



LICAIM Research Project Summary Sheet

1. Title of the Research Project

From Neotenic Intelligence to Artificial Intelligence

2. Synopsis

Human intelligence is a complex cognitive function composed of multiple mental abilities, included Neotenic Intelligence: a distinctive capacity for creative interpretation of the environment that lies at the foundation of the mental development of our species. For this reason, it is plausible to consider Artificial Intelligence (AI) as the most recent emanation, and ultimately a tool, of the more ancient Neotenic Intelligence.

AI, however, lacks fundamental dimensions such as self-awareness, emotionality, and intuition. Therefore, it cannot replace Human Intelligence, but it can offer significant advantages in the memorization and retrieval of large amounts of data, as well as in associative reasoning and problem solving.

The most evident challenge will thus concern the development of strategies to manage AI without being managed by it, preserving our creative, emotional, and relational characteristics. By contrasting the flexible and exploratory dynamics of neotenic intelligence with the structured and goal-oriented nature of AI systems, this research highlights the philosophical and ethical implications of transferring human cognitive principles into artificial architectures.

Through a bibliographic and theoretical approach, the study investigates how the neotenic principle, defined by plasticity, relationality, and creative learning, can offer a renewed understanding of AI as an extension of human adaptive intelligence rather than its opposite. Drawing from evolutionary theory, developmental, dynamic, social, and clinical psychology, anthropology, philosophy of technology, and neuropsychology, the project seeks to reinterpret artificial intelligence as a tool of neotenic intelligence, an expression of the same evolutionary drive toward learning, connection, and transformation.

It also proposes a framework for human-centered AI that values openness, curiosity, and self-transformation as core dimensions of intelligence. The expected contribution is theoretical: to redefine AI not merely as computational efficiency, but as a potential expression of neotenic intelligence, capable of continuous learning, empathy, and ethical adaptation, laying the groundwork for a functional and educationally oriented use of AI in teaching and learning contexts.

3. Objectives

Main goals

To reinterpret artificial intelligence as an expression of neotenic intelligence, demonstrating how the evolutionary principles of plasticity, relationality, and creative adaptability can inform the development of more human-centered, ethical, and learning-oriented AI systems.

Specific goals

- To conduct a bibliographic review of the main theoretical perspectives on neoteny and neotenic intelligence, emphasizing their role in human evolution, cognitive development, and creativity.
- To analyze how artificial intelligence embodies—or fails to embody—neotenic characteristics such as openness, flexibility, and self-transformative learning.
- To integrate insights from evolutionary theory, developmental and dynamic psychology, social and clinical psychology, anthropology, and philosophy of technology in order to construct a multidisciplinary interpretive framework.
- To demonstrate, through the analysis of bibliographic sources, how Artificial Intelligence can be considered both a product and a tool of Neotenic Intelligence.
- To connect AI to other forms of intelligence, such as divergent thinking, emotional intelligence, and temporal intelligence.
- To hypothesize the possible transformations of cultural codes.
- To establish the foundations for a functional use of AI, as an implementation of new possibilities in educational and didactic contexts.

4. Theory and Methods

Theoretical Framework

The concept of neotenic intelligence—rooted in the evolutionary retention of juvenile traits (Lorenz, 1971; Gould, 1977; Menarini, 2002; Mannino & Montefiori, 2013, 2019), is explored as a model of cognitive plasticity, openness, and creativity. Within this framework, human intelligence is understood as an adaptive and relational process characterized by continuous learning and transformation.

The study draws from Evolutionary Theory, Developmental, Dynamic, Social, And Clinical Psychology, Anthropology, Philosophy of Technology, and Neuropsychology to examine how these perspectives illuminate both the origins of human intelligence and the construction of artificial cognition. The theoretical foundation also integrates contributions from cognitive science and AI ethics (Turing, 1950; Dennett, 1996; Santaella, 2007; Floridi, 2013) to situate artificial intelligence as a possible extension of neotenic intelligence rather than its technological antithesis.

This framework allows the research to reinterpret AI not merely as computational or instrumental, but as a manifestation of human evolutionary creativity and relational learning.

Methodology

Research Design: Qualitative, theoretical, and bibliographic. The project is conceptual in nature and based on an integrative literature review.

Data Collection:

- Systematic bibliographic review of scholarly literature across Evolutionary Theory, Developmental, Dynamic, Social, And Clinical Psychology, Anthropology, Philosophy of Technology, and Neuropsychology.
- Thematic examination of key theoretical works on neoteny, cognition, creativity, and artificial intelligence.
- Comparative analysis of conceptual frameworks from human and artificial cognition.

Data Analysis:

- Thematic and conceptual synthesis of theories to identify patterns of convergence and divergence between neotenic and artificial intelligence.
- Comparative interpretation of key authors and models.
- Theoretical mapping of neotenic principles (plasticity, openness, relationality) within AI discourse.

Sample/Cases: The research does not involve participants or empirical data. The “sample” consists of selected peer-reviewed publications, theoretical essays, and interdisciplinary sources relevant to the comparative study of biological and artificial intelligence.

5. Current Status

Completed Activities

- Preliminary bibliographic research on neoteny, developmental plasticity, and the philosophical foundations of artificial intelligence.

Ongoing Activities

- Selection and review of key authors.
- Initial mapping of theoretical intersections between biological, psychological, and technological models of intelligence.

Timeline Progress

Approximately 15% complete, on schedule.

Preliminary Findings (if applicable)

Preliminary reflections indicate that neotenic intelligence provides a meaningful conceptual metaphor for understanding artificial intelligence as an adaptive and evolving tool rather than a purely technical construct.

6. Next Steps

Short-term (next 3 months)

- Complete the integrative literature review across psychology, philosophy and anthropology.
- Comparative synthesis of theories to identify how neotenic intelligence principles (openness, adaptability, relationality) appear within AI frameworks.

Medium-term (3-6 months)

- Drafting of theoretical sections connecting psychology, anthropology, and philosophy of technology.
- Refinement of conceptual definitions and key terms for the analytical framework.

Long-term (6-12 months)

- Finalize the conceptual synthesis of neotenic and artificial intelligence models.
- Develop the comparative framework positioning AI as a tool of neotenic intelligence.
- Explore the potential use of AI in educational settings.

Expected Outputs

- A complete research report.
- One conceptual paper for an academic journal or conference.
- A theoretical framework connecting neotenic and artificial intelligence for future interdisciplinary studies.

Resource Needs (if any)

Access to academic databases and digital libraries for bibliographic research; potential support for editing, translation, and presentation materials.

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