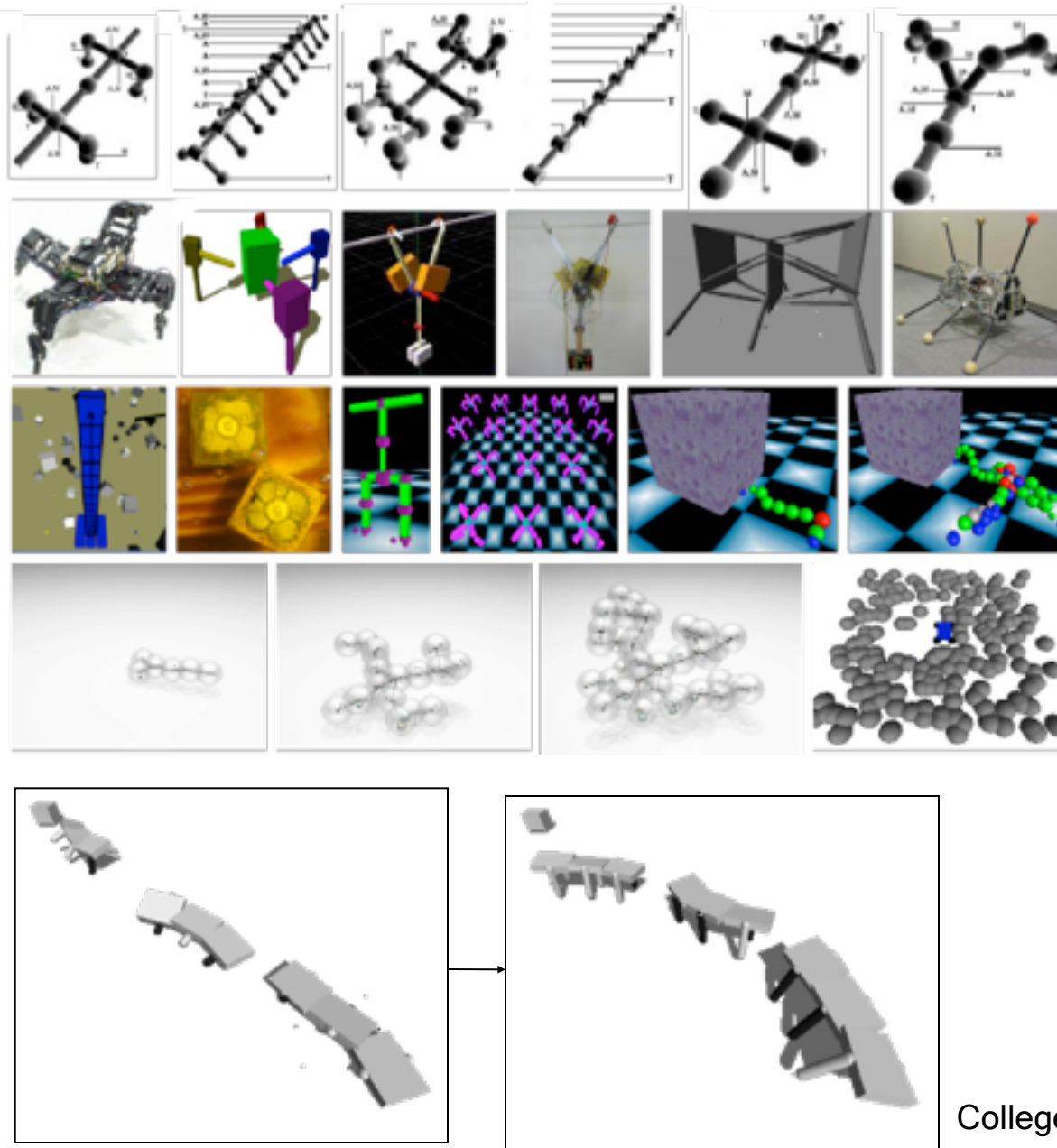


Morphological Change in Machines Accelerates the Evolution of Robust Behavior



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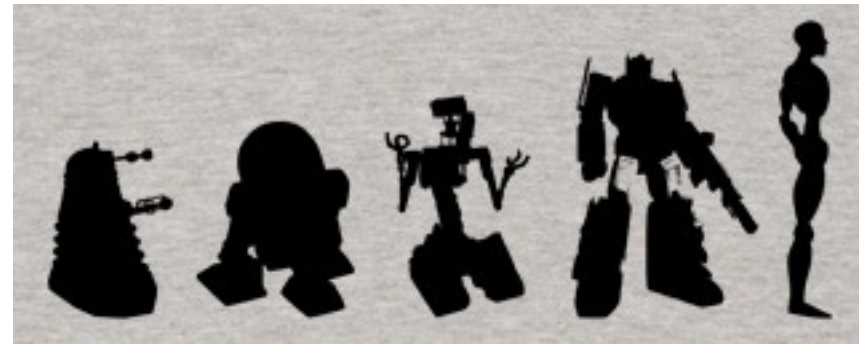
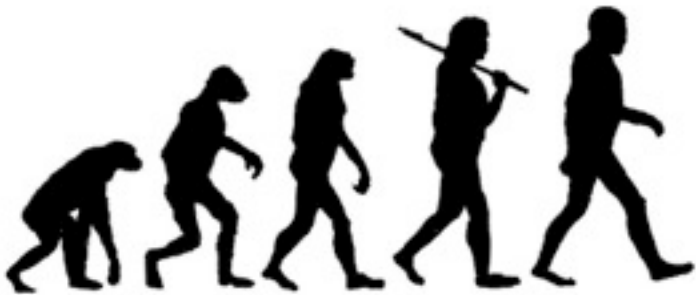
Bio-inspired Robotics: Replicate the products of evolution.

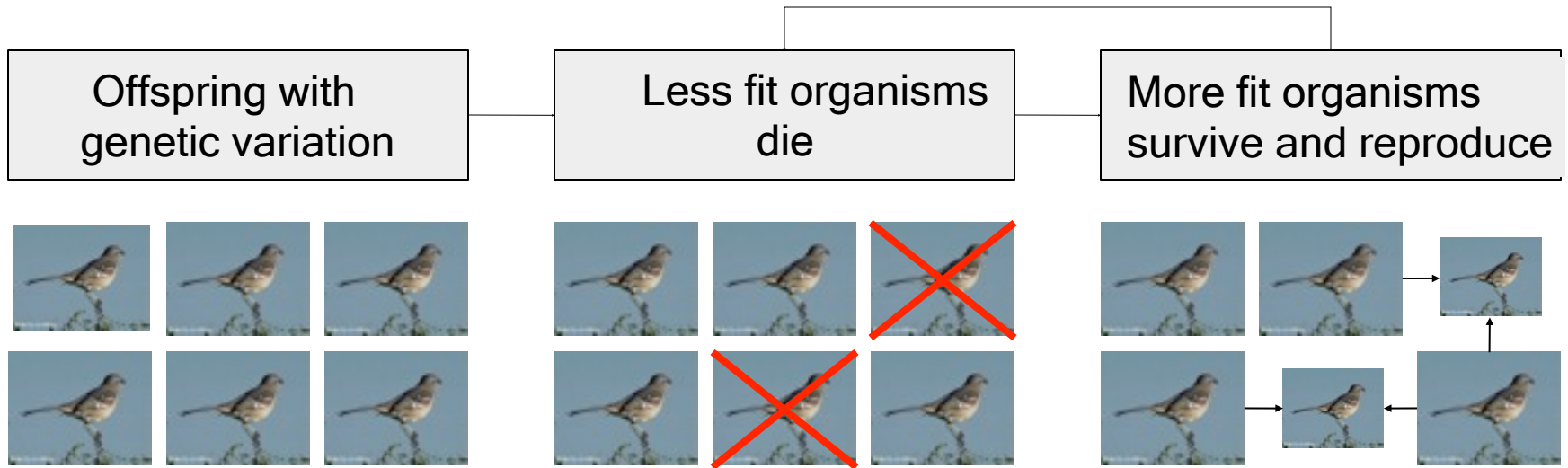


Bio-inspired Robotics: Replicate the products of evolution.

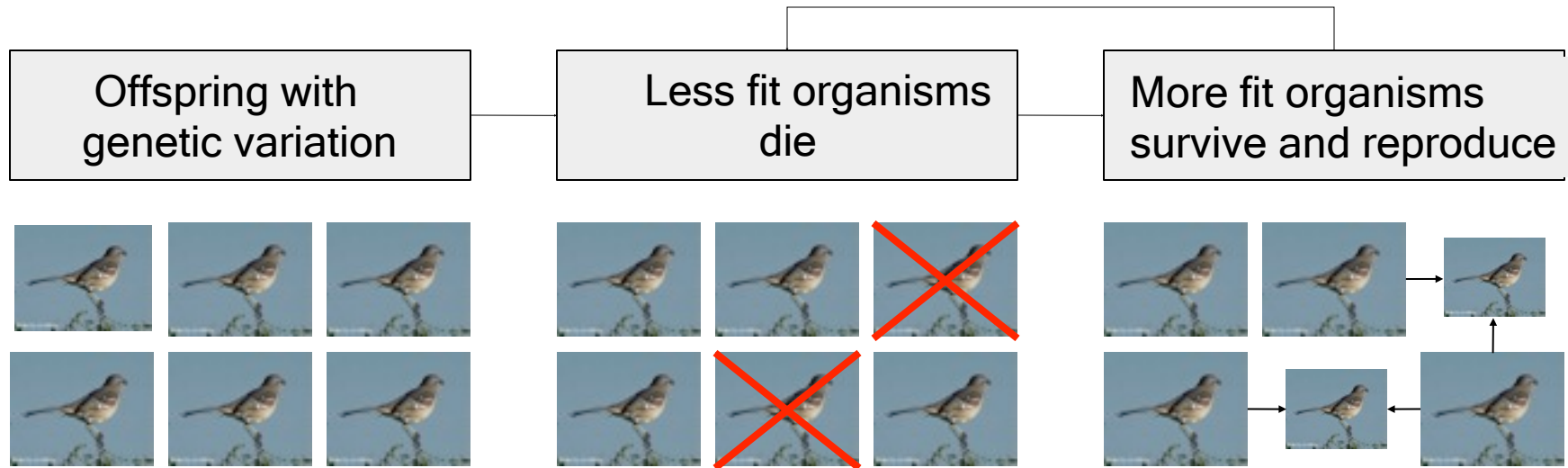


Evolutionary Robotics: Replicate the process of evolution.



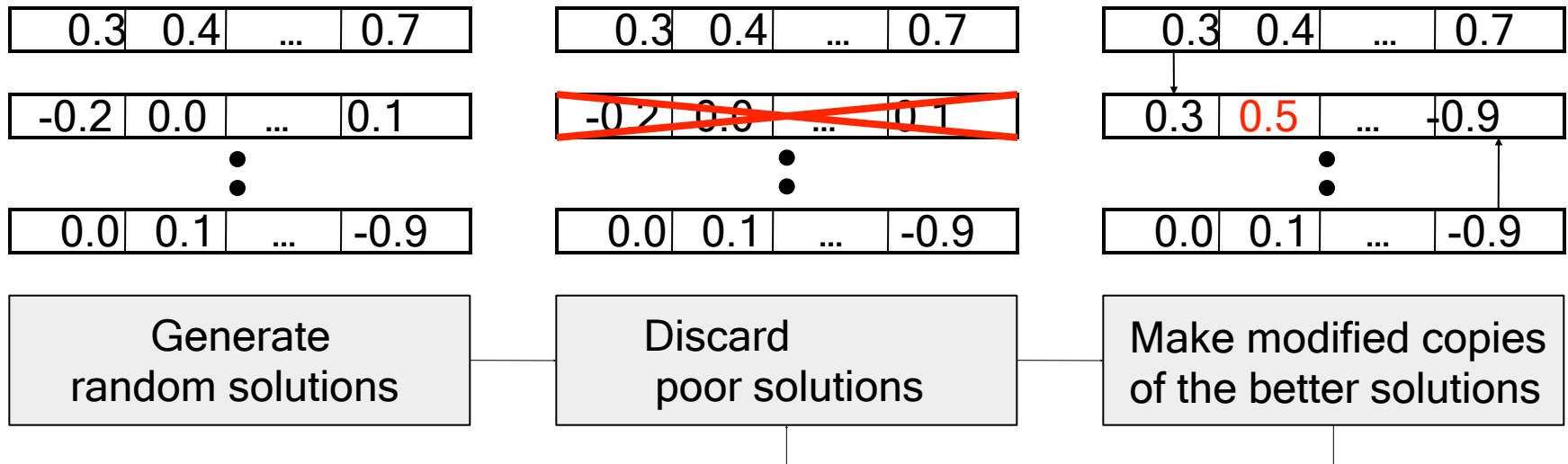


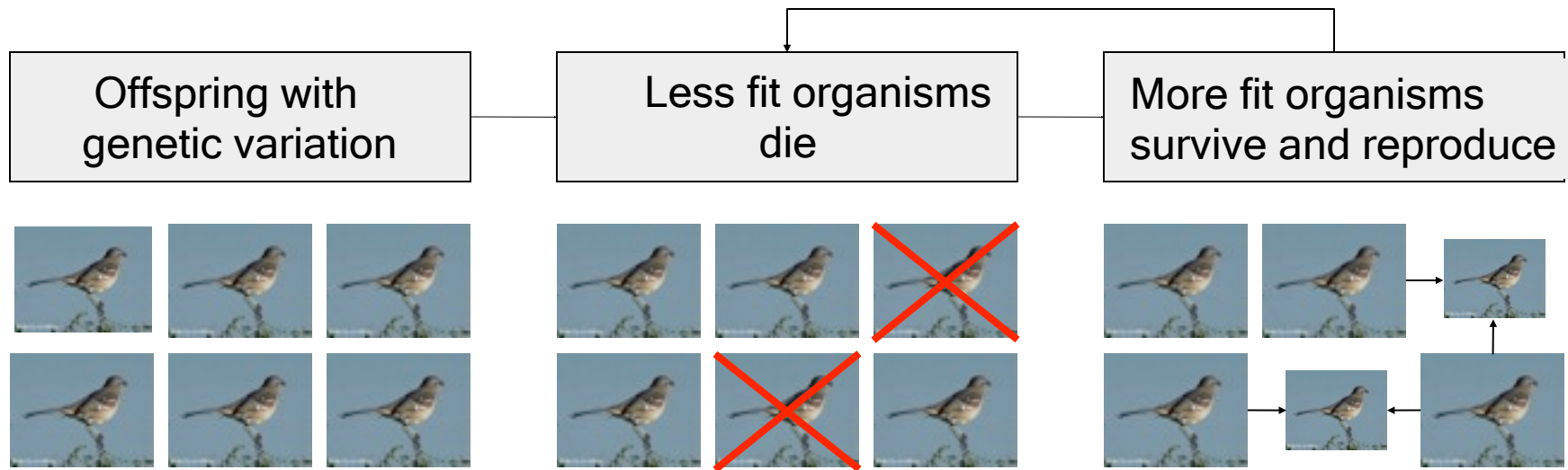
BIOLOGICAL EVOLUTION



BIOLOGICAL EVOLUTION

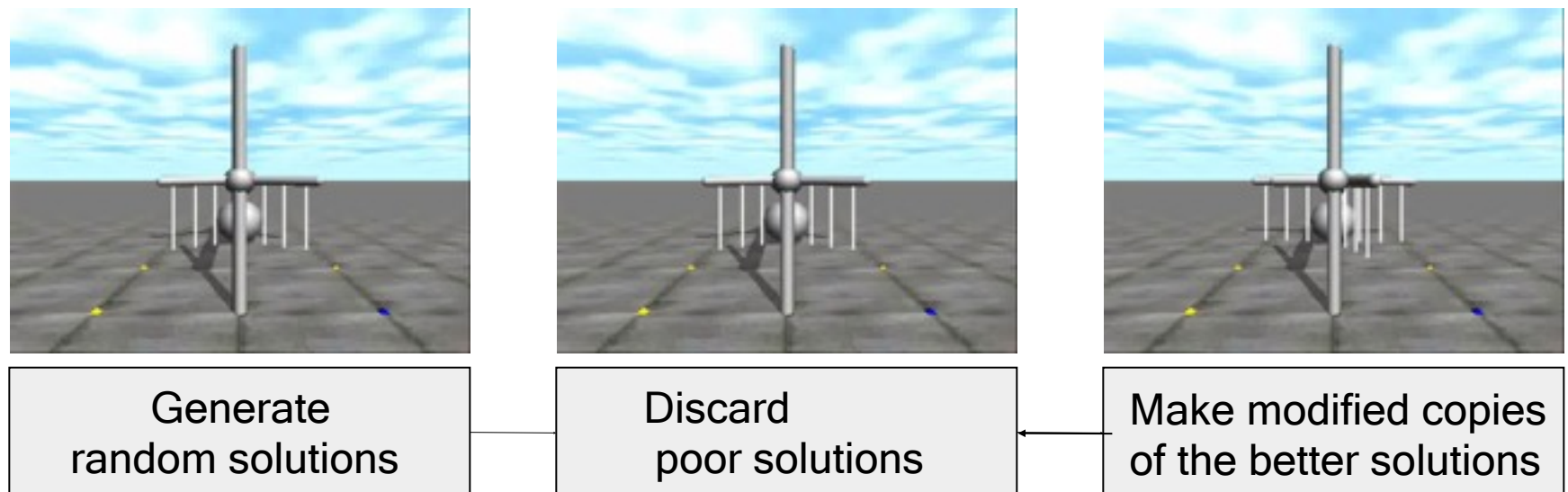
THE GENETIC ALGORITHM



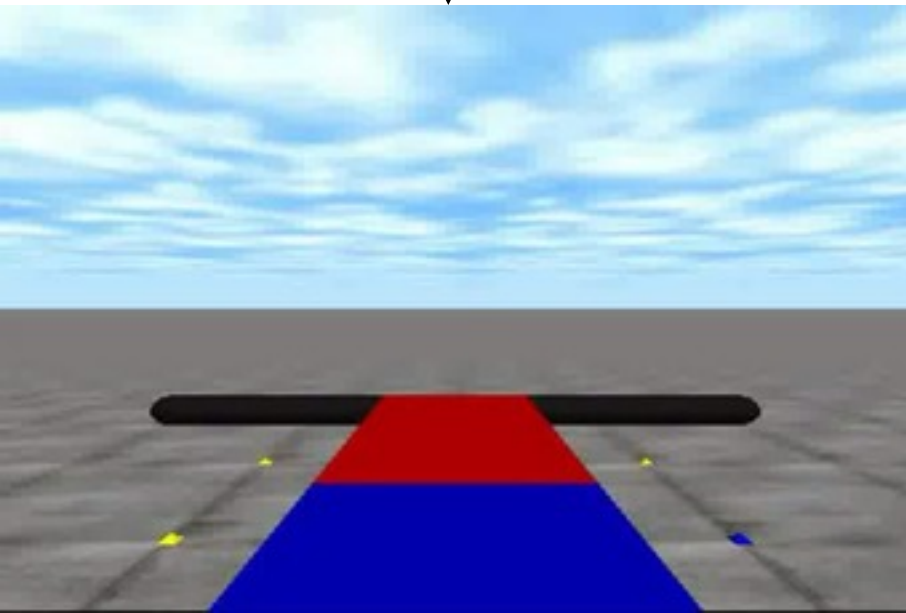
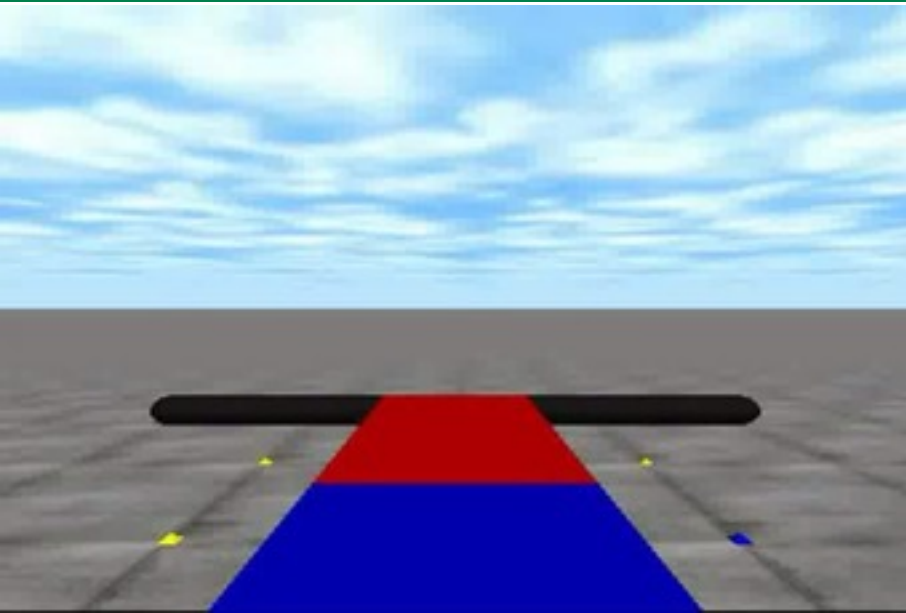


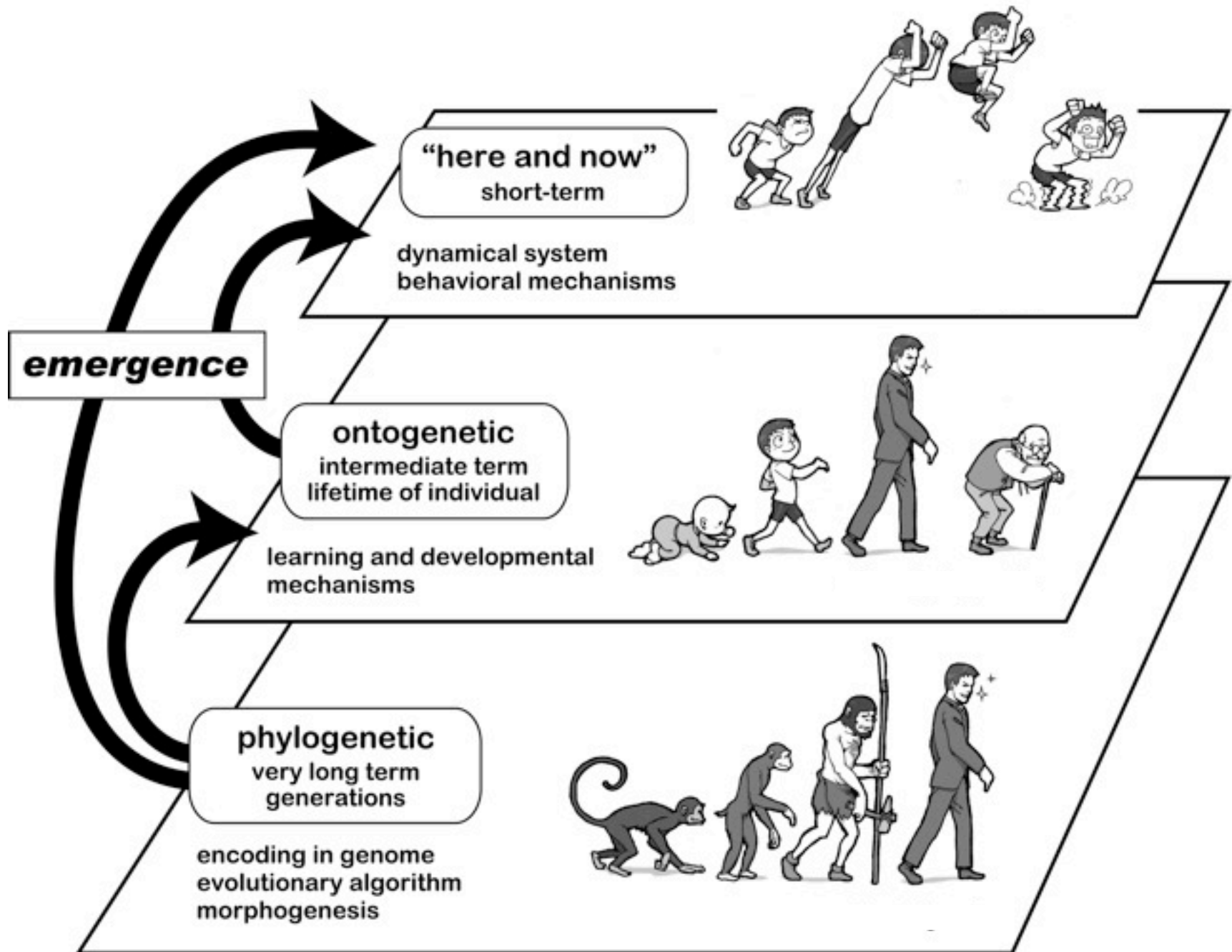
BIOLOGICAL EVOLUTION

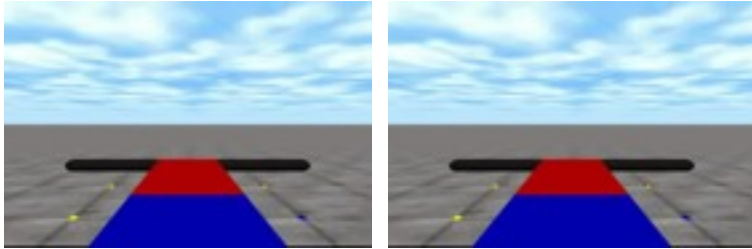
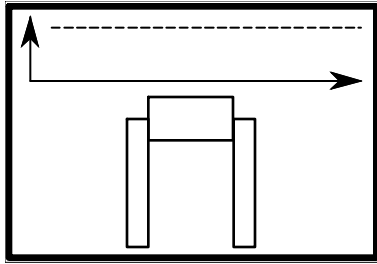
EVOLUTIONARY ROBOTICS



How an evolutionary approach to robotics provides an engineering benefit

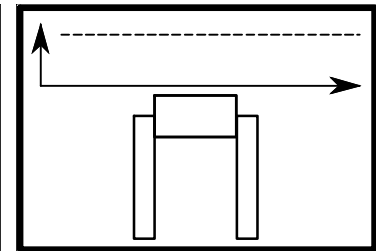
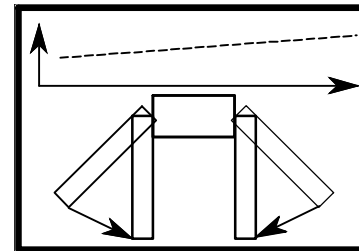
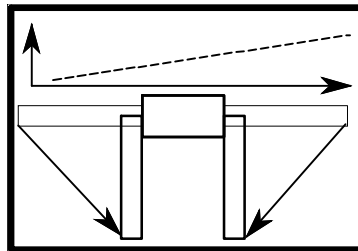
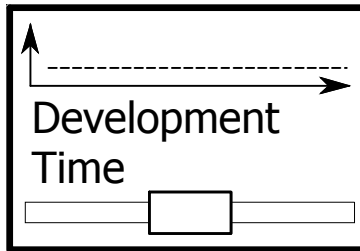
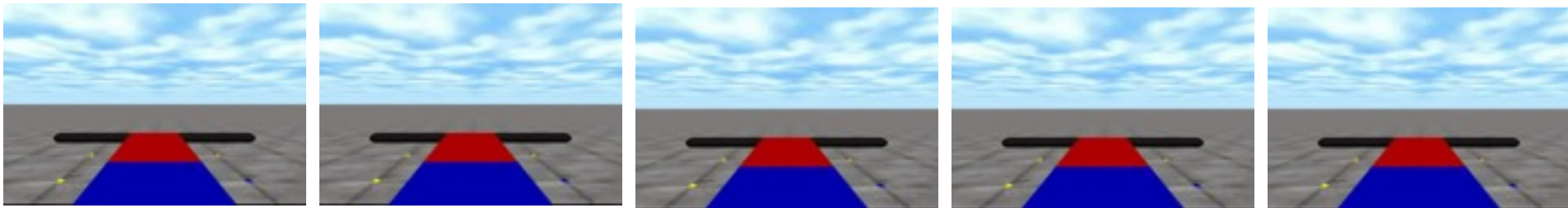






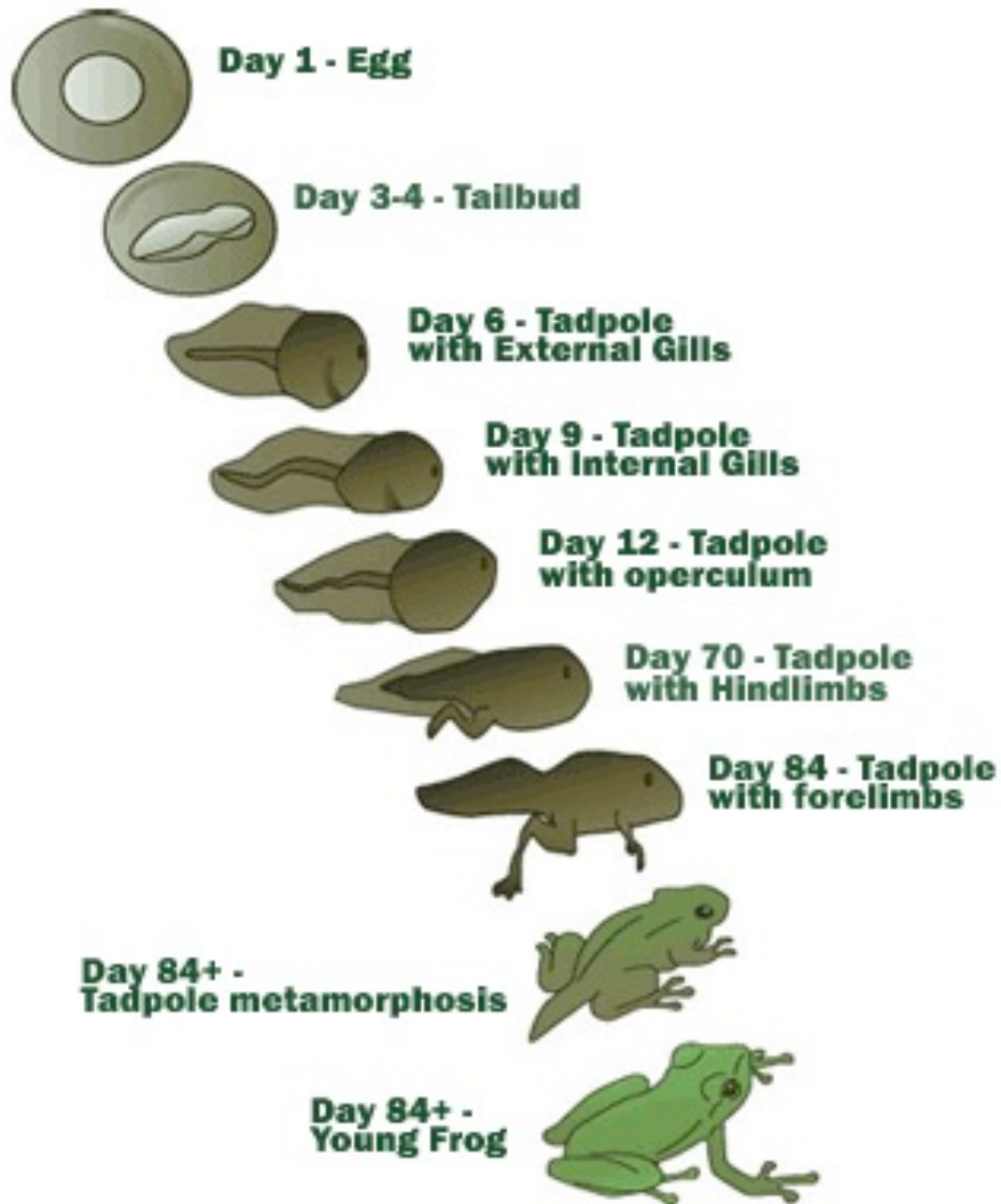
No Morphological Scaffolding

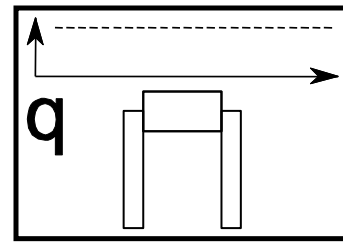
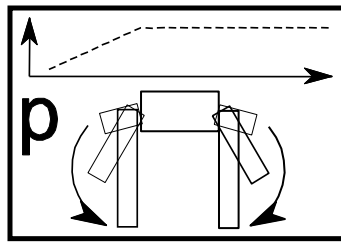
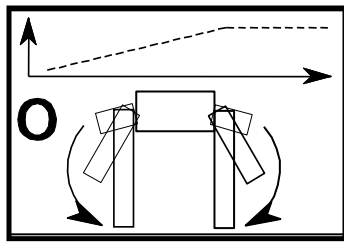
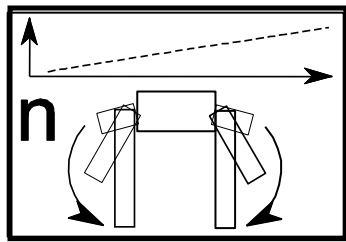
Morphological Scaffolding

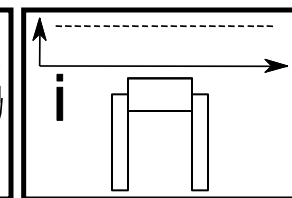
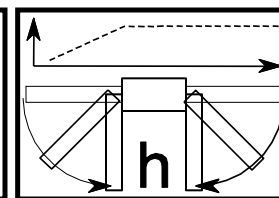
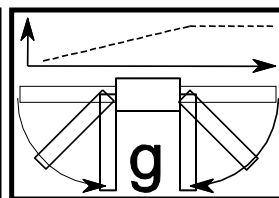
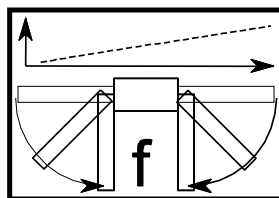
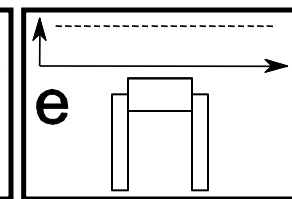
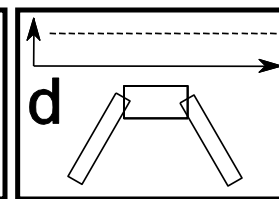
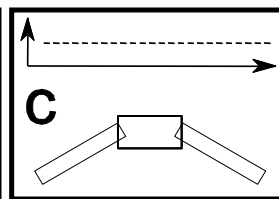
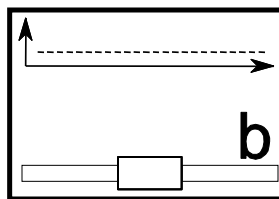
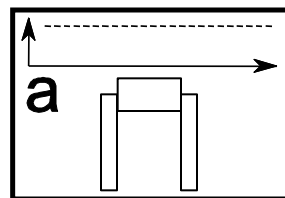
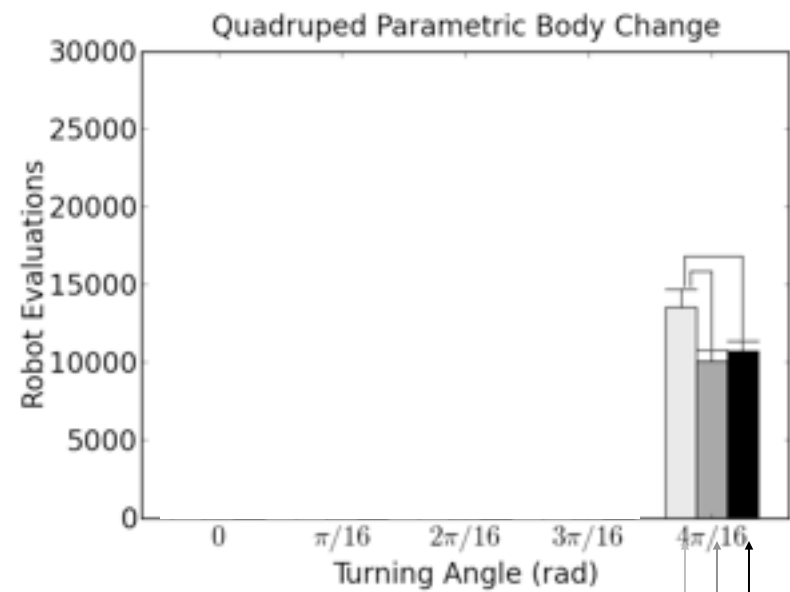


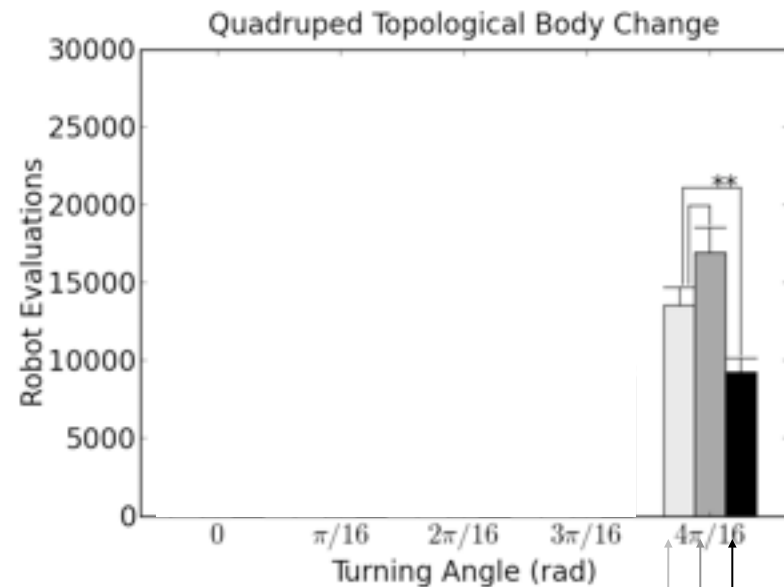
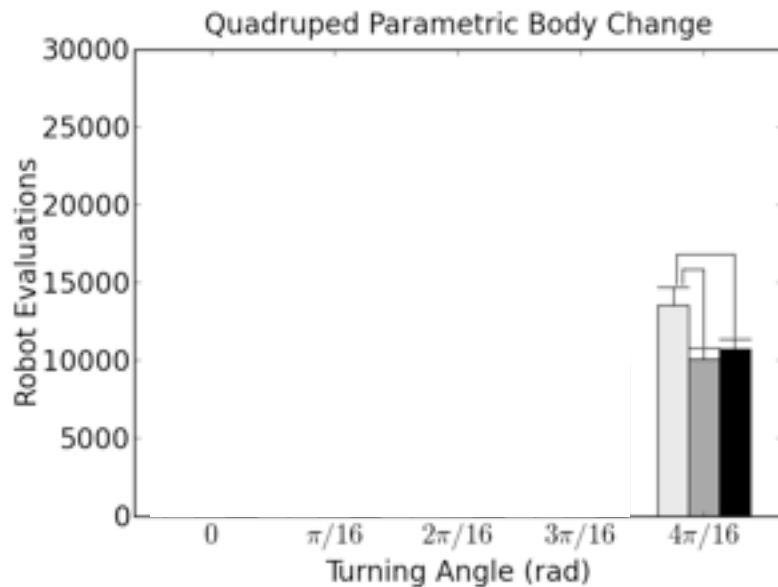
Evolutionary Time



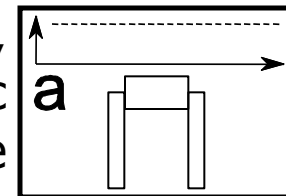




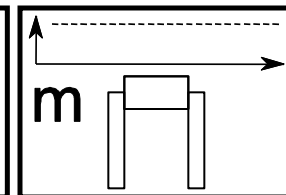
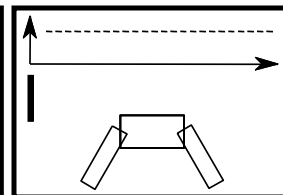
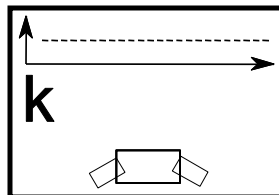
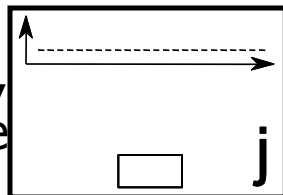




No phylogenetic,
ontogenetic
Physiological change



Phylogenetic,
Topological change



Phylogenetic,
Ontogenetic,
Topological change

