Reading Assignment 6

"Automatic Programming of Behavior-Based Robots using Reinforcement Learning" by *Mahadevan and Connell*

Due: ***Wednesday, March 10th, 1999***

The following questions are intended to stimulate your understanding of the assigned reading material. Many of them have no "right" and "wrong" answers.

1. In the experiments with OBELIX, its range of motion is limited to one of five possibilities, nd the sonar sensors are discretized into one of two ranges. Why do you think the researchers did this? Do you think that it's reasonable to do this?

2. A simulator was use to develop and test the learning algorithms for OBELIX. This simulator had some deficiencies (mentioned in the paper). What problems do you think that this would cause (if any) when taking the alfgorithms and using them on a real robot. Can you think of a way to overcome these problems?

3. Reinforcement learning uses a reward function to guide learning. Is desiging this reward function likely to be easier or more difficult than designing code to perform the task to be learned? Why?