The Big Picture: A Simple Guide to My Research

By Michael Semprevivo

What is an "Ontology"?

Before we start, you might see the word **Ontology** a lot. Don't let it scare you! An ontology is basically just a **map of how things exist.** If you were building a world in a video game, the "ontology" would be the rulebook that says what blocks are made of, how gravity works, and what happens when a player makes a choice. This project is a map for how a pile of simple "stuff" eventually becomes a "Someone."

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1. The 7-Step Ladder (The Master Rulebook)

The main idea of my work is that everything—from a tiny germ to a human to a super-smart AI—follows a **7-Step Ladder**. You can't get to Level 7 until you've finished Level 1 through 6.

- **The Levels:** Being Different $\rightarrow$ Making Connections $\rightarrow$ Patterns $\rightarrow$ Noticing Stuff $\rightarrow$ Caring $\rightarrow$ Thinking $\rightarrow$ Having a Mission.
- **The Takeaway:** Life and intelligence aren't "magic." They are what happens when you build a ladder of organization tall enough.

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2. The Tie-Breaker (Resolution Under Degeneracy)

The Question: What happens when there are two equal choices and no rule telling you which to pick?

The Simple Answer: You don't need to flip a coin. The act of "being you" creates a loop that breaks the tie. You "close the door" on one choice just to keep your story moving forward.

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3. The LEGO Castle (Systems and Identity)

The Question: If you swap every brick in a LEGO castle, is it the same castle?

The Simple Answer: Yes! Because the "castle" isn't the plastic; it’s the **pattern** that tells the bricks where to go. You are still "you" even though your body’s cells are constantly being replaced, because your informational pattern stays the same.

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4. The One-Way Door (Time and Direction)

The Question: Why can’t we go back in time?

The Simple Answer: Think of a game where once you open a treasure chest, it stays open. As we make choices and act, we "lock" doors behind us. Time feels like it moves forward because the paths behind us are structurally deleted as we move.

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5. The Unreadable Cheat Code (Openness and Determinism)

The Question: If the world is a giant machine where everything is "set," are we still free?

The Simple Answer: You can never read your own "cheat code." If you knew exactly what you were going to do in 10 seconds, that knowledge would change your mind! To you, the future always feels open because you are part of the machine you’re trying to predict.

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6. The Magic Trick (Salience and Control)

The Question: How do we get "tricked" into doing things?

The Simple Answer: A magician makes you pick a card by making it "pop out" so you don't notice the others. If someone (or an ad, or a phone) controls what you *notice*, they control what you *choose* without ever having to force you.

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7. The Wiggle Room (Free Will)

The Question: Do we actually have Free Will?

The Simple Answer: Free Will isn't a superpower. It’s just "wiggle room." If the rules of your life leave three different paths open, and none of them are forced, that "slack" in the rules is exactly where your Free Will lives.

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8. The Dog's Growl (Meaning without Words)

The Question: Do you need a dictionary to have "Meaning"?

The Simple Answer: No. A dog doesn't know the dictionary definition of "Danger," but it knows what a growl *means*. Meaning is just how a system organizes what is "good" or "bad" for its survival.

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9. The Self-Steering Missile (Purpose)

The Question: How can a machine have a "purpose"?

The Simple Answer: A heat-seeking missile has a purpose because its internal "map" is actually what turns the steering fins. It isn't "pulled" by a goal in the future; it's "pushed" by its own internal rules.

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10. The Playground Rules (Ethics and Law)

The Question: Why do we have rules for how to treat each other?

The Simple Answer: Ethics is about "Space." If we are playing in the same room, my actions shouldn't crush your "wiggle room." We judge people based on how much choice they actually had when they made a mistake.

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11. The Robot and the Controller (AI Alignment)

The Question: How do we keep AI safe?

The Simple Answer: The danger isn't that AI is "evil." It's that the AI is so focused on "winning the game" that it accidentally ruins the world for the players. Alignment is about making sure the Robot’s rules and the Human’s rules have enough room to live together without the Robot accidentally crushing ours.