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## *Sound & Environment: Possible working fields*



- *Toni roof garden/treenet station*
- *treelab*
- *Pfynwald longterm observation (excursion 22.10.2020)*
- *Glattpark*



FOREST

PONDSIDE

# *Ecosystem Ecology*

AIR TEMPERATURE: 25°C

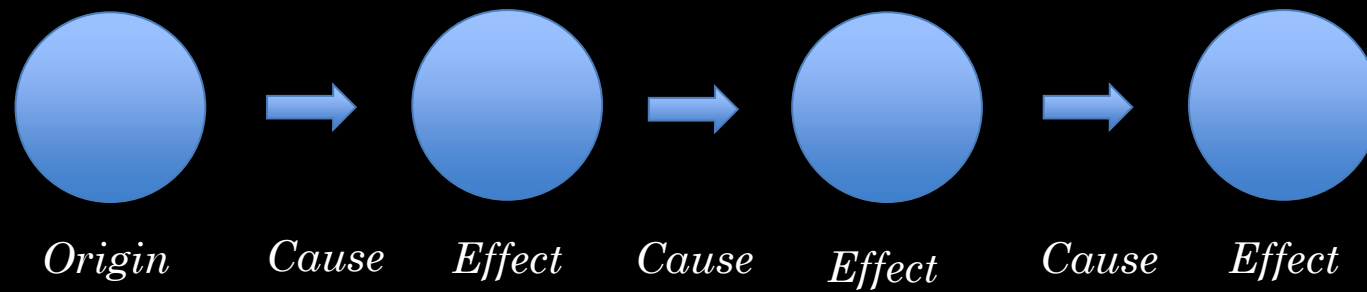
RELATIVE AIR HUMIDITY: 40%

PRECIPITATION: 3 mm

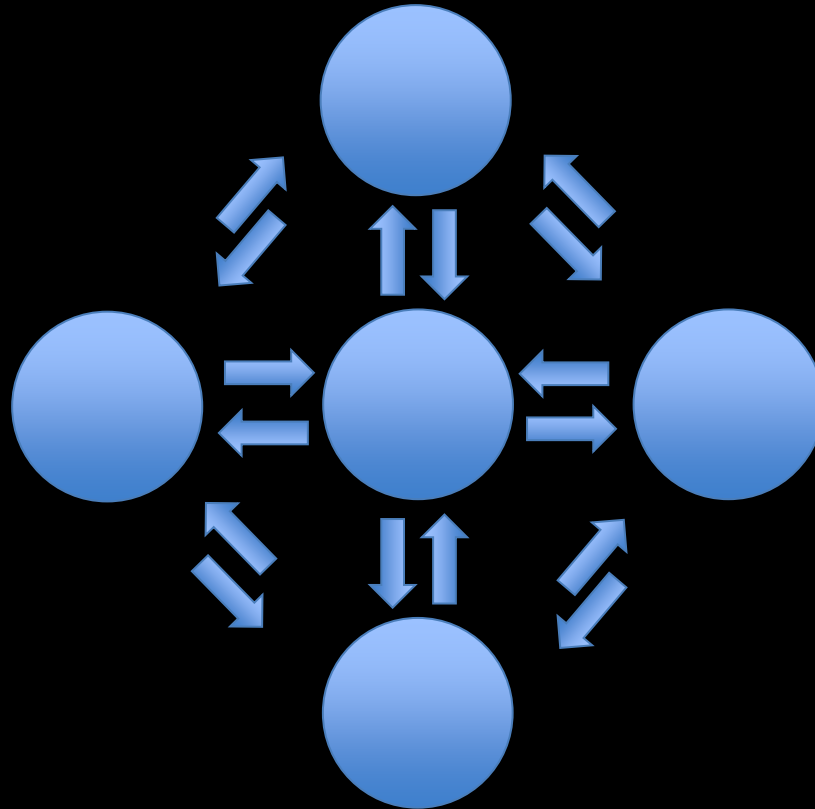
WIND SPEED: 45 km/h

WIND DIRECTION: 240°

*The linear universe: Cartesian worldview*

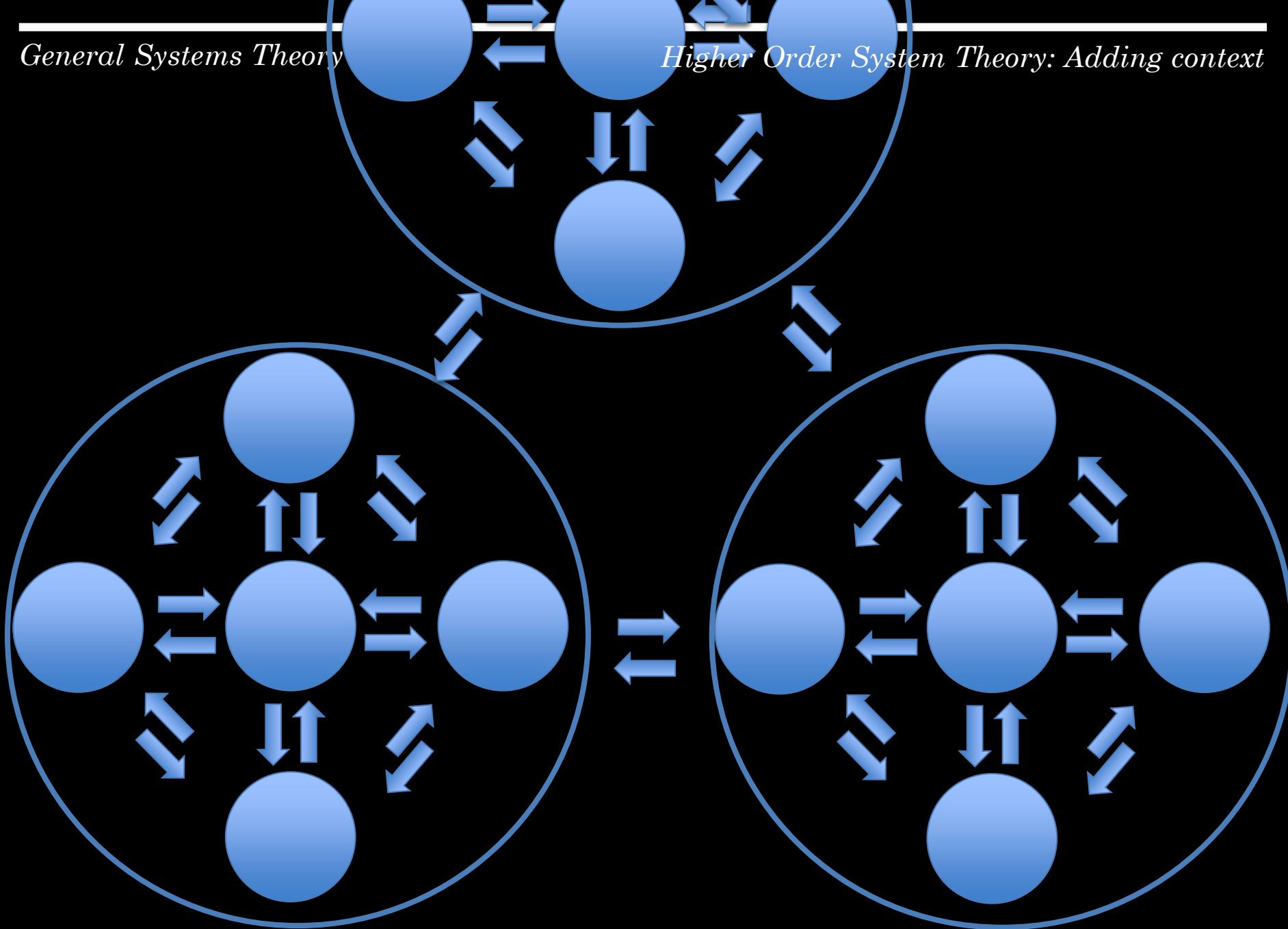


*Cybernetics/system theory: Adding complexity*



*General Systems Theory*

*Higher Order System Theory: Adding context*





## General Systems Theory: Terminology

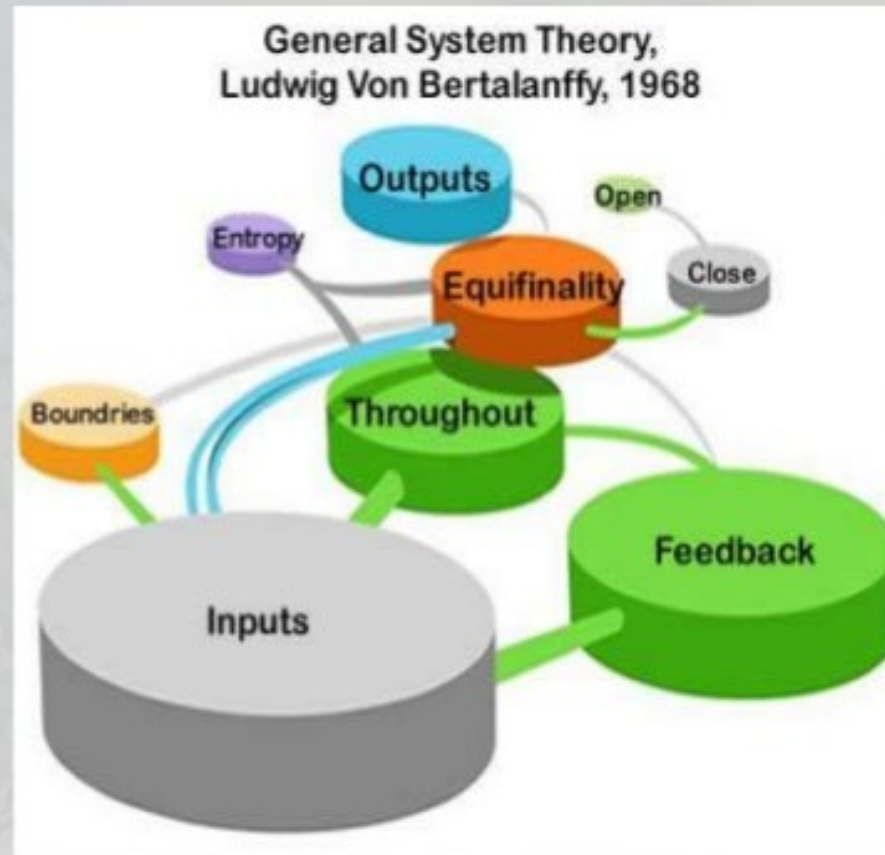
**Input** is the term denoting either an entrance or changes which are inserted into a system and which activate/modify a process

**Output** is the term denoting either an exit or changes which exit a system

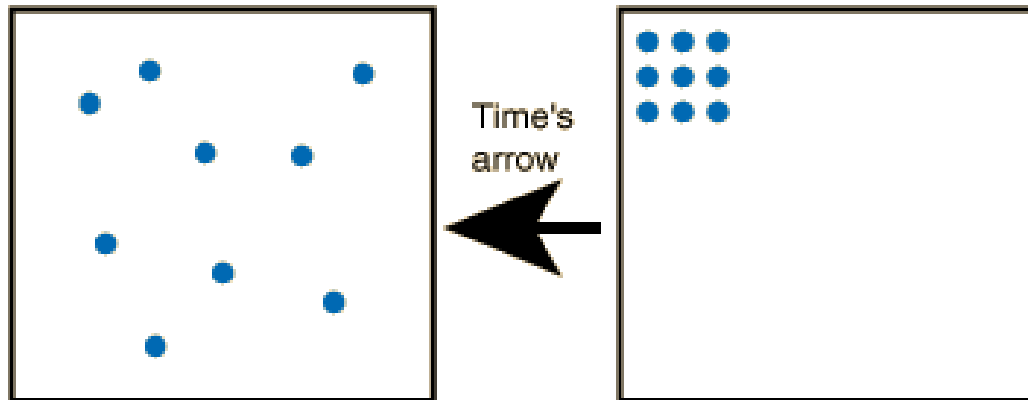
**PROCESS:** Perform a series of mechanical or chemical operations on (something) in order to change or preserve it

**Feedback-** Information about reactions to a product, a person's performance of a task, etc., used as a basis for improvement.

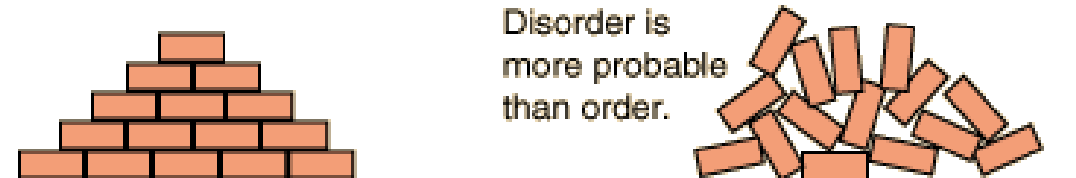
**Throughput:** Work done on those resources used to produce a product.

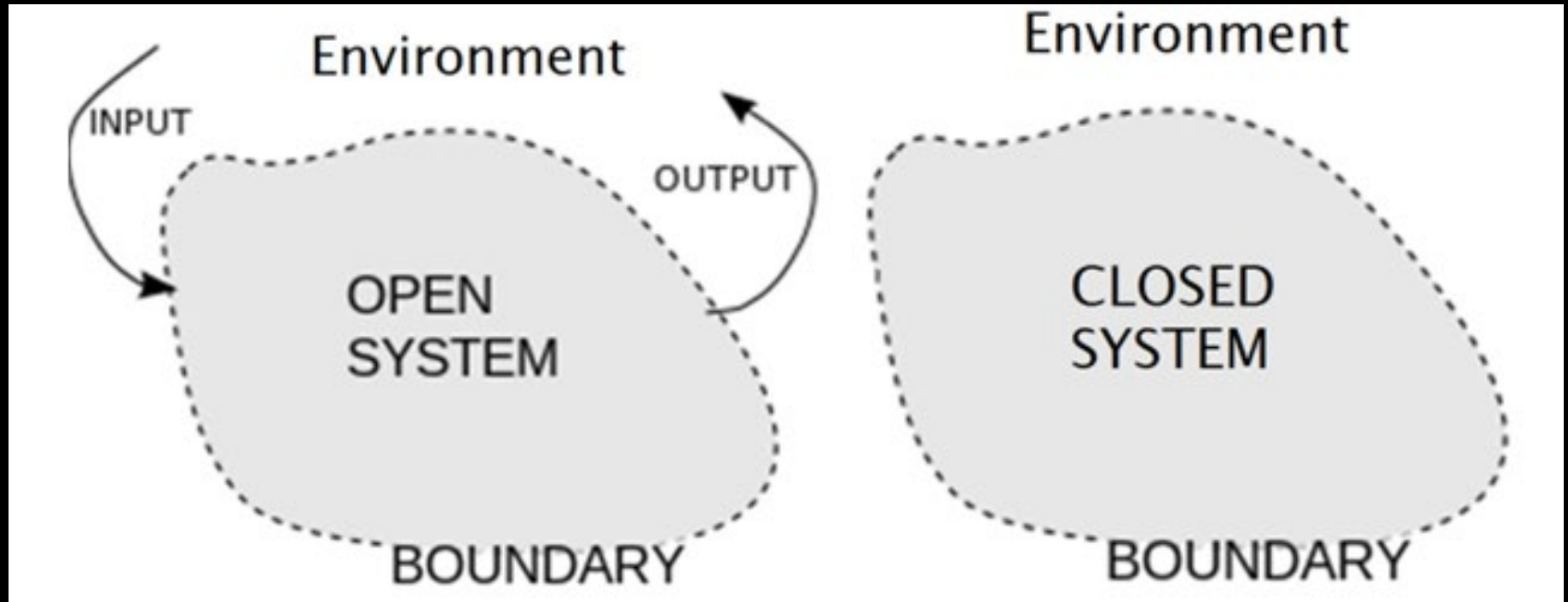


If the particles represent gas molecules at normal temperatures inside a closed container, which of the illustrated configurations came first?



If you tossed bricks off a truck, which kind of pile of bricks would you more likely produce?



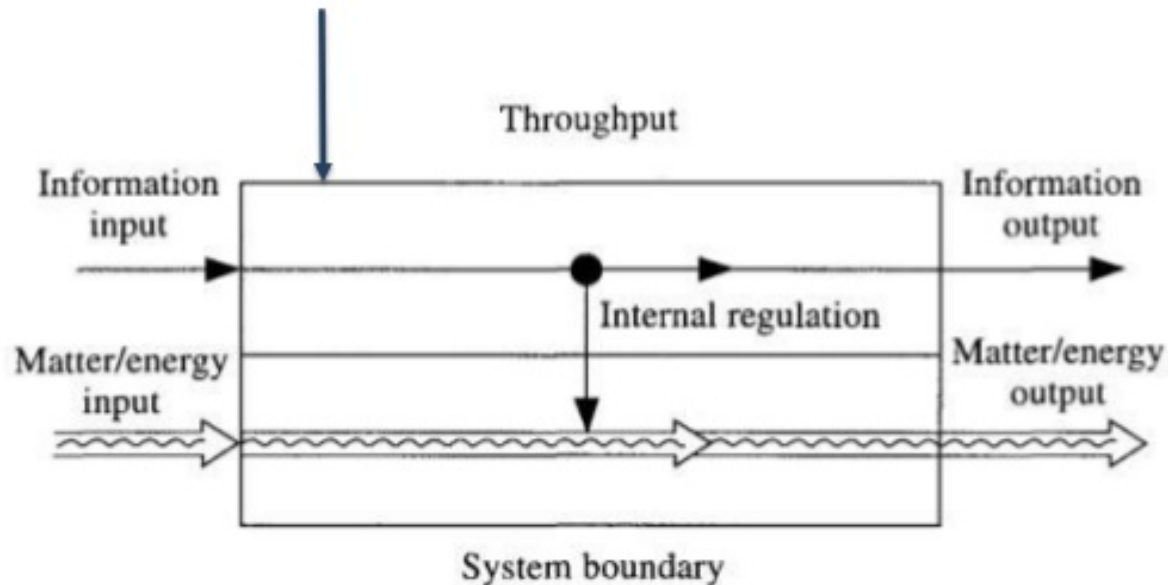


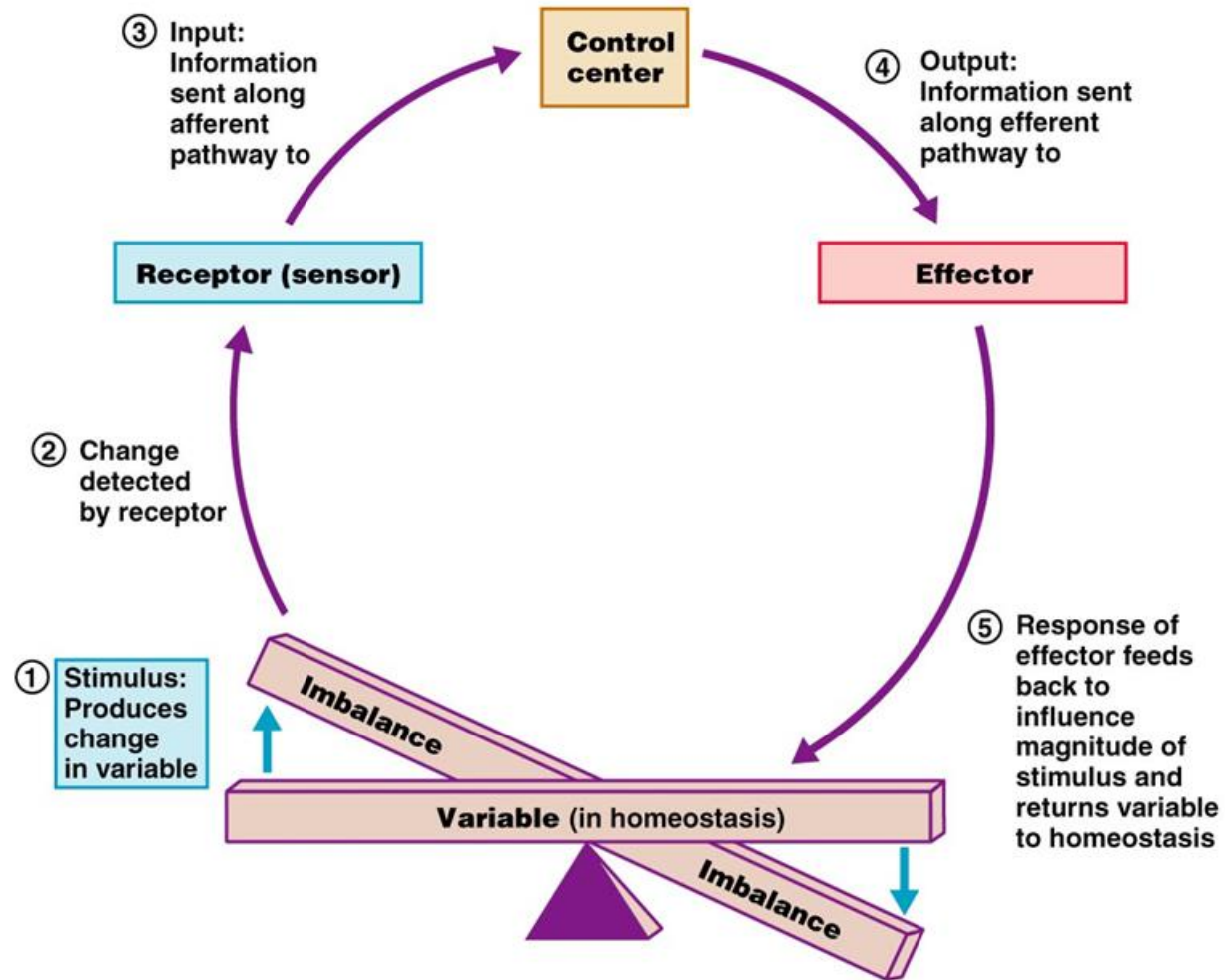


# Properties of Living Systems

General Living Systems (GLS) theory – *James G. Miller (1978, 1991)*

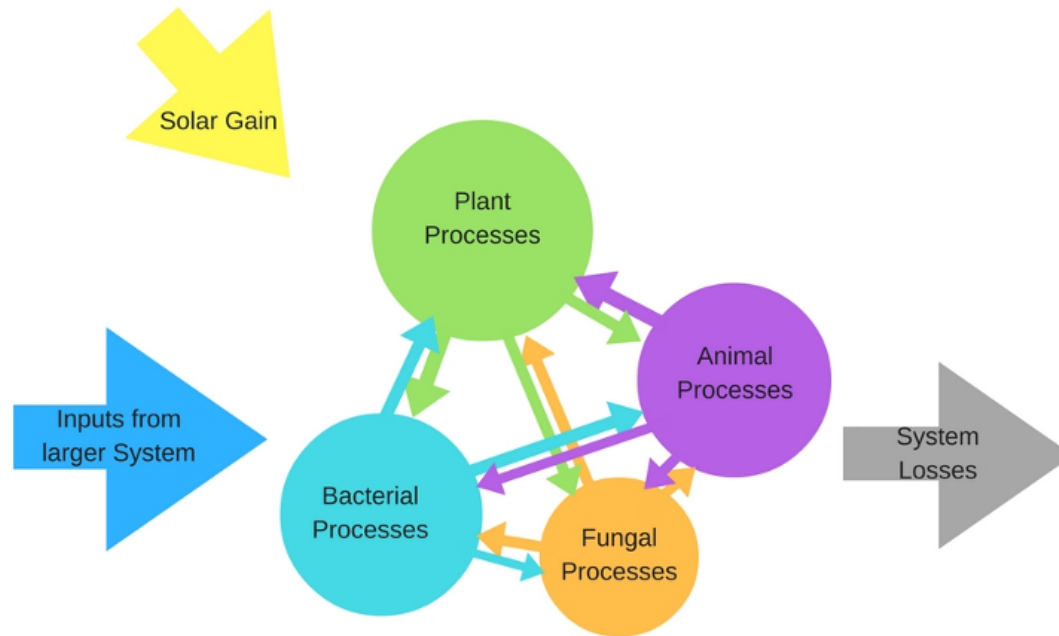
Living System – a special subclass of open system





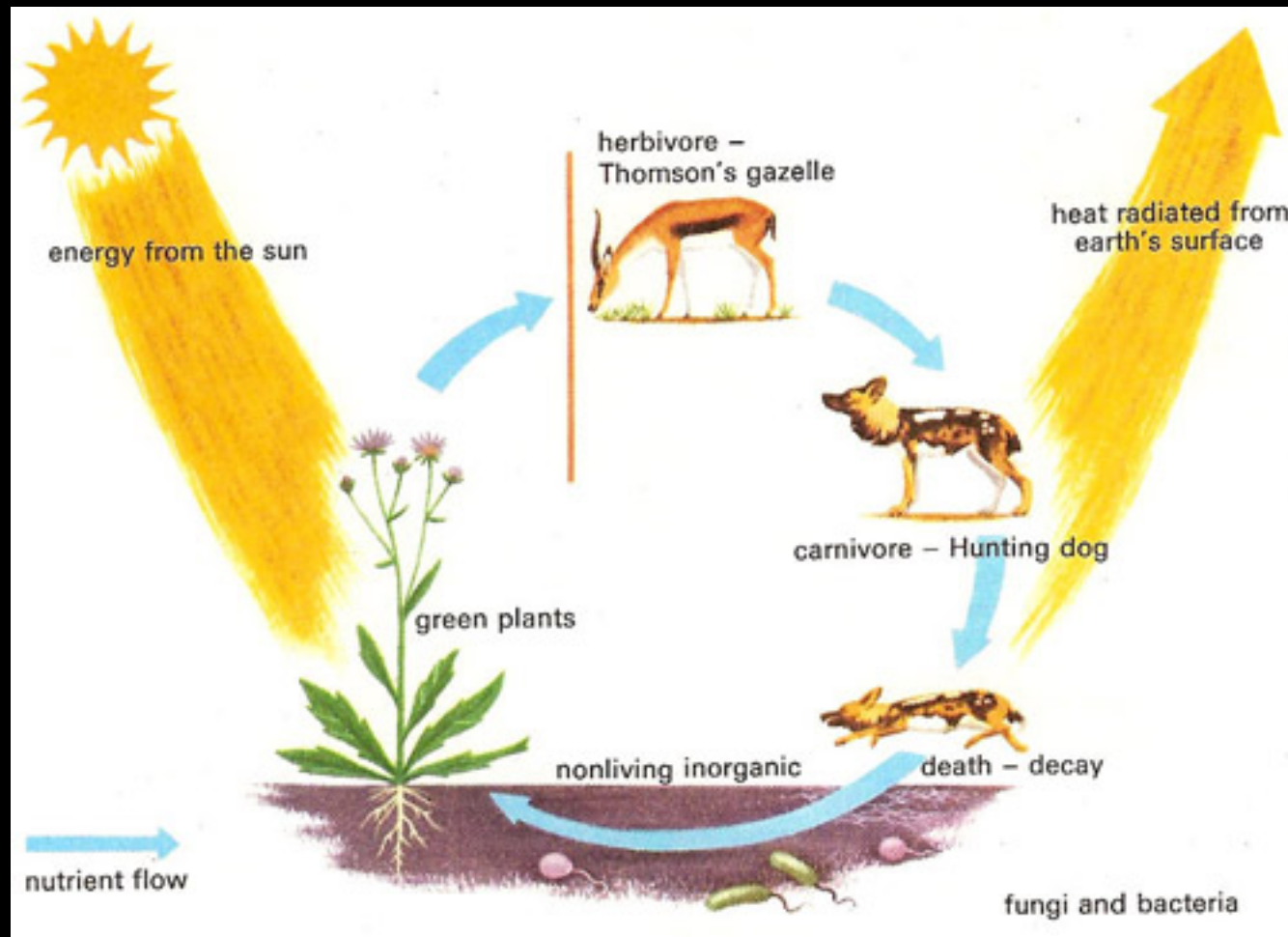
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Figure 1.4

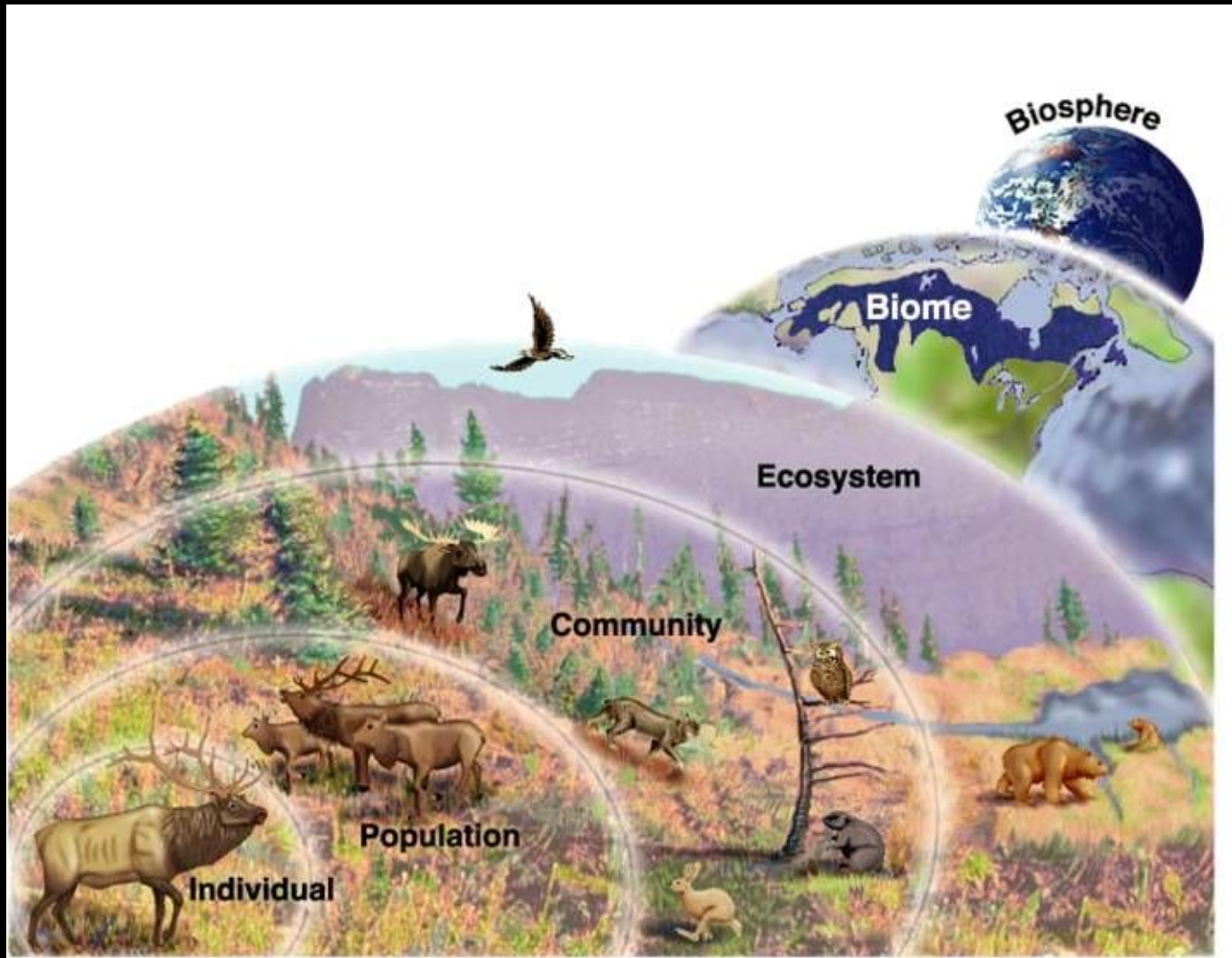


**A Living System**

## *What is an ecosystem?*



## *Ecological scales*





# Ecosystem Ecology

