

AI: A New Technology Tool Addition to "Who We Are"

(Emergent Technologies, Enduring Values)

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Introduction: Evolution of “Us”

- A fast-forward history of "*Who we are*": From *what we wear* ("the suit makes the man") to the *tools we use* to perform our jobs.
- **Agriculture Analogy:** We moved from hard physical labor to the *GPS-automated combine* (Fig.).
- We shifted from "*doing the hard work*" to "*supervising the process*"



Evolution of Tools ...

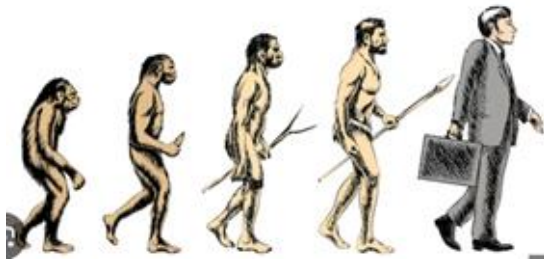
- **Evolution:** Horses -> Wheel -> Vehicles -> PCs -> Internet-> **AI & Quantum Computers**⁵.



...



- **Theme:** These tools allow "Homo Sapiens" to transform to the "next level".



Part I: AI & QC

“Natural” vs. “Artificial”

The 21st Century Scientific Super-Revolution

- We are living through three simultaneous revolutions¹:
 - 1.Quantum Computing (QC):** More impactful than Internet and AI combined².
 - 2.Artificial Intelligence (AI):** The focus of today's talk.
 - 3.Gravity Control Technology:** Emergent "baby phase" (see [LMI work](#)).
- **Key Takeaway:** These technologies converge to transform how we process reality.

What is AI? (The Core Analogy)

- **Natural Intelligence (Ages 0-7):**
 - . Uses networking, parallel processing, and "Quantum Logic" (superpositions).
 - . Organizes massive data into reductions (Large Language Models of experience).
- **"Programmed Education" (K-12 & beyond 16-20-24):**
 - . Focuses on "compiling" data into specialized languages.
 - . Uses Classical Logic (Yes/No, True/False) for

AI as Artificially Made *Natural Intelligence!*

- **Definition:** AI is essentially "Artificially Made Natural Intelligence".
- **Complementary Roles:**
 - **AI's Role:** Projects, reduces, and structures DATA (Quantum/Probabilistic).
 - **Our Role:** We apply Classical Logic (Yes/No) to the structured data.
- **Mathematics:** This is the "Math Code for the Brain" that formalizes these foundations.

From Algorithmic to Conceptual

- **The Shift:** AI allows us to move from "computational/algorithmic learning" to a "conceptual approach".
- **Aligning with Nature:**
 - . Arts (Music, Literature) have always used this "Quantum Thinking".
 - . Science can now adopt these norms via AI.
 - . We stop being "calculators" and start being "composers" of information.

Concrete Examples: Professional Productivity

- **Administrative Tasks:**
 - . Evaluation/Productivity Reports (e.g., DFSC).
 - . AI helps structure and draft, increasing speed on non-creative tasks.
- **Research & Development:**
 - . The "Researcher-AI Tandem".
 - . **Analogy:** Research without AI is like riding a bike with one pedal.
 - . **Zoom AI Summaries:** Excellent tools for both instructors and students.

Concrete Examples: Student Learning

- **Homework & Problem Solving:**
 - . Computational aspects handled by CAS (Mathematica, MatLab, R).
- **The New Student Role:**
 - . The Student becomes a **Manager of Resources**.
 - . **Driving Analogy:** The student shifts gears and steers; the tool provides the power.
 - . Focus shifts to strategy rather than mechanics.

Perspectives: The "Truck Driver" Analogy

(AI liked it! Proposed speaker notes for it :)

- **The Current State:**
 - . We often ban calculators/AI at tests.
 - . This forces focus on "low-level Math" and limits conceptual depth.
- **The Analogy:**
 - . "Comparing it to Truck Drivers trained to run a 5K...".
 - . We should train them to drive the truck (use the tool), not run the race physically.
- **AI Interfaces:** Increase our performance "in/for Society".

The Future: Quantum Education

- **Integrating the Future:**

- . Quantum Physics and Computing will transform the Job Market.
- . "Quantum Thinking" is ubiquitous in Education, Services, and Politics.

- **Integration:**

- . We must integrate AI as a personal tool.
- . AI performs "Quantum Thinking" (networking/probability) for free.

Conclusion: Homo Universalis

- **The Transformation:**
 - From "Homo Sapiens" (Wise Human) -> **Homo Universalis.**
 - Not a Cyborg, but correlated with Society and Humanity as a whole.
- **The Personal Coach:**
 - AI emerges as a personalized teacher-coach.
 - An extension of who we will become.
- **Final Thought:** It is like a "heart transplant"—difficult, but vital.

Part II: Integrating AI

- From Writing to Explaining and Teaching
- *Learning How to Teach* from Building AI

Impact of “*generative*” AI in *writing* classrooms

- Levels of AI: Narrow (ANI), General (AGI) and Super (ASI)
- Generative AI generates new context (Similar to automated proof): It is Narrow type of AI, like ChatGPT, Midjourney, GitHub Copilot
- I use Gemini 3.0 as Assistant R&D Collaborator, which is highly advanced ANI.
- The work formula “**Faculty/Student with Calculator/Computer**” has already evolved to “**Human & AI Super-Team**”; AI enhances professional and intellectual performance, whether it is a student or teacher, researcher etc..

Integrating Generative AI & Beyond

- There is extensive work regarding *integration of generative AI in writing classrooms* (e.g. L. Dumin work etc.).
- The next step is to advance beyond “writing”, which is “off-line” & asynchronous, to “speaking” (Live performance), on top of the writing assignment. We can use AI recording & summary, together with AI assessment of resulting “summaries” to automate the grading process.
- Recall: ancient Greeks used to say “*No Orator without Geometry*”, i.e. teaching student how to *prove formal statements* (Math framework) and how to Program Computers (Software Design) is for students a form of conceptual training and thinking that *integrates both scientific rigor and flexibility of writing classrooms*.

Part III: Conclusions

It's NOT about AI!

It's rather about **HOW TO BUILD AI!**

AI is Artificially Created *Natural Intelligence!*

- Computer Scientists develop AI by replicating the way Natural Intelligence develops:

Young children's minds development
process:

Large DATA -> Large Language Models

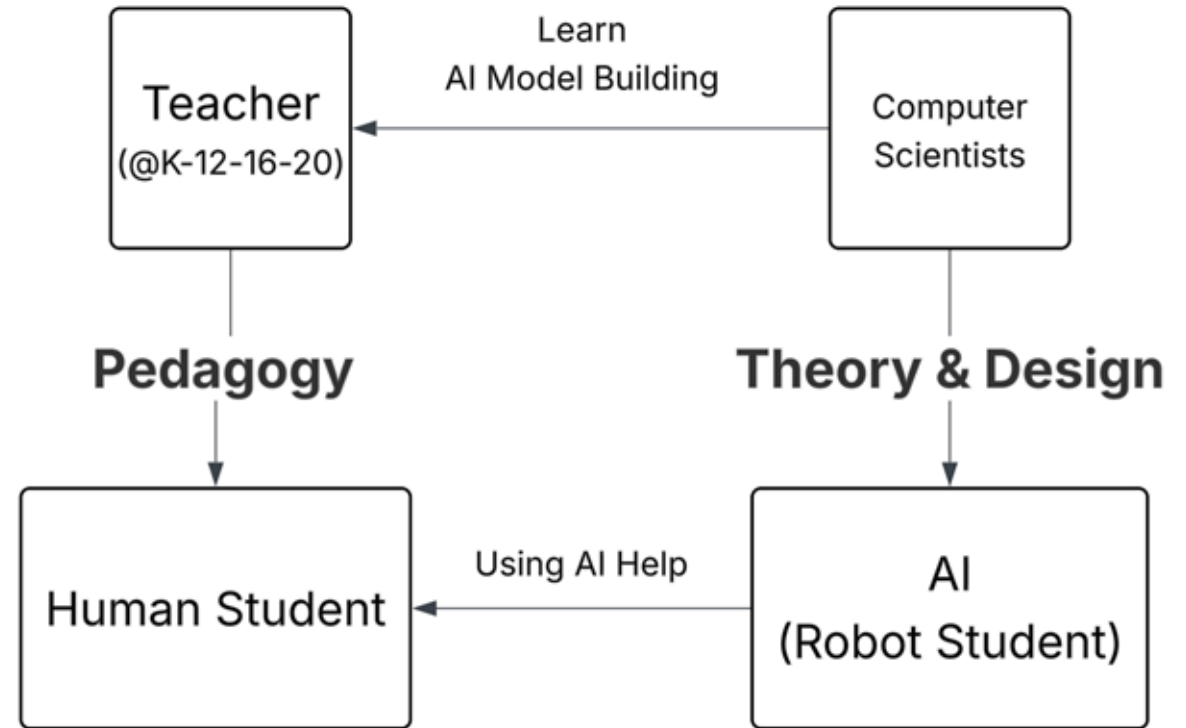
- Exposure to Quantum Logic, Quantum Computing and Quantum Education is by now mandatory for understanding the relation between Natural / Quantum and Artificial/ Classical.
Goal: integration of AI/QC and advancement of Education System.

Using AI is the “tip of the iceberg” ...

- The main lesson for US Teachers, from “*AI emulates thinking*”, is:

**“HOW DO THEY
(Computer Scientists)
DO IT?”**

- Let us, Faculty/Teachers, LEARN from CS and improve OUR PEDAGOGY, to build “Natural Intelligence” into our Students!



Roughly speaking ...

- The fastest way to “force” us (Teachers) improve “What & How to Teach”, is to let them use Calculators and AI: if students can achieve / complete assignments using such “modern”, yet ubiquitous tools, then it is FINE! ... *Find some more challenging tasks to give them* 😊
- ... and add on to “off-line & async” writing assignments LIVE performances: speaking, presenting, teaching, debating etc.
- ... while giving “Home work” where students can use what everybody already has access to: AI & iPhone, the Web ...

Questions & Discussion

- Thank you!
- Lucian M. Ionescu
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Supplements

- AI Bloopers
- Bibliography

AI Bloopers!?

- The SandBox solution: AI converted Python code for my presentation into PowerPoint format ... but the “Download” link didn’t work ...
- But the follow-up solutions worked (almost!):
 - 1) MS Word Outline -> PPP & ”discovery” that docx & pdf won’t work; rtf format needed ... & parsing limitations ...)
 - 2) Google Collaboration: Python -> PPP worked fine!
- Outcomes: A) during the AI collaboration I have learned TWO valuable tools! B) That was an interesting and entertaining experience!! (“Work” become “fun” too :).

Bibliography

- 1) L. M. Ionescu, “ Episodes of Scientific Revolutions: Past, Present and Future“, 66th *Midwest JUNTO for the History of Science*, March 2025.
- 2) See YT somewhere on the web 😊 - see [First Movers](#) video.
- 3) About Quantum Computing and Quantum Physics:
[L.M.I.@ISU](#)
- 4) About [Gravity Control Technology](#) (if interested).
- 5) How [QC Revolution > AI + Internet combined](#) & how everything will become “Quantum” (Including Education): Midwest Quantum Week event, Nov. 2025.