

## “HYBRID THINKING”

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During millions of years of biological evolution, the living world of planet Earth constantly went through the process of adaptation and natural selection. So, Darwin realized that the birds of Galapagos are the same species, but with other variations (adapted to the conditions in which they lived) that he met on other islands. That is why in his book "On the Origin of Species" he will underline: "The same species of birds adapt and change race to the changing world."

Evolutionary development and adaptation are also characteristics of humans. With biological evolution, the brain cortex in humans has constantly adapted and developed. The cerebral cortex is the center of the most important nerve centers for all human activities. These centers are interconnected by nerve connections that transmit information that is further analyzed, synthesized and memorized. Doesn't the human brain resemble today's computers?

*How does the modern man function today?*

Today's man is in the process of transhumanism with the goal of improving human well-being in every aspect through technological and scientific advances. That is why we have accelerated human evolution with the help of various inventions such as computers, mobile phones, nanorobotics... Artificial intelligence (AI) is such an example of transhumanism. AI is being integrated into every profession, every segment of human life.

*Where is medicine in this process of transhumanism?*

In medicine, we have accelerated biological and technological evolution. Evidence-based medicine is the basis of modern medicine. But AI enables new dimensions in this segment. AI is dynamically transforming medical practice. There are specially designed software solutions that facilitate the clinical practice of doctors with the help of AI. Quick solutions are offered in the medical decision-making process (10-15 seconds), from disease identification to differential diagnosis, treatment... All these facilitate and improve the clinical knowledge of doctors, real-time up to date academic and medical support is enabled, the precious time of doctors is optimized, but the most importantly, the quality of medical health care is improved. AI is gradually closely connecting the global medical community by sublimating the latest knowledge and scientific achievements in the field of medicine. With the help of AI, CT and MRI diagnostics are already facilitated, AI quantification of the coronary vasculature in cardiology, anesthesia monitoring, control of anesthesia, event and risk prediction, calculating and administering drugs, influences in the construction of individualized therapy, AI constructed

archiving of medical records... With the further development of even more modern software, the impact of AI will be inevitable and even more common.

The future is here. We have accelerated personal adaptation to new technologies. But all of that requires a change in our thinking. That is why we have also developed another type of thinking - Hybrid thinking. The power of working together. Hybrid thinking is already a reality. Hybrid thinking analyzes, synthesizes, and harmonizes views across disciplines into coordinated and coherent frameworks. Perhaps the most plastic way to explain hybrid thinking are the following tulip pictures showing one person thinking, two persons and comprehensive, interdisciplinary, and open hybrid thinking.



Thinking of one person, Thinking of two persons, Hybrid thinking

*What is the opposite of hybrid thinking?*

Narrow, non-cooperative, homogenized, incomprehensive, exclusive, orthodox ... thinking.

In modern medicine, there are already procedures where hybrid thinking has been developed or is being developed. Such is the example of hybrid cardiological-cardiosurgical procedures where the heart team is composed of a non-invasive and invasive cardiologist, cardiac surgeon, anesthesiologist, nurses... The heart team with hybrid thinking and joint work from different professional disciplines becomes "One" for the benefit of the patient. Such is the case with heart or liver transplantation when the whole process requires the involvement and hybrid thinking of a huge team of medical and non-medical personnel. The same is the case with cancer teams. There are many examples. The further development of hybrid thinking will lead to even greater rise in hybrid procedures, transplantation...

Interestingly, there are already studies of hybrid thinking in the world. By stimulating hybrid thinking, students, who are our future, should also be stimulated to express themselves critically towards new ideas or an area they are interested in, as well as working together as teams.

The world is changing faster than ever. Throughout history, some have built walls, but some have torn those walls down. Let us be the harbingers of those who break down the mental walls and embrace, adapt, and apply the new future. Let's be active participants in the changing World.