

# Computational Logic

## L2.x.1 Exercises

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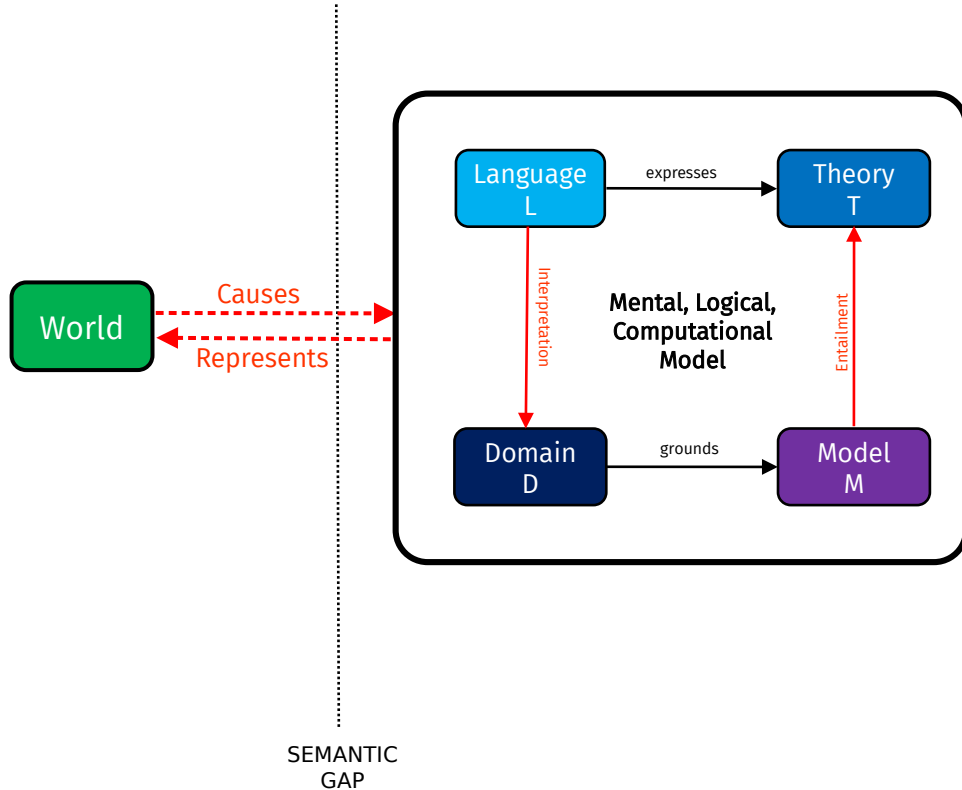
# Deep Blue

- Chess-playing computer developed by IBM
- First computer to win against a world champion (Garry Kasparov, Feb 1996)
- Based of GOF AI (Good old fashioned AI)



Adam Nadel/AP Images

# Mental, ..., Logical Models

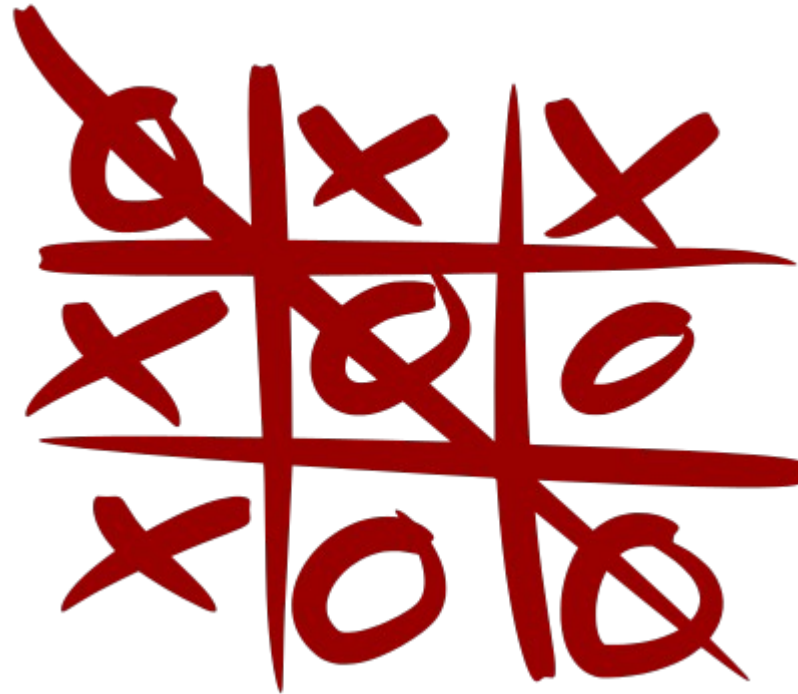


- **Language: syntax** (symbols and rules used to describe the world) and **semantics** (interpretation function)
- **Theory:** sentences describing what is true of the world
- **Domain:** sets of elements representing atomic elements to describe what we see in the world
- **Model:** sets of elements representing sets of facts that we have seen in the world

# Modeling Chess



# Modeling ~~Chess~~ ... Tic-tac-toe!



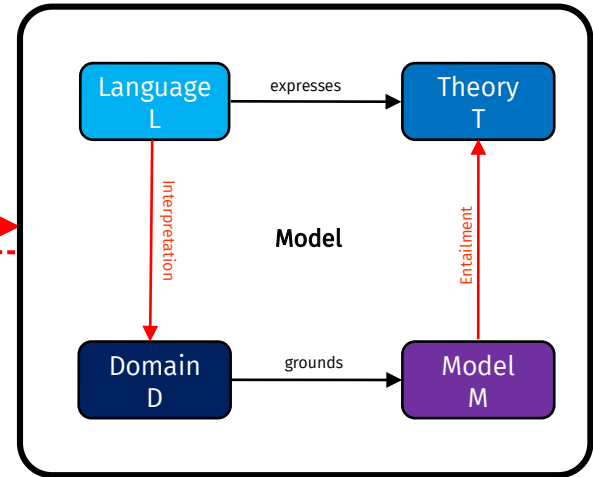
<https://en.wikipedia.org/wiki/Tic-tac-toe>

# Modeling Tic-tac-toe: hints

- How can you represent the board and pieces on the board?
- What is the domain?
- How does the language look like? Try first with a language with symbols only; then with symbols and rules.
- What is the interpretation function?
- How does a model in which none wins look like?
- What is the theory in which crosses win? What is the theory in which naughts win?



Causes  
Represents



SEMANTIC  
GAP



Good luck!

Questions:

<https://github.com/avillafiorita/cl-2020>

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