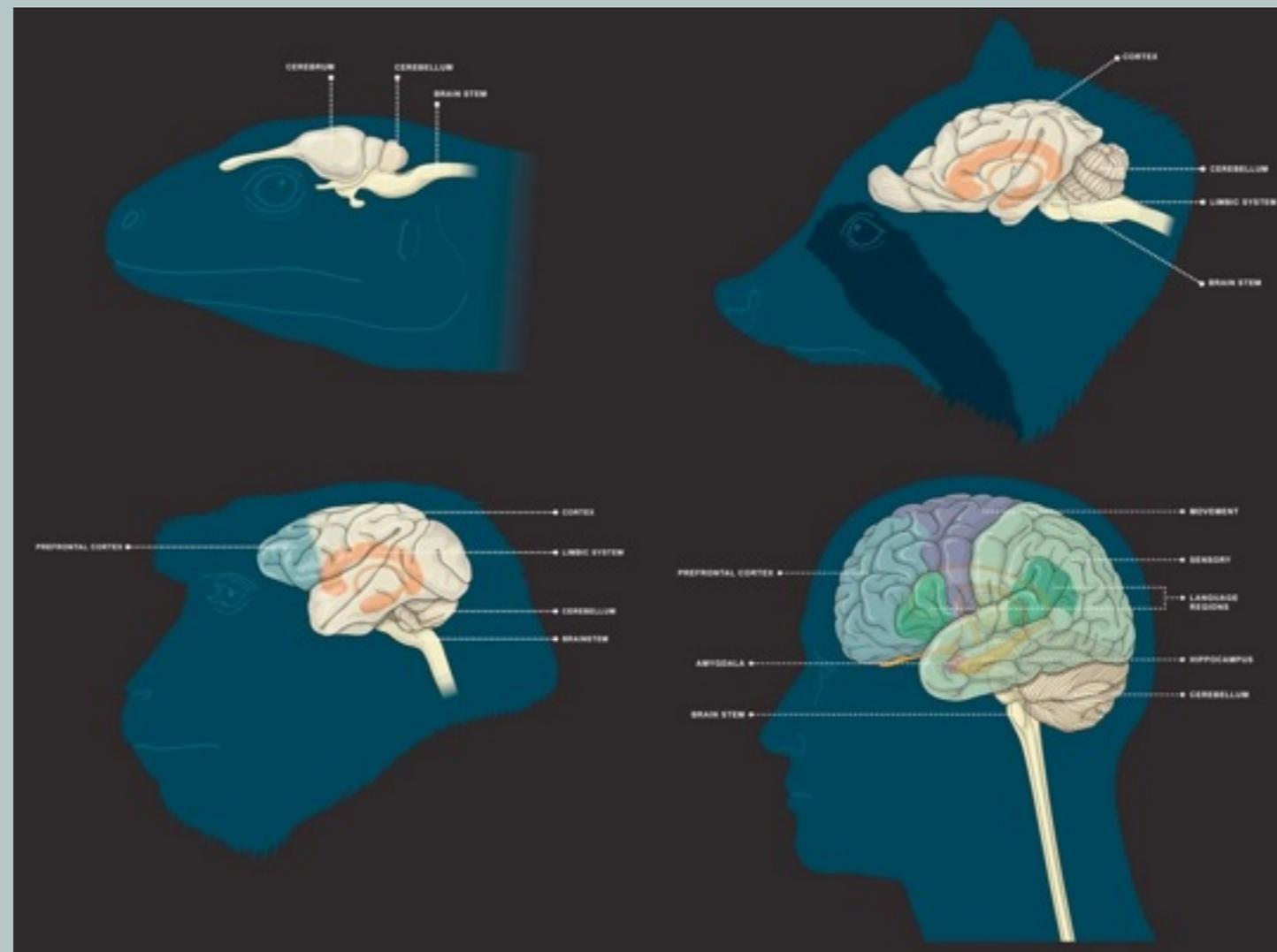
When the animal brain sees something good for survival, it releases chemicals that humans experience as happiness.

-  Dopamine
-  Serotonin
-  Oxytocin
-  Endorphin

Something bad for survival triggers  
cortisol in the animal brain.  
Humans perceive it as anxiety.



Neurochemicals are powerful enough to trigger urgent survival behaviors in the state of nature.

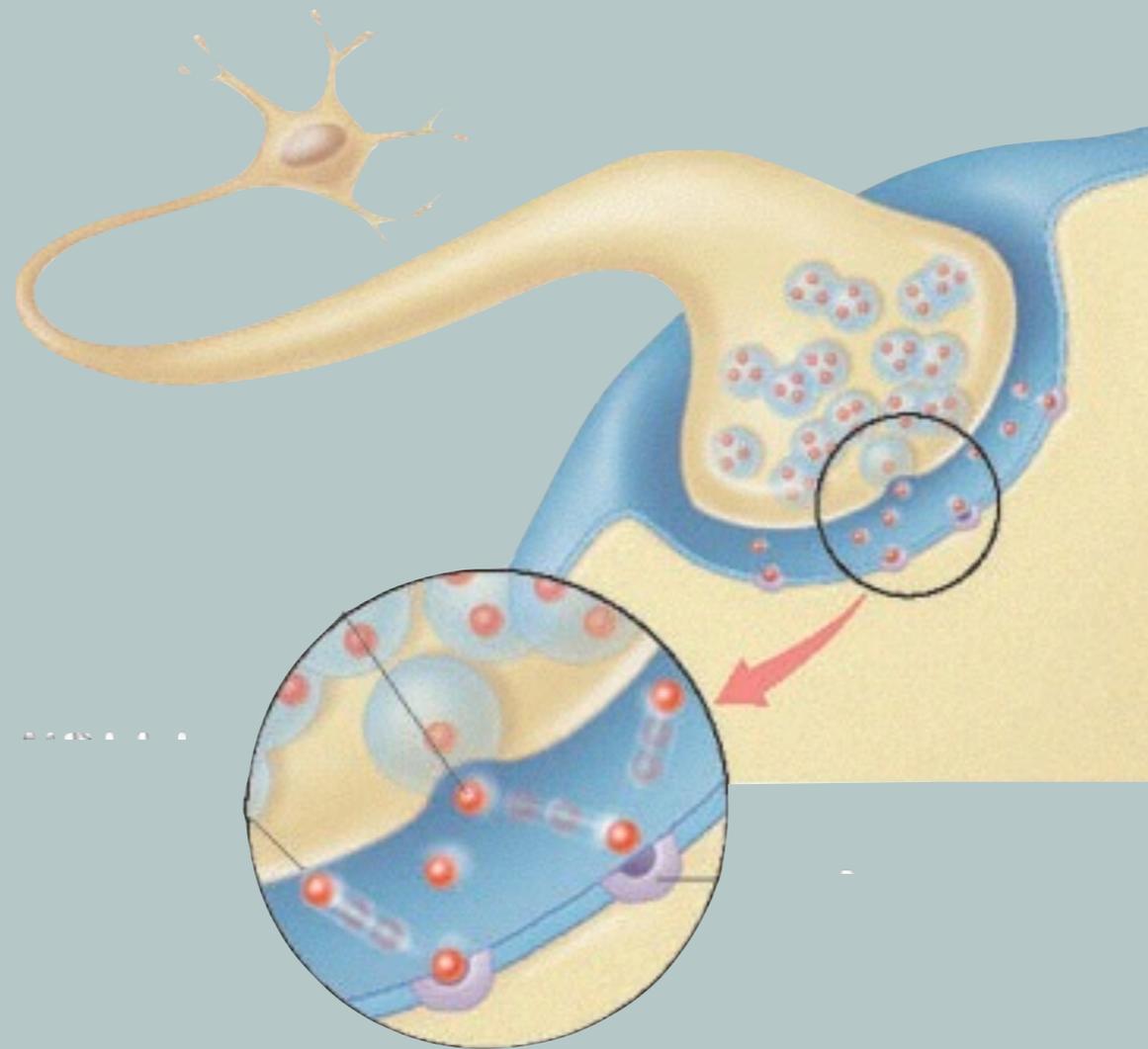


Our neurochemical responses are hard to put into words, but it's easy to see the behaviors they trigger in animals.

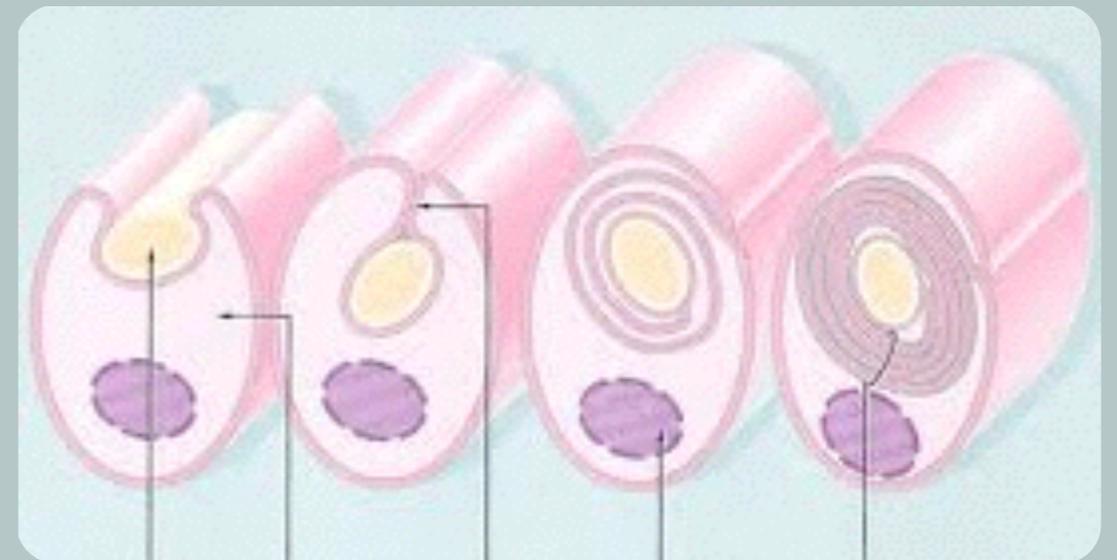
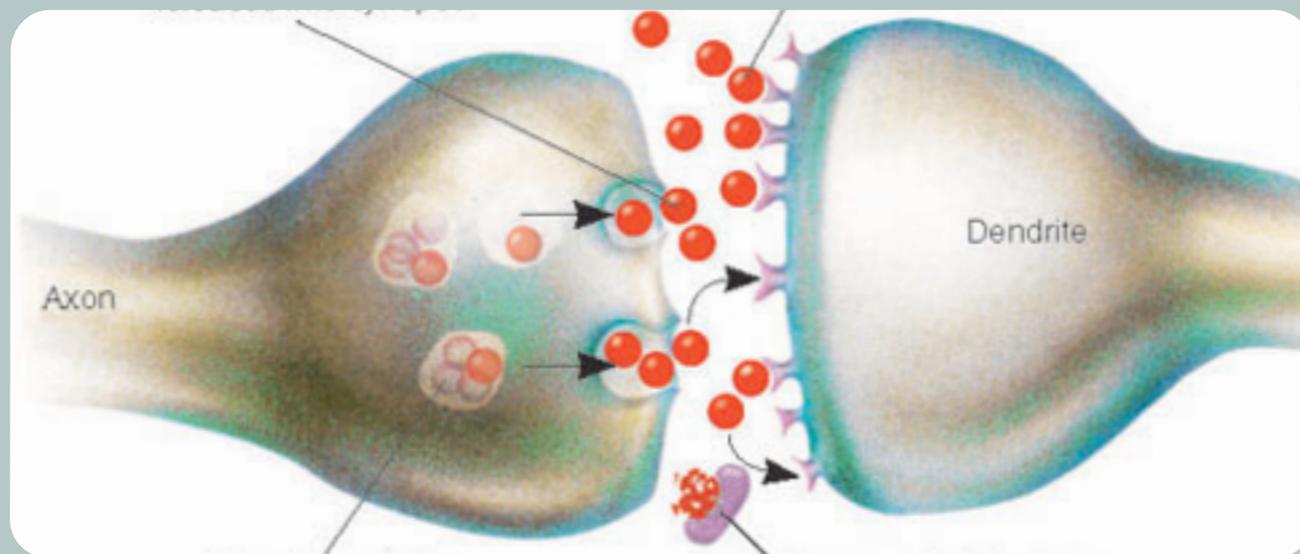




# Experience builds real physical pathways in your brain.

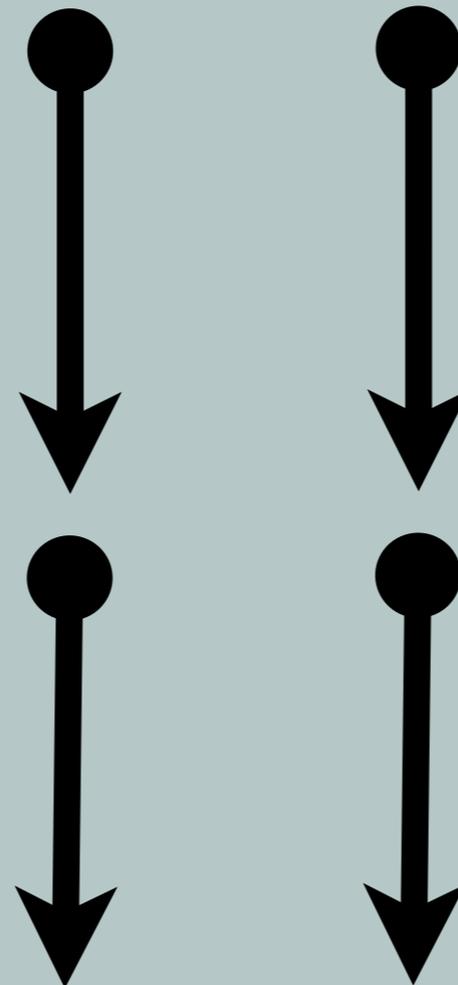


# Your cortex builds pathways in 2 ways: from emotion and from repetition



Emotion instantly improves a neuron's ability to trigger another neuron.

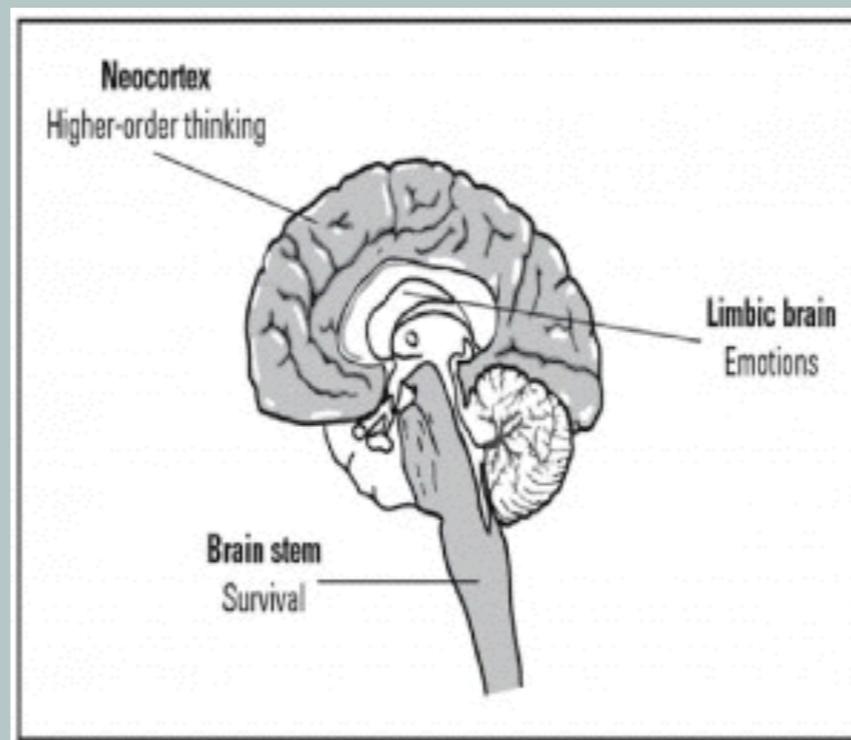
Repetition gradually improves a neuron's ability to trigger other neurons.



Your brain can “learn” behaviors that are not really good for your survival.

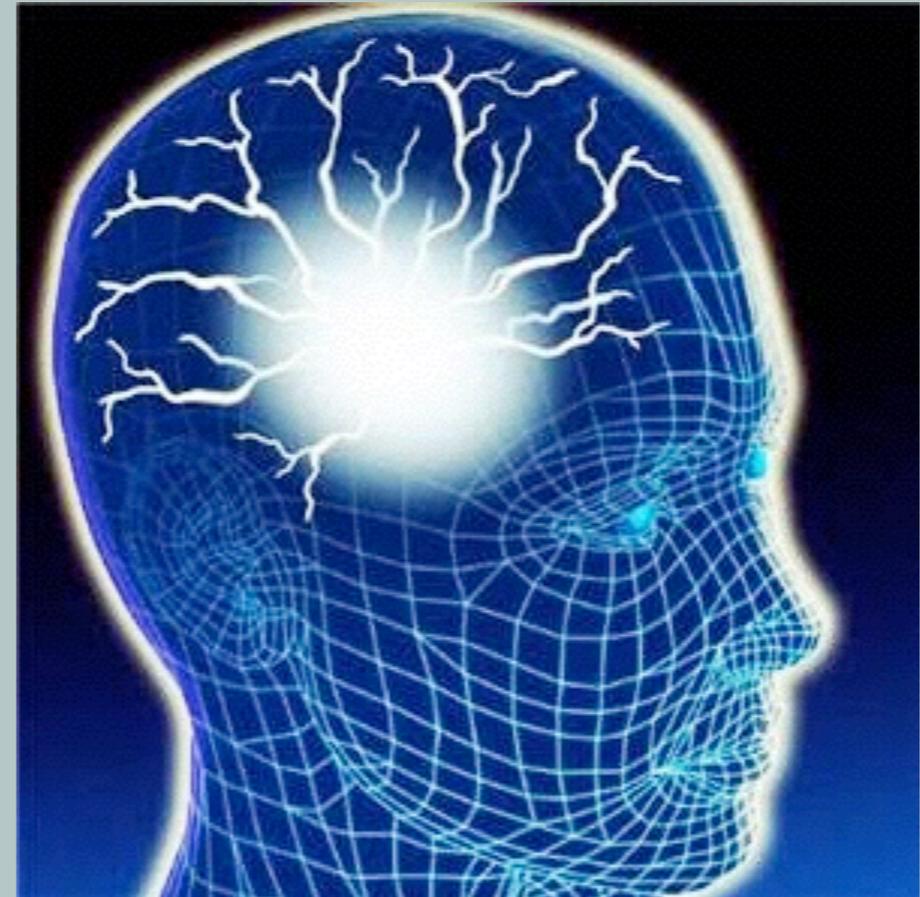


Your animal brain seeks whatever felt good in your past.

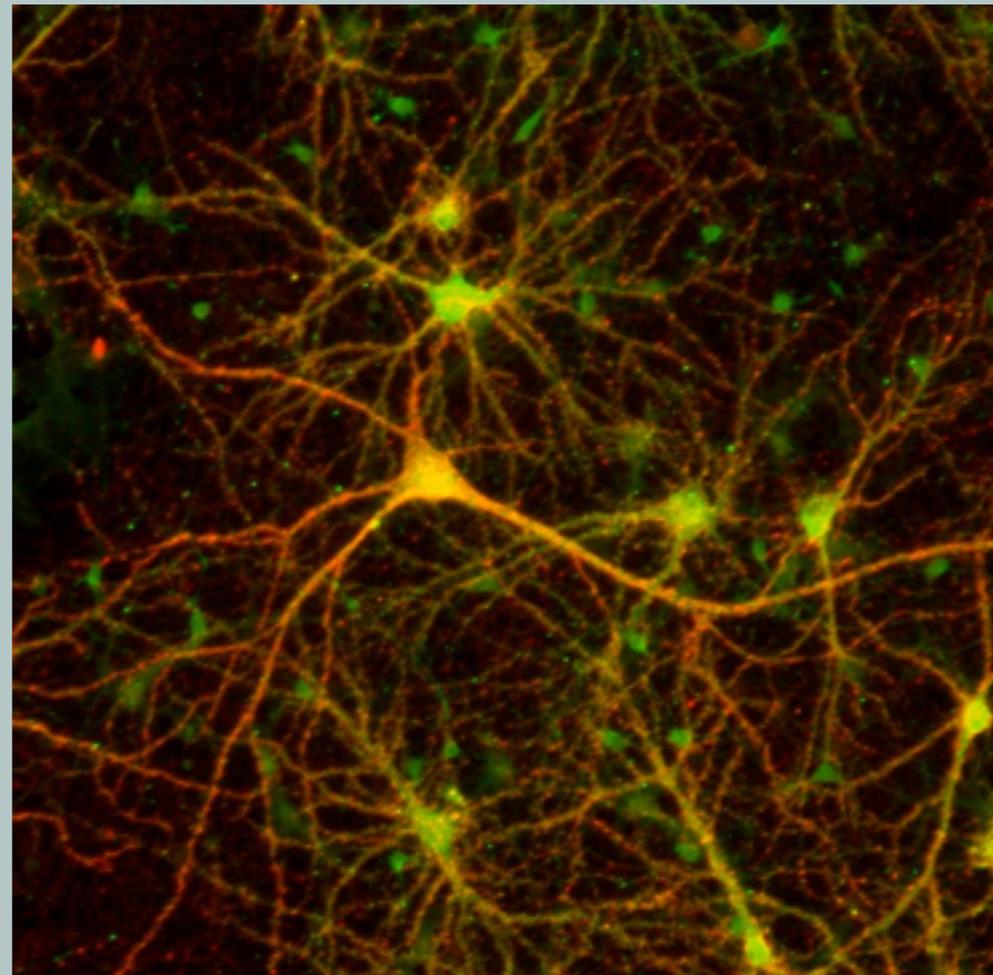


Your cortex may think it's not good for your future.

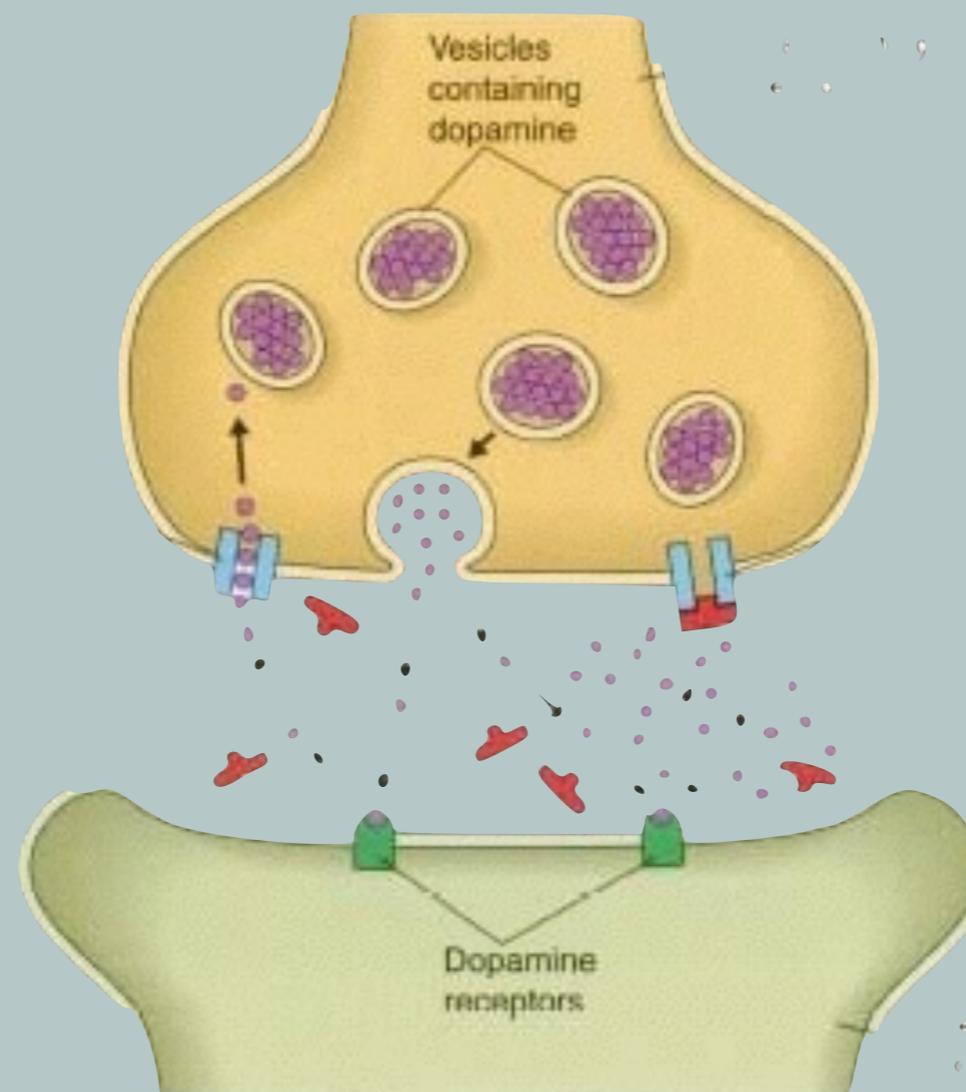
The electricity in  
your brain flows  
like water,  
finding the paths of  
least resistance.



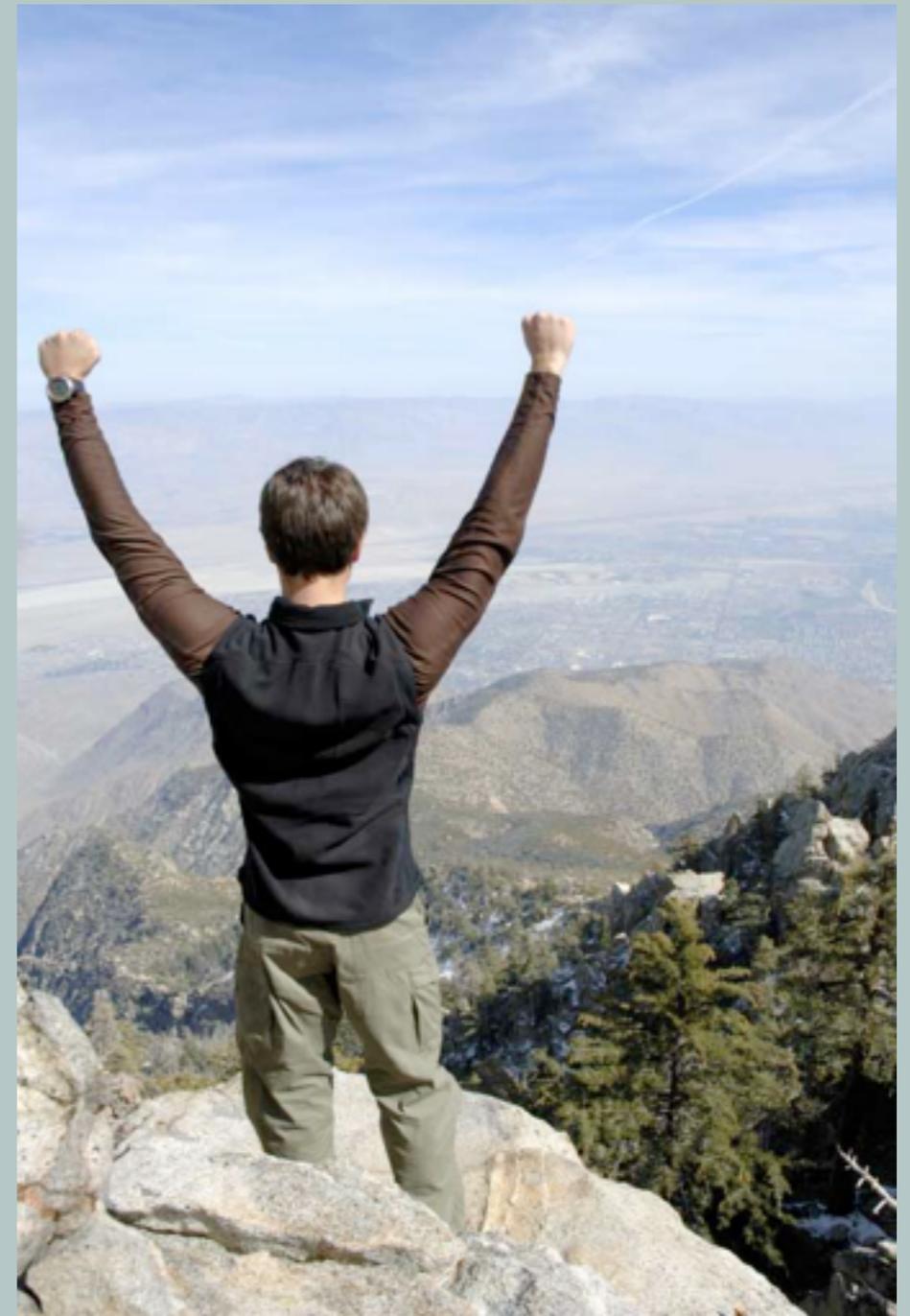
Electricity easily flows into pathways built from past emotion and repetition.



You can create new neural pathways  
by repeating new experiences.



But it's not easy.  
The more you know about  
how your brains works,  
the better you can promote  
your own well-being.



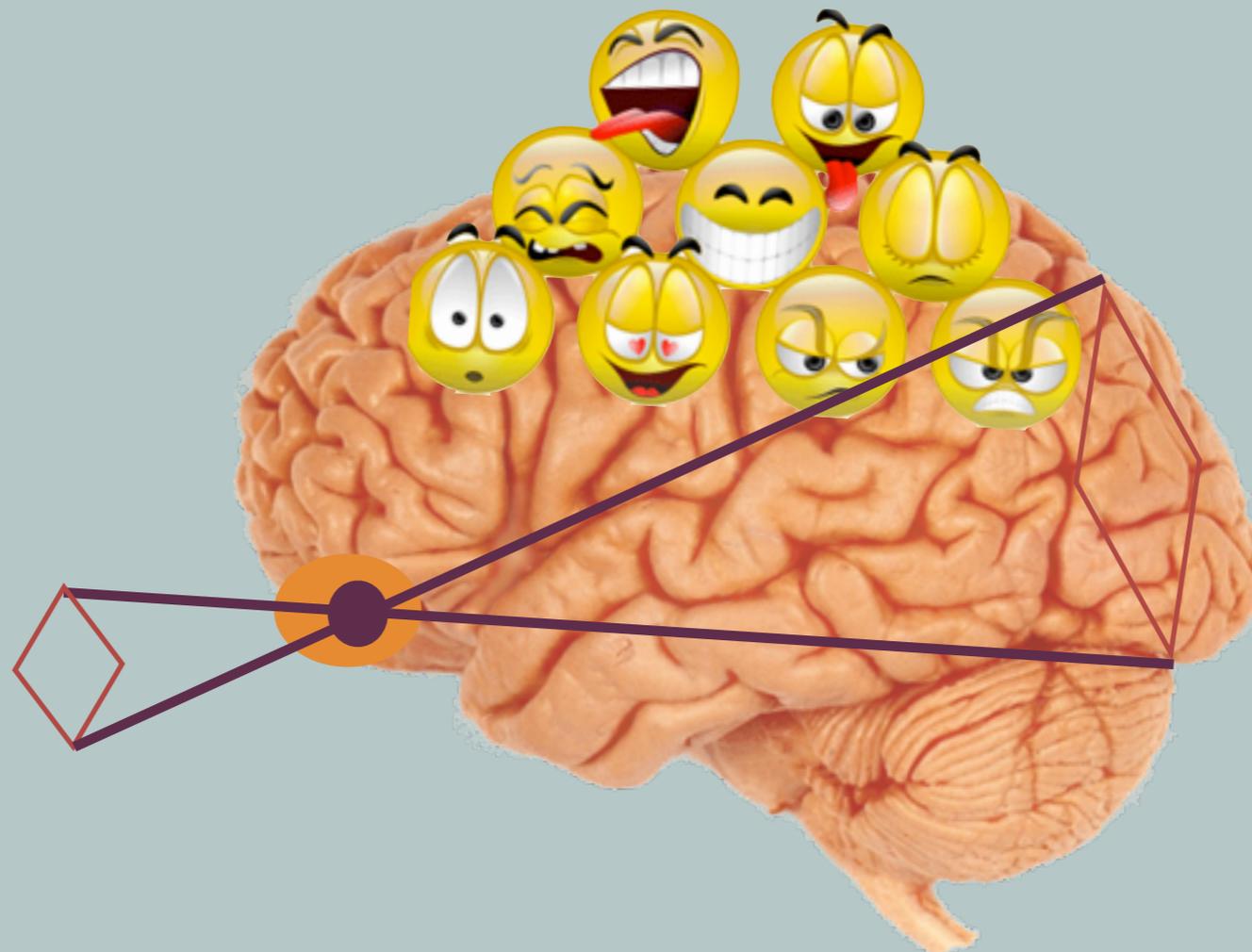
200 million years ago,  
mammals began evolving brain systems  
that support group life.



More of their babies survived as a result,  
and the successful brains got passed on.



You have inherited  
the brains of successful survivors.





Knowing how  
your brain works  
helps you  
understand  
yourself  
and others.

# Meet Your Happy Chemicals

is a lighthearted guide to the brain's natural ups and downs, and re-wiring yourself for more ups.

\$9.<sup>99</sup> paper

\$4.<sup>99</sup> ebook

