

# HUMAN INTELLIGENCE, ARTIFICIAL INTELLIGENCE and BUSINESS ETHICS

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AI and physical integration, Non-Representational Cognitive Science -NRCS

ontological and epistemological realism,

Business Ethics and social acceptance

Corporate Code of Ethics, Ethical principles and values

Ethical leadership, ETHOS

## 1. HUMAN INTELLIGENCE

It exclusively characterizes living beings

It exists only in close relation to time, and has an evolutionary course of millions of years.

It is characterized by existential uniqueness for every different individual, since it experiences a beginning and an end. It is absolutely defined by birth and death.

It stubbornly experiences and creates.

It is moved and passionate about art and beauty, imagination, anything authentic and the premium essence of things.

It experiences contradictions: while we are mortal beings, we contain the past. That fact allows us to refer to deep, historical time and establishes us in eternity.<sup>1</sup>

It is the basis for the creation of perceptual abilities, determines meanings and guides every kind of action. These three parallel and mutually complementary functions, with their constant interaction, co-shape the **ontological existence** of each different personality.

Living creatures, in addition to intelligence, have in complete interdependence, five more important common characteristics: Teleonomy, reproductive ametatropy, denial of randomness, demonic functions, cybernetic mechanisms.

Let us define these five (5) characteristics<sup>2</sup>

TELEONOMY, means to have a "plan", which they manifest with their structure and fulfill with their achievements.

But teleonomy is a deeply **ambiguous** concept, because it is based on the subjective idea of "plan". Logical questions arise: what kind of plan, aiming at what, who created it, why etc.

REPRODUCTIVE AMETATROPY, i.e., the ability to reproduce and transmit the full information corresponding to their own structure.

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1 Maria Efthymiou, article published on site capital.gr dated 5/10/2023, entitled: Who do we think we are. The text is partially based on a speech by the author at the accepting ceremony of the Award for Outstanding University Teaching in memory of V. Xanthopoulos - St. Pneumatikos, in December 2013.

2 As described in the classic book of the Nobel prize winner, Jacques Monod "Hasard and Necessity" Rappa publications, Athens 1970

Human beings **DENY** (desperately and heroically) THEIR very **RANDOMNESS**, because their creation is completely unpredictable (like, for example, the creation of a rock).

Examining functions at the microscopic level and related chemical processes **PROTEINS EXERCISE "DEMONIC"** functions (such as Maxwell's demon<sup>3</sup> and more specifically according to the upgraded description by Szillard and Brillouin). This ability arises when they form stereospecific and non-covalent complexes.

THEY HAVE complete and sophisticated **CYBERNETIC MECHANISMS**, based on complex chemical processes.

## 2. ARTIFICIAL INTELLIGENCE TODAY

Some important characteristics of A.I., are:

It is evolving rapidly. It is based on previous applications, of limited scope and complexity (e.g. databases, knowledge bases, decision support systems).

Its autonomy (self-existence) is disputed, it is under question. Today we know that intelligence relates strongly with the perspective of physical integration<sup>4</sup>. Is that true for A.I.?

It has creators who are well known (e.g., Dennis Hassabis<sup>5</sup>)

Has characteristics of a commercial product (e.g., registered trademarks)

Has documented and known deficiencies (e.g., accidents with self-driving vehicles)

It evolves, while there is LIMITED knowledge of the corresponding human tool, **the brain**

It functionally ignores the complex chemical environment that ensures the proper functioning of complex and specialized **cybernetic mechanisms** in living creatures.

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<sup>3</sup> In order to understand how it functions, we have to correlate entropy and information, since elementary cognitive function (based on information), changes the energy balance of the system

<sup>4</sup>New York Times – 2023 – article titled: “What is the relationship between mind and body” by Boyuan Chen, Professor of Robotics at Duke Univer

<sup>5</sup> Founder of the company Deep mind, award-winning scientist in the field of Artificial Intelligence

It completely ignores the five (5) common features of living creatures (teleonomy, reproductive ametatropy, denial of coincidence, "demonic" functions of proteins).

Modern cognitive science<sup>6</sup> (and in particular the approaches of embodied and non-representational cognitive science -**Non-Representational Cognitive Science -NRCS**) considers intelligence as a process of INTERDEPENDENCE of the intelligent being with the environment where it acts<sup>7</sup>. This applies to both human intelligence and artificial intelligence since today we have machines that act, receive stimuli, form reactions, make simple decisions and learn.

On the contrary, it is accepted that the human intellect goes hand in hand with ontological and epistemological realism<sup>8</sup>, while artificial intelligence leads to an anti-realistic conception of the world, according to modern cognitive science.

### 3. BUSINESS ETHICS in a complex environment

Business ethics today is called upon to provide convincing answers in an environment with unprecedented opportunities/possibilities but also extensive threats/dangers. At the same time, it must ensure the active social acceptance of all its actions, but also the positive influence on each individual personality.

It is based on tools that ensure (at least under normal conditions) the adequacy of both human resources and the processes followed.

It must be used to control A.I. applications and effective tools

Artificial intelligence, with an increasing variety of effective tools, has an important role in the operation of the business as a whole, but also in the economy of scale.

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<sup>6</sup> As described by Alkis Gounaris in: "Human intelligence and Artificial Intelligence: Searching for the fundamental differences of meaning at the limits of metaphysics", announcement at the 4<sup>th</sup> conference of cognitive science/ Humans and Robots Symposium / – Athens 2013

<sup>7</sup> It is worth noting that the Uncertainty Principle, as formulated by the physicist Werner Heisenberg and the Copenhagen school of philosophy, leads to similar conclusions. This predicts that the observation of a phenomenon affects its own evolution.

<sup>8</sup> Realism means that the world exists, independent of the human mind, and therefore of the way it is understood.

However, making critical decisions is equally based on the proper motivation of human resources at all levels and departments, but especially of experienced executives.

Ethical code, the main tool for ethical leadership

In such decisions, the correct use of the **Corporate Code of Ethics** is linked to:

- Company's principles and values

- Company's culture, corporate envisioning, ensuring firm's reputation and corporate prospects.

- Long term business plans and priorities

- Compliance with legal obligations

- Adaptation to social, professional and international requirements

- Ensuring the interests of all stakeholders, but also justifying their reasonable expectations.

In the day-to-day operation of the business, ethical management is called upon to guide all associates, with exemplary behaviors and gaining distinction for every personality. It reinforces habits and unwritten laws, promotes group development of ethical skills, and examines alternative solutions to ethical dilemmas.

Ethical leadership is characterized by (according to Daniel Goleman):

- Self-awareness, i.e., they know their strengths and weaknesses.

- A strong moral constitution

- Self-control and prudence when expressing emotions

- Understanding and fairly evaluate the behavior of others

#### 4. GENERAL CONCLUSIONS

In its evolutionary course, Artificial Intelligence becomes a useful partner of Business Ethics. It creates valuable tools that contributes to the efficiency of corporate processes, but requires critical thinking and well-reasoned decisions.

Living beings, man, has the unique privilege of experiencing and managing:

Dreams, Visions, Imagination, Emotions and Empathy, Culture of different origins, Unwritten laws.

All the above are what give meaning to the word **ETHOS**, and create the unique moral constitution of each distinct human