

## 6.894 Legged Locomotion in Robots and Animals

Handout No. 04

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### Problem Set 2

#### Problem 1

Passive Dynamic Control is a method of putting the “competence” or “intelligence” into the mechanism rather than into the brain or computer. McGeer’s walker and Playter’s layout doll are examples which use Passive Dynamic Control to perform complex tasks without any feedback control.

Describe other examples from nature or engineering in which the competence or intelligence for a task is (possibly) located outside of the brain or computer. How about examples in which it is (possibly) found in the environment or mechanism-environment interactions.

#### Problem 2

Robots are typically stereotyped as being slow moving, jerky, “non-biological” looking devices. Explain this stereotype from an engineering-biomechanics point of view. If you wish, include how this stereotype comes about due to the difference in goals, design specs, materials, design and control methods, etc. that nature and man have to work with.