## JOHN SULLINS (SONOMA STATE) THE CONSCIENCE OF THE MACHINE

## **TESTING ARTIFICIAL PHRONESIS WITH EXPERIMENTS**

## IN INNER DIALOG AND SOCIAL ROBOTS

As humans begin to work closely with social robots to complete tasks, the design of the technologies used will influence or nudge the outcomes towards various outcomes that may have ethical impacts. In this presentation we will look at how certain experiments at the robotics lab at the University of Palermo and Sonoma State University are helping to determine the best ways to build systems that will help machines and humans make the best ethical choices from those available. We will present the experiments taking place and some of the early results. These experiments utilize the concept of inner speech found in psychology that gives us a model for the inner dialog many of us experience as we accomplish tasks which we can then implement into a social robot. In earlier experiments is has been shown that robot inner dialog has resulted in systems that display more conscious and trustworthy actions as judged by their users. Here we will extend this work towards solving ethical problems and dilemmas that may occur as social robots are used to help in elder care facilities. Giving users access to the inner dialog of the robot helps the users understand the conscience of the machine as it reasons through decisions as well as bringing to

consciousness for the human users that there is an ethical problem that must be dealt with. I will further argue that this inner dialog also plays a role in skilled moral and ethical reasoning or as it is known in philosophy phronesis.

