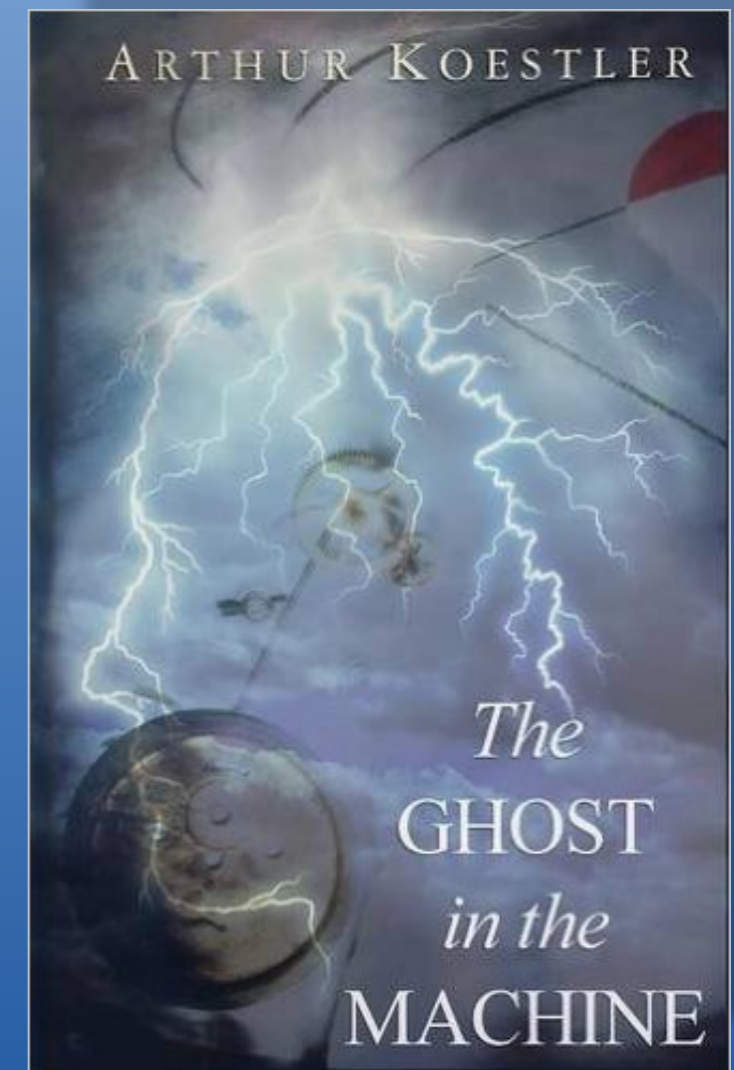
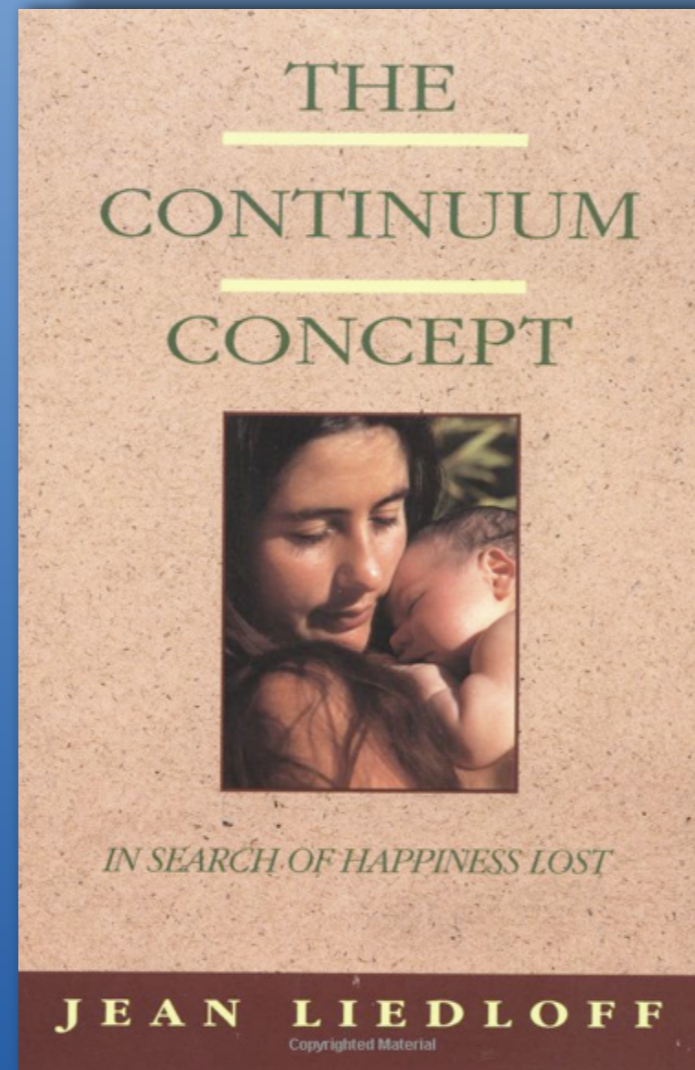
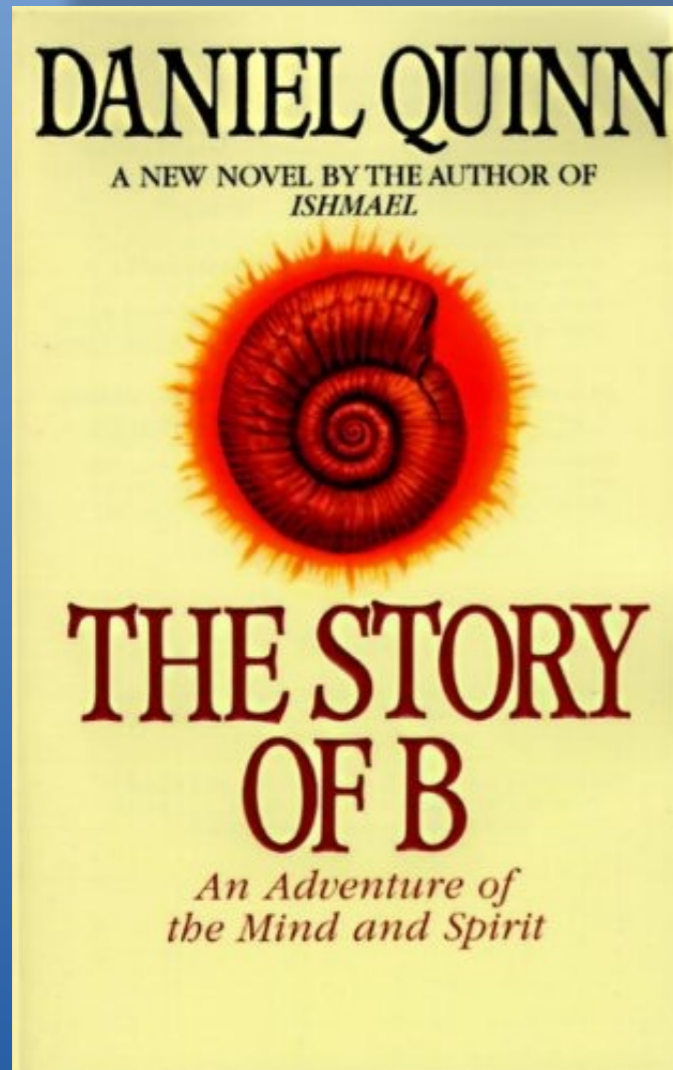



# The Human Predicament



ARTHUR KOESTLER



*The*  
GHOST  
*in the*  
MACHINE

# Koestler's Thesis



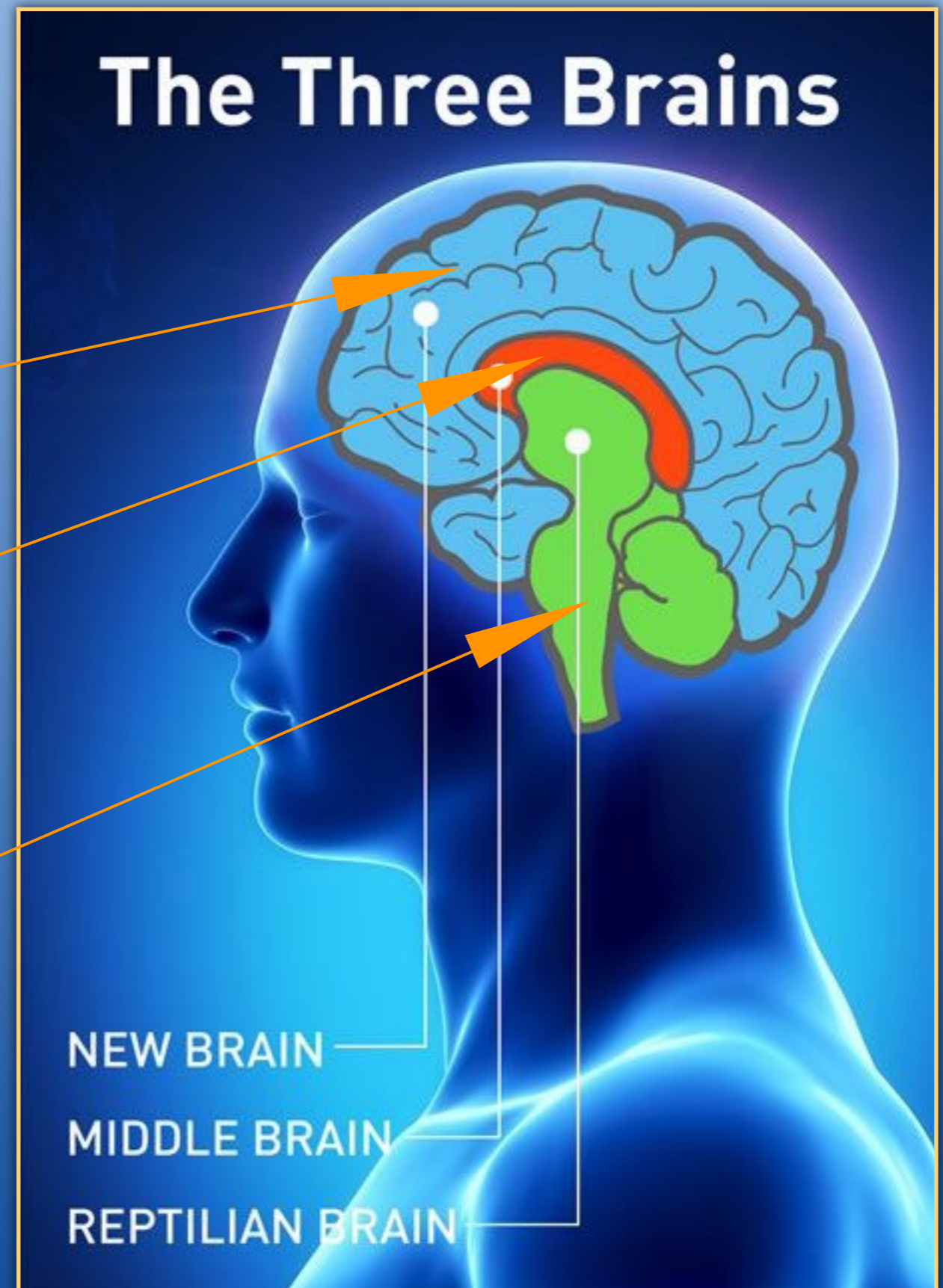
Arthur Koestler: Nobel novelist & science writer  
(coined 'holon' & 'holarchy')

**identified a problem with the human brain.**  
a potentially fatal problem!



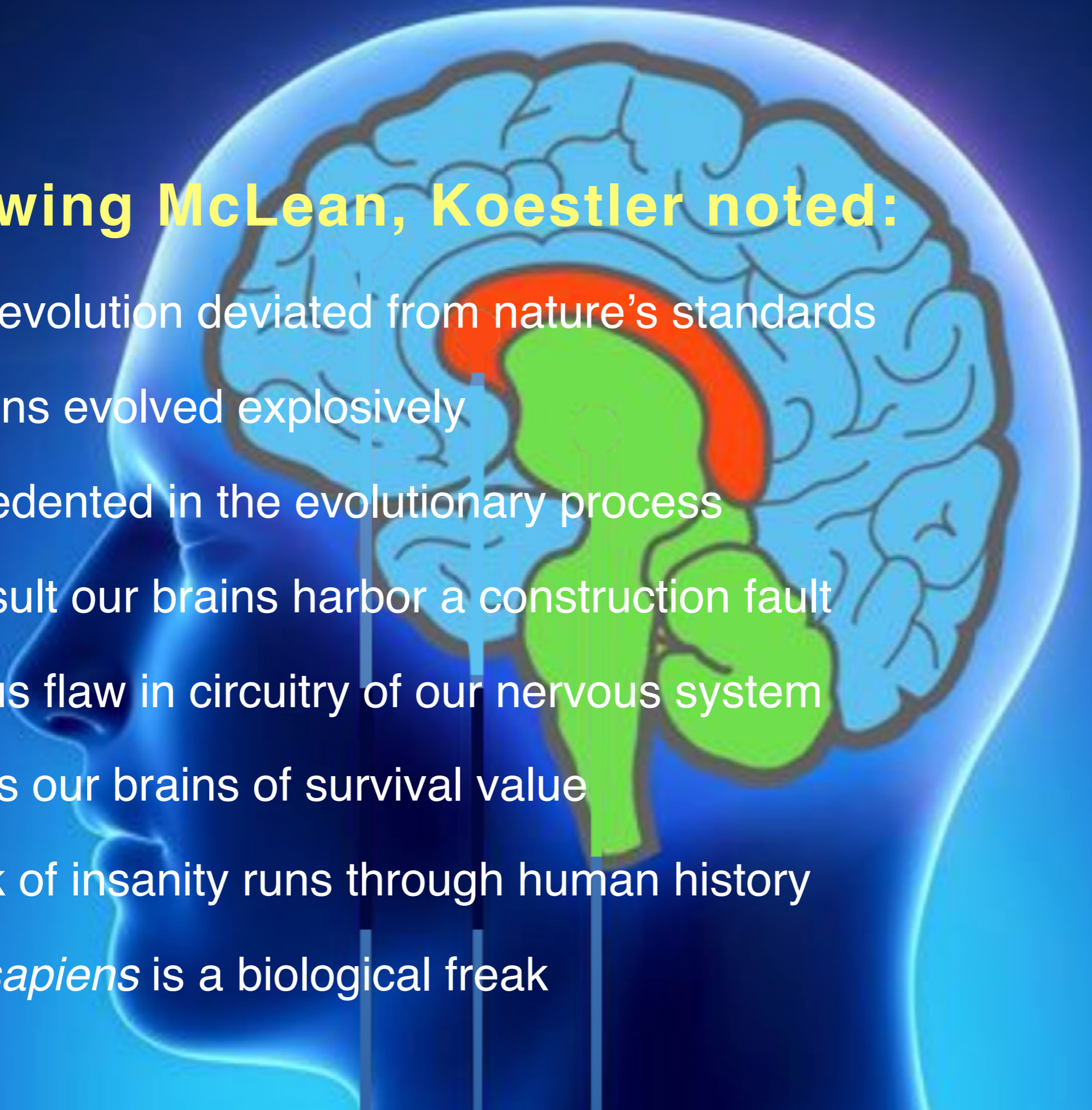
Neuroscientist Paul McLean discovered the **Triune Brain**:

- **Forebrain** (neocortex) 'thinking' brain.  
**Later mammals**
- **Midbrain** (limbic system) emotional brain.  
**Paleo-mammals**
- **Brainstem** ("smell" olfactory brain) instinct.  
**Reptiles**



## Following McLean, Koestler noted:

- human evolution deviated from nature's standards
- our brains evolved explosively
- unprecedented in the evolutionary process
- as a result our brains harbor a construction fault
- a serious flaw in circuitry of our nervous system
- deprives our brains of survival value
- a streak of insanity runs through human history
- *Homo sapiens* is a biological freak



# Evolutionary Errors

## Irish Elk

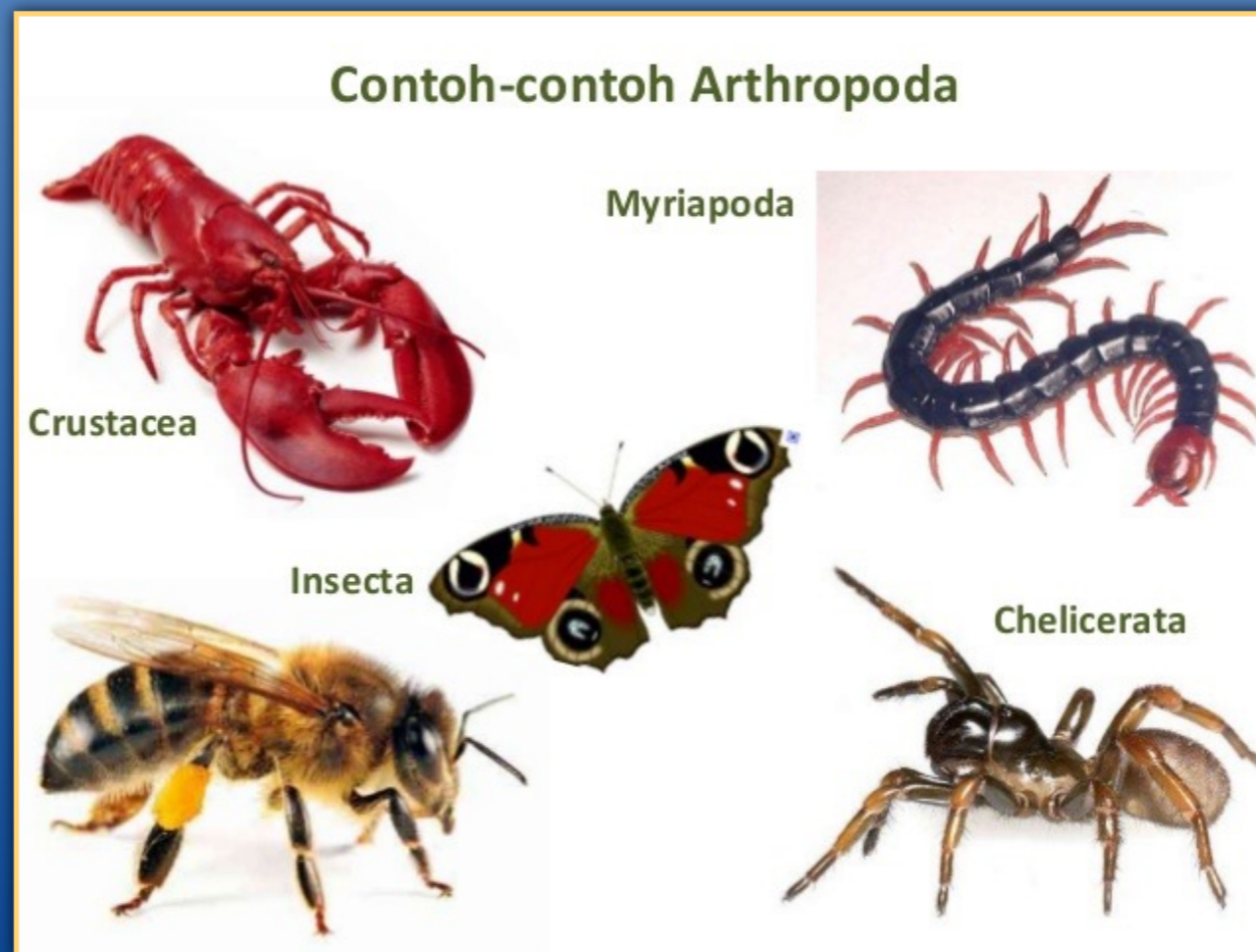
(giant antlers prevented males from mating)



# Evolutionary Errors

## arthropods

Brain-around-gullet evolutionary dilemma:  
either intellectual advance with certainty of  
starvation, or mental stagnation and remain  
blood suckers.





# Evolutionary Errors

## koala bear

No corpus callosum, so no connection between hemispheres. Brain mostly for smelling.



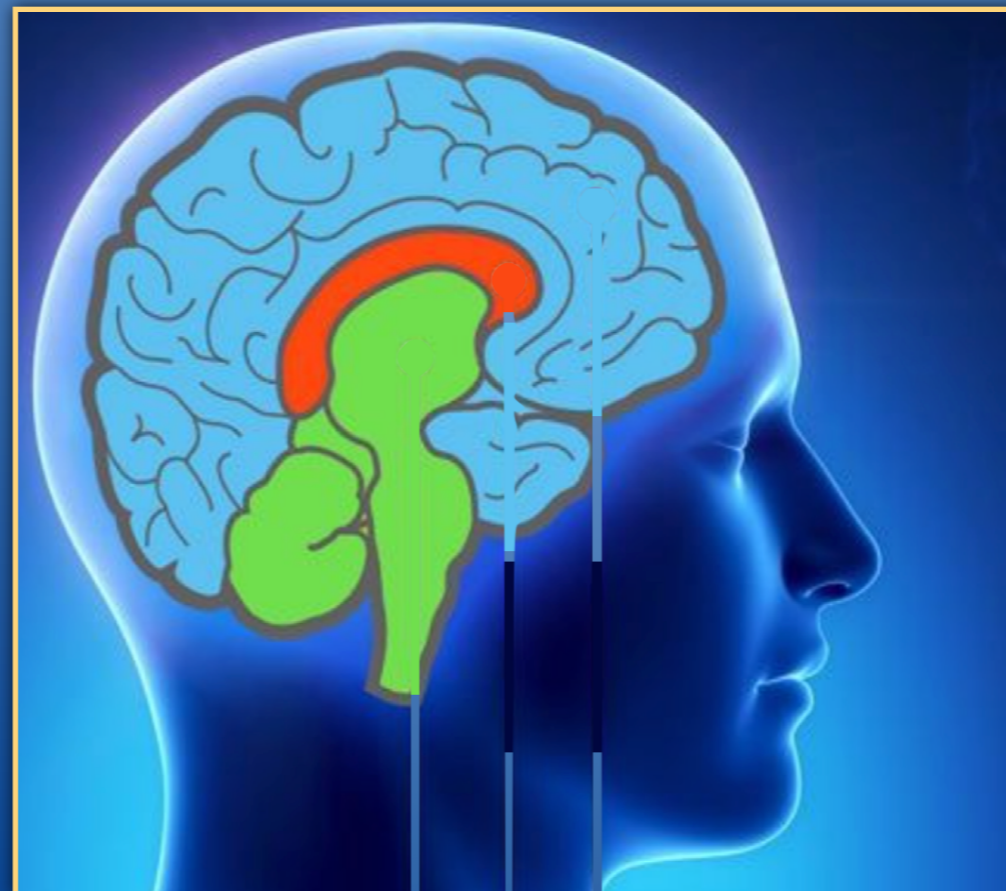
*'Clinging to his eucalyptus tree like a discarded hypothesis.'*

# Evolutionary Errors

## **homo sapiens**

Hominid brain same for about three million years;  
then explosive growth about half million years ago.

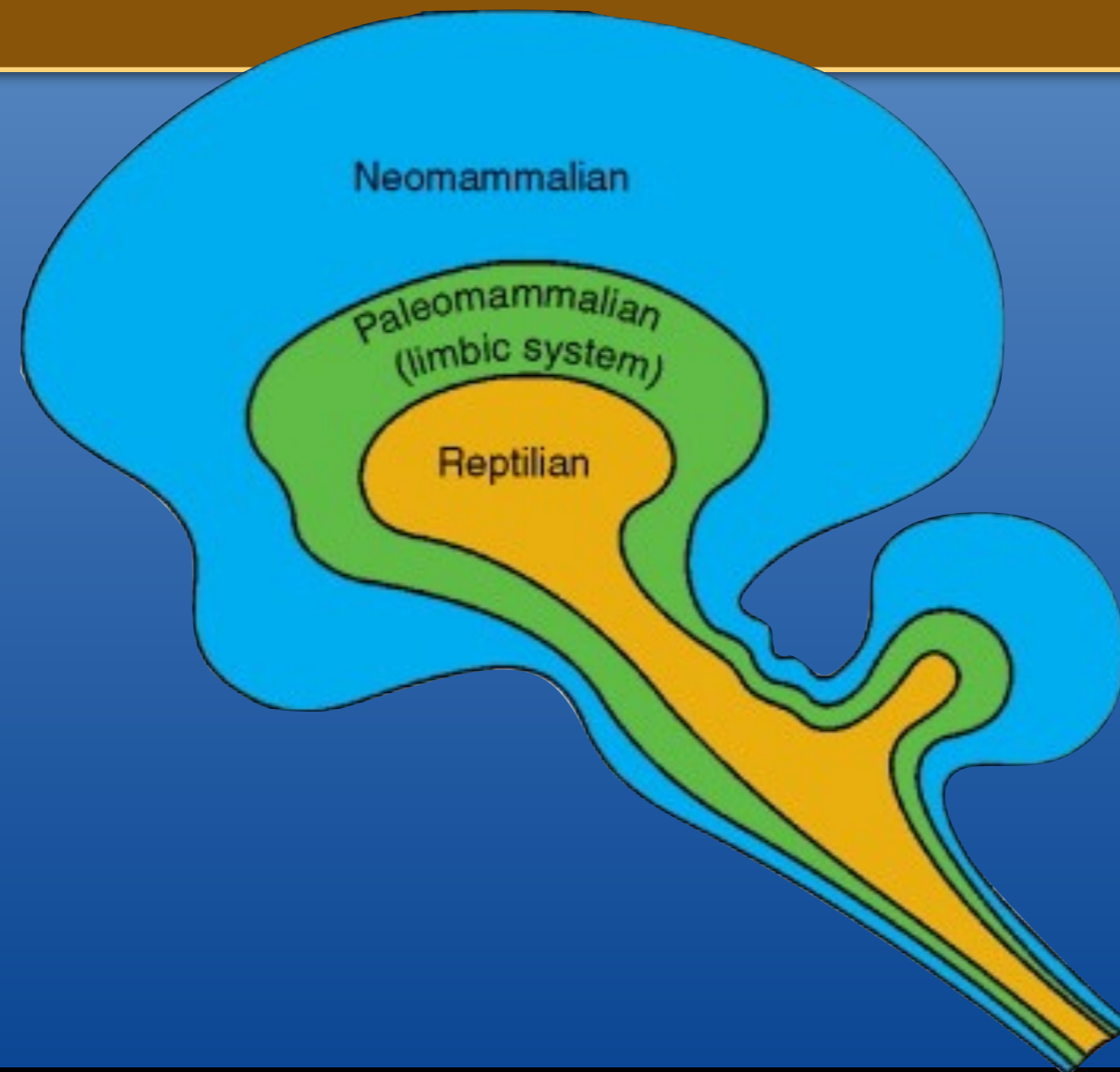
Poor connection between emotional limbic system  
and rational cortex.



# Evolutionary Error

*‘Enlargement of human brain has gone so fast and so far that the result is actually pathological . . . the human cortex is a sort of tumorous overgrowth.’*

— Judson Herrick, in Koestler.

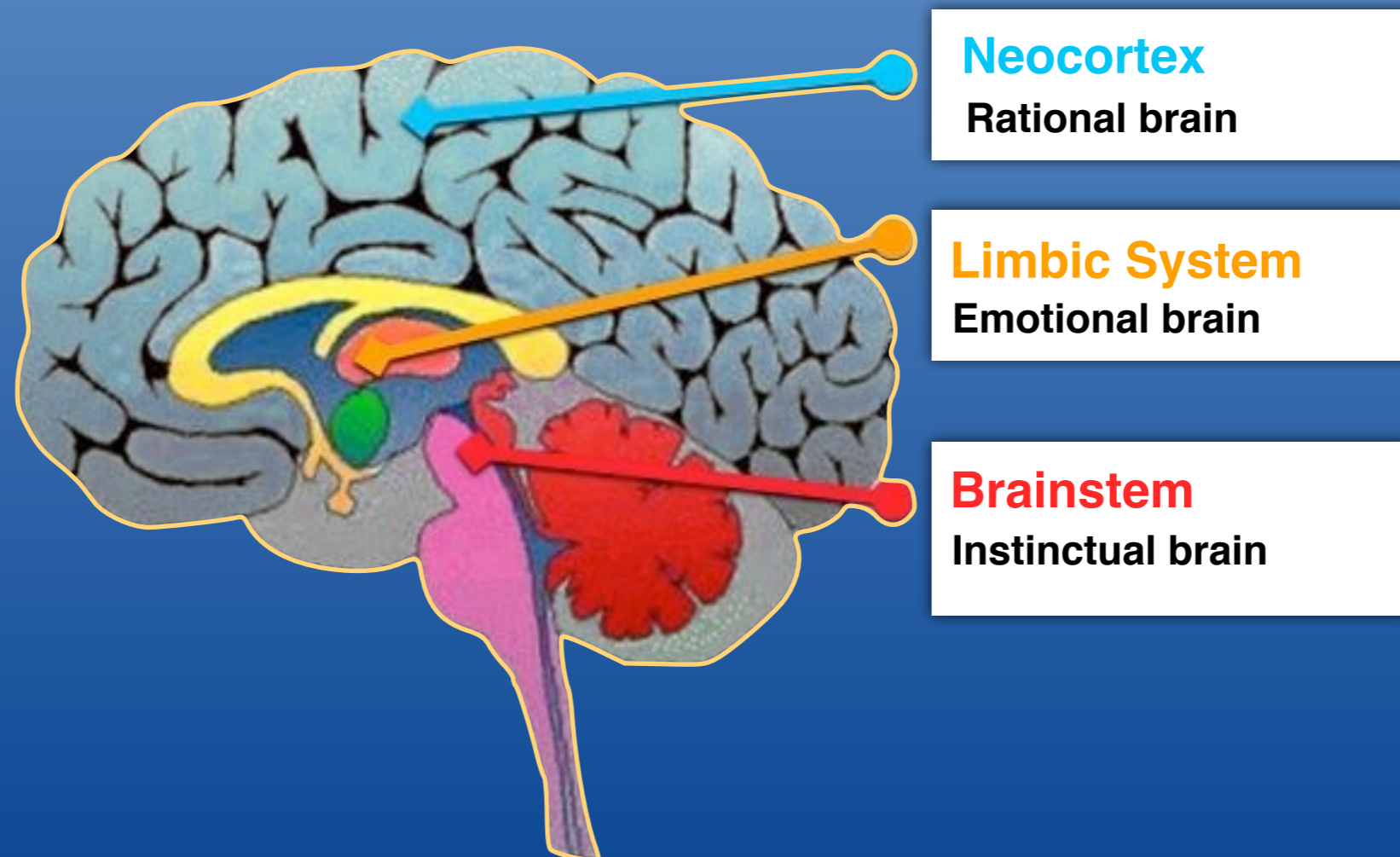


# Problem:

not size of cortex but insufficient coordination  
between old and new brains

between emotional (**limbic system**)  
and intellectual (**neocortex**)

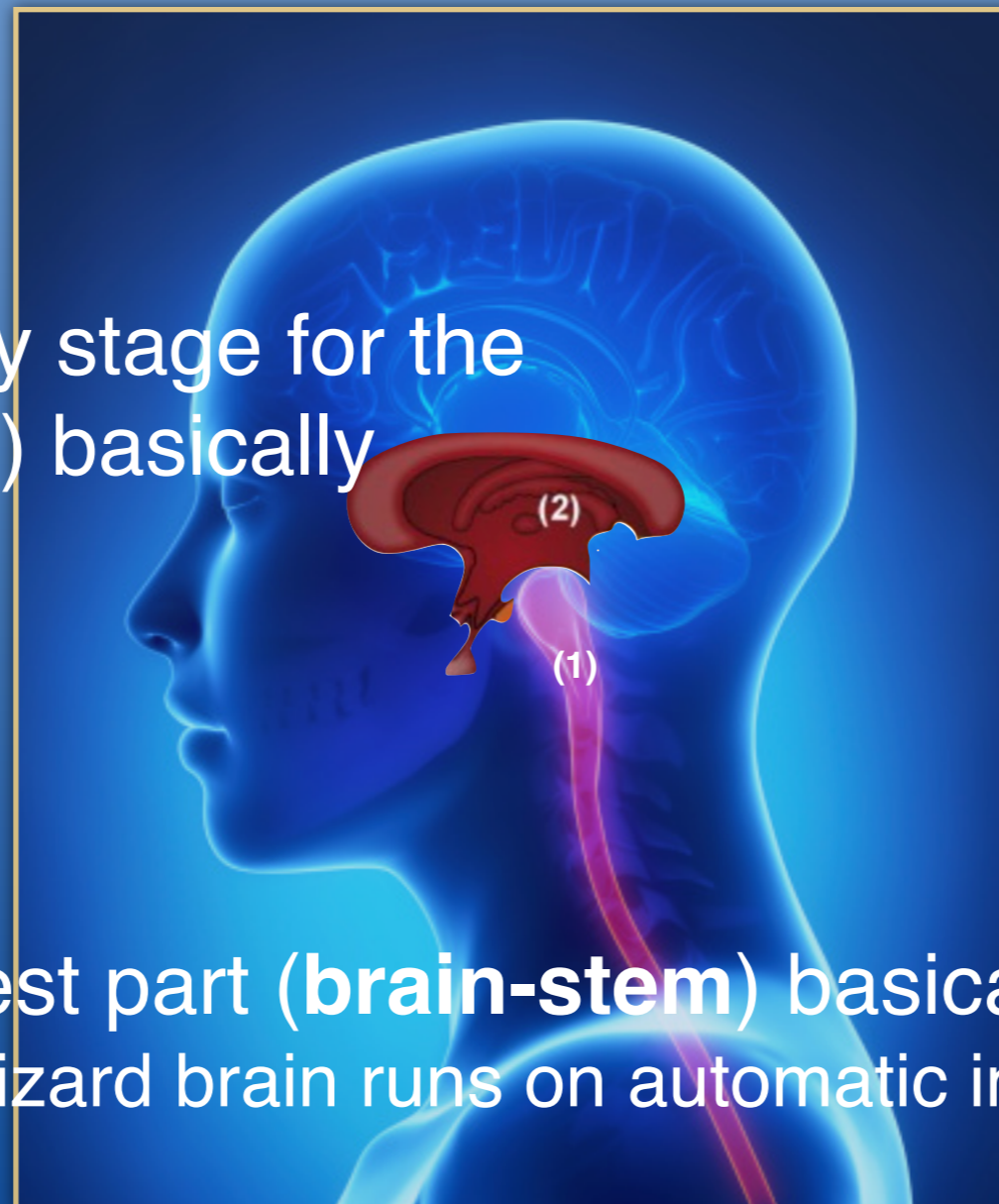
disconnect between what we “feel” and “think”



# Problem

Human brain is *split*.  
'Schizophysiology' built into our species.

(2) Next evolutionary stage for the brain (limbic system) basically *early mammal*

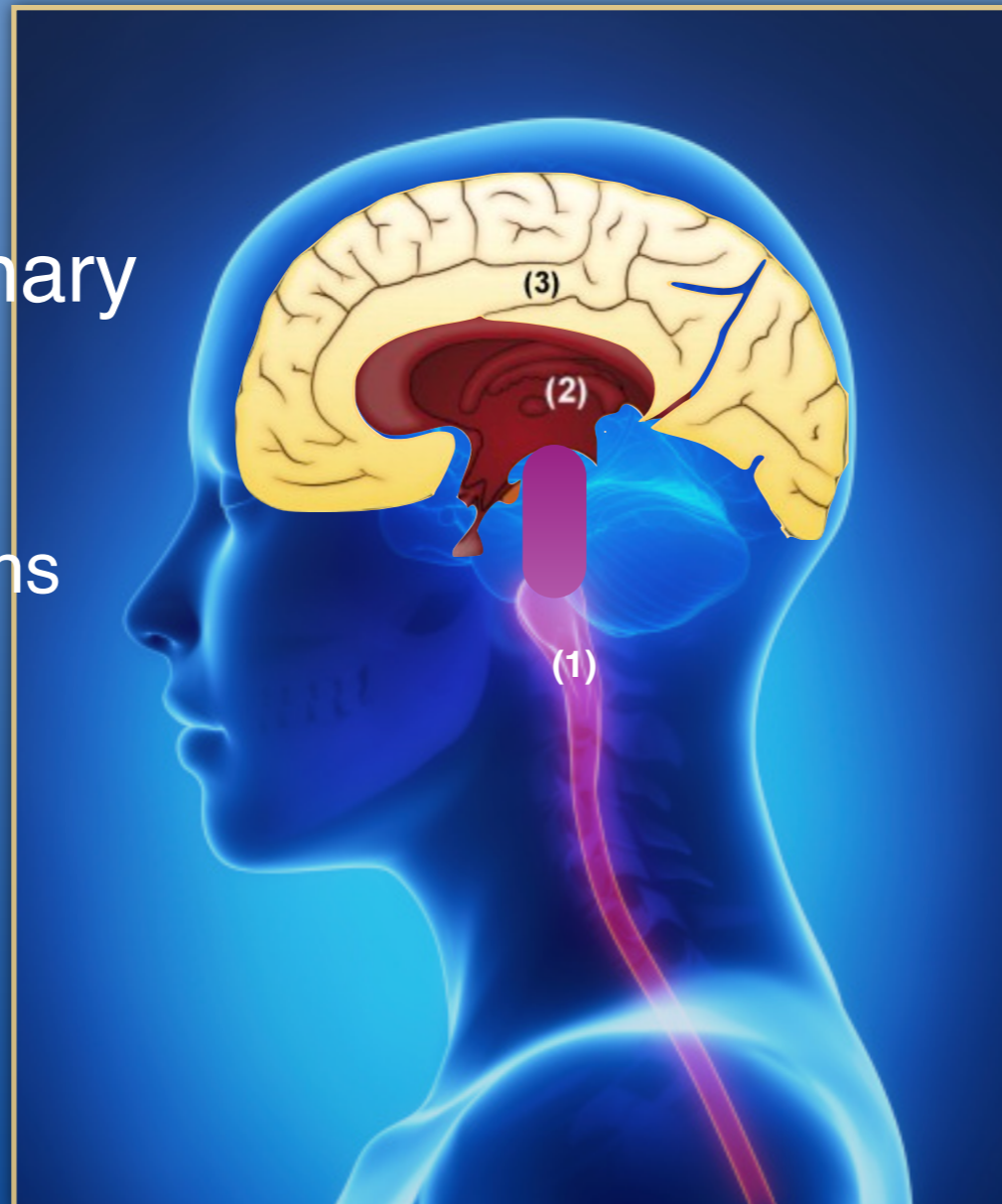


(1) Oldest part (**brain-stem**) basically *reptilian*  
(lizard brain runs on automatic instinct)

# Problem

‘Schizophysiology’ built into our species.

Most recent evolutionary stage (neocortex),  
*late mammal*  
(conflict between emotions and intellect)

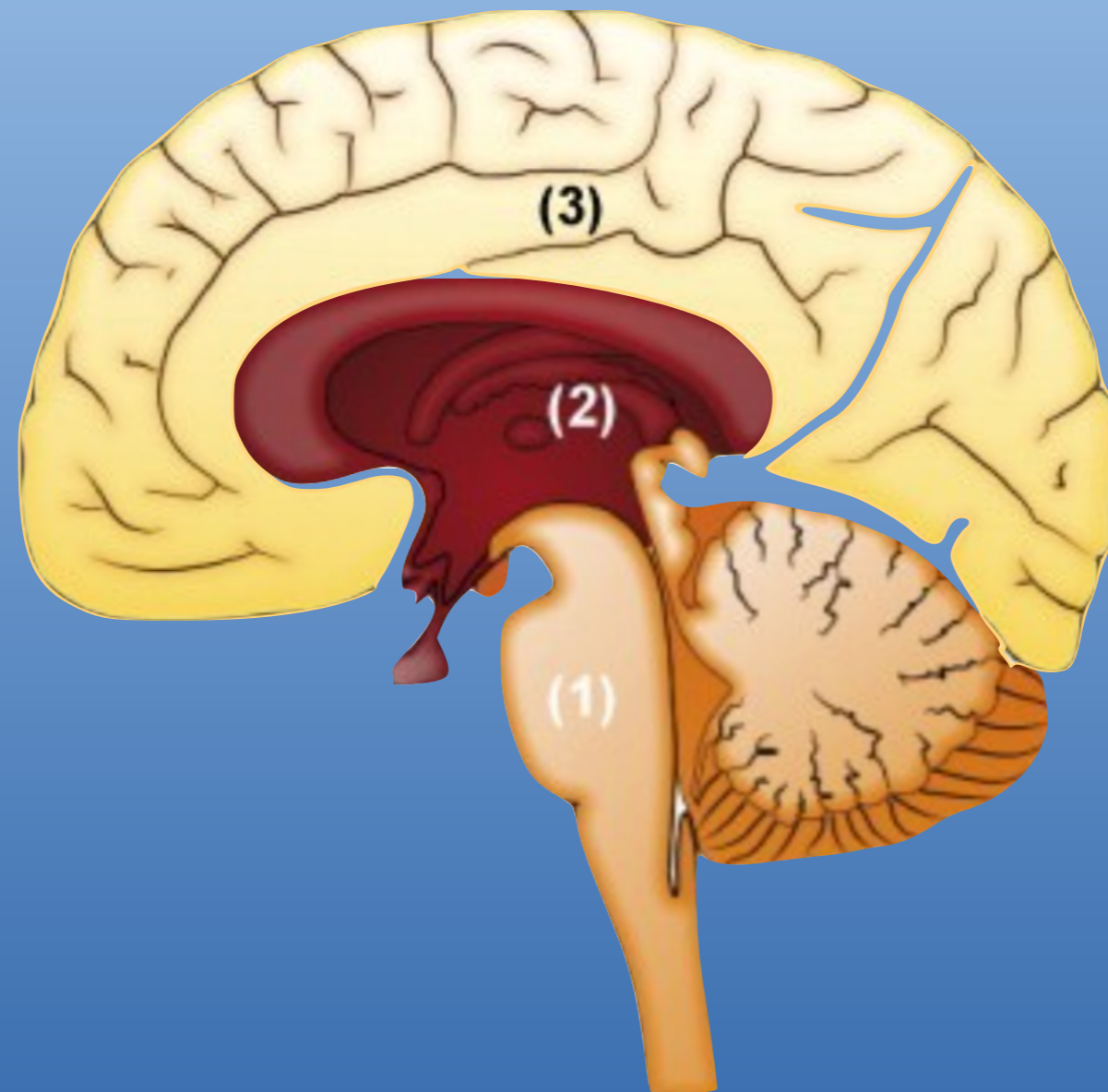


# Problem

**‘Schizophysiology’** built into our species.

Psychiatrist’s patient lies on couch alongside  
a lizard and a rat





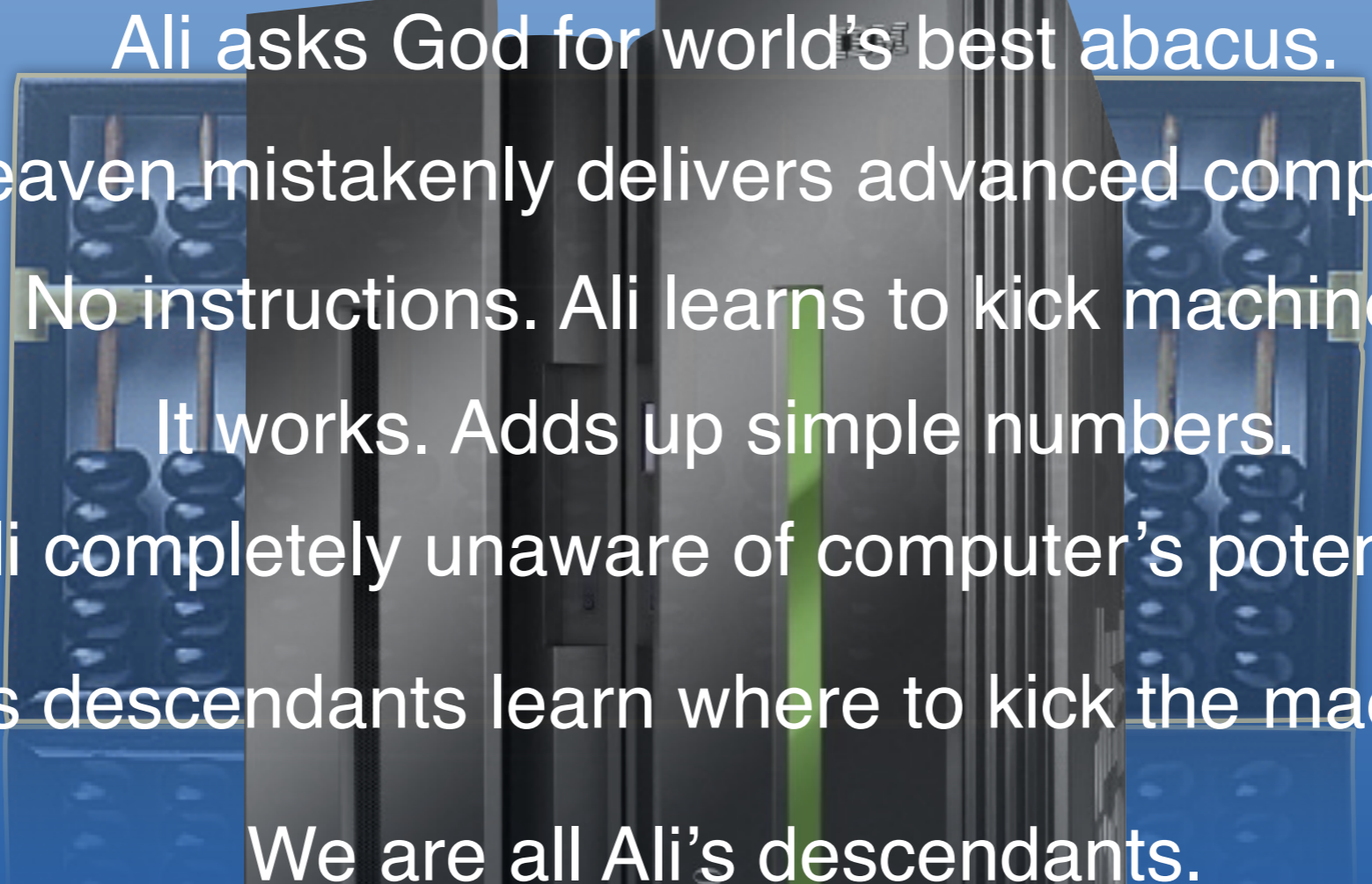
New parts of brain grew over older parts:  
**Neocortex swelling around the limbic system and brainstem.**

*Poor connection between new and old.*

Limbic system interferes with neocortex.  
Even irrational beliefs are *felt* to be true!



# ‘The Unsolicited Gift’



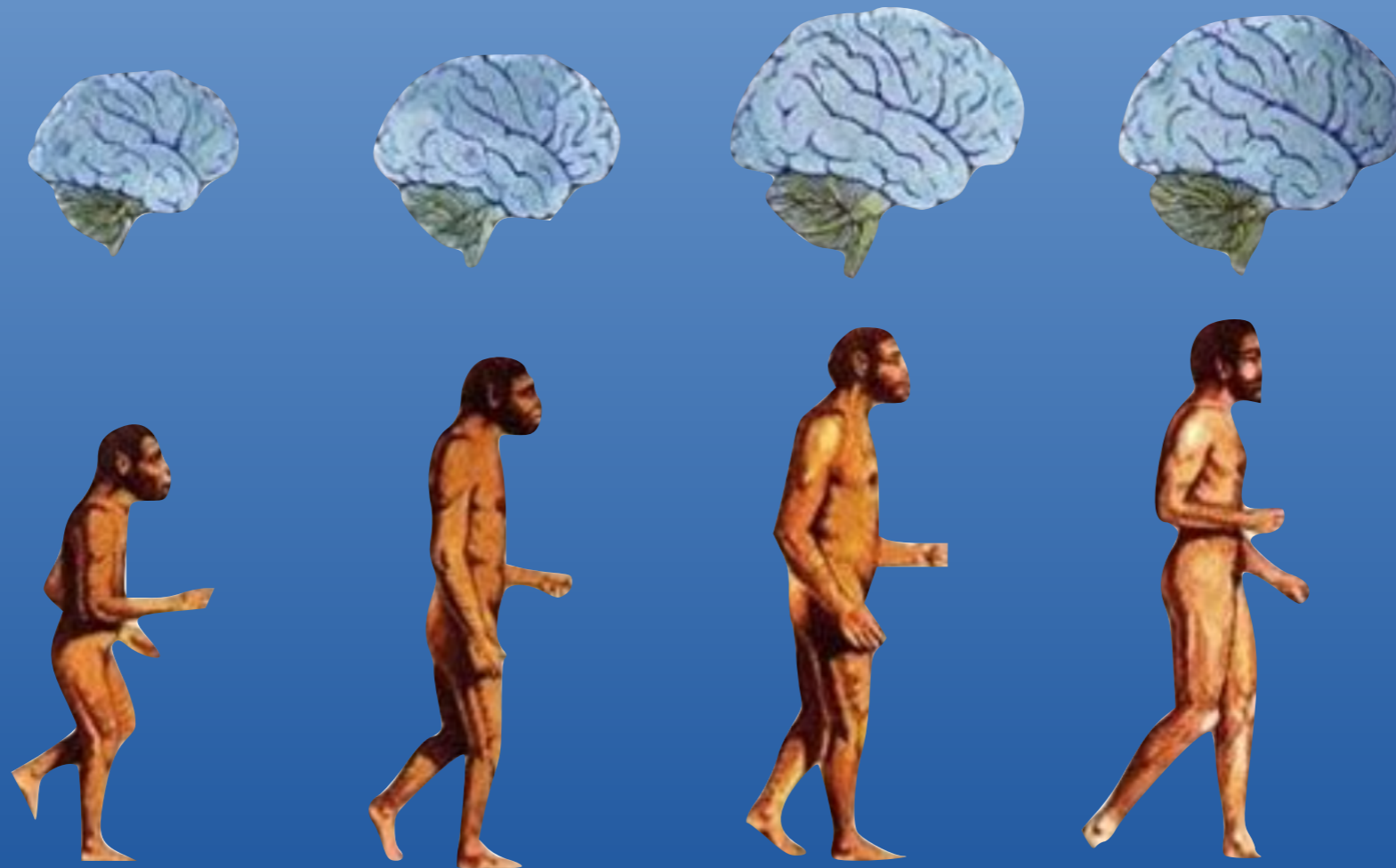
Ali asks God for world's best abacus.  
Heaven mistakenly delivers advanced computer.  
No instructions. Ali learns to kick machine.  
It works. Adds up simple numbers.  
Ali completely unaware of computer's potential.  
Ali's descendants learn where to kick the machine.  
We are all Ali's descendants.

*‘It is entirely unprecedented that evolution should provide a species with an organ it does not know how to use.’*

—Arthur Koestler

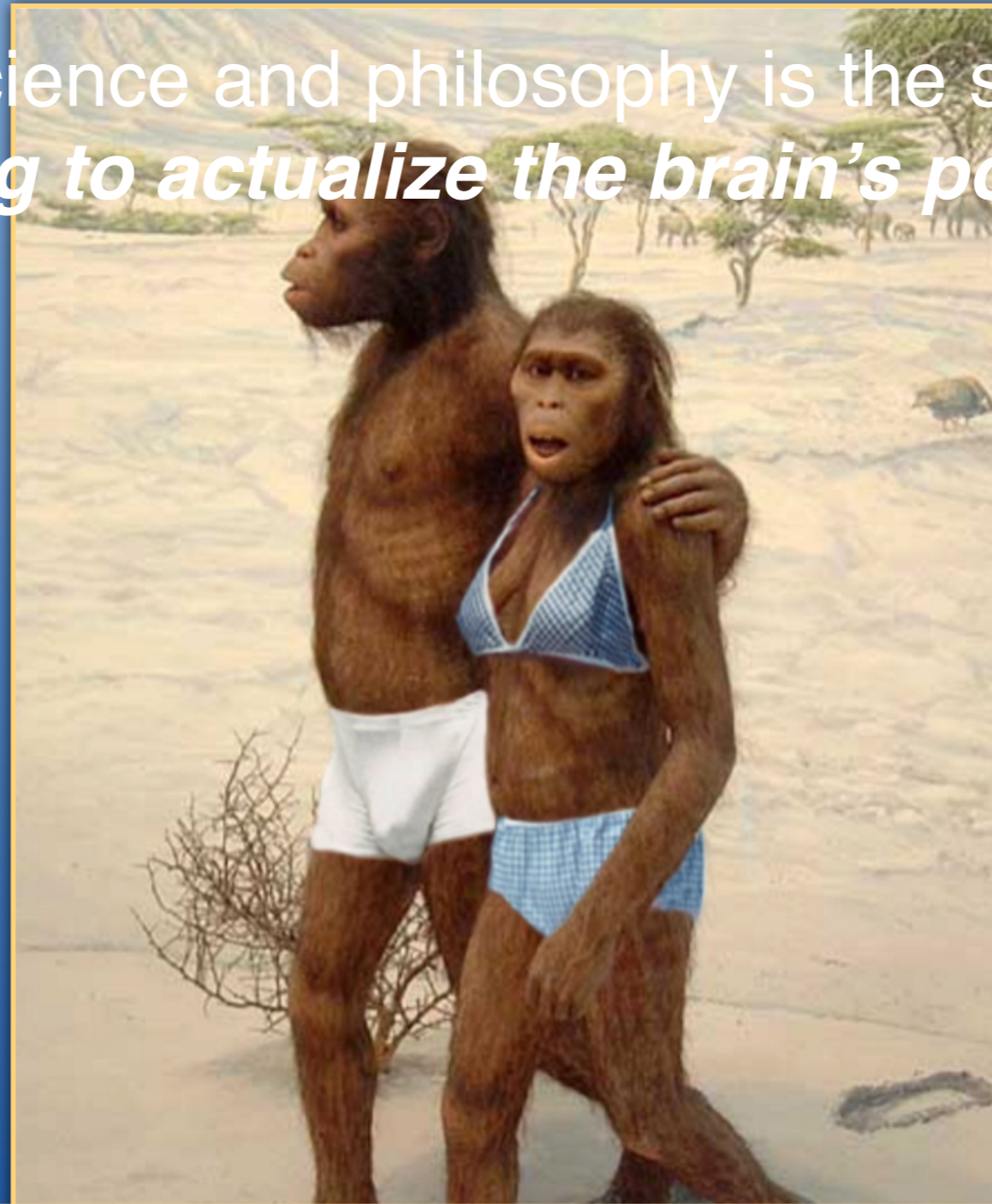
# Koestler Quotes

‘Cro-Magnon, a hundred-thousand years ago,  
had essentially same brain we do.’



# Koestler Quotes

‘History of science and philosophy is the slow process of *learning to actualize the brain’s potentials.*’



The flaw in our brain circuitry is responsible for humanity’s ‘delusional streak.’

# Koestler's 'Solution'



Suspicious of spiritual practices,  
Koestler suggested a 'chemical fix.'

# Koestler's Blindspot

He didn't consider meditation as a possible solution to human 'schizo-physiology.'

Neuroscience confirms meditation can grow new connections between brain's synapses.

Minds can change brains.

## **Downward Causation**

Changes in consciousness can accelerate growth of new neural connections.

# The Solution

We cannot wait for evolution to solve the human predicament.

Artificial chemicals have dangerous side-effects.

We need to cultivate sustained and widespread psycho-spiritual practices.

# The Solution



Meditate not Medicate