Modeling

Mental model

Mental Model

1. Knowledge semantics

2. Language semantics

3. Mental model

1.2.3-Mental model

Lecture index

Mental model (notion)

Principle 1 (Mental model)   We think of a **mental model** as constituted of four components:

- **Language**: the space of all the possible theories;
- **Domain**: the space of all the possible cases;
- **Model**: a set of facts;
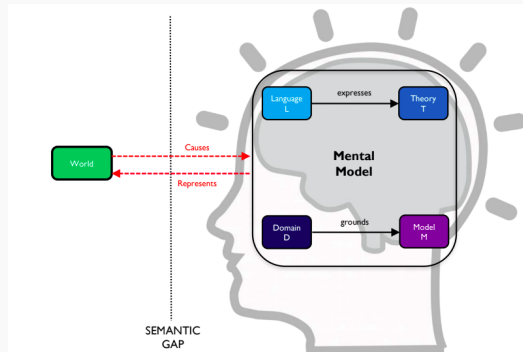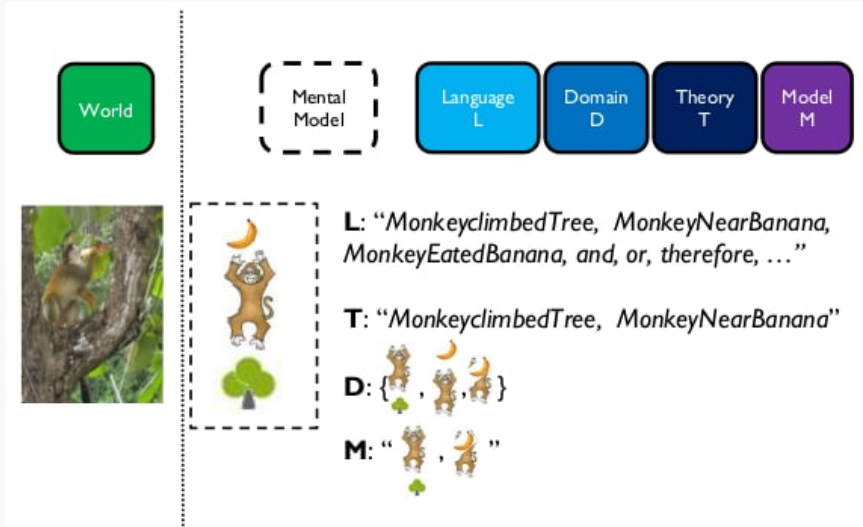- **Theory**: a set of sentences describing the facts in the model.

Figure 1: The Mental model

Mental model (example)

The semantic Gap (notion)

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- The semantic gap is the difference between the model and the world itself. This difference must be thought of as everything of the world which is not represented in model itself
- The semantic gap is caused by the fact that our sensing capabilities, and therefore the domain, as well as our linguistic capabilities (those that we use to describe what we perceive), i.e., the language cannot capture the full complexity of the world.

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