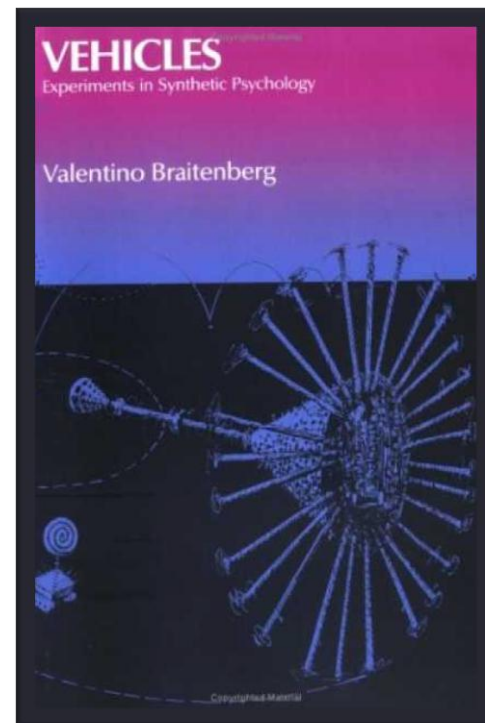


BRAITENBERG VEHICLES

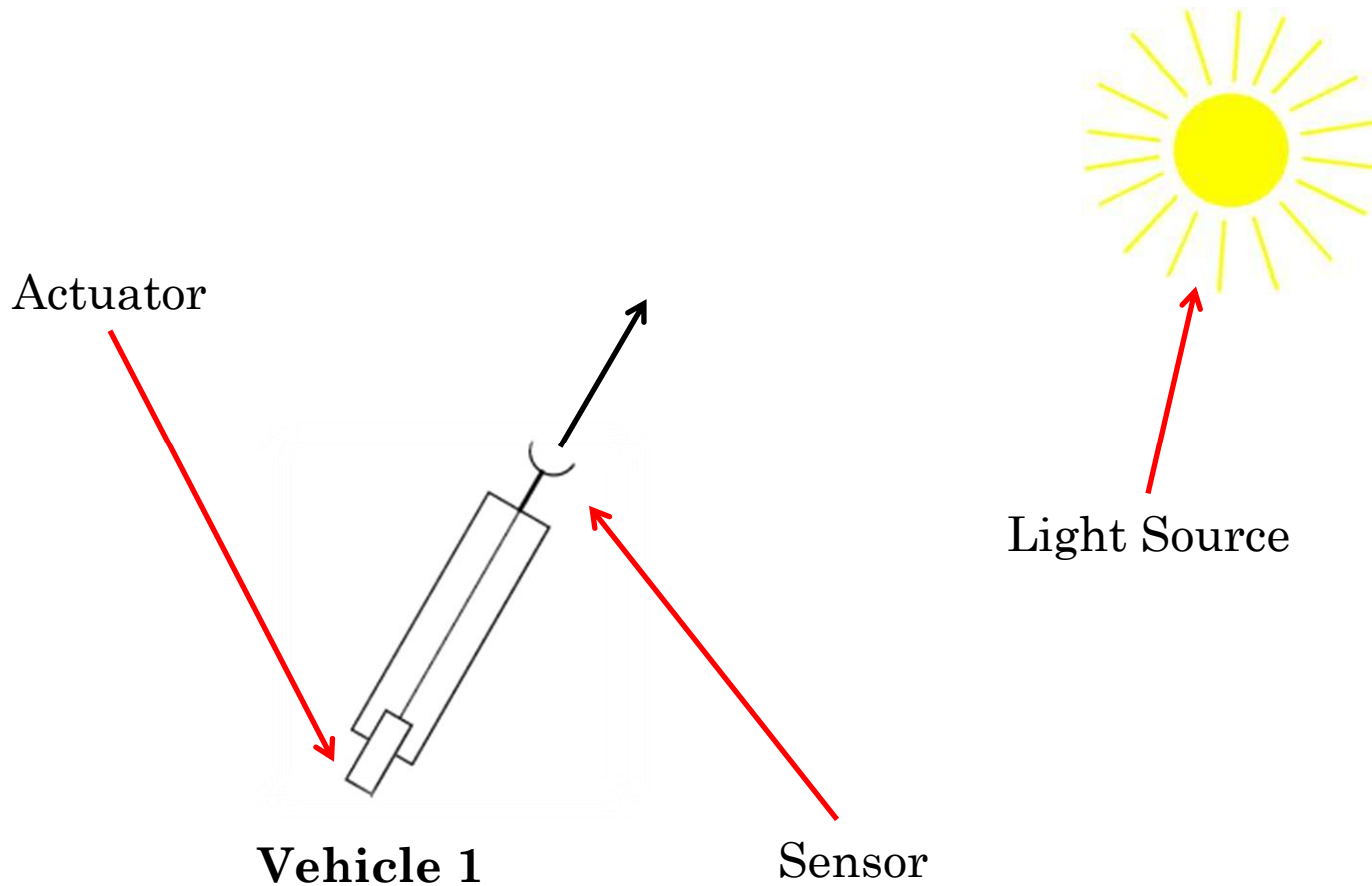
Lab 3

VALENTINO BRAITENBERG

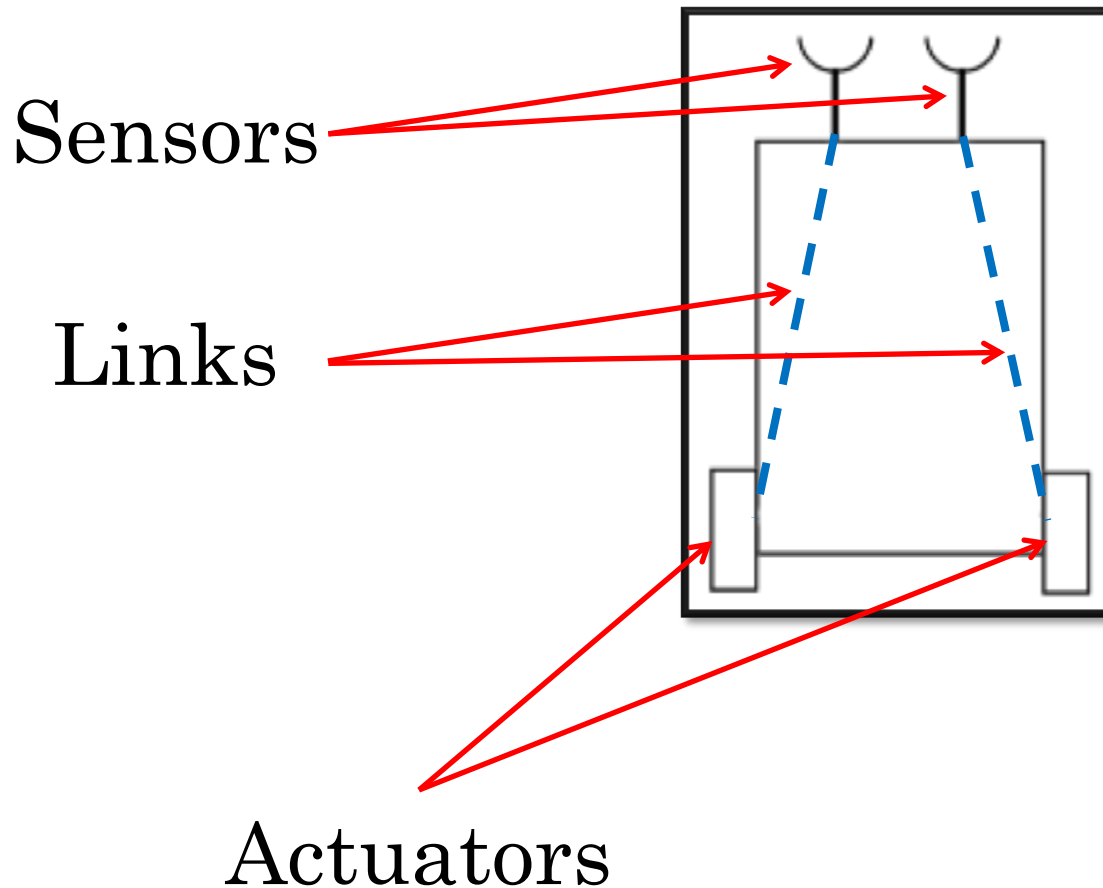
- Valentino Braitenberg is an Italian-Austrian **neuroscientist** and **cyberneticist**.
- Director at the Max Planck Institute for Biological Cybernetics:
 - Tübingen, Germany;
- **Vehicles:**
Experiments in Synthetic Psychology



THE SIMPLEST VEHICLE MODEL



A VEHICLE WITH 2 SENSORS AND 2 ACTUATORS



A BRAITENBERG VEHICLES SIMULATOR

- A Java Applet implementing a [Braitenberg vehicle simulator](#)

The screenshot displays the user interface of a Braitenberg vehicle simulator. At the top left, a diagram shows a vehicle with two wheels and four sensors. The sensors are connected to the wheels in a cross pattern. The diagram includes numerical values: 0.0 for the left sensor to left wheel, 0.0 for the right sensor to right wheel, and 0.0 for the left sensor to right wheel. Below the diagram is a control panel with a 'Vehicle' dropdown set to '0', a 'Mouse attribute' section with 'lamp' selected and 'vehicle' unselected, and 'Start/Stop' and 'Trail' buttons. To the right of the control panel is a status panel with six rows of colored bars and numerical values: 'Left sensor to left wheel: 0.0' (red), 'Right sensor to right wheel: 0.0' (green), 'Left sensor to right wheel: 0.0' (blue), 'Right sensor to left wheel: 0.0' (magenta), 'Default speed left wheel: 0.0' (grey), and 'Default speed right wheel: 0.0' (grey). The main simulation area is a large white rectangle containing a small icon of the vehicle and a yellow dot.

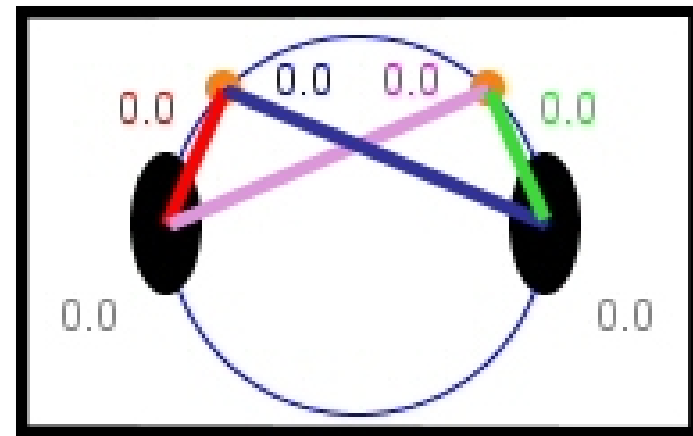
OUR VEHICLE'S MODEL

○ Two Connection Types:

- Ipsi-lateral (right);
- Contra-lateral (crossed).

○ Sensor Weights:

- Excitatory: +
- Inhibitory: -
- Disconnected: **0**



REFERENCES

- Braitenberg, V. (1984). *Vehicles: Experiments in synthetic psychology*. Cambridge, MA: MIT Press
- [Braitnberg Vehicles](#) from Wikipedia;
- Braitenberg Vehicle simulator:
 - Link to the [Java Applet](#);
 - Applet [Commands](#);
 - Vehicle's [Model Description](#).