SECTION 3

ONTOLOGY

Major philosophical problems, forms of being, virtual reality, determinism, and the scientific picture of the world

LECTURE 10

Lecture Roadmap

Six connected questions build the ontology narrative from first principles to today's scientific w

1 **Subject of Ontology**
Being, entity, nothingness, and the four forms of being

2 **Models of Reality**
Monism, dualism, pluralism, and the question of substance

3 **Space and Time**
Attributes of being, multiple temporalities, and the chronotope

4 **Virtual Reality**
Simulation, simulacra, avatars, and hyperreality

5 **Determinism and Systems**
Causality, emergence, synergetics, and openness

6 **Scientific World Picture**
Matter, energy, information, evolution, and the anthropic principle



LECTURE 10

Ontology as “First Philosophy”

Ontology asks the most universal question of philosophy before any special science

> *“Why is there something rather than nothing?”*
>
> — the guiding ontological question highlighted in the lecture through Heidegger

- Physics studies matter, biology studies life, but ontology investigates being as such — the universal condition that makes anything present at all.
- Its scope is broader than any special science because it does not “slice” reality into sectors; it searches for first principles.
- Ontology therefore works at the level of ultimate foundations, not just observable properties.



LECTURE 10

The Core Ontological Categories

Ontology distinguishes between the fact of existence, particular existing things, and the problem of nothingness.

B

Being

Not one object among others, but the all-encompassing fact or "energy" of existence that stabilizes reality.

E

Entity

A concrete thing or phenomenon: a person, star, table, law, institution, or digital object.

Ø

Nothingness

Absence in one tradition; in others, a substantive void from which existence can potentially arise.

Ontology asks not only "what exists?" but also "why and how does it exist?"

LECTURE 10

Historical Drama of Being

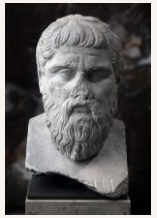
The meaning of being shifts with each major philosophical epoch.

1

Being is; non-being is not

Parmenides

Being is eternal, immovable, and perfect.



2

True being vs. changing appearances

Plato

Ideas possess a higher ontological status than sensible things.

3

Substance enters the debate

Modern rationalists

Descartes and Spinoza describe being through self-sufficient substances.

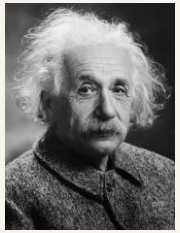


4

Ontological turn toward Dasein

Heidegger

Being becomes linked with time, finitude, and human self-awareness.



LECTURE 10

Architectonics of Reality: Four Basic Forms of Being

The lecture organizes reality into four fundamental ontological levels.

N

Being of Nature

The “first nature”: stars, minerals, matter, and objective laws.

I

Being of the Ideal

Meanings, values, numbers, truths, and symbolic forms.

H

Being of the Human

A bridge between body and consciousness, necessity and freedom.

S

Being of the Social

The “second nature”: institutions, law, culture, and shared practices.

LECTURE 10

Why Ontology Still Matters

Ontology is not an abstract museum piece; it shapes how we interpret science, personhood, and digital life.

Science

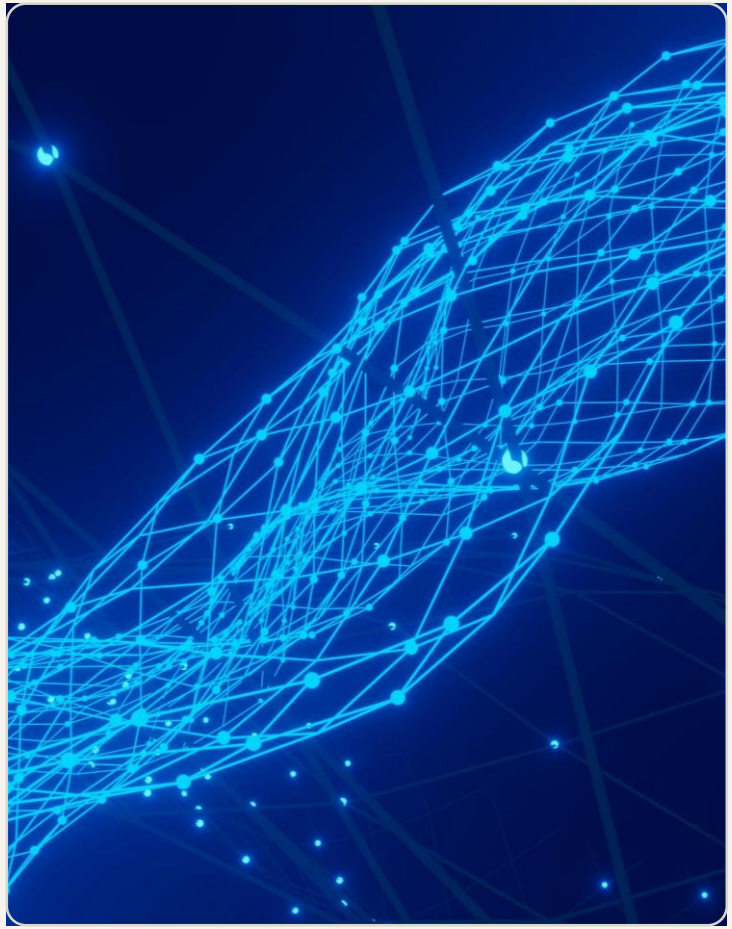
Determines whether the world is treated as dead mechanism, evolving system, or information-rich process.

Human existence

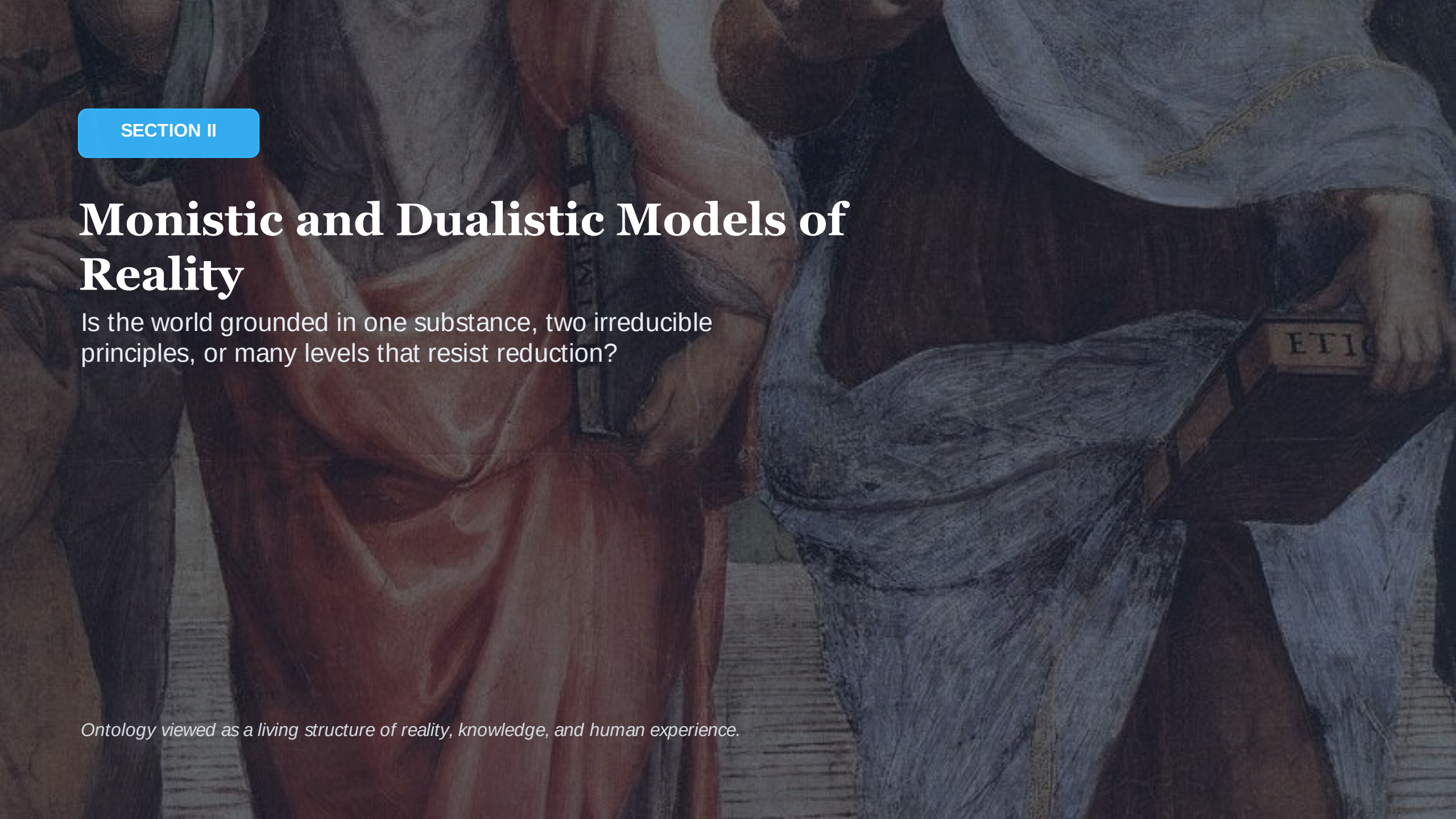
Clarifies the status of freedom, consciousness, mortality, and the relation between body and spirit.

Digital worlds

Helps explain why virtual objects, avatars, and social media signs can become ontologically effective.



Ancient question -> contemporary stakes



SECTION II

Monistic and Dualistic Models of Reality

Is the world grounded in one substance, two irreducible principles, or many levels that resist reduction?

Ontology viewed as a living structure of reality, knowledge, and human experience.

LECTURE 10

Substance and the Search for a First Principle

Most ontological models revolve around substance: a foundational reality that does not depend on anything else for its existence.

SUBSTANCE

4·95	4·95	4·95
Monism	Dualism	Pluralism

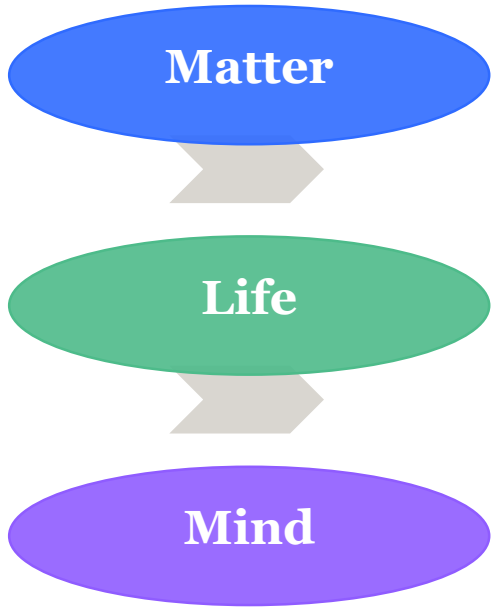
The question is never merely technical: it shapes whether we imagine reality as unified, fractured, or layered.

LECTURE 10

Materialism and Physicalism

Materialistic monism holds that matter is the only substance and that mind emerges from material development.

- Consciousness is not an independent substance; it is a product or function of material organization (for example, the brain).
- Nature is knowable because it follows lawful, objective patterns rather than transcendent intentions.
- Twentieth-century physicalism radicalizes this claim: ultimately, everything real should be explainable in the language of physics.

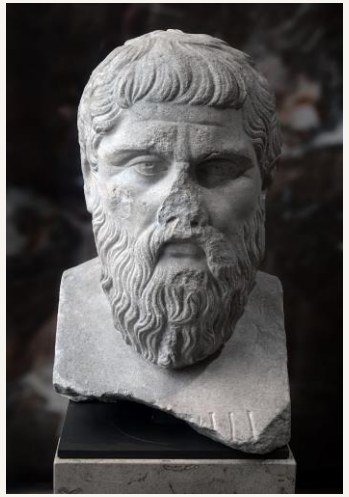


Key move: explain higher complexity without introducing a second substance.

LECTURE 10

Idealism: The Priority of Spirit or Idea

Idealistic monism makes the non-material the primary basis of reality.



Objective idealism

Plato and Hegel: reality is grounded in supra-individual reason, eternal Ideas, or Absolute Spirit. Nature is the outer expression of this deeper principle.

Subjective idealism

Berkeley: the world exists only in relation to the perceiving subject. His formula "to be is to be perceived" means reality is inseparable from consciousness.

Two branches, one thesis

Reality is not exhausted by matter.

- Spirit, meaning, or consciousness enjoys ontological priority.
- The visible world may be derivative rather than ultimate.
- Values and ideas are therefore not decorative; they are structurally real.

LECTURE 10

Dualism and the Mind-Body Problem

Descartes recognizes two equal substances: extended matter and thinking spirit.



res extensa
extended thing / material body

res cogitans
thinking thing / mind or soul

How do these radically different substances interact in one human being?

- How can a non-material thought cause a material hand to rise?
- Descartes proposed the pineal gland, but the explanatory gap remains philosophically difficult.
- Dualism preserves human uniqueness but risks splitting the person into incompatible realms.

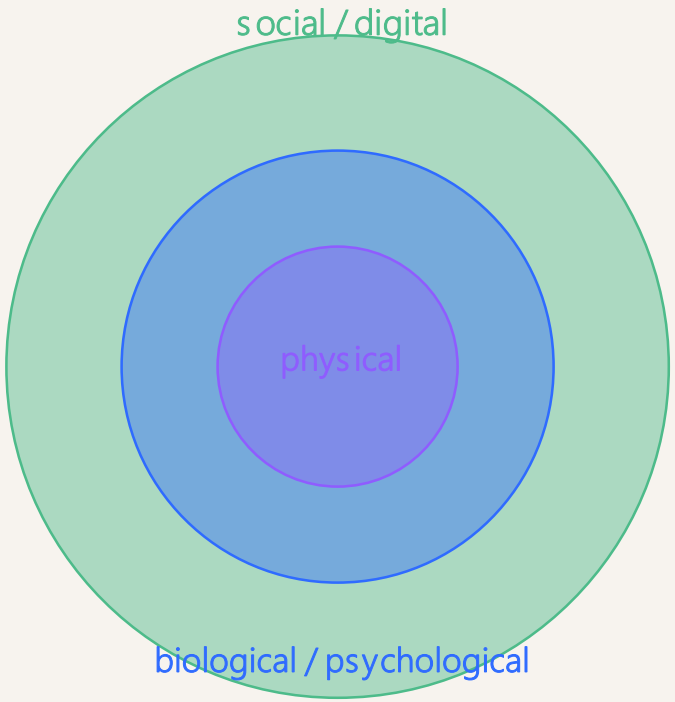
LECTURE 10

Pluralism: A Many-Layered Reality

Pluralism rejects reduction to one or two principles and emphasizes multiple irreducible levels of being.

Leibniz and beyond

Leibniz's monadology imagines the world as composed of many spiritual units. In contemporary ontology, pluralism often means acknowledging distinct layers such as the physical, biological, social, psychological, and digital.



Why it matters

Pluralism protects complexity. It resists reducing life to chemistry, society to biology, or meaning to raw matter alone.

LECTURE 10

Comparing the Main Models of Reality

Each model answers the "first principle" question differently and carries its own philosophical strength and cost.

Model	What is primary?	Main advantage	Main difficulty
Materialist monism	Matter	Unity and scientific knowability	Must explain consciousness without remainder
Idealist monism	Idea / spirit	Explains values, meaning, and rational structure	Risks weakening material independence
Dualism	Matter + spirit	Preserves human inwardness and moral uniqueness	Interaction problem between mind and body
Pluralism	Many levels / principles	Honors complexity and emergence	Can weaken a sense of total unity

SECTION III

Space and Time as Attributes of Being

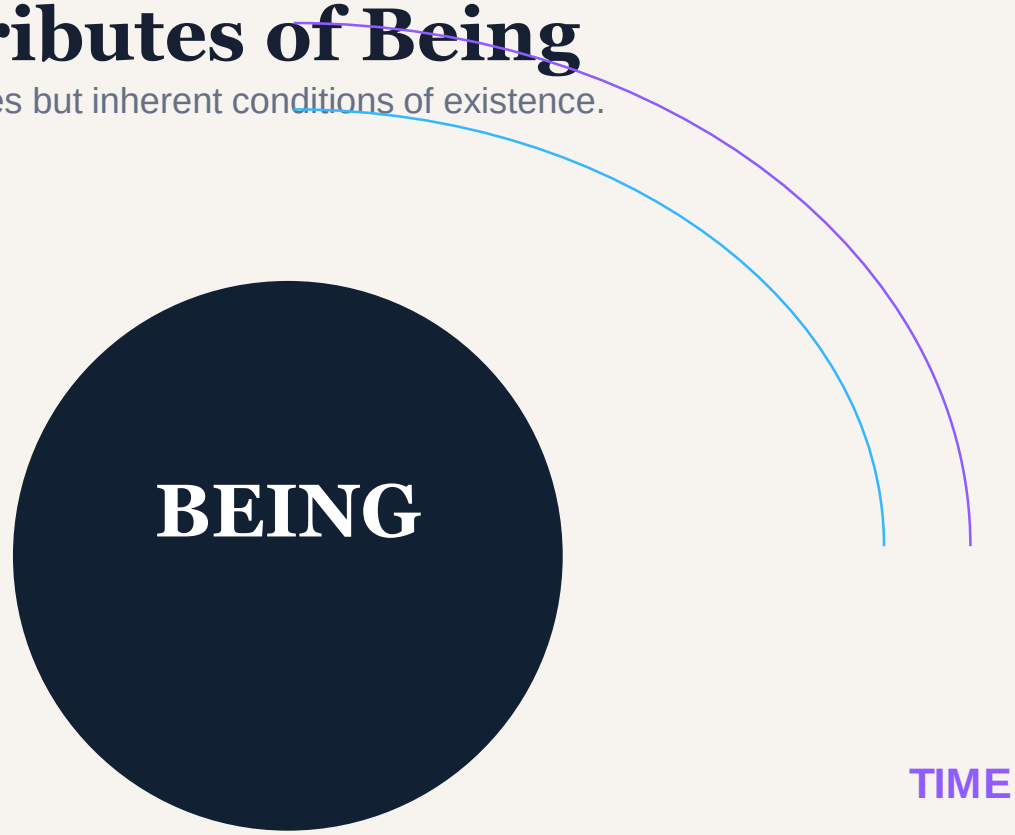
If substance tells us what exists, space and time tell us how, where, and in what rhythm existence unfolds.

Ontology viewed as a living structure of reality, knowledge, and human experience.

LECTURE 10

Space and Time as Attributes of Being

In ontology, space and time are not optional coordinates but inherent conditions of existence.

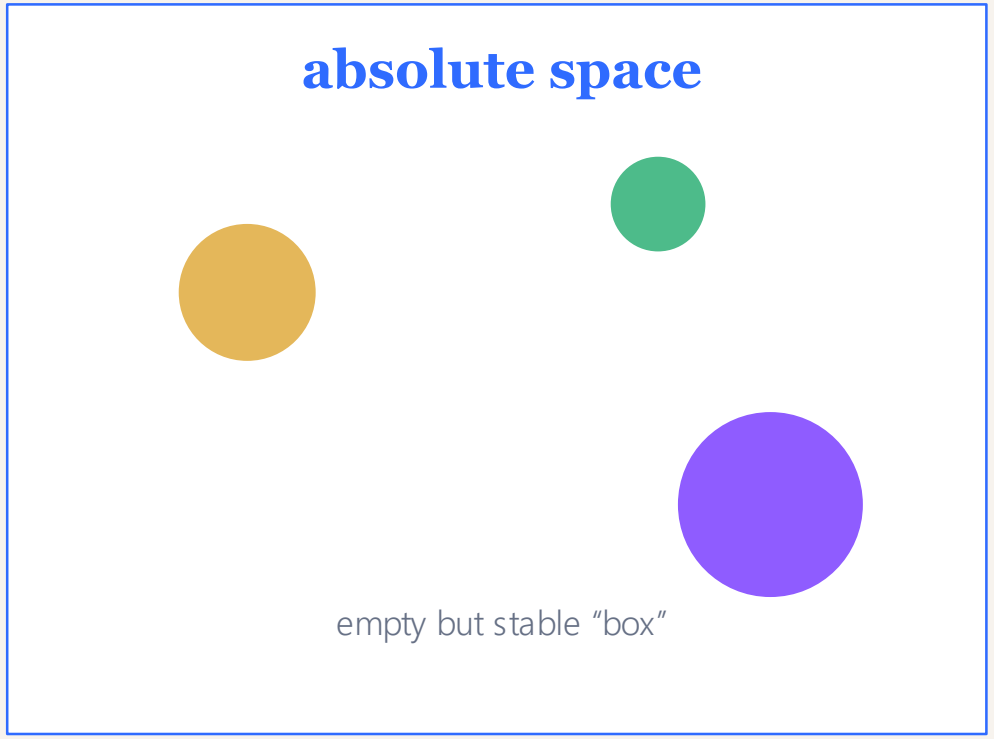


- They are “attributes” because matter and spirit cannot be thought without some form of extension and duration.
- Ontology therefore studies not only things, but the mode in which things unfold and persist.
- Modern thought gradually moves from viewing them as containers to viewing them as relations generated within reality itself.

Substantial Approach: Space-Time as a Container

In classical antiquity and Newtonian physics, space and time exist independently of the objects that occupy them.





TIME

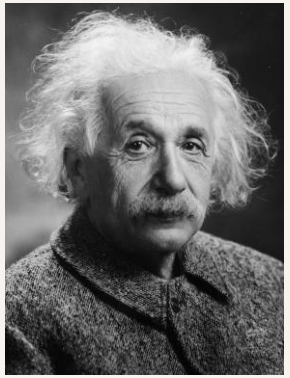
uniform flow independent of events

- Space exists before the "play" of objects begins.
- Time ticks identically everywhere, whatever happens in the world.

LECTURE 10

Relational Approach: Space-Time as a Web of Relations

Leibniz's philosophical criticism and Einstein's physics dissolve the container model.



Leibniz

Space is not a thing in itself but the order of co-existence among bodies; time is the order of succession among events.

Einstein

Mass and energy curve space-time. Reality does not sit inside a rigid frame; it helps generate the frame itself.



Key ontological shift

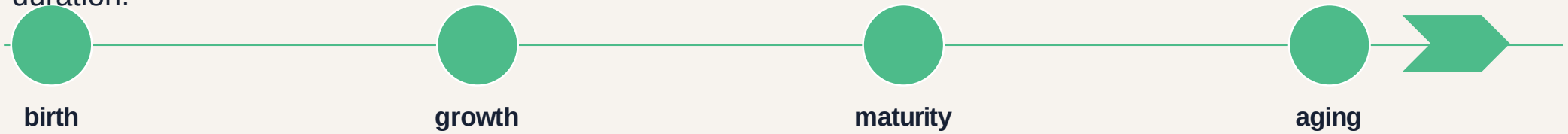
Being creates its own coordinates.

LECTURE 10

Biological Time: The Arrow of Life

Living matter experiences time as rhythmic, embodied, and fundamentally irreversible.

- Biological clocks appear in cell division, circadian cycles, development, aging, and regeneration.
- Unlike reversible equations in parts of physics, life moves from birth toward decay in one direction.
- Different species inhabit different ontological scales of time: the dayfly and the oak tree do not “live” the same duration.



Core feature

Irreversibility: biological existence is an embodied arrow, not a neutral sequence of abstract instants.

Ontological implication

To live is to unfold in time from within, not merely to occupy positions on a clock face.

Social Time: History Has a Changing Speed

Social time measures the rhythm of collective life rather than the seconds of a chronometer.

Middle Ages

seasonal and liturgical rhythm

tempo ↑

Industrial era

factory shifts and measurable labor

tempo ↑

21st century

accelerated information exchange

tempo ↑ tempo ↑

Measured by

generations
revolutions
institutions
work cycles
major events

Social being is historical: the “speed” of life itself changes as society changes.

LECTURE 10

Psychological Time and Bergson's "Duration"

Subjective time does not coincide with measurable clock time.

clock time

1 sec = 1 sec

Joy / flow

Time flies. Duration contracts when attention is absorbed and experience is affirmative.

Pain / waiting

Time drags. A few minutes can feel interminable when existence is strained.

Bergson

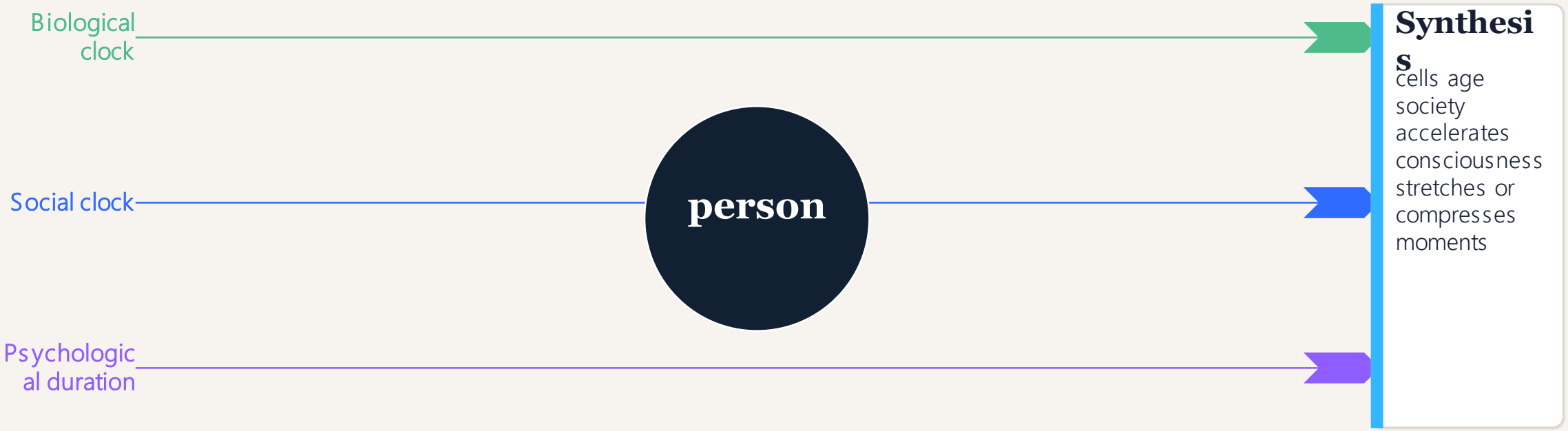
Duration (duree) is lived continuity - a flowing qualitative experience that cannot be chopped into identical units.

Psychological temporality reveals a human mode of being unavailable to mechanical measurement alone.

LECTURE 10

A Human Being Lives in Several Times at Once

The lecture synthesizes temporality as multilayered rather than singular.



Time is therefore not a cage outside us; it is the field in which life, history, and subjectivity intersect.

LECTURE 10

The Existential Center: “Here and Now”

For the human being, the unity of place and moment becomes a concrete point of authentic presence.



- The past survives as recollection; the future exists as anticipation or project.
- Only in the synthesis of a place and a moment is human presence fully actualized.
- Authentic existence is therefore not abstract but situated.

LECTURE 10

Chronotope: The World as a Spatio-Temporal Continuum

Modern ontology replaces the split between “place” and “duration” with an indissoluble unity.

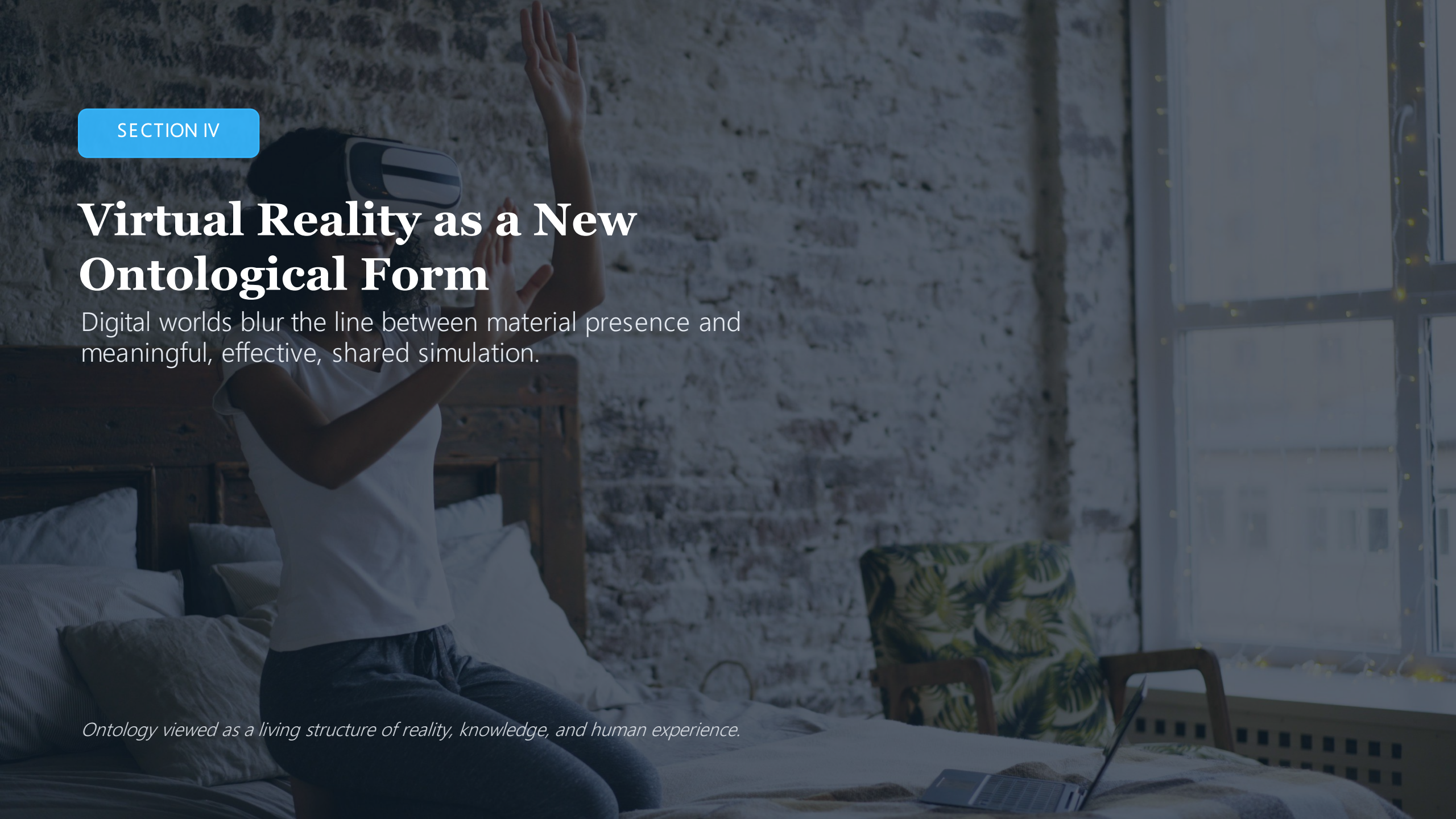
From static objects to events

Any entity is not merely a point in space but an unfolding event in the history of the Universe. “Where” cannot be separated from “when.”

Ontological lesson

We do not simply move through space or wait inside time. Every step in space is also an act of creating history.





SECTION IV

Virtual Reality as a New Ontological Form

Digital worlds blur the line between material presence and meaningful, effective, shared simulation.

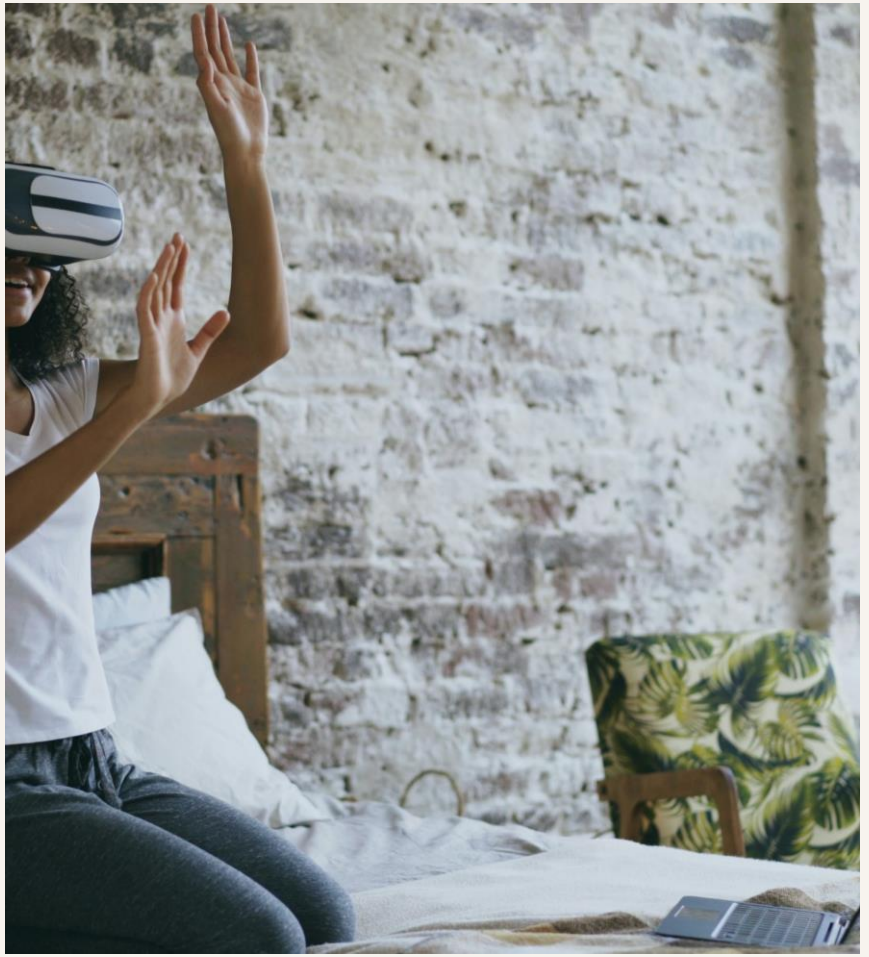
Ontology viewed as a living structure of reality, knowledge, and human experience.

LECTURE 10

Virtual Reality: Being Without Atoms

Virtuality occupies the paradoxical zone between physical presence and pure imagination.

- Virtual reality supports action, emotion, and social relation, so it cannot be dismissed as “nothing.”
- Yet it lacks the heavy physical substance of classical objects; it exists through code, interfaces, and algorithmic states.
- The lecture therefore treats VR as a distinct ontological form rather than a mere illusion.



Definition in one line

Virtual being is real insofar as it structures interactions, meanings, and consequences within a shared technical environment.

LECTURE 10

Simulation Changes the Logic of Objects

Virtual worlds deform the familiar causal and material rules of classical ontology.

Physical world

Objects require material resources, inertia, and time to be created or moved. They leave traces, resistance, and debris. Matter slows action.

inertia | material cost | resistance

Virtual world

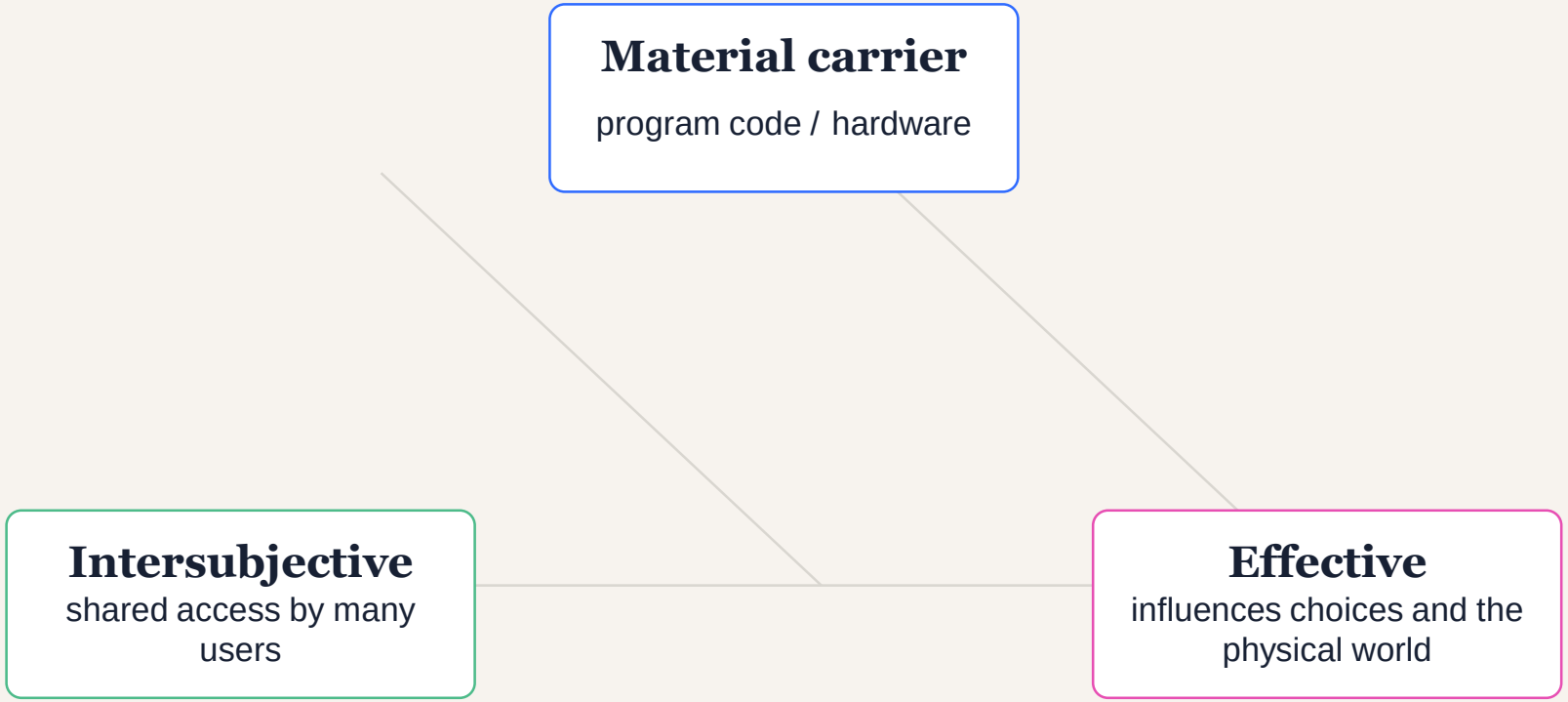
Objects can appear “from nothing” by the act of code, disappear without residue, and be modified instantly. Programmer intention replaces material resistance.

instant | discrete | weightless

LECTURE 10

Why Virtual Reality Is Not a Hallucination

The lecture grants VR ontological status because it is objectified, shared, and causally effective.

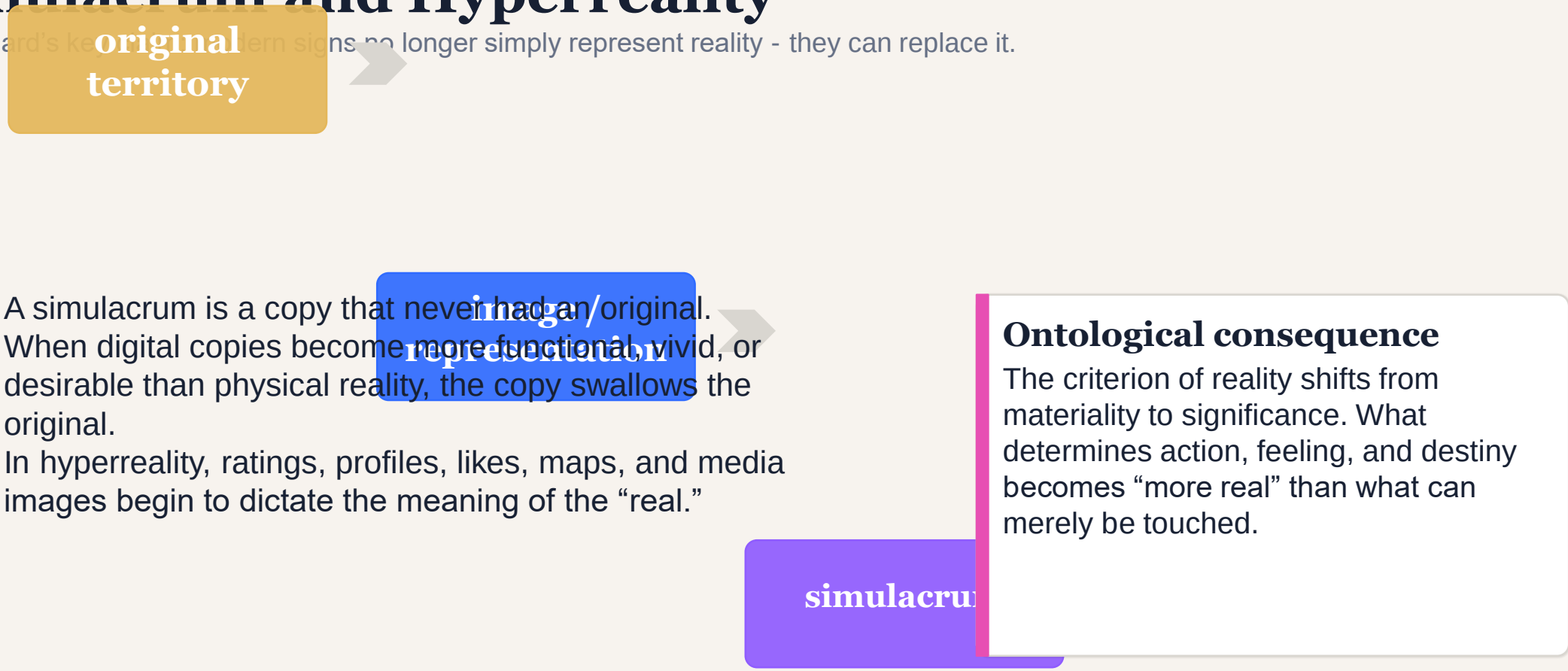


Conclusion: VR is not a private delusion but a technically mediated domain of shared reality.

LECTURE 10

Simulacrum and Hyperreality

Baudrillard's key claim: modern signs no longer simply represent reality - they can replace it.

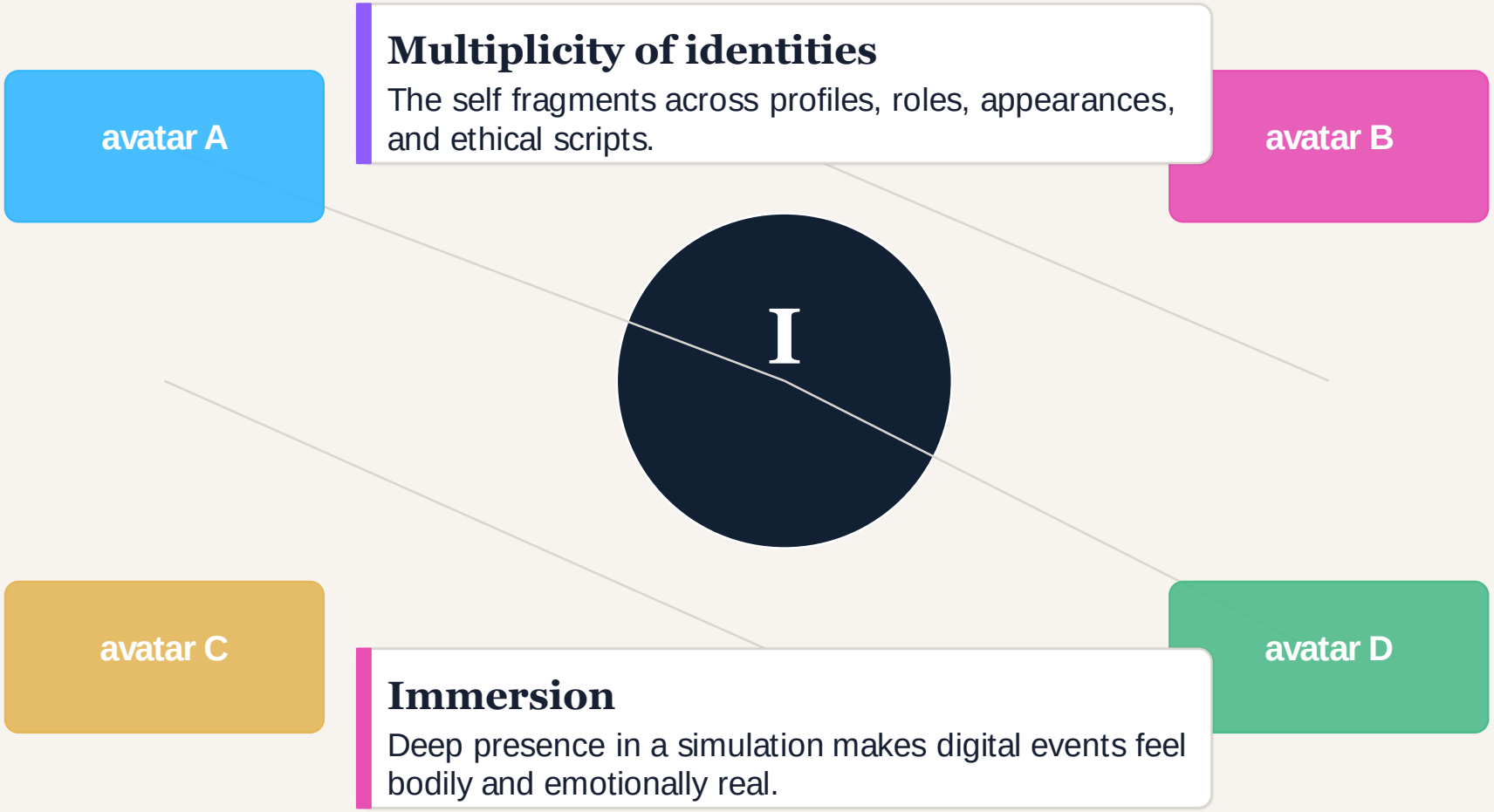


- A simulacrum is a copy that never had an original.
- When digital copies become more functional, vivid, or desirable than physical reality, the copy swallows the original.
- In hyperreality, ratings, profiles, likes, maps, and media images begin to dictate the meaning of the "real."

LECTURE 10

Human Identity in Virtual Space

Virtual ontology transforms the subject from stable substance into a project of multiple masks and roles.



LECTURE 10

The Ethical Challenge of the Virtual Turn

If humans become creators of worlds, they also become responsible for the meanings and states those worlds produce.

Immersion

How much should technology be allowed to capture attention, desire, and emotion?

Identity

What remains of the “authentic self” when personalities are multiplied and edited?

Power of signs

Who controls the simulacra that organize political, economic, and social life?

Responsibility

If digital worlds shape action, creators and users share responsibility for their consequences.

Ontology therefore moves into ethics: what is real and what ought we build?

SECTION V

Determinism and Systemicity of Being

Is the universe mere collision and accident, or a rational cosmos woven by causes, probabilities, and emergent wholes?

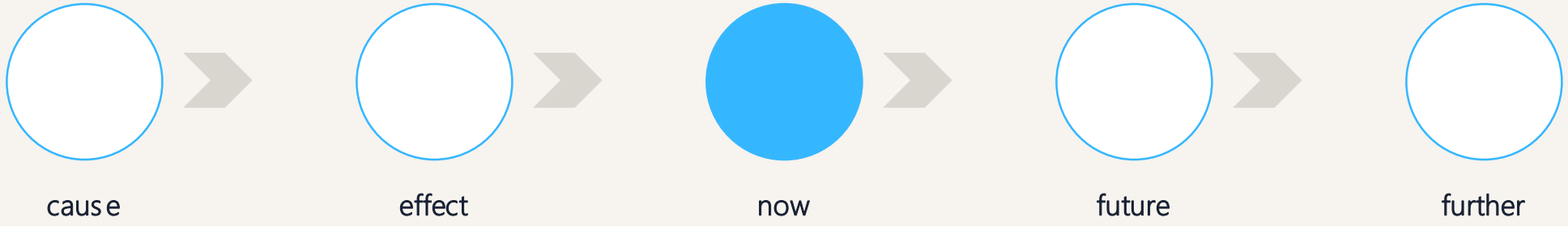
Ontology viewed as a living structure of reality, knowledge, and human experience.

LECTURE 10

Determinism: Universal Connection and Causality

Determinism states that nothing happens in complete groundlessness: every event belongs to a network of dependencies.

- The present is an outcome of the past and also a seed of the future.
- Classical determinism imagined reality as a perfectly tuned mechanism.
- The image of “Laplace’s Demon” expresses the dream of total prediction if every particle’s state were known.



LECTURE 10

From Laplace’s Demon to Fields of Probability

Modern ontology softens rigid determinism without abandoning order.

Dynamic laws

Classical mechanics: the cause determines one definite effect. Example: strike the ball and its trajectory can be calculated precisely.

Statistical regularities

Quantum physics and mass social behavior: causes generate a spectrum of possible outcomes rather than a single guaranteed effect.

Order does not disappear; it becomes probabilistic and open.

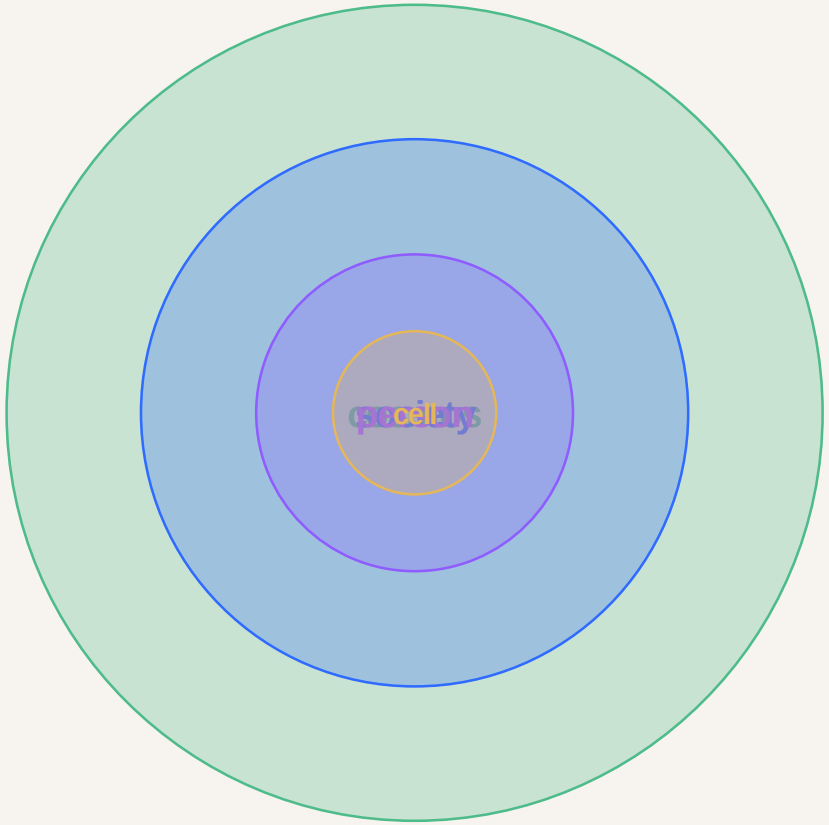
LECTURE 10

Systemic Organization and Emergence

Being is not a warehouse of separate things but a hierarchy of wholes whose properties exceed the sum of parts.

Emergence

Life is not reducible to a heap of molecules; consciousness is not simply a list of neurons. New properties arise at higher levels of organization.



Systemicity

Each level has its own laws and relative sovereignty, but every level is also nested within larger wholes.

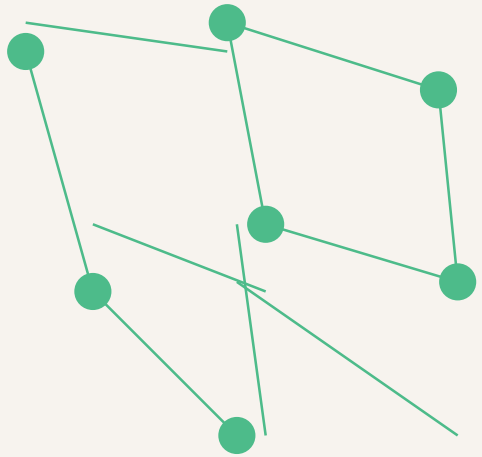
LECTURE 10

Synergetics: How Order Can Emerge from Chaos

Open systems can self-organize, moving from disorder toward new forms of structure.



chaos



self-organized order

Meaning

Randomness is not the absence of law; it can be the medium from which new structure emerges.

A Structured Cosmos Still Leaves Room for Freedom

The lecture's synthesis rejects both total chaos and total fatalism.

- Systemicity gives the world knowability and coherence.
- Probability prevents the world from hardening into absolute predestination.
- Human action matters because the future is structured but not fully closed.



SECTION VI

The Modern Scientific Picture of the World

Contemporary ontology sees an evolving universe in which matter, energy, and information form a new ontological trinity.

Ontology viewed as a living structure of reality, knowledge, and human experience.

LECTURE 10

Evolution of Matter: Micro, Macro, Mega

Modern ontology adopts global evolutionism: matter does not merely exist - it complexifies itself.

Microworld

elementary particles
quantum fields
wave-particle duality

Macroworld

ordinary bodies
classical mechanics
human scale

Megaworld

stars, galaxies
cosmic expansion
Universe as a whole

Each higher level rests on lower levels, yet introduces a complexity that cannot be explained by merely adding atoms.

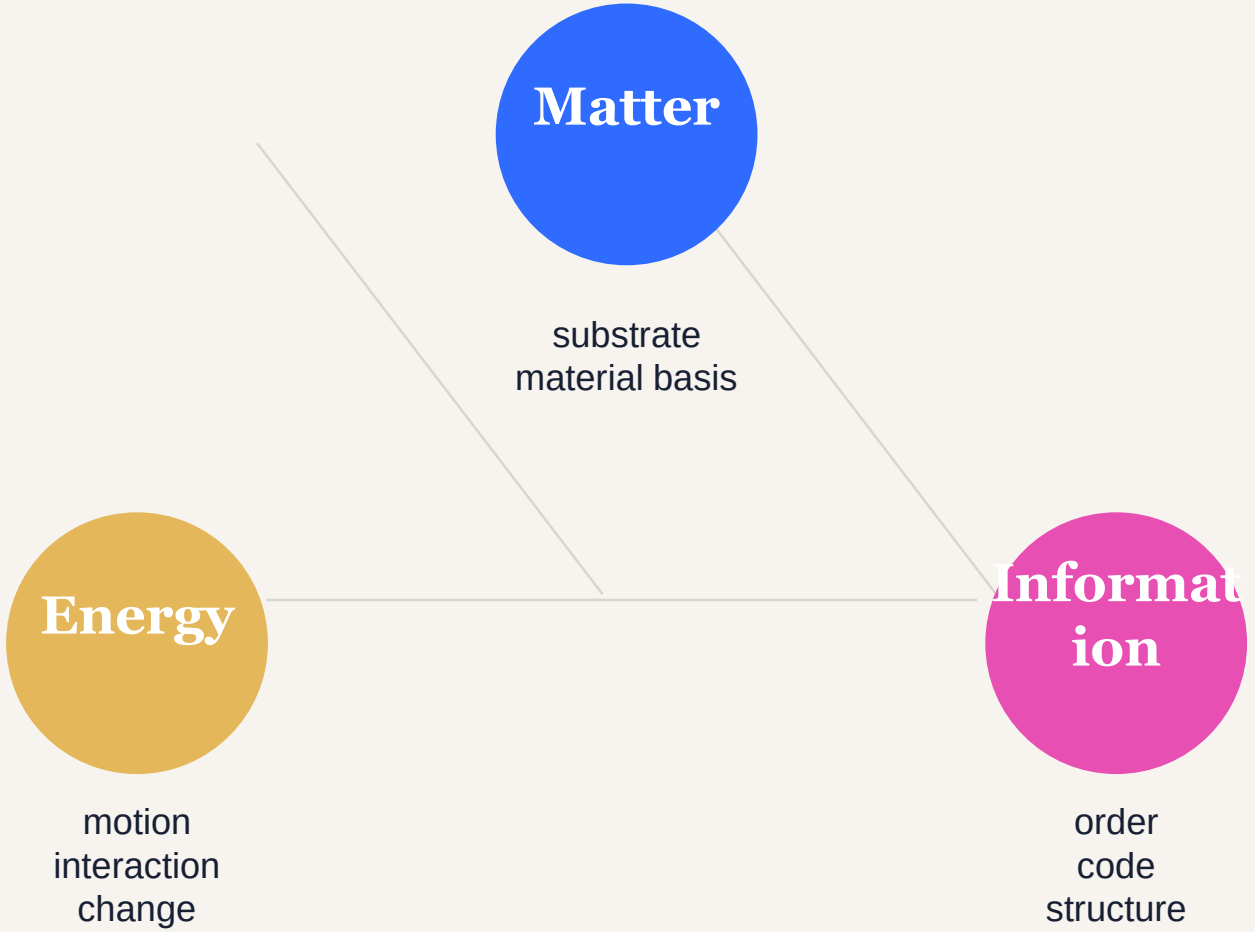
LECTURE 10

Matter, Energy, Information: A New Ontological Trinity

The lecture argues that contemporary science no longer views reality as mere substance alone.

Key shift

Without information - DNA, law, pattern, code - matter and energy would remain shapeless chaos.



Implication

Reality is increasingly conceived as process, structure, and communication.

LECTURE 10

The Universe as an Open, Self-Organizing System

Contemporary ontology joins science in describing the cosmos as historical, dynamic, and unfinished.

- The world has a history rather than a static blueprint.
- Being generates novel structures instead of endlessly repeating the same state.
- Self-organization means the universe develops internal order without needing an external craftsman at every stage.



Modern ontology therefore views reality as process, emergence, and ongoing becoming.

LECTURE 10

Anthropic Principle and Human Self-Awareness

The lecture closes the scientific picture by asking why the cosmos appears “fine-tuned” for life and thought.

Anthropic principle

Fundamental constants such as gravity and electric charge appear to fall within ranges compatible with the later emergence of life.

Ontological resonance

Human consciousness is not described as an accidental passerby only; it becomes the point at which the universe reflects on its own being.



LECTURE 10

Final Synthesis of the Lecture

Ontology emerges as a living dialogue between humanity and reality.

Being
is the condition of all entities, not another object among them.

Reality
can be interpreted as one, twofold, or many-layered in its foundations.

Space-time
is best understood as dynamic continuum rather than neutral box.

Virtuality
counts as real when it structures shared meaning and effective action.

Systems
show that wholes are more than parts and can self-organize.

Science
now reads the universe through matter, energy, information, and evolution.

Main conclusion: we live in a rationally structured cosmos, and the human being is one of the places where that cosmos becomes conscious of itself.

LECTURE 10

Key Vocabulary for Philosophical Discourse

A compact glossary of the lecture's central concepts.

Ontology
study of being

Being
objective reality as such

Entity
a concrete existent

Substance
self-sufficient basis

Monism
one first principle

Dualism
two independent principles

Chronotope
unity of place and time

Simulacrum
copy without original

Hyperreality
simulation eclipses reality

Emergence
new system properties

Determinism
universal causal connection

Dasein
self-aware human being

Takeaway: ontology gives us a language for thinking reality as layered, dynamic, meaningful, and historically changing.