IS THINKING COMPUTABLE

SE367 Project

John Searle

- Are brains just computer programs?
- "Causal powers" cause minds
- Systems with minds have "equivalent causal powers"
- Hence, programs do not have "equivalent causal powers"
- No program can produce a mind
- **So our brain is not solely a computer program**

The Churchlands

- Laws of physics govern the brain

- Intelligent behaviour arises due of collective effects

- Brain can be simulated by artificial neural networks

Turing Test

- What is Turing test?

- Turing test can be passed by symbol manipulation

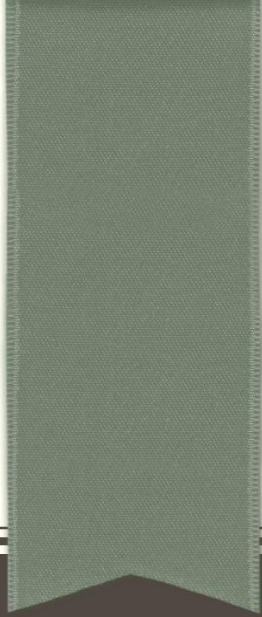- Penrose, Churchland, Searle, Denning agree

Roger Penrose

- Thinking = creation of new thoughts

- Machine can only does logical deduction

- Denies that algorithms must be the essence of thought.

- Mental processes inherently more powerful than computational processes

- Hence, computers cannot possess consciousness

Maturana and Varela

- Consciousness = the way we observe things

- Levels of consciousness

- Humans' aim is to understand the world

- Machines' aim is to obey the user

THANK YOU