Thinking About Robots

Ontology is not a dirty word

Presented by Amanda Lunt

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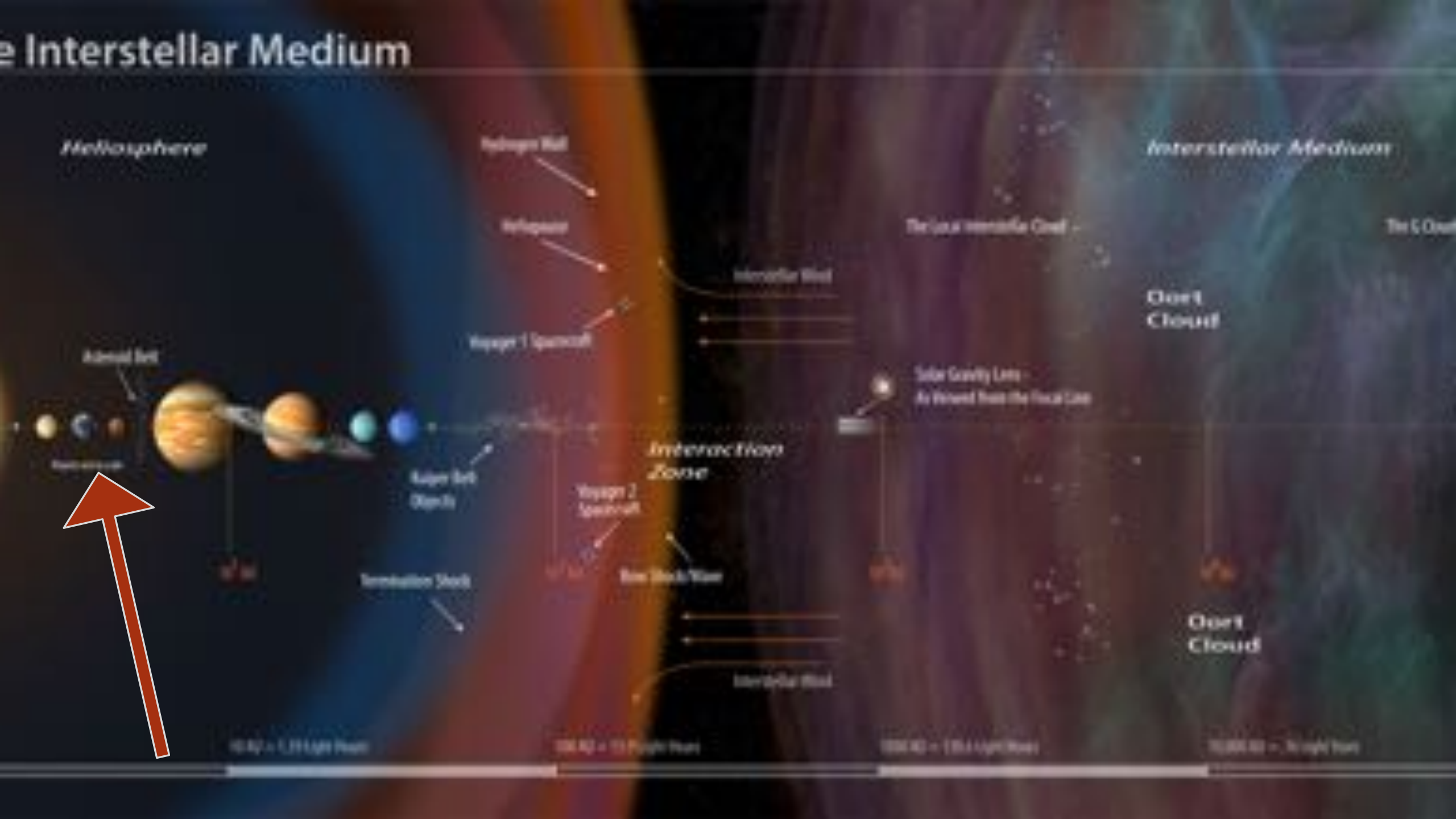
Upside Down World Map


e Interstellar Medium
Heliosphere
Interstellar Medium
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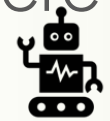
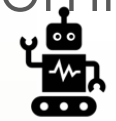
What is ontology ?

The study of

1. What there is 
2. The most general features of what there is and how the things they are relate to each other 
3. Ontological commitment: what we or others are committed to 
4. Meta-ontology: what task, if any, should the discipline of ontology aim to accomplish, how the questions it aims to answer should be understood, and with what methodology they can be answered.

- Thomas Hofweber, Stanford Encyclopedia of Philosophy https://plato.stanford.edu/entries/logic-ontology/

The Skyhooks

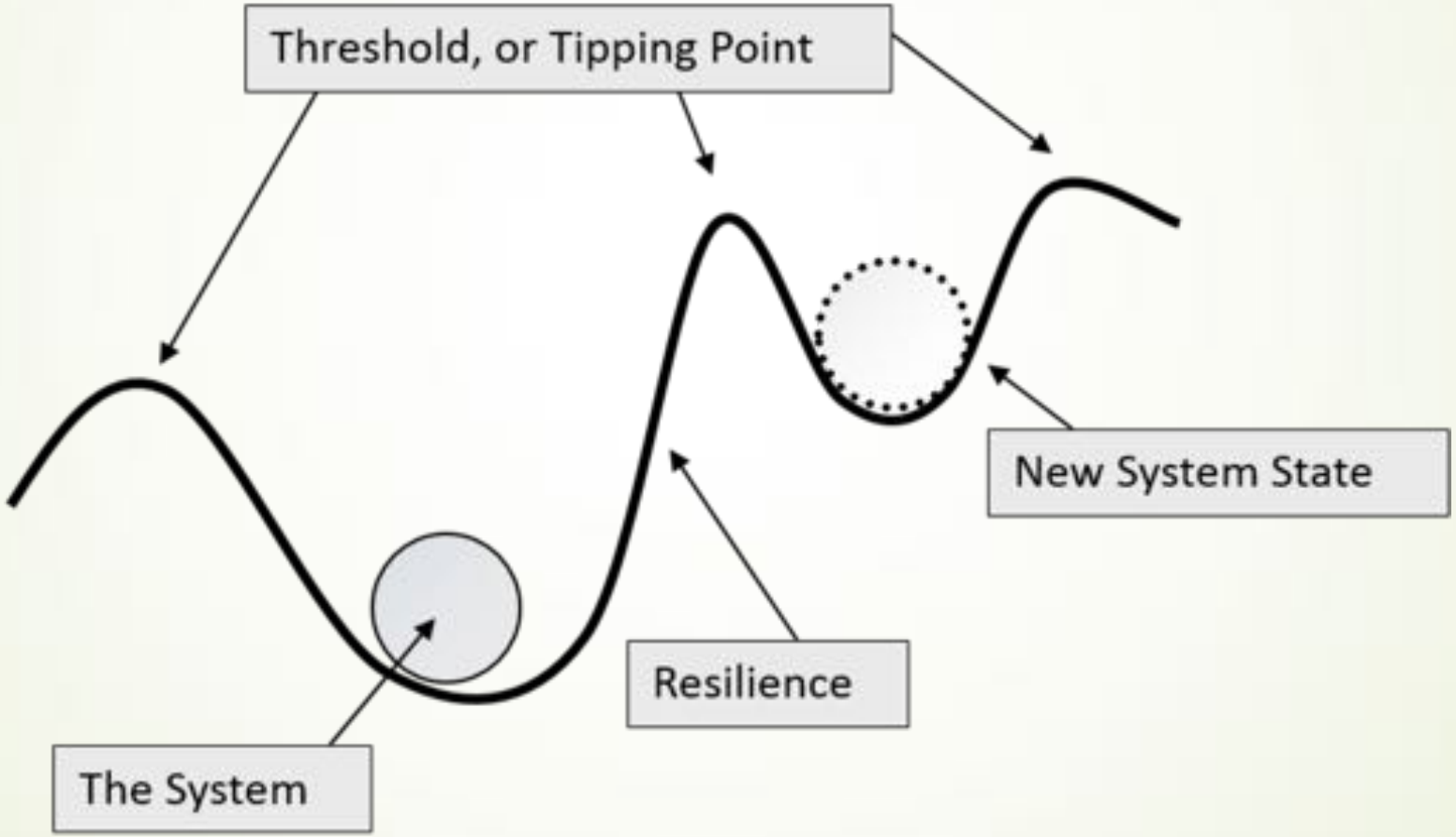
Australian 1970's Glam Rock band

~~Ego~~ Ontology Is Not A Dirty Word

If I did not have an ~~ego~~ ontology I would not be here tonight
If I did not have an ~~ego~~ ontology I might not think that I was right
If you did not have an ~~ego~~ ontology you might not care the way you dressed
If you did not have an ~~ego~~ ontology you'd just be like the rest

~~Ego~~ Ontology is not a dirty word
~~Ego~~ Ontology is not a dirty word
~~Ego~~ Ontology is not a dirty word
Don't you believe what you've seen or heard

Measuring organisational resilience through a computational framework



Difficulties with researching ‘resilience in the wild’

- Many definitions
- ”Survivor bias”
- Resilience is triggered (automatic response) – but is it desirable?
- Experiment design?
- The need for context

Different Strategies for Catching a Tail

Strategies for catching a tail

Contort your body in new ways

Pretend to ignore it

Sneak up on it

Get someone else to do it for you

(Robotics) research is hard ?

Progress seems slow.

Concepts can be difficult to hold onto.

Open question. What is a robot?

- Machine that possesses some developed AI and able to interact functionally with environment
- Whole body (embodied) adapt itself to the environment – intelligence
- Designed ☺
- Communication with a person or other "beings", smile, access emotions, help me to do some jobs

Thinking about environment

Context

"One thing about which fish know exactly nothing is water, since they have no anti-environment which would enable them to perceive the element they live in." – Marshall McLuhan, 1968

Ontological Commitment

- Idealist
  - No entities exist independent of the human mind
- Empiricist
  - Mind-independent entities can be directly observed, everything else (electrons, viruses) is a theoretical construct helpful to make sense of the directly observable
- Realist
  - Many types of entities exist autonomously even if they are not directly given to our senses

-Manuel DeLanda, 2013

Proposal: Our organisations are cybernetic organisms and AI is already here.

What is a cybernetic organism?

Where is ”the entity”? Where does it exist?

Organisations as technology.

Robots as tools

The tragedy of the mechanical man

Resilience revisited

- Resilience as an emergent property of complex self-adaptive systems (rather like intelligence, or cognition, or consciousness)

Robots as

Evidence

Blueprints

Prototypes

Proposals

Explorations

Reflections

Robotics as…

EXPLORATION

Of ethics

Of politics

Of the way things are

Of the concept of future

Of possibilities

Robotics as an exploration of what it means to be human

What impact does your concept of "environment" have on the choices that you make for your robot (design)?

Is it "out there"? Is it "in here"? Are we limiting what our robots can perceive or our perception of what our robots achieve?

Any questions or comments

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