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INTELLECTUALISATION OF DECISION-MAKING OR ALGORITHMIC ILLUSION?

In an era of comprehensive digital transformation of society, marked by the rapid development of intelligent technologies, artificial intelligence and machine learning, the paradigm of decision-making has changed radically.

The classic methods, widely used since the heyday of automation in the last century, are based on rationality, probability, and optimization. Decision-making is based on simplified models that mimic knowledge about the unknowable – attempting to squeeze complex processes into clear numbers, assuming that complete information is available to calculate the best option. The illusion of control through modelling gives a false sense of accuracy and security. But in any complex system, information awareness is far from complete for the application of mathematical methods, especially in real-time systems, time-constrained conditions and so on.

Behind the optimism about the possibility of a technological solution to the problem of decision-making and the desire to rely on complex mathematical calculations lies the false belief that any complex problem has a single correct algorithmic solution and that any uncertainty can be reduced to a measurable risk. This illusion is evident in light of the concept of radical uncertainty [1], discussed by J. Kay and M. King, which cannot be quantitatively modelled. This is not simply a lack of data, but a fundamental limitation of human knowledge, where it is impossible to accurately determine all possible scenarios, possible influencing factors or their probabilities. Prediction and decision-making by people in conditions of incomplete certainty occurs through established narratives, intuition, and experience.

At the same time, modern technologies – from artificial intelligence to big data – promise to reduce uncertainty. It would seem that the transition from traditional mathematical, heuristic, or probabilistic methods to the intellectualization of decision-making allows to process huge amounts of data, extract knowledge, offer optimal, and sometimes non-obvious, solutions. The

advantage of algorithmic methods in decision-making systems is the elimination of human bias. From this point of view, it can act as an ideal tool for implementing A. Nikonov's rational ethics [2]. Systems built on their basis are theoretically capable of producing decisions free from emotional irrationality, instincts and cognitive biases. At the same time, the use of artificial intelligence aims to increase efficiency by eliminating errors caused by fatigue or incompetence of the «human factor».

In a world where information systems are becoming an integral part of life, an important question arises: is the process really being intellectualized, or is human error simply being replaced by algorithmic error? The authors [1] emphasize that excessive faith in technological breakthroughs creates an illusion of control and security, which can be more dangerous than uncertainty itself. Algorithms can only model what is known, based on examples. Even the most rational models only optimize a given target function using the same mathematical methods, but with more complex algorithms.

On the other hand, there is a fundamental paradox related to the problem of values. Who will create and program a new rational morality into artificial intelligence? If humanity does not define a new ethic, artificial intelligence may optimize existing values or create its own, different from human ethics.

Therefore, in a world where technology is increasingly automating processes, it is humans who remain the source of meaning, ethics and adaptability. The value of human judgment, experience and collective intelligence prevails over artificial intelligence and data-driven models. This shifts the focus from technocracy to humanism and requires new approaches to technology design that support explainability and human participation in decision-making. It is necessary to perceive uncertainty as a source of creativity, focusing on readiness for any events and creating strategies that are as flexible and secure as possible. At the same time, it is important to create systems that not only process information but also take into account context, emotions, and human values. Research on this topic requires a critical analysis of the limits of artificial intelligence, an assessment of the role of qualitative methods, in particular fuzzy modelling involving human experience.

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