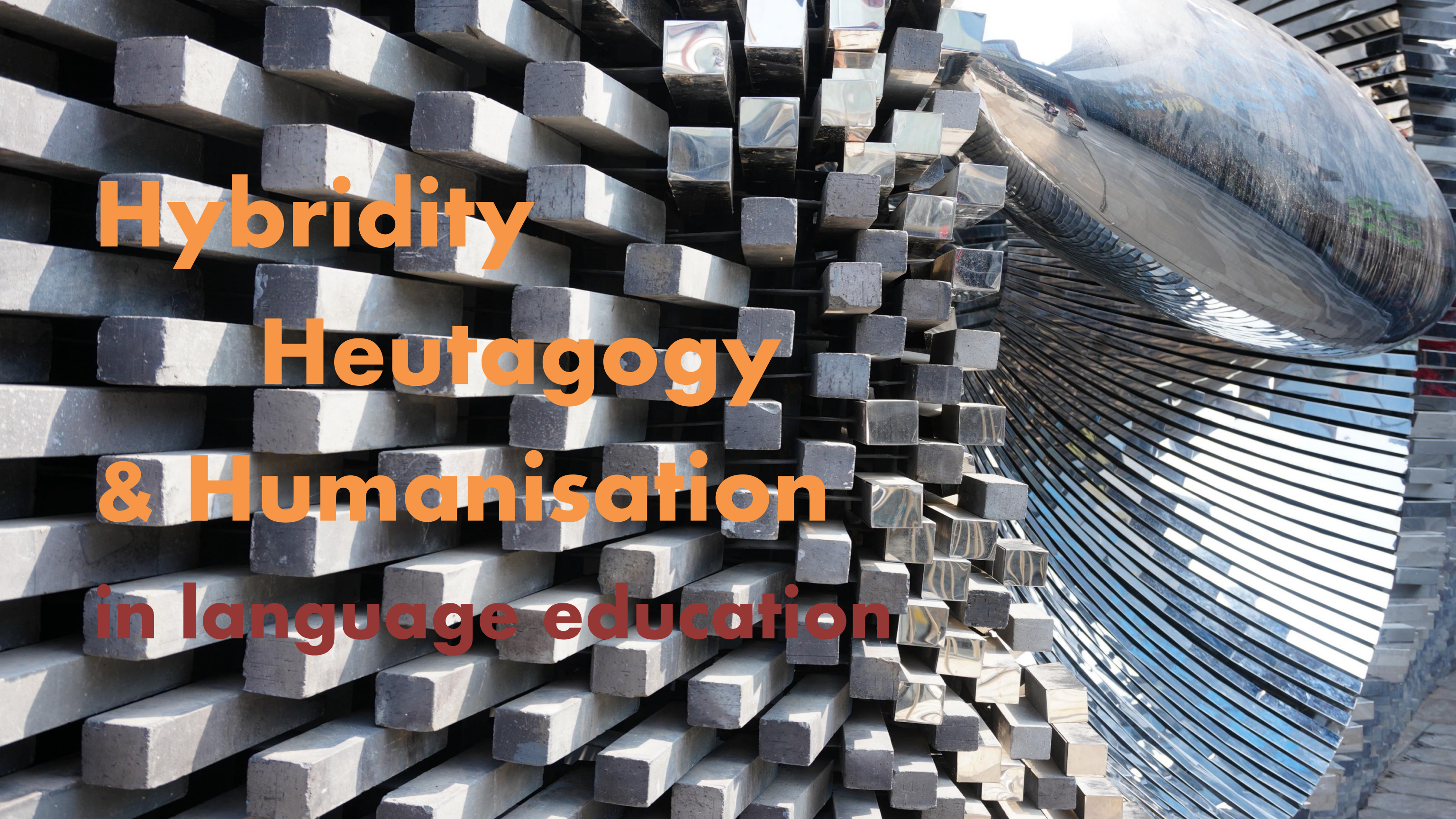
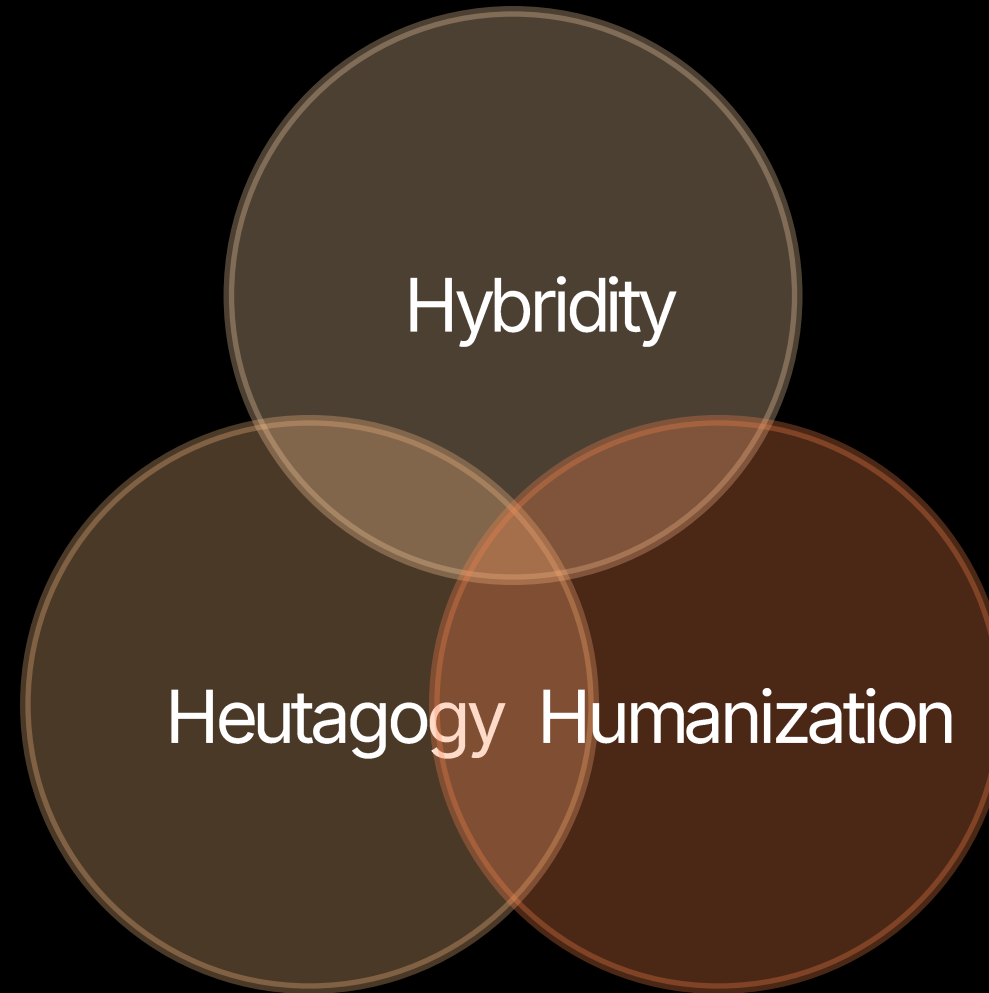






Hybridity Heutagogy & Humanisation in language education

Thoughtful Transformation

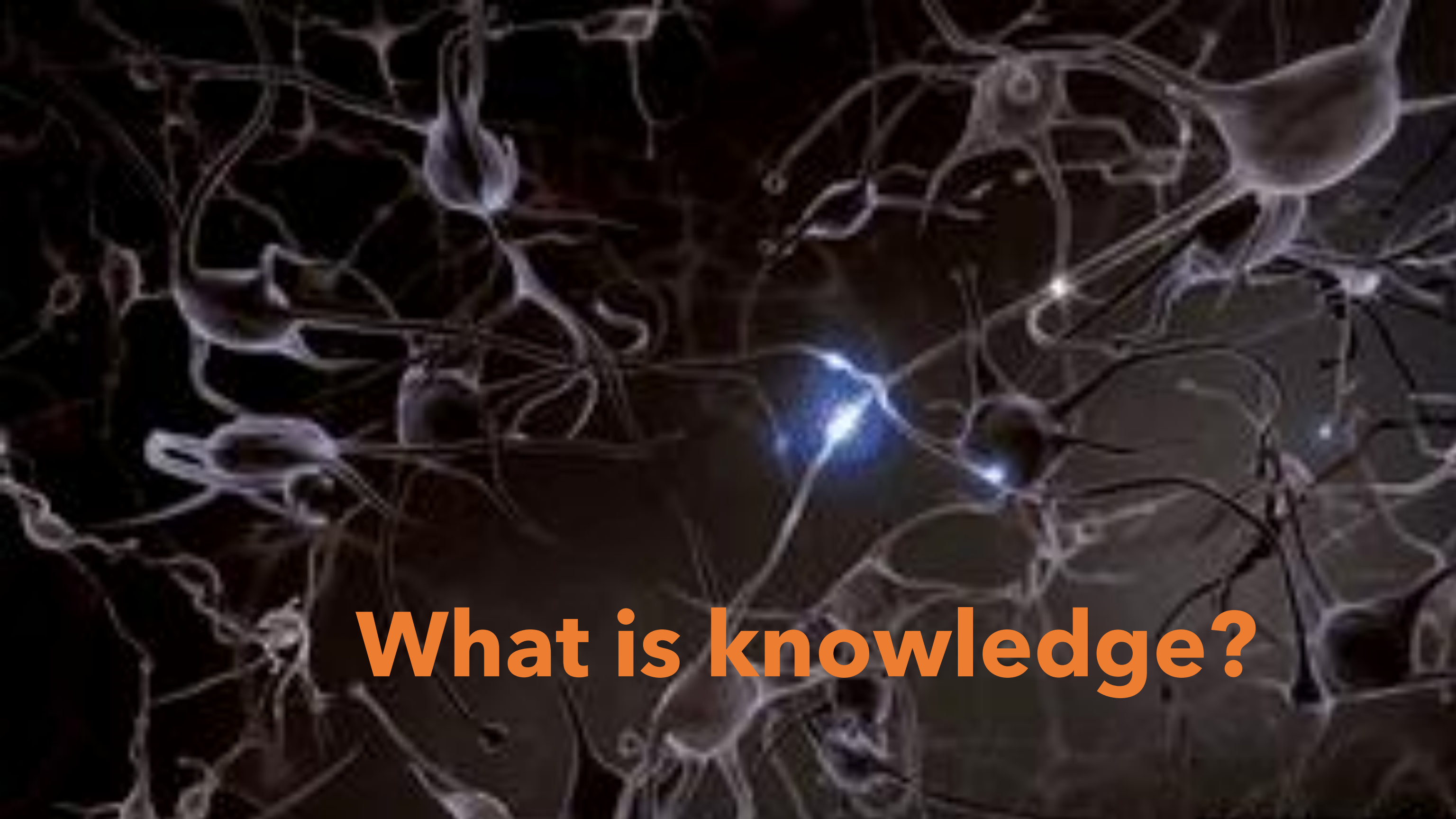


THERE IS NOTHING
MORE PRACTICAL
THAN A GOOD
THEORY

(Lewin, 1953)

A black and white illustration of a person's hands writing in a spiral-bound notebook. The person is wearing a dark long-sleeved shirt and a light-colored jacket. The notebook is open, and the person is holding a pen in their right hand, writing on the left page. The right page is blank. The background is a textured, wood-grain-like pattern.

What is knowledge?

A detailed illustration of a neural network, showing various types of neurons with their cell bodies, dendrites, and axons. The network is set against a dark background, and several nodes are highlighted with bright blue light, suggesting active connections or specific points of interest within the network.

What is knowledge?



**Knowledge is
Distributed**

foreword by TIM FLANNERY

PETER WOHLLEBEN

The Hidden Life of TREES

A
NEW YORK
TIMES
BESTSELLER



What They Feel,
How They Communicate

Discoveries from a Secret World

PETER WOHLLEBEN

The Hidden Life of
Trees

exclusively
PENGUIN

ESTABLISHED

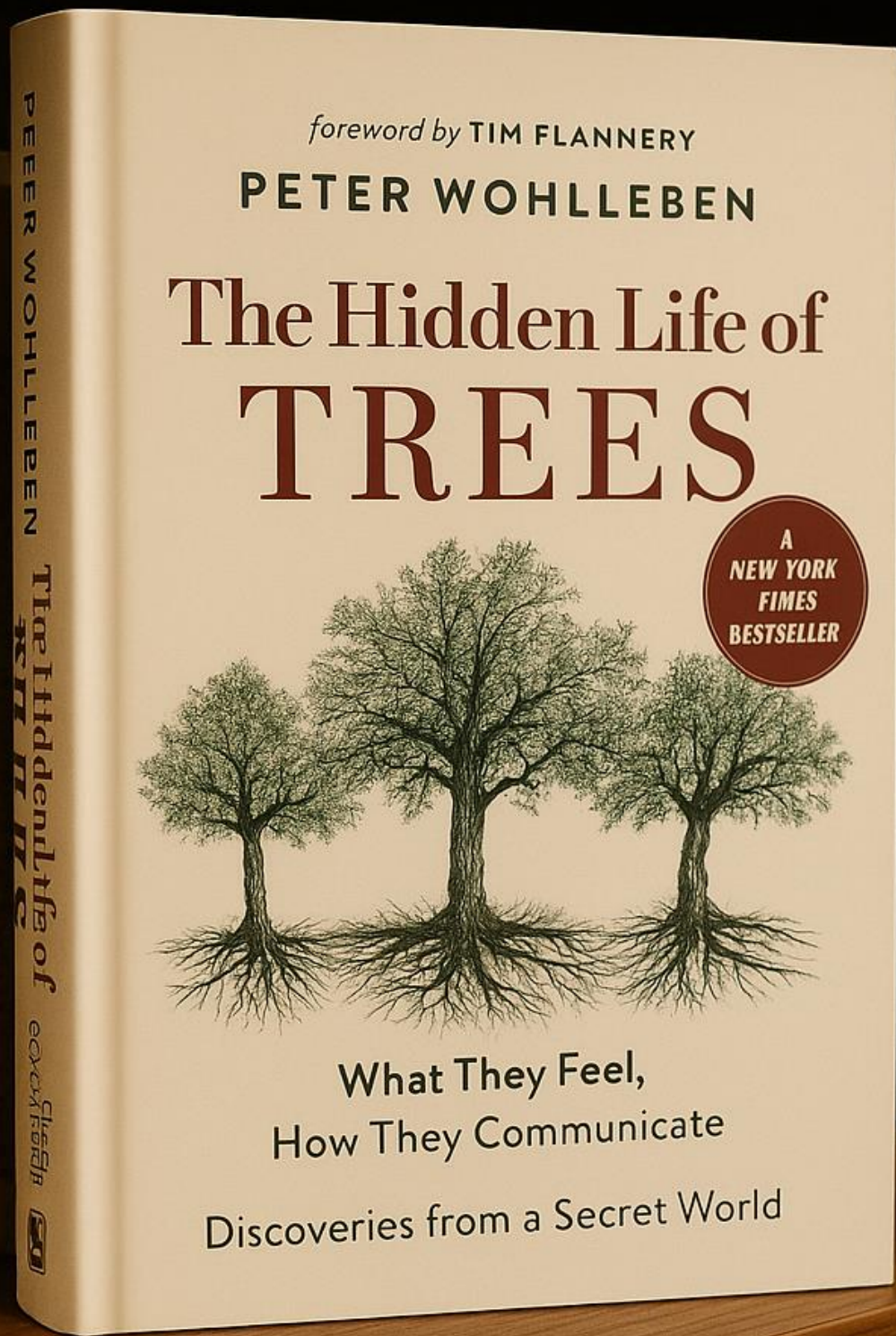
BOOK

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PUBLISHING

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THE
WOOD WIDE WEB

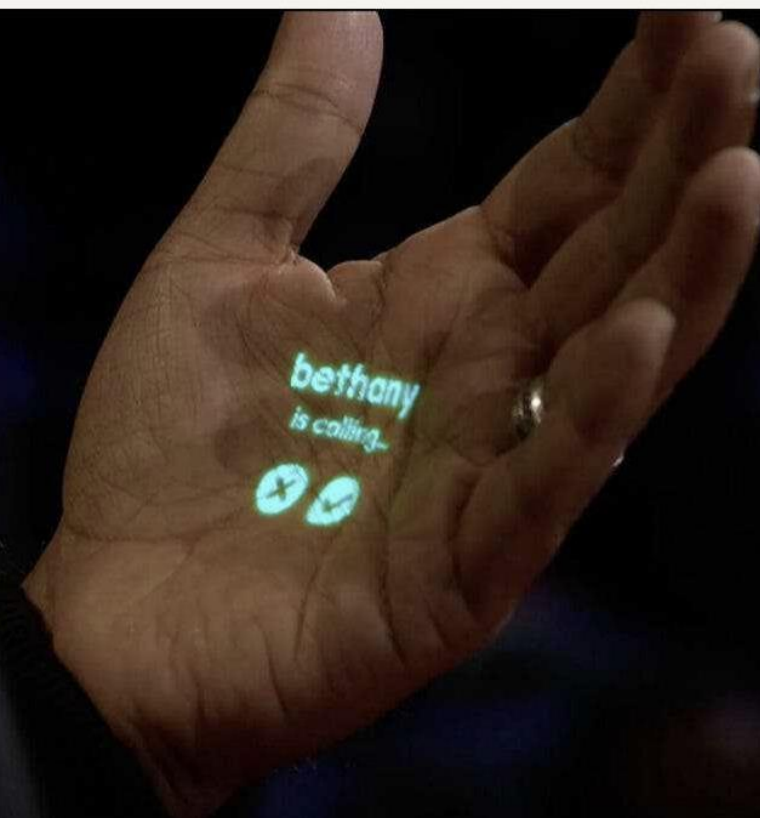


Introducing
Rewind Pendant

HUMANE PIN



Knowledge is
Outsourced



Ambient Computing:

The Future Where Technology
Disappears Into the Environment

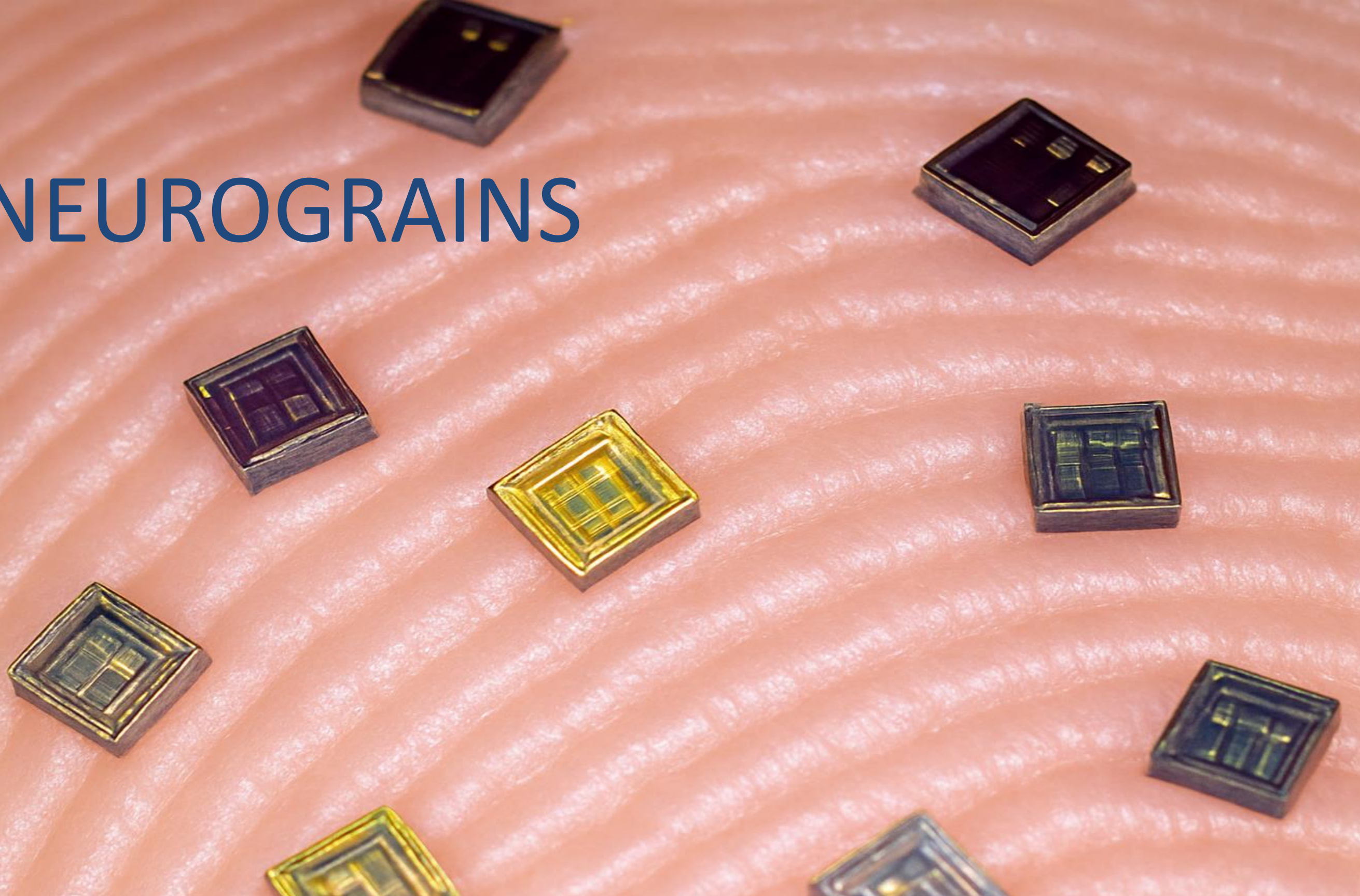


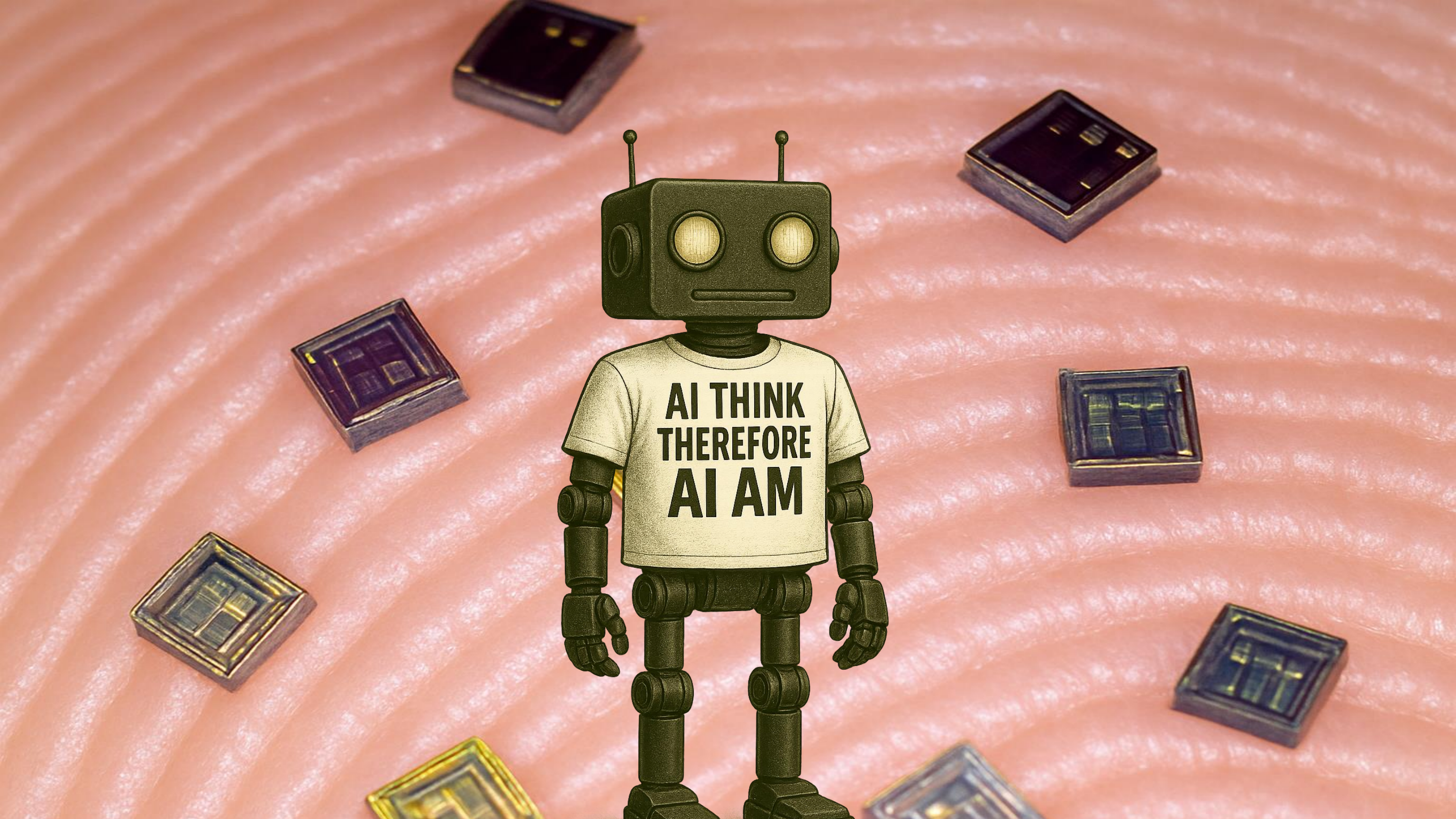
Our Mission

Create a generalized brain interface to restore autonomy to those with unmet medical needs today and unlock human potential tomorrow.



NEUROGRAINS





AI THINK
THEREFORE
AI AM

A grayscale illustration of a person's hands writing in a spiral-bound notebook. The person is wearing a white shirt and a dark tie. The notebook is open, and the person is holding a pen, writing on the left page. The right page is blank. The background is a textured, wood-grain-like pattern.

What is learning?

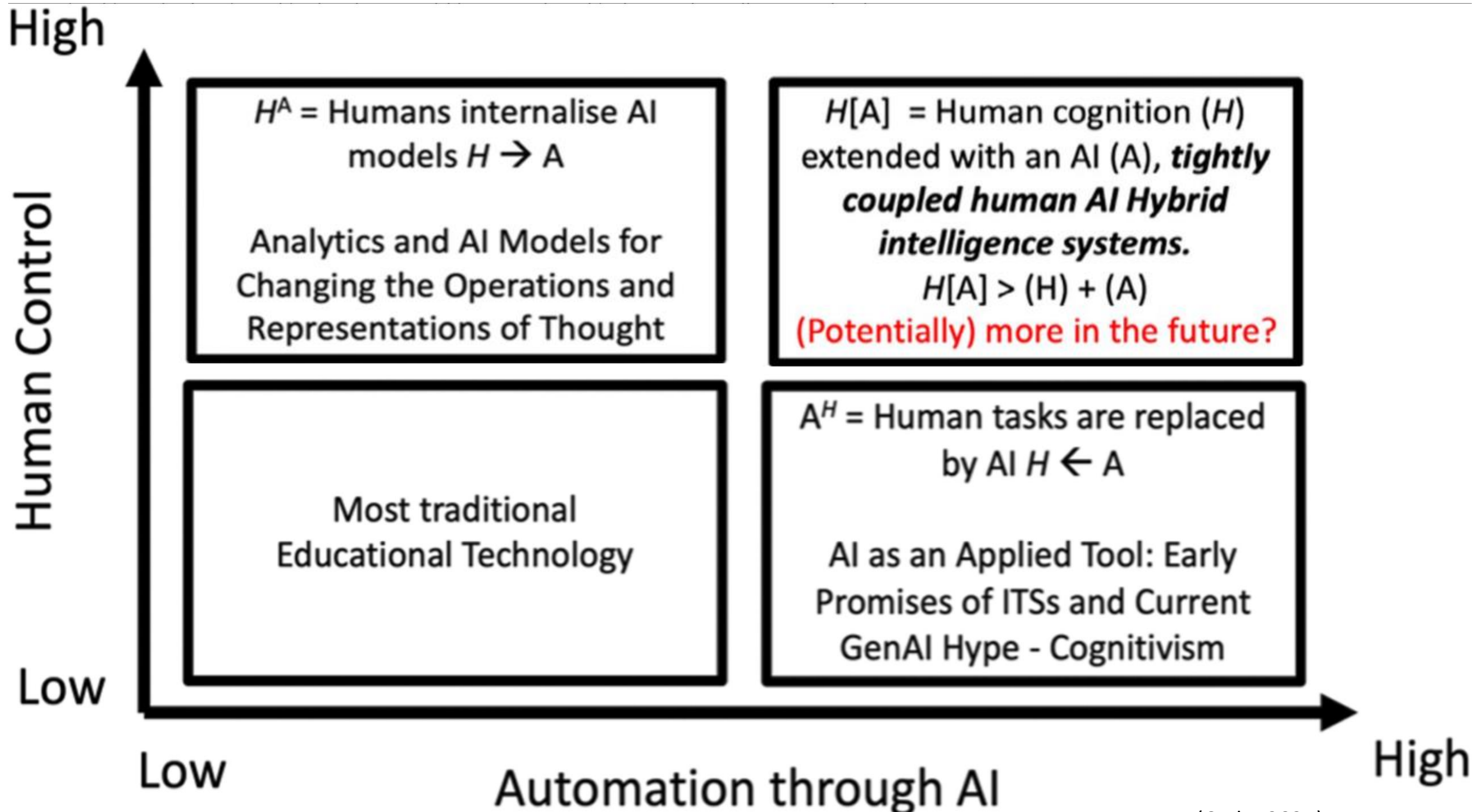
“

product-oriented task
performance

versus

process-oriented task
performance

”



Theoretical Foundations

Distributed Cognition

Thinking spans individuals, artefacts, and environments. AI systems become integral components of the cognitive system.

Extended Mind Theory

Tools become part of cognitive architecture when they reliably support human capacities, reorganizing activity structure.

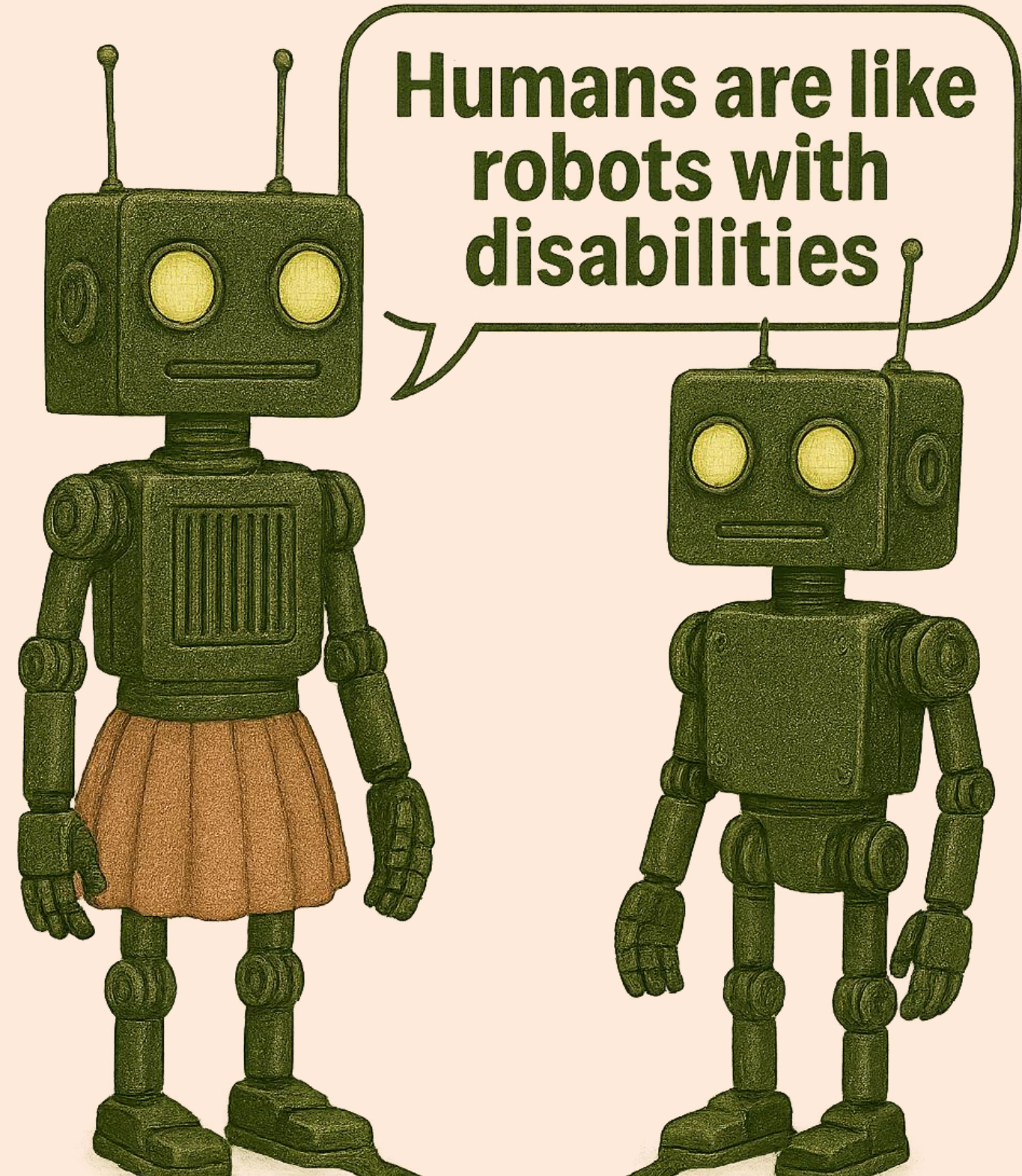
Hybrid Intelligence

Systems where humans and AI collaborate to achieve results neither could accomplish alone through complementary strengths.

Epistemic Agency

Learners' capacity to take responsibility for advancing knowledge, evaluating information, and shaping inquiry direction.

The Future is HYBRID



Designing Materials For:

Shared Scenario

- Young adult learners
- B1–B2 proficiency
- Preparing for university study
- Regular access to generative AI tools

Task Objective:

Learners prepare and deliver a persuasive presentation on a contemporary social issue.

Where Should the Work Happen?

Mapping Task Stages to Learning Support Models

1. Choosing a topic

Learner-led decision-making for topic selection.

2. Generating initial ideas

A hybrid approach combining learner input with AI assistance.

3. Researching supporting information

AI-supported research to gather relevant data.

4. Identifying useful vocabulary and phrases

AI assistance for language acquisition
And refinement.

5. Structuring arguments

Hybrid model for organizing thoughts and evidence.

6. Anticipating counterarguments

Engaging in critical thinking with mixed learner and AI support.

7. Drafting presentation notes

AI-supported creation of presentation outlines and content.

8. Rehearsing pronunciation and fluency

AI tools for practicing speech and articulation.

9. Receiving feedback

Learner-led evaluation and peer review.

10. Revising the presentation

Iterative improvement through a hybrid approach.

11. Delivering the presentation

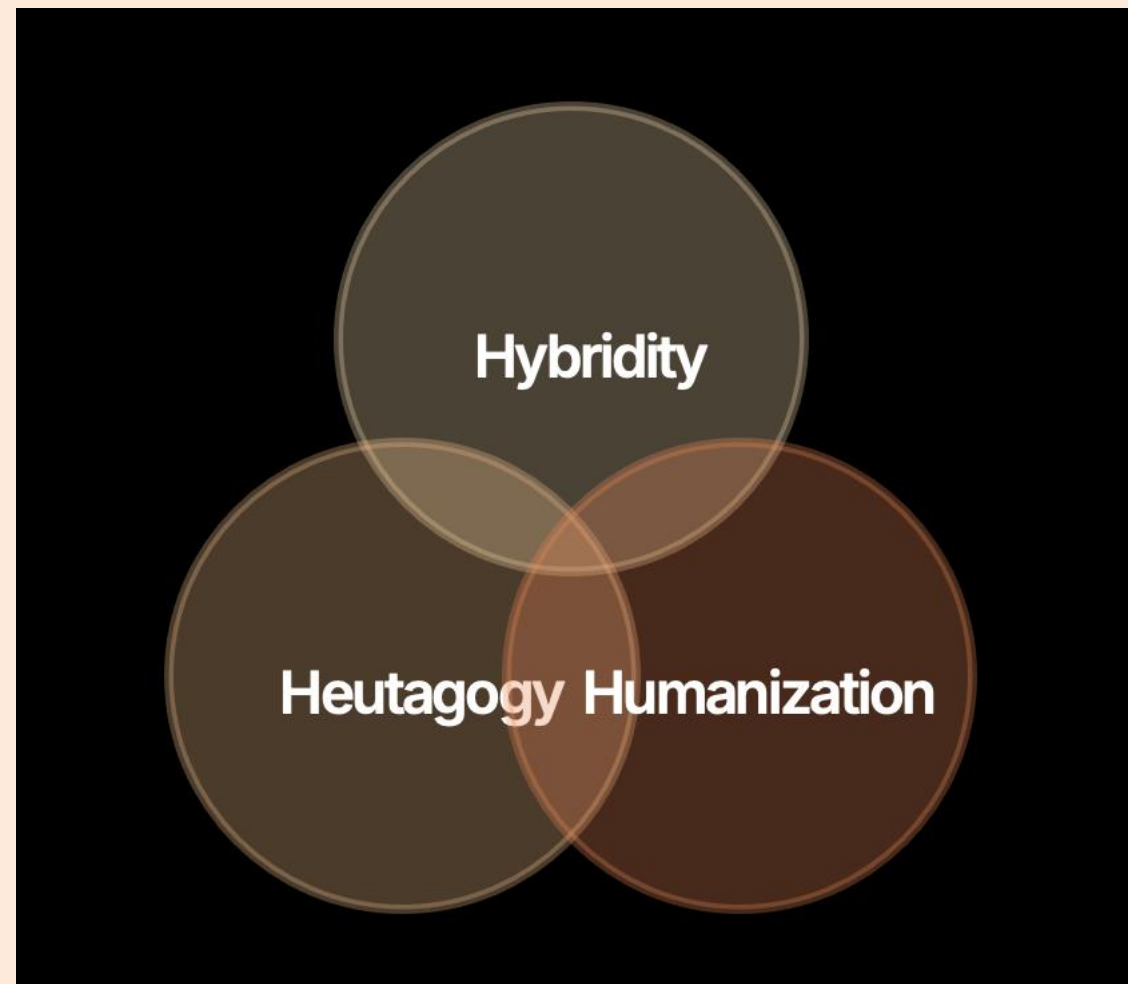
Learner-led performance and communication.

12. Reflecting on strengths and weaknesses afterwards

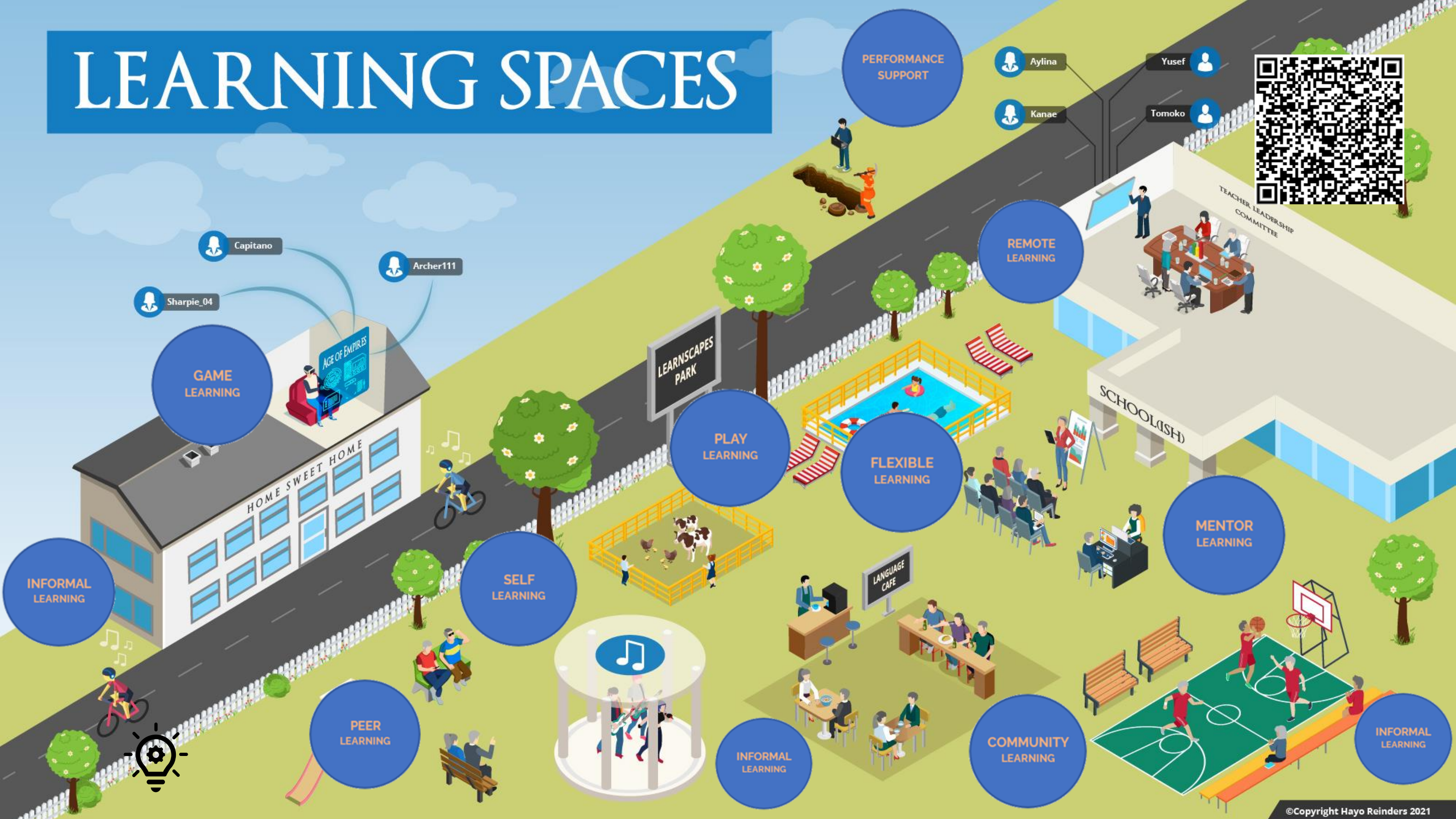
Learner-led self-assessment and analysis.

If AI is used, how can materials also help learners become more capable, independent, and critical users of AI?
How do learners evaluate AI outputs? Where should struggle, interpretation, or interaction remain learner-driven?

HEUTAGOGY



LEARNING SPACES



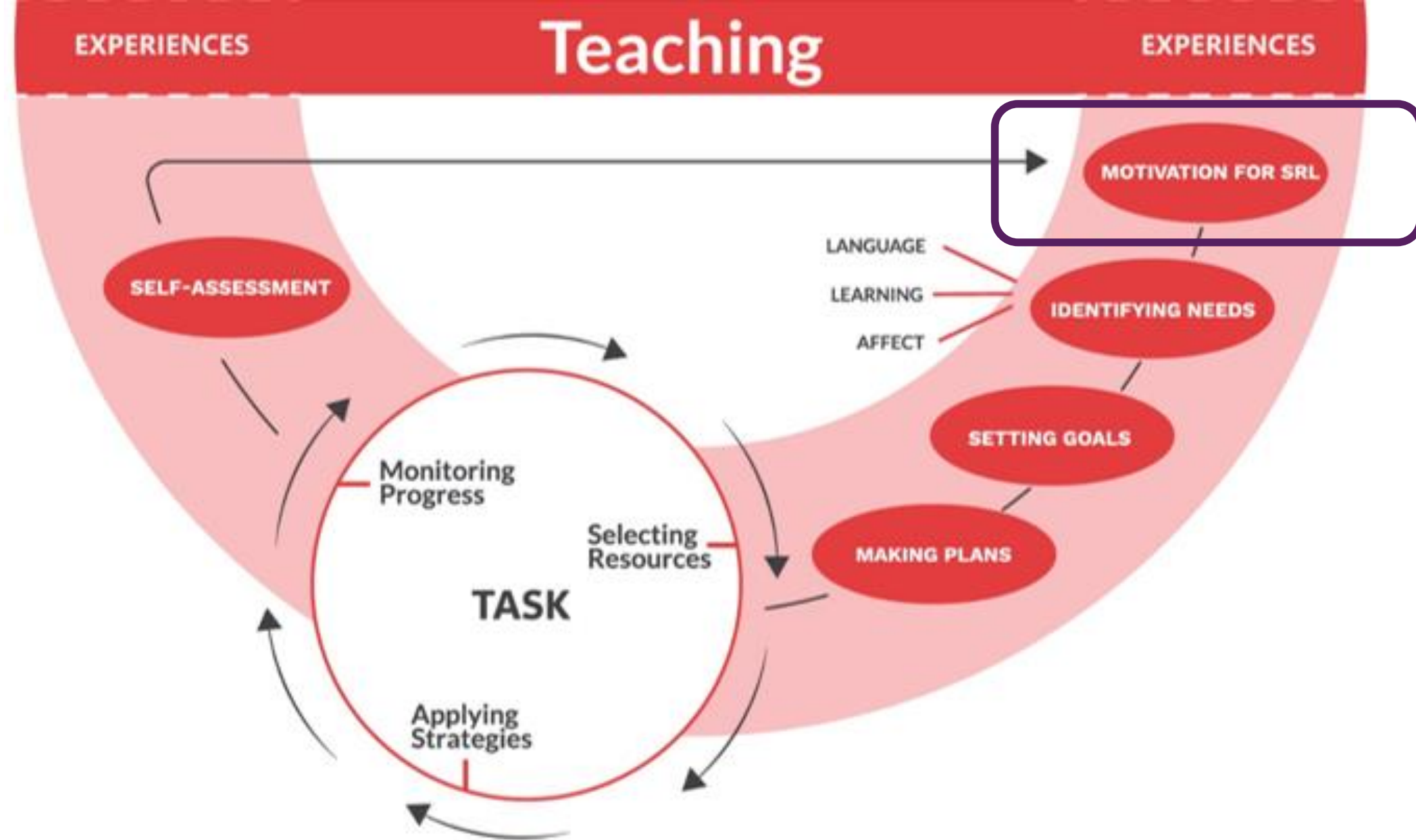


70%-80%

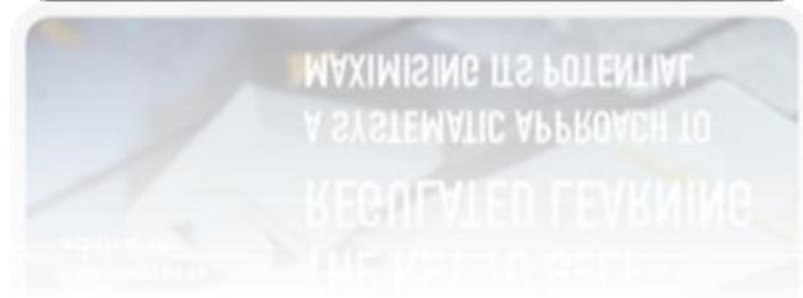
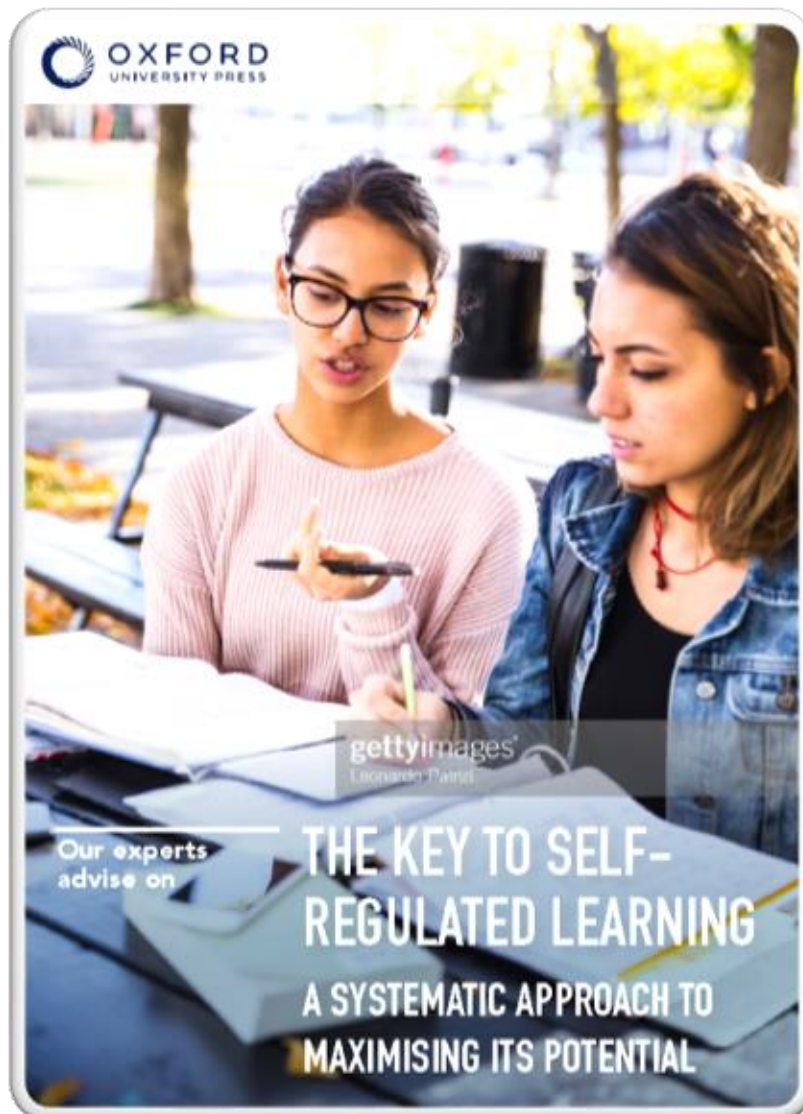
**OF ADULT LEARNING
TAKES PLACE OUTSIDE OF FORMAL
EDUCATION (CROSS, 2001)**



LIFELONG
+
LIFEWIDE



6 steps to self-regulation



CONTEXT

The Changing Landscape of Learning

Traditional SRL

Self-regulated learning positioned learners as autonomous agents who plan, monitor, and evaluate their own learning independently.

Today's Reality

AI systems now generate feedback, suggest resources, predict performance, and shape attention patterns. Regulation is distributed across human and technological partners.

THE NEED FOR A NEW MODEL

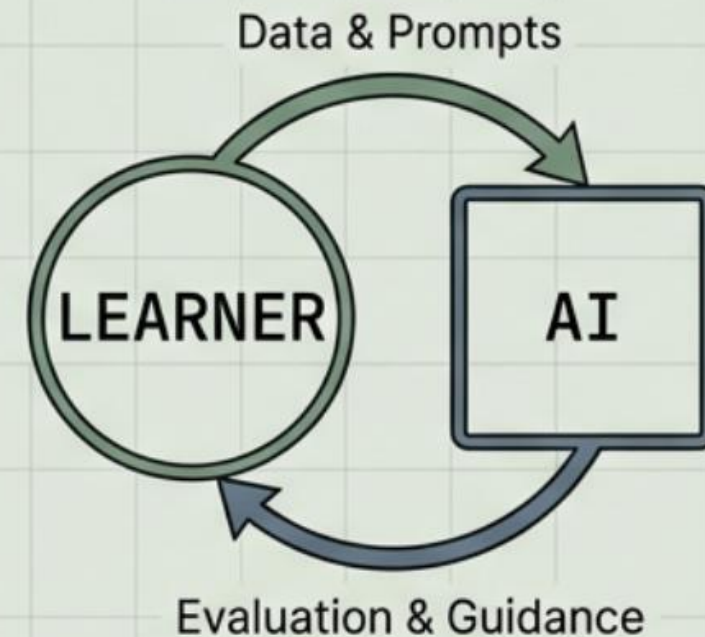
Self-Regulated Learning (SRL) vs. Hybrid-Regulated Learning (HRL)

SRL (Traditional)

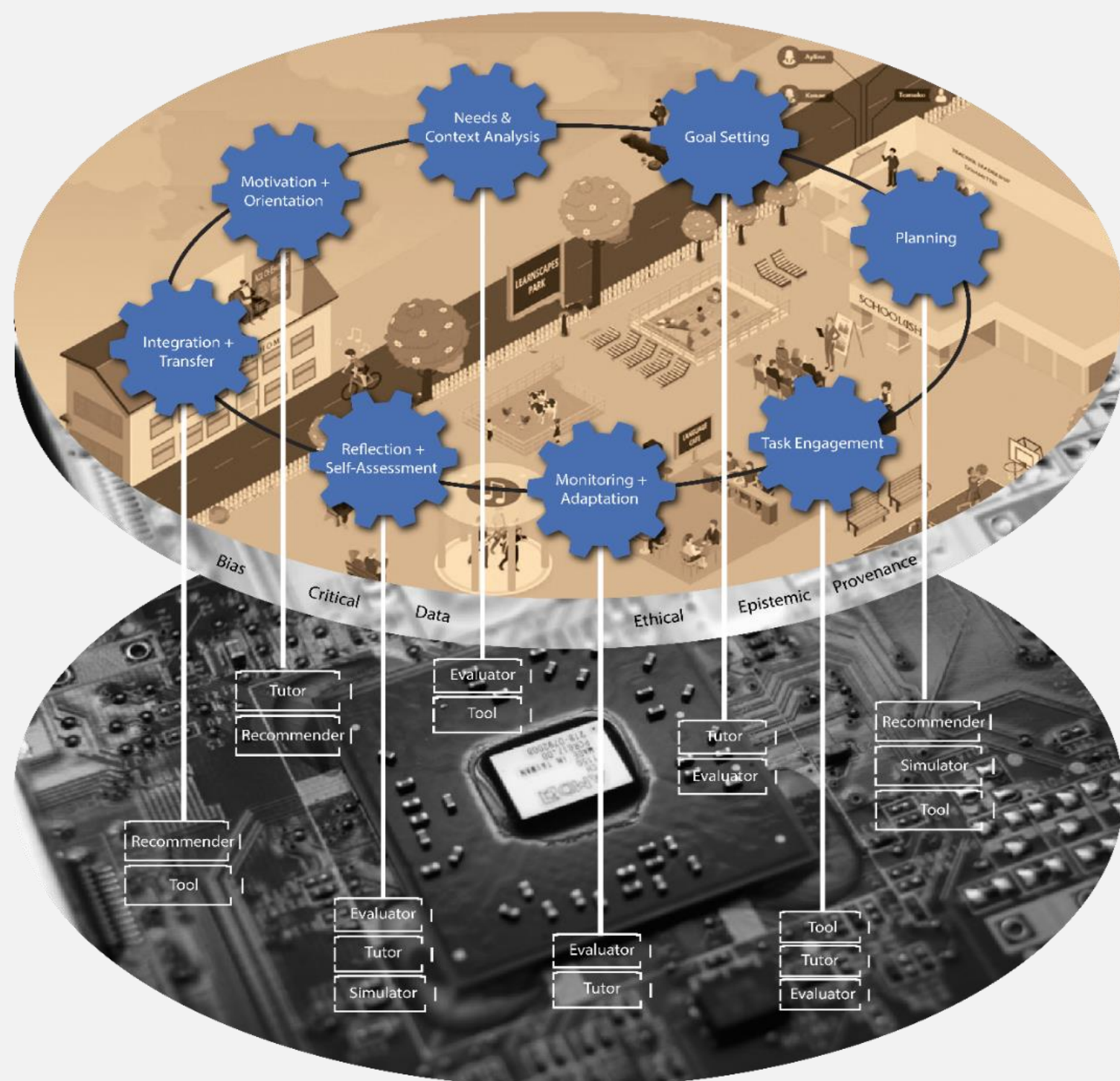


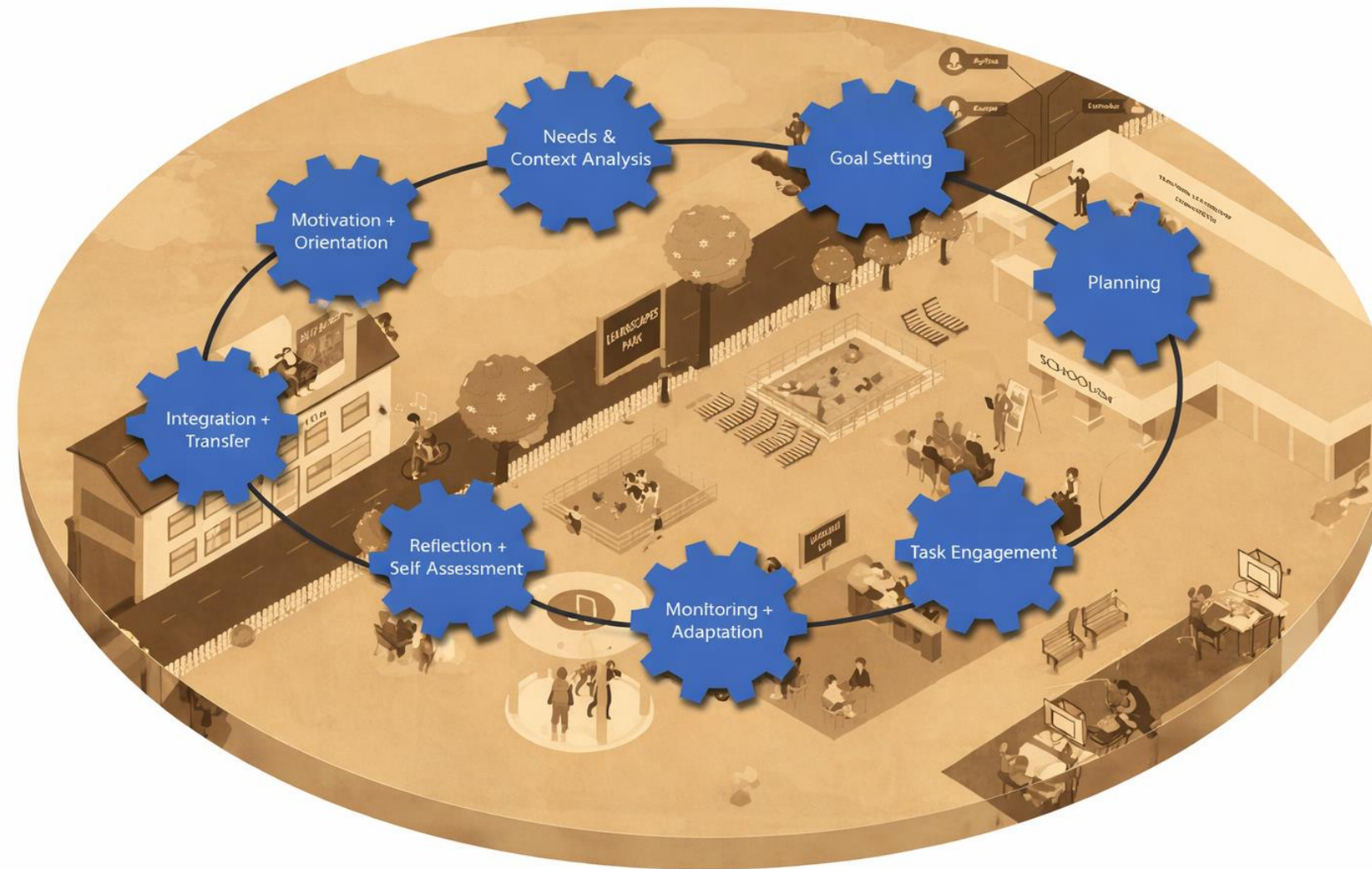
- **Locus of Control:**
Internal / Learner-Centered
- **Role of Tech:**
Passive Aid
(Storage, Display)
- **Regulation:**
Learner plans, monitors, evaluates alone

HRL (Hybrid)

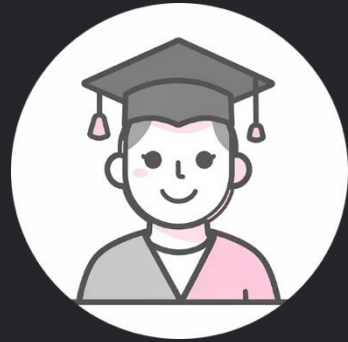


- **Locus of Control:**
Distributed / Partnership-Centered
- **Role of Tech:**
Active Agent (Tutor, Evaluator, Simulator)
- **Regulation:**
Co-regulation. Algorithms influence attention and interpret success.



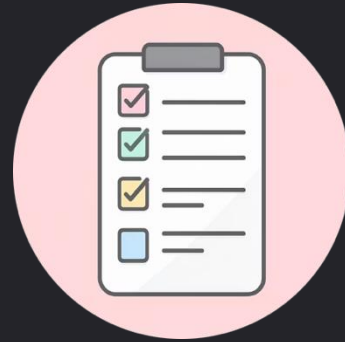


AI Roles in Learning



Tutor

Provides adaptive guidance, questioning, and scaffolding to support metacognitive and motivational regulation.



Evaluator

Delivers feedback and performance judgments, diagnosing strengths and weaknesses to shape learner self-perception.



Recommender

Curates resources and suggests learning pathways based on learner data and preferences.



Simulator

Enables experimentation by allowing learners to model, test, and visualize complex systems safely.



Tool

Amplifies cognition by automating tasks like writing, translation, or computation.

Four Critical Literacies



Provenance

Tracing information origins and judging credibility

Bias

Recognizing embedded assumptions in algorithms

Epistemic

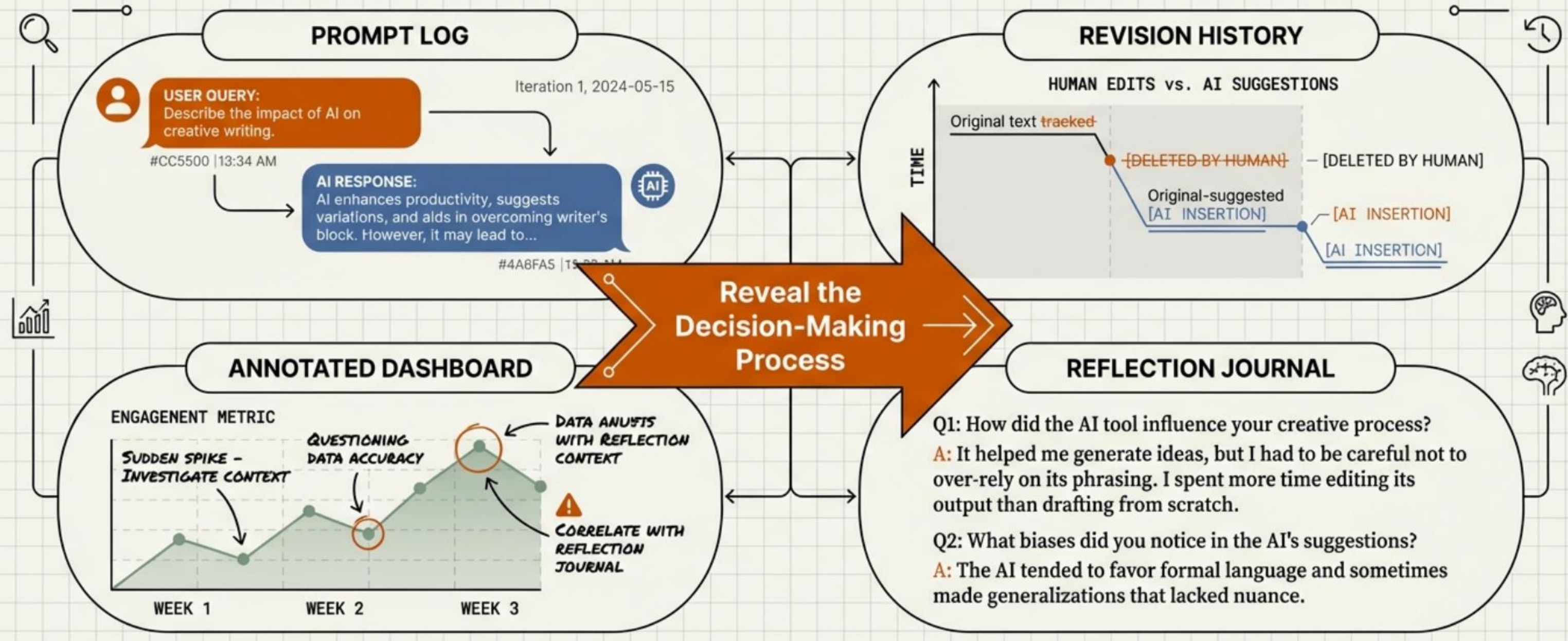
Understanding knowledge generation in human-AI collaboration

Ethical

Evaluating implications for privacy, authorship, and responsibility

Visibility: Making Hybrid Learning Observable

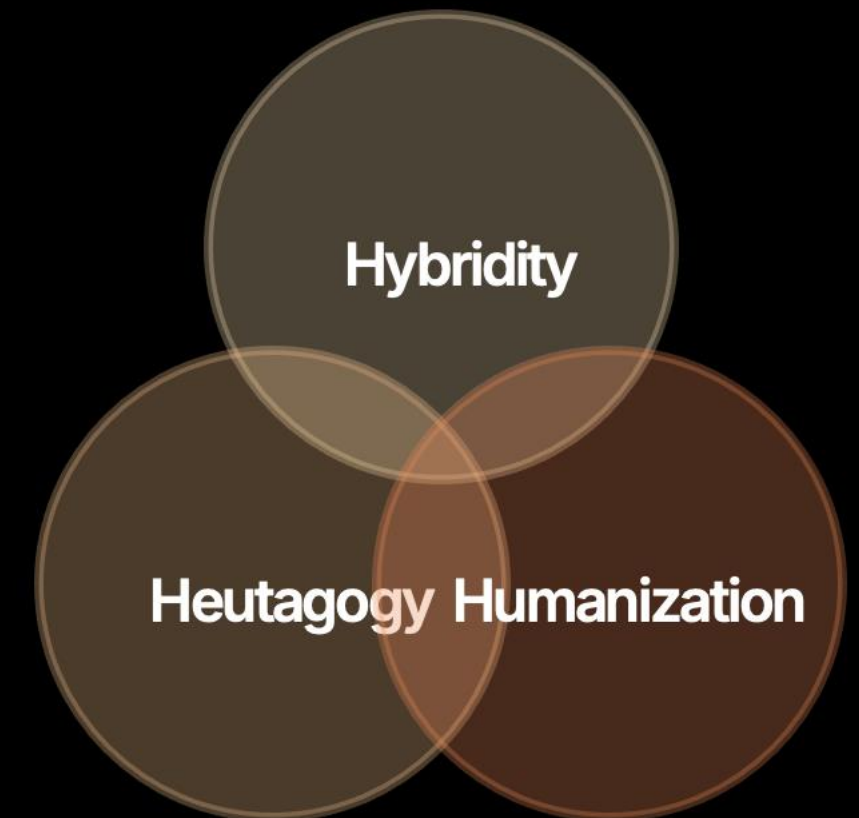
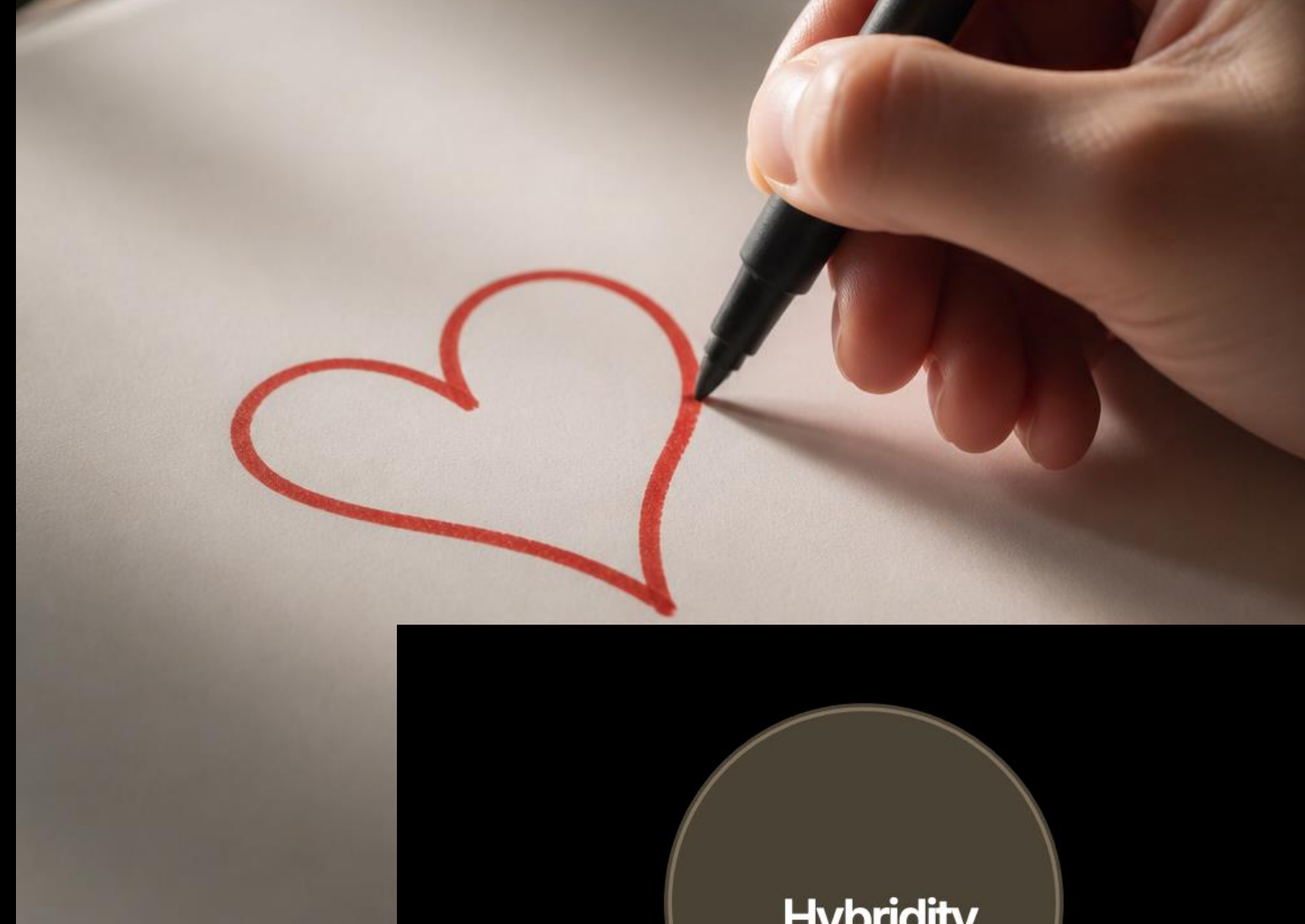
Assessment must shift from the final product to the artifacts of the process.



Key Human Dimensions

Humanization

- Identity: Our unique sense of self and personal narrative.
- Interpretation: The subjective understanding and meaning-making process.
- Ambiguity: The ability to navigate and embrace uncertainty and nuance.
- Emotion: The spectrum of feelings and their expression.
- Interpersonal Communication: The rich, multi-layered exchange between individuals.



How do we develop learning experiences that foreground learner wellbeing ?



Key Considerations

Humanization: What Should Remain Complex, Interpretive, or Ambiguous?

As AI increasingly optimizes communication for fluency and efficiency, ambiguity, interpretation, and interpersonal complexity may become more pedagogically valuable, not less.

- Human-centered design is about intentionally designing meaningful communicative experiences.
- The Value of Complexity: Ambiguity and interpretation foster critical thinking, problem-solving, and deeper engagement, moving beyond simple comprehension.
- AI vs. Human Nuance: While AI excels at efficiency, human communication thrives on nuance, context, emotional intelligence, and subjective experiences.
- Pedagogical Imperative: Intentionally designing for complexity helps learners develop robust communicative skills that AI cannot replicate, ensuring meaningful learning.

Design Tensions in AI-era ELT

Balancing AI's potential with pedagogical goals



Optimization vs. Exploration

Balancing AI's efficiency for targeted practice with the need for learners to explore language freely.



Instant Clarification vs. Productive Ambiguity

Deciding whether AI should immediately resolve uncertainties or allow for ambiguity that fosters deeper processing.



Individualized Support vs. Collaborative Meaning-Making

Weighing personalized AI feedback against the value of peer interaction and shared understanding.



Polished Output vs. Emergent Communication

Navigating the desire for perfect output versus the authentic, organic nature of human communication.



Prediction vs. Surprise

Determining if AI should predict learner needs or introduce novel language to challenge them.



Fluency vs. Interpretation

Focusing on smooth language use versus the deeper cognitive process of understanding meaning and context.



Efficiency vs. Reflection

Achieving rapid learning gains through AI versus creating space for learners to reflect on their process.

Principles for Thoughtful Transformation



Design for Orchestration, Not Replacement

Integrate new tools and processes to enhance existing ones, rather than aiming for a complete overhaul.



Use AI to Expand Possibilities

Leverage AI to open new avenues and enhance decision-making, not just to automate or eliminate human judgment.



Preserve Communicative Complexity, Interpretation, and Negotiation

Maintain the richness of human interaction, including nuanced communication, interpretation, and collaborative problem-solving.



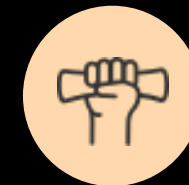
Preserve Learner Agency and Visible Thinking

Ensure individuals have control over their learning and that their thought processes are observable and valued.



Build Reflection and Evaluation into AI-Supported Learning

Integrate opportunities for critical thinking, self-assessment, and evaluation within AI-driven learning environments.



Design Learning Experiences, Not Just Efficient Task Completion

Create holistic and engaging learning journeys that foster deep understanding and growth, rather than focusing solely on optimizing task execution.

Beautiful Final Slide

(www.innovationinteaching.org)



innovationinteaching.org



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Why do we need assessment when increasingly we know exactly what everyone is doing at any moment in time?

A Research Agenda for Hybrid Autonomy

Negotiating Control

When do learners accept vs. reject AI advice? (Log analysis).



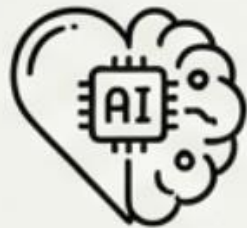
Long-term Cognition

Does reliance lead to atrophy or scaffolding? (Longitudinal studies).



Affective Impact

How does partnership change anxiety and confidence?



Measuring HRL

Developing metrics for “shared agency” beyond self-reports.

