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Human intelligence, artificial intelligence & spiritual intelligence

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Abstract. This paper examines the relationship and interactions between human, artificial, and spiritual intelligence. A comparative analysis shows that human intelligence develops through the creation and strengthening of neural connections in the brain, while artificial intelligence mimics some human processes using computer science, mathematics, and data processing. Key elements of spiritual intelligence include self-awareness, purpose and meaning, compassion and empathy, integrity and values, and transcendence. It is concluded that human, artificial, and spiritual intelligence must work together to develop meaningful, ethical, and sustainable technologies and societies.

Keywords: human intelligence (HI), artificial intelligence (AI), spiritual intelligence, AI technologies, key elements of spiritual intelligence (SI), development of spiritual intelligence

Человеческий интеллект, искусственный интеллект и духовный разум

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Аннотация. Рассматривается соотношение и взаимодействие человеческого, искусственного и духовного интеллектов. Сравнительный анализ показывает, что человеческий интеллект развивается через создание и укрепление нейронных связей в мозге, искусственный интеллект имитирует некоторые процессы человеческого, используя компьютерные науки, математику и обработку данных, а ключевые элементы духовного интеллекта включают самосознание, цель и смысл, сострадание и эмпатию, честность и ценности, трансцендентность. Сделан вывод, что человеческий, искусственный и духовный интеллект должны работать вместе для развития осмысленных, этических и устойчивых технологий и общества.

Ключевые слова: человеческий интеллект (ЧИ), искусственный интеллект (ИИ), духовный разум, технологии в области ИИ, ключевые элементы духовного интеллекта (ДИ), развитие духовного интеллекта

Introduction. Modern publications on artificial intelligence (AI) typically compare it to human intelligence (HI) and consciousness, but their relationship and interaction with spiritual intelligence have been insufficiently explored. Spirituality fundamentally distinguishes humans from AI and is the key to wisdom and the art of connecting it with one's own intelligence in practical activities.

Study Objective: To reveal the specifics and interrelationships of human, artificial, and spiritual intelligence, the key elements of spiritual intelligence, and to demonstrate its role in integrating all three types of intelligence.

Materials and Methods. Modern scientific literature on cognitive science. Psychological, philosophical, and systemic methods.

Results. 1. Human Intelligence (HI). Human intelligence develops by building, strengthening, and refining neural connections in the brain.

Networks of brain cells (neurons) communicate via electrical and chemical signals, and this dynamic system is the biological foundation of learning and adaptation.

In the early stages, a process called synaptogenesis (neuron connectivity) occurs. This means new connections are constantly formed in response to experience. Over time, experience shapes intelligence — a principle sometimes summarized as “use it or lose it”.

Repetition builds strong networks: neurons that fire together wire together. Repeated activation of the same pathways makes them stronger and faster, which is why practice improves skill and memory.

This ability of the brain to change is called neuroplasticity — the brain's capacity to rewire itself throughout life. Activities such as practicing meditation, learning new skills, and novel experiences promote neuroplasticity and keep the mind flexible. Peer-reviewed research supports this. For example:

A Harvard study on Mindfulness-Based Stress Reduction (MBSR) found that an 8-week MBSR program led to increased gray matter density in the hippocampus (associated with learning and memory) and decreased gray matter in the amygdala (linked to stress and anxiety). (Source: Harvard Gazette [1–3]).

A Scientific Reports study on Rajyoga meditation [4] found that long-term practitioners exhibited increased gray matter volume in brain regions linked to reward processing and happiness. These findings show that human intelligence is not fixed — it grows and refines with conscious practice.

Artificial Intelligence (AI). Artificial Intelligence is shaping the future by mimicking some processes of human intelligence. It is a combination of computer science, mathematics, and data, designed to find patterns, make predictions, solve problems, and generate ideas—much like how humans learn.

History: AI's journey began in the 1950s with foundational theories and early programs. Over the decades, key milestones included the development of expert systems, the rise of machine learning, and the advent of deep learning technologies, which have transformed AI from a theoretical concept to widespread practical applications.

Core Technologies in AI:

- Machine Learning (ML): Algorithms that learn from data.
- Deep Learning: Layered artificial neural networks inspired by the human brain.
- Natural Language Processing (NLP): Enabling machines to interpret and produce human language.
- Robotics: Combining AI decision-making with physical actions.

How AI Learns:

- Learning from Experience: AI adjusts “weights” in neural networks based on training data.
- Artificial Neural Networks (ANNs): Mathematical models simulating neurons and their connections.
- Pattern Recognition: Trained to identify patterns in data (faces in photos, sentiment in text).
- Memory and Adaptation: Can “remember” past data using recurrent networks or attention mechanisms (as in ChatGPT).
- Parallel Processing: Uses GPUs to process many features simultaneously.

Similarities between the Human Brain and AI:

Both human intelligence and artificial intelligence learn from experience, use interconnected networks (biological vs. artificial), and can improve performance with repetition and feedback.

Differences between the Human Brain and AI:

- Learning Efficiency: Humans can learn from a few examples; AI typically needs vast datasets.
- Consciousness and Emotions: Humans have self-awareness, emotions, and intrinsic motivation; AI does not truly feel anything.
- Flexibility and Creativity: Humans are adaptable and creative in real-world contexts; AI is limited to tasks it was trained for.
- Development: The human brain grows biologically over time; AI is programmed and built by humans.

Beyond AI and HI. Spiritual Intelligence (SI) can be seen as the wholesome integration of AI and HI — a higher level where meaning, values, and ethics guide both human thinking and technology use.

Spiritual Intelligence goes beyond IQ (thinking) and EQ (feeling). It is the capacity to access inner wisdom, values, and meaning to guide decisions and actions. While human intelligence helps us think and artificial intelligence helps us compute, spiritual intelligence helps us understand why we do what we do, connecting our actions to a deeper sense of purpose.

Key Elements of SI:

- Self-Awareness at a Deeper Level: Recognising the self beyond roles, ego, and immediate emotions.
- Purpose and Meaning: Seeing a bigger picture and connecting daily tasks to life's larger goals.
- Compassion and Empathy: Acting from interconnectedness and kindness rather than purely self-interest.
- Integrity and Values: Making choices rooted in inner principles rather than external pressure.
- Transcendence: The ability to step back, gain perspective, and respond rather than react.

Developing SI:

- Mindfulness and Meditation: Cultivating inner stillness to access deeper awareness.

- Reflection on Core Values & Purpose: Journaling or contemplation to clarify what truly matters.

- Service and Empathy: Engaging in actions that benefit others and the community.

- Learning from Wisdom Traditions: Studying ethics, philosophy, and diverse spiritual perspectives to expand understanding.

Discussion. 1. AI – Friend or Foe to Human Intelligence? How AI Complements HI:

- Boosts learning speed.
- Expands knowledge access.
- Enhances critical thinking.
- Strengthens creativity.
- Supports cognitive skills and frees mental energy for deeper work.

Risks of Overreliance:

- Cognitive laziness and reduced deep learning.
- Decline in emotional and social skills.
- Reinforcement of biases.
- Job deskilling and dependence on automation.
- Example: Using AI as a navigation tool can reduce our own spatial learning.

The impact of AI depends on how we use it. It should remain:

- A servant to human purpose, not a replacement for human wisdom.
- A facilitator, not a master.
- A partner, not a competitor.
- A tool for progress, not a source of decline.

Why SI Matters?

- Provides an ethical compass for using human and artificial intelligence responsibly.

- Helps leaders and individuals stay grounded and resilient in a fast-changing, tech-driven world.

- Enhances emotional balance, creativity, and authentic relationships.

- Aligns technology and innovation with human well-being and sustainability.

Conclusion. Putting It All Together. Human Intelligence gives us the ability to think, Artificial Intelligence gives us the power to compute, and Spiritual Intelligence gives us the wisdom to guide both [5]. When these three work together, technology and humanity can progress in ways that are meaningful, ethical, and sustainable.

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