Article 04:

The emergence of AI and its necessities

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Introduction:

The experience of life's necessities, both biological and social, has been a fundamental aspect of human and biological systems. This experience is represented through **genetic heritage** in living beings and **social-cultural heritage** in human societies. Additionally, the emergence of AI systems has provided a new way to represent and respond to these necessities, using **advanced scientific, knowledge, and technological heritage**. This includes the representation of processes, procedures, patterns, and the intelligent operation of biological systems. Through the use of various technologies such as genetic engineering, nanotechnology, informatics, machine learning, and robotics, AI plays a crucial role in improving the performance and efficiency of biological systems, as well as in the processing and use of massive data for value-added production.

Three levels of representation:

1- The necessity of the emergence of "**biological necessities experience**" and its representation as "**genetic heritage**"

Every living being, in order to preserve its **maintaining survival and continuity of sustainability** in the process of life, acquires "**biological necessities experience**" in deficiencies, shortcomings, needs.

This experience, which occurs in a long and continuous process in living beings, causes them to develop instinctive patterns of life and these patterns are passed down from generation to generation and preserved in the form of **genetic heritage**.

The axis of the cycle of biological necessities experience:

Issues: deficiencies, shortcomings, needs, desires, demands, biological, supra-biological, etc.

Solutions: with continuous self-referral using available resources and existing capabilities

Which living beings experience in continuous phases of the cycle**; process of emergence, nurturing procedure, and transformational pattern.**

"The experience of life's necessities in living beings by the genome (a part of the molecule (DNA) in the physiological system with a specific genetic structure, which is recorded as "**genetic heritage**" in living beings) is widely represented."

This **genetic heritage** is accompanied by extraordinary capabilities, recording the characteristics, traits, and functions of living beings that can be transferred from one generation to another, which has been shown inside the physiological system as devices, organs, members, etc., and outside as **instinctive behavioral patterns**.

2- The emergence of "**social life necessities experience**" and its representation in the form of "**social-cultural heritage**"

The emergence of the neocortex layer (at its current level of development) in the brain approximately 200,000 years ago enabled humans to acquire the ability to represent static objective conditions **in the psyche, thought, and behavior of humans**.

And this was the beginning of acquiring extrasensory experiences, i.e., acquiring **social life necessities experience** in various forms of **livelihood** during the recent 200,000 years.

Social life necessities experience can be observed in the following circuit:

- **In the technical process work** (production of goods, service delivery)
- **Social relationships in the production** (distribution, consumption), and the growth of productive forces social relationships in the production

This cycle shows the response to biological and extrasensory deficiencies, shortcomings, needs, desires, demands... of individual and social human life.

Various methods have been used to respond to social life necessities (issues and solutions), leading to the emergence of various forms of **livelihood**.

The massive representation of "**social life necessities experience**" and its continuity is shown in the form of "**social-cultural heritage**."

3- Emergence of AI System

The emergence of AI systems provides a representation of the "**advanced scientific, knowledge, and technological heritage**" of humanity. Using advanced and diverse algorithms, these systems enable the representation of massive data, fast information processing, the continuous growth of sciences, knowledge, experience, and various skills (obtained throughout history) in AI systems.

This representation includes efficient analytical models, exploration, simulation, modeling, and simulation of existence, through which resources and capabilities become accessible.

AI capabilities in representing existence include:

- Representation of processes, procedure and patterns
- Structures and functions of phenomena, the autodynamics of processes
- Issues (deficiencies, shortcomings, needs, etc.) and solutions (continuous self-referral using available resources and existing capabilities)
- Cycles of "**the process of emergence, nurturing procedure, and transformational pattern**" and "**social existence, social experience, and social consciousness**."

The role of AI in various fields

AI plays an effective role in the " **design, implementation, and intelligent operation of biological systems**" using advanced technology and new generation AI methods. In various fields such as medicine, health, pharmaceuticals and human nutrition, education (educational and research), security, military, transportation (urban, road, rail, air, sea), insurance and banking, agriculture, environment, space exploration, etc., AI using various technologies such as genetic engineering, nanotechnology, and informatics facilitates the improvement of biological systems' performance, efficiency improvement, risk reduction, and optimization of resources used in these systems.

Representing existence using AI and new generation technology.

Using AI and new generation technologies such as, intelligent automation and advanced algorithms, machine learning, robotics, etc., the representation of existence includes processing scientific theory, mental modeling, and pattern recognition to achieve:

- More value-added production that is faster, more cost-effective, easier to access and more widespread in the process of producing goods and services

- Processing and use of massive data, design and development of efficient algorithms, patterns, and analytical models, exploration, simulation, modeling, simulation, and pattern recognition (especially transformation patterns) using platforms and applications.

Source: personal research and access to sources of scientific publications in various fields.
Thank you for the time you've provided.

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