

The Evolution of Modern Neuroscience

Outline

1. Mind and Brain or Mind vs. Brain
2. The mind – body problem in philosophy
3. Psychoanalysis vs. Radical behaviorism
4. Define the brain: basic function and high levels of cognition
5. Modern neuroscience is built on three fundamental disciplines in science: Mathematics, Physics and Chemistry
6. The Brain as an Information Processing Machine
7. Complexity of the neural networks in the brain
8. Evolution of Neuroscience: Classical neuroanatomy and neurophysiology
9. Molecular neuroscience
10. Cognitive neuroscience
11. Future of Neuroscience:
Mapping neuronal connectivity at the level of single neuron resolution
Decoding neuronal codes
12. The BRAIN INITIATIVE PROJECT for the next decade