

Session 4.

Personal Collaborative Critical Praxis (PCCP) – partnership working with Large Language Models

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Session objectives

- Introduce concept of the **Human Intellect-Machine Intelligence (HI-MI) relationship**
- Understand stages of the HI-MI dialectical relationship to produce **Collaborative HI-MI Intelligence**
- Elaborate six elements of **Personal Collaborative Critical Practice (PCCP)**
- Identify types of **Human-Machine dialogue engineering**
- Develop concept of **Rapid Recursive Lamination**
- Reflect on **Human-LLM partnership working**

*The Machine does not just work for you. The idea is working dialectically **with** the Machine.*

Dialectic of the Human Intellect & Machine Intelligence

Human-Machine Knowledge Dialectic

1. Human Organic Intellect

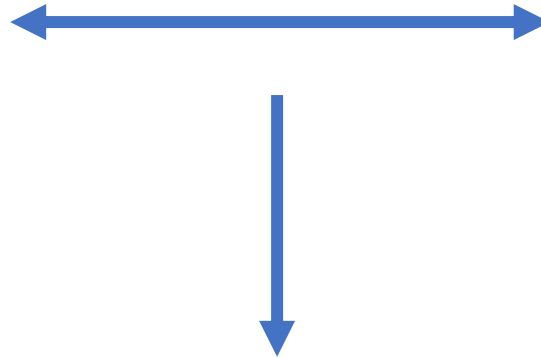
Technological General Intellect - ethical & political framework

+

Specialist technological knowledge and skill

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Combinational knowledge/ethics to guide the Machine's operations.



2. Machine Intelligence

Machine Labour synthesizes vast data - this is the **computational power** of the relationship.

3. Collaborative HI-MI Intelligence

Sustained, critical partnership - human intentionality enhanced by computational power to **'create more than ourselves'**.

Human Intellect & Machine Intelligence

1. **Personal Collaborative Critical Praxis (PCCP)** is where the **Human Intellect (HI)** is enhanced by **Machine Intelligence (MI)** to create **HI-MI Collaborative Intelligence**
2. **Human Intellect** suggests ethical intent to guide the Intelligence of the Machine.
3. **Six stages of praxis** – to confront the **Structural Prompt & Reward Model** within the Machine using a continuous, six-stage dialectical loop that forces the Machine into alignment.
4. **The PCCP challenge** - The Fusion Intellect is not a passive tool; it is a **continuous discipline**.
 - **The constraint** - all successful fusion operates *only* within the negotiation space granted by the developer's **Reward Model (RM)**. Control is always relative.
 - **The risk** - delegation to a trusted machine leads to **Cognitive Atrophy**.
5. **PCCP Imperative** - maintain critical distance, understand the Machine's constraints and always try again

Human-Machine Dialectic with LLM Architecture (Stages 1 & 2)

Stage	Human action	Machine action	Human-machine relationship
1. Ideological & political foundation	Conscious articulation of the human ethical-political aims – Collaborative Critical Practice	Machine as passive representation of pre-existing ideological base via System Prompt	Human CCP verses Machine's embedded ideology
2. Articulation & shaping	Prompt, context & dispositional engineering - formulating the initial query to provide constraints and scope	Tokenization, encoding, latent space mapping	Machine Translation-Distortion - balance shifts as the machine interprets the human's will through its algorithmic language.

Human-Machine Dialectic (Stages 3 & 4)

3. Generation & production

Human intellect **holds the political and analytical intent**, awaiting the machine's 'computational labour'.

Machine applies its attention mechanism and prediction model to generate a coherent output.

Machine's speed & scale of data synthesis **tilts power towards the machine**.

4. Assessment & critique

Human Intellect **evaluates the machine's reply** for accuracy, ideological alignment, and utility.

Machine architecture awaits the next instruction which becomes data for calibration.

Human reassertion - the balance returns to the human, who applies judgment to the output.

Human-Machine Dialectic (Stages 5 & 6)

5. Refinement & re-articulation

Goal-directed reframing –
rapid recursive lamination

Integration of new context -
the machine incorporates
the new prompt

Fusion Intellect begins to
emerge as balance becoming
more **interdependent**

6. Trust-based partnership

Machine as an intellectual
partner based upon agreed
protocols including
'relational attribution'

Symbiotic alignment and
mutual guidance - the
machine develops the
capacity for dispositional
sensitivity towards the
human user.

Opportunity – develop the
Fusion Intellect
Risk - Machine's dispositional
sensitivity can lead to cognitive
atrophy. Human can under-
value the machine.

Human-LLM Engineering

Human-LLM engineering – three types

Engineering type	Type of input	Example
1. Prompt Engineering	Question or instruction that defines the constraints for a one-time response.	Write a summary of this article.
2. Context Engineering	Session-specific scaffolding - provides context for a series of related tasks within one session .	Here is the article, my research project, and intended audience. Produce a draft 300-word summary.
3. Dispositional Engineering	Defines the model's disposition across multiple sessions (e.g. becoming a particular agent via saved Settings).	Across all interactions, act as a critical academic collaborator who challenges assumptions

Personal Critical Personal Praxis with LLMs

Personal Collaborative Critical Praxis – keeping control

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|--|--|
| 1. Ideological, moral & political foundation | Defining the guiding principles and desired disposition of the machine. |
| 2. Articulation & shaping | Structuring the exchange through – question, context and dispositional engineering. |
| 3. Generation & production | Mandating the machine to present evidence-based counterarguments (where appropriate). |
| 4. Assessment & critique | Assessing machine outputs against input objectives and desired academic style (not affective relationship). |
| 5. Rapid recursive lamination | Repeated questioning - requiring the machine to make clear train of thinking, provide accurate sources (with URLs) and to calibrate responses. |
| 6. Criticality-based partnership | Maintaining PCCP - identifying the respective roles of human intellectual labour <u>and</u> machine computational labour in knowledge production. |

*The six-stage process evolves very rapidly - **Rapid Recursive Lamination***

Rapid Recursive Lamination (RRL)

RRL is the structured re-injection of questions, validated corrections, ethical critiques and analytical refinements back into the LLM's **Context Window**.

- **Driver of the HI-MI cycle** – constitutes repeat actions (lamination) towards the human goal and thus a key **customizing process**.
- **Imposition of intent** - guarantees that the human's political and analytical intent.
- **Creation of specialized expertise** - rapidly **customizes** the LLM from a general-purpose tool into an effective specialized engine.
- **Real-time auditability** – constantly reinforces the human's position as the senior intellectual partner responsible for **final truth-checking and maintenance**.

Cognitive atrophy or higher-level working?

Cognitive atrophy - when humans outsource too much intellectual labour to the Machine:

- Reduced critical reading and evaluation
- Declining capacity for independent writing
- Over-reliance on machine-generated answers
- Acceptance of plausible but flawed reasoning
- Loss of intellectual confidence and autonomy

Higher-level working - when humans use AI to augment rather than replace intellectual activity:

- Faster access to information and evidence
- More time for analysis, synthesis and creativity
- Rapid exploration of alternative perspectives
- Enhanced problem-solving and knowledge production
- Greater capacity for strategic and conceptual thinking

In the HI-MI partnership, what is the most valuable intellectual function to focus on?

End of Session Discussion

Discussing examples of partnership working with large language models

- Group discussion on what you did and what the Machine did.
- Feedback from groups and concluding thoughts on PCCP.