

'On EU Education, Research & Innovation (ERI) – Towards An Enhanced Strategic Framework, Humane Technology and Social-Cultural Resilience'¹

Dr. Robert E. Wendrich

Rawshaping Technology Research & Innovation, the Netherlands

rawshaping.com | robert@rawshaping.com | <https://orcid.org/0000-0001-6770-6639>

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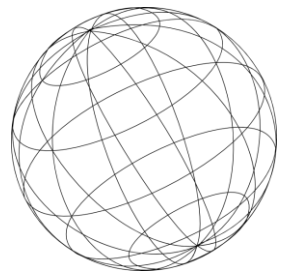
16:15 - Session 2 | Cluster 4: Digital Technologies

¹ [2000]: https://www.europarl.europa.eu/summits/lis1_en.htm

The European Union (EU) has likely acknowledged the importance of a strong strategic framework for education, research, and innovation (ERI). Such a framework would aim to enhance Europe's competitiveness in the global economy, while fostering an environment conducive to cutting-edge research, technological advancements, and innovation.

➤ **Targeted Subsidies and [EU] State-Driven Innovation & Scientific Research**

- The EU's ERI framework should be continuously updated to address emerging challenges and opportunities, with a clear focus on ethical innovation and technological empowerment.
- Ensuring humane technology is vital to avoid exacerbating social inequalities or contributing to harmful technological practices.
- A focus on social-cultural resilience is crucial for preparing Europe to navigate future disruptions, be they technological, economic, or environmental, while maintaining a cohesive, just society.



The immediate objects of the perception of our senses are merely particular states induced in the nerves. People are constantly tormented by **the lack of knowledge**.

Believe in the story (*like absurd ideas*), not because it is true, but it *creates a new social bond* (*e.g., farmers defense force, fake news groups, climate denial, ...*).

Radical Change:

Education (e.g., NeXtGenEU) + Health & Well-Fare (i.e., Preventive/Personalized) + Innovation & Science Driven (i.e. Governmental Investments | Wealth Distribution)

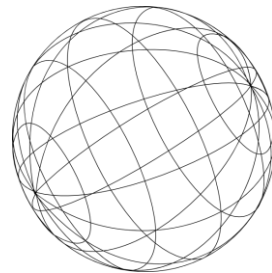
Core competencies <> Self-Awareness <> Self-Management <> Responsible Decision Making <> Social Awareness <> Relationship Skills

- Change (Big Change) requires bold thinking. Transformations require consistent, sustainable change – to be implemented every day, one step at a time, with our own personal circumstances and limitations in mind.
- One never changes anything by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.*
- The young generation of the current society has proven to be very “impatient” since they mostly use social media.**
- The most important part of learning is forgetting. (e.g.: Opposite to Rote Learning). [Dopamine and serotonin work in opposition to shape learning]
- The very structure of social media encourages polarization.

➤ The transformational dynamic potential of **XRTs** imbued with meaningful, awe-inspiring and informed relevant **XRxs** could lead to novel fundamental communicative dimensions, simultaneously creating alternatives and **topsy-turvy revelations**.

References:

http://oro.open.ac.uk/30159/1/Entrepreneurial_State_-_web.pdf
<https://www.wipo.int/publications/en/details.jsp?id=4759>
<https://www.sciencedirect.com/topics/social-sciences/metacognitive-experience>
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<https://learningportal.iiep.unesco.org/en/issue-briefs/improve-learning>



* R. Buckminster Fuller: Operating Manual for Spaceship Earth (1969)

**Effective attention to learn/work for approximately 8-12 minutes.

Topics | Trending Topics

Human in the Loop in AI & ML | Hybrid & Hybridity Systems & Tools
Virtual | Extended Reality and Serious Gaming for Educational, Training, Medical Applications
Control (i.e. human/hybrid) for Autonomous Robots towards High-level- and Tele-robot Control
Assistive Technology and Tool Systems: Tele-manipulation, HCI, AI and “Smart Systems”
Innovation for Public Procurement Systems to Ensure Long-term Sustainable and Inclusive Growth

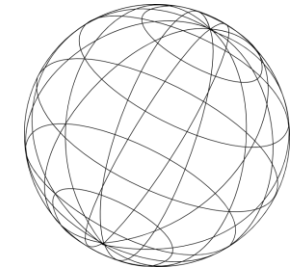
Fields of Complex Systems:

Human & Humane Aspects
Cognitive and Emotional Engineering
Personalized Ubiquitous-, Pervasive- and Cyber-Physical Systems, Robotics, AI/ML
Modeling, Simulation, Information Technology & Processing, Competitive Engineering Education
Advanced Educational and Training Systems
Blended Education, Life-Long Learning
AI & Machine Learning in Personalized Education + Health & Well-Being [Teaching and Learning]

HYBRID MIXED EXTENDED REALISM & EXPERIENCES | Human – Non-Human – More-Than-Human

- **XRTs:** good tools, systems and technologies have the capability to empower and engage human beings. “Noise” is always already part of the signal; blindness (*blindspots*) inescapably accompanies vision.
- **Metacognitive skills**—planning, monitoring, and evaluating learning processes—are pivotal in modern education. These skills foster self-directed learners, equipping them to adapt to challenges in traditional, online, and lifelong learning contexts.

Extended Reality Tools (XRTs)
Extended Reality Experiences (XRxs)
Extended Reality Contextual Awareness (XRCAs)



- ✓ Metacognition supports critical competencies like communication, collaboration, and problem-solving. Innovative approaches, including project-based learning, digital tools, and teacher training programs, are reshaping how metacognition is taught.
- ✓ AI further enhances these efforts by providing personalized feedback and enabling students to manage their learning paths.

Framework inner-, outer- and shared world of ideas: 'Mind's Eye.' - Future Meta-Cognition:

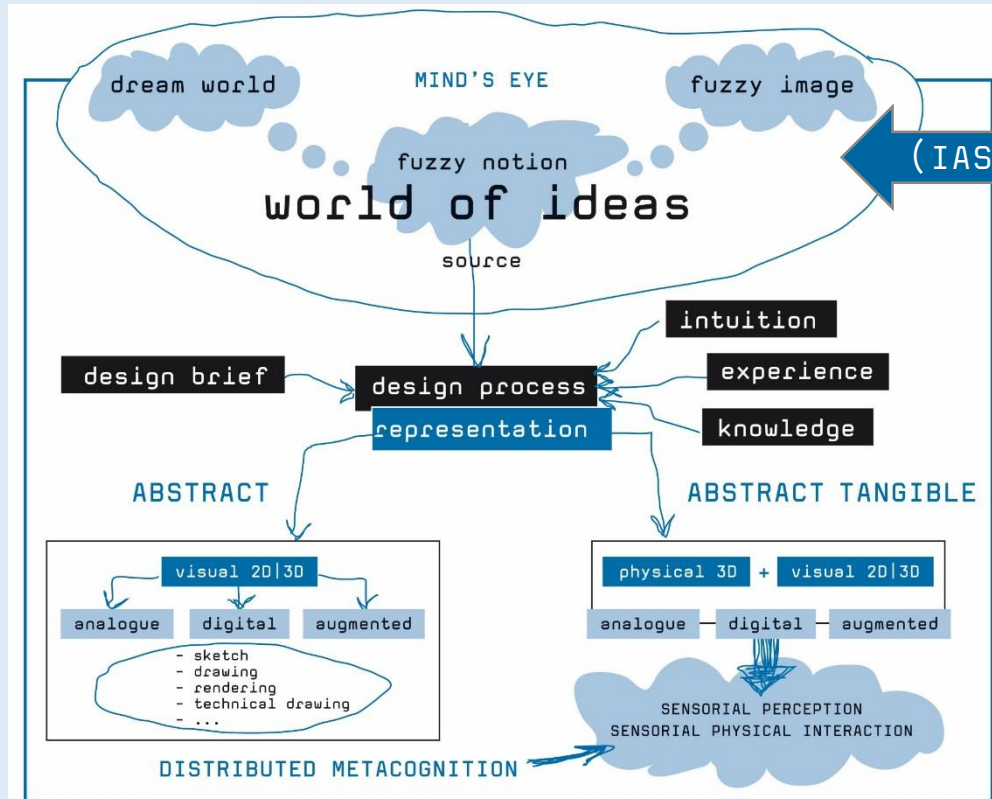
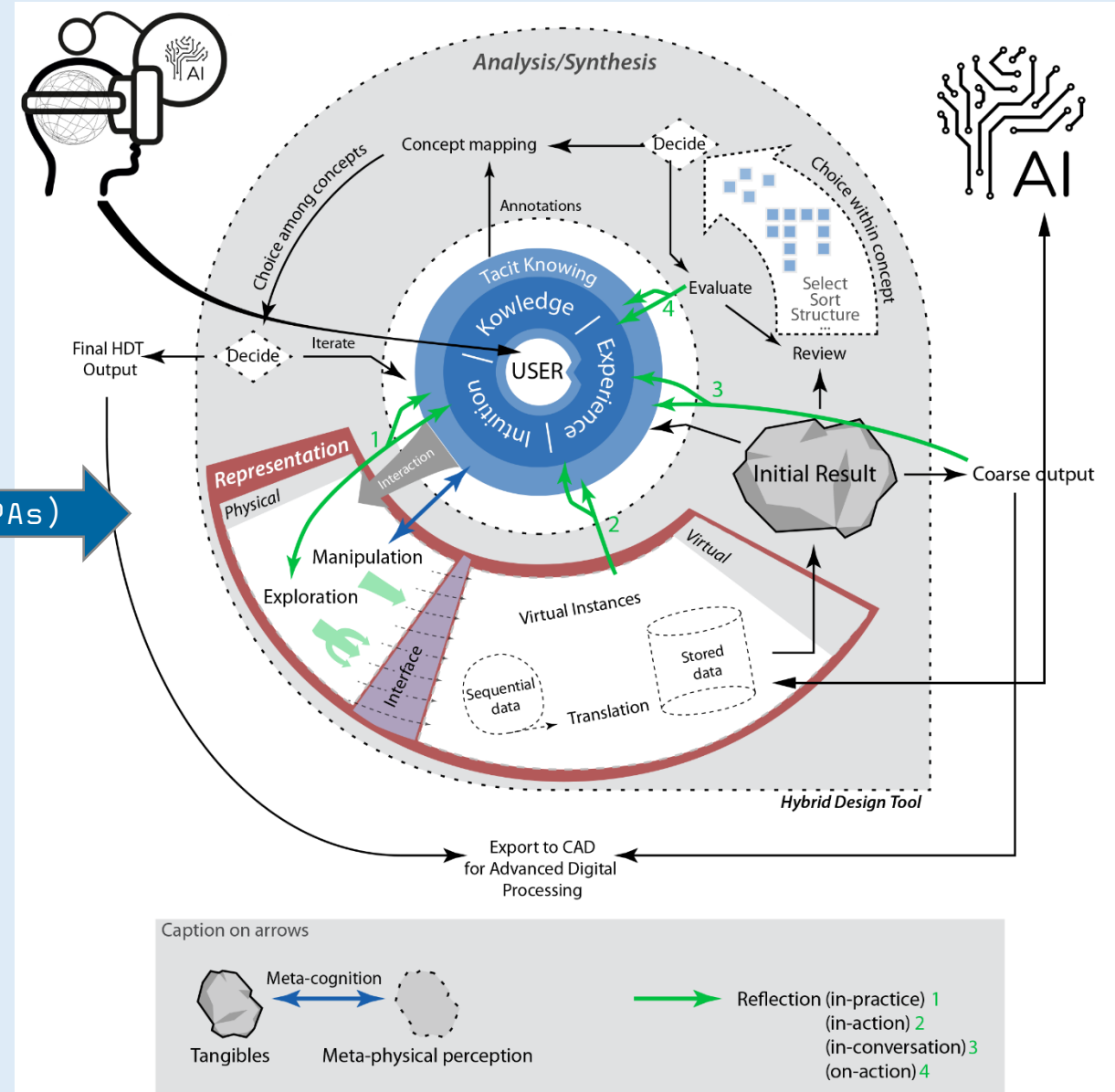
Frame | Idea

Perception of the world of objects essentially as separated from the world of minds.

Hybridity Is Key!

This makes it possible for people to envision soulless bodies and bodiless souls.

Intelligent virtual assistants (IAS) or Intelligent personal assistants (IPAs)



Scientific, Academic, Industry and Technological Expertise & Partnerships Sought:

[e.g., France; UK; Romania; Poland; Portugal; Sweden; Italy; Ukraine; Finland; Ireland; Spain; Scotland; Netherlands...etc.]

- Participation in multiple consortia from FP7; FET; FoF; H2020; Horizon Europe: RIA and IA proposals and projects.
(i.e., GaLA; BEACONING; BlueAware; E-United; Elane; TACIT; TagME; X-Aware; LEAP, etc.)

Thank You For Your Attention!

- A variety and/or blend of Partners sought from Education (higher/vocational); Social-Cultural Sciences; Industry; Academia and Citizen Science (for example):



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