

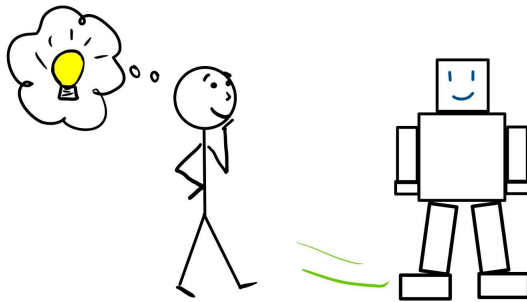
# Warning: This Robot is Not What it Seems!

## Exploring Expectation Discrepancy Resulting from Robot Design

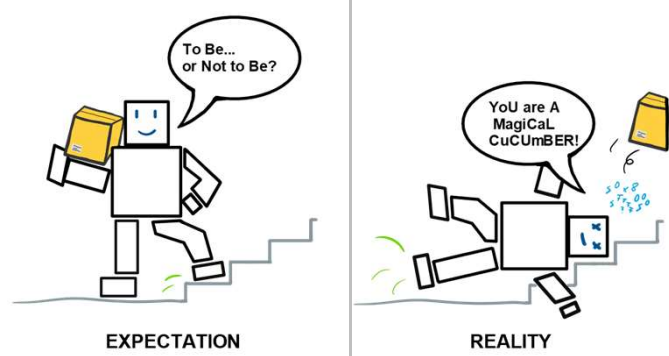
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### What do people expect from a robot?

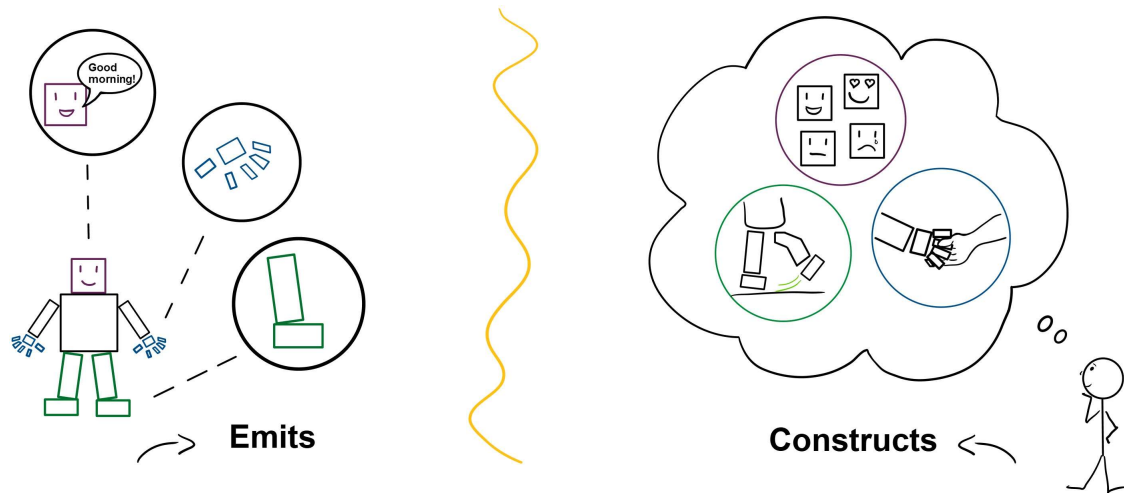
Person constructs expectations based on observation.



Constructed expectations may not match real capabilities.



### How can we describe this expectation discrepancy?



#### Emission of Potential Capability

**Life-like** – Inspired by life. *Static* human, animal or insect-like features. *Dynamic* interactions (e.g. waving, telling a joke).

**Consequential** - Specific elements relating to functional requirements (e.g. visible sensors, large wheels, stable form).

**Exposition** – How the robot is introduced, including proposed usage, tasks, media influence, specific keywords (remote controlled, autonomous, etc.). Robot also can self-introduce.

#### Future research questions:

How can we avoid issues of disappointment, misplaced trust or negative affects on robot acceptance?

How can we leverage social interaction techniques while controlling the resulting expectations?

#### Construction of Expectations

**Physical Ability** – Expected movement ability, noises, sensing, advanced tasks like writing with a pen, robustness / fragility.

**Computational Ability** – Can save and retrieve data, perform calculations, logical decisions, using the internet.

**Non-Social Cognition** – E.g. an autonomously acting robot, may be able to learn and engage with its environment.

**Emotional System** – Synthetic emotions and ability to express them (smile, frown,...).

**Social Interaction Ability** – Talking, sign language, gestures, eye gaze in social situations.

**Pseudo-Consciousness** – Impressions of the robot having own intentions, goals, self-awareness, creativity.

→ Build useful tools and measurements to further explore and analyze expectation discrepancy