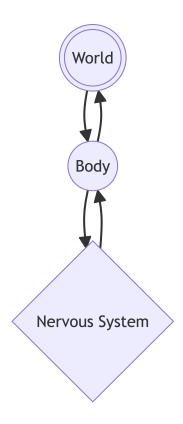
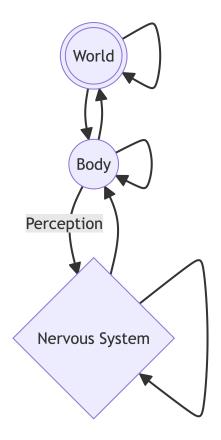
Action

Big picture

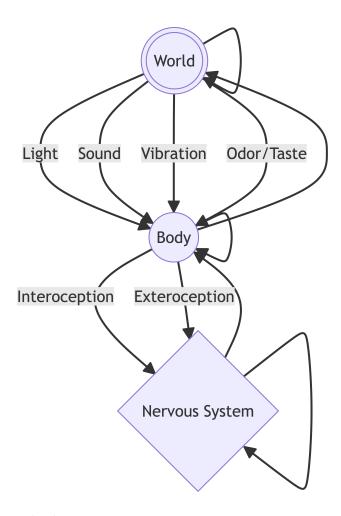
Perception/Cognition/Action Systems



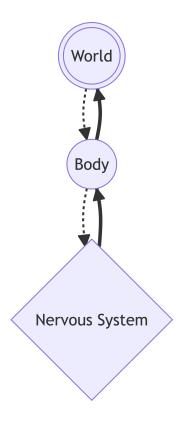
A System of Systems



With memory/momentum/inertia $\,$



Multiple input streams



Highlighting the output stream

Our impact

- What types of outputs are there?
 - Body to world?
 - Nervous system to body?
- How are they produced?
 - By the muscles, glands
 - By the nervous system

$\textbf{Body} \to \textbf{World}$

- Movements
 - Locomotion (move self)
 - Manipulative (move other objects/entities)
 - Communicative

- * Gestures
- * Facial expressions
- Secretions, excretions

Nervous System \rightarrow Body

- Muscle commands
- Autonomic responses
- Endocrine responses

Physical considerations & constraints

- Medium/Environment
 - Terrestrial
 - Arborial
 - Aerial
 - Aquatic
 - Fossorial
- External forces
 - Gravity
 - Friction
 - Drag
- Internal forces & factors
 - Balance/orientation
 - Reaction forces, complex dynamics
 - Energetics
 - Time delays
 - Motor equivalence (Lashley, Bernstein)