The Biological Bases of Behavior
Chapter 3

Genetics
- DNA
- Chromosomes
- Genes
- Polygenic
- Twins
  - Identical (monozygotic)

The Nervous System
I. Central nervous system
   A. Brain, Spinal cord
II. Peripheral nervous system
   A. Somatic nervous system
      1. Voluntary: Afferent, Efferent
      2. Autonomic: Sympathetic, parasympathetic
Peripheral Nervous System

Somatic: Red
Autonomic: Blue

Phineas Gage
The Neuron

- Soma
- Dendrites
- Axon (Myelin Sheath)
- Synapse
- Terminal Buttons

**Terminal Buttons**

**Myelin Sheath**

**Dendrites**

**Axon**

**Human**

**Elephant**

**Dolphin**

**Gorilla**

**Cat**

**Macaque**

**Mouse**

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**5 cm**
Neural communication

- Resting potential
- Action potential
- All-or-none law
- Refractory period
- Presynaptic neuron $\Rightarrow$ postsynaptic neuron
Neurotransmitters

- Acetylcholine
- Monoamines
- Serotonin
- Norepinephrine
- Dopamine
- Endorphins

Drugs

- Agonist
- Antagonist
- Reuptake inhibitor
- Selective serotonin reuptake inhibitor
Hemispheric Specialization

- Left hemisphere
  - Right side of body
  - Language, verbal skills
  - Math, logic
- Right hemisphere
  - Left side of body
  - Visual and spatial skills