How Your Brain Works

a 200-million-year success story

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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.
Your human cortex learns about survival from experience.
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.

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