

The Track and Engineering of Ancient Rome: An End-to-End Analysis of the Ways of Civilizational Development and the Predecessors of Modern AI in Travel and Information Search

Oleg Pavlov Vitalievich

Taganrog Institute of Management and Economics (TIUE)

Citation: Vitalievich O.P. (2026) The Track and Engineering of Ancient Rome: An End-to-End Analysis of the Ways of Civilizational Development and the Predecessors of Modern AI in Travel and Information Search, *British Journal of Business and Management Research*, 1 (1), 17-28

Abstract: *The article is devoted to the analysis of the phenomenon of the "people's track" using the example of the civilizational path of Ancient Rome. It is considered how a unique combination of geographical, cultural, institutional and mental factors forms a stable trajectory for the development of society. Special attention is paid to the concept of "freedom lanes" — a historical window of opportunity within which the people are able to get out of the rut and make a civilizational leap. Based on the history of Rome, key bifurcation points are explored — transitions from tsarist power to republic, from republic to empire — and the mechanisms that allowed society to change the form of government while preserving cultural identity are analyzed. The paper also compares Roman transformations with modern examples of states that successfully overcame their historical inertia. It is concluded that getting out of the rut requires not only institutional reforms, but also a deep mental and cultural transformation initiated by both external challenges and the internal discipline of the people. The Roman experience is proposed as a methodological model for analyzing the current processes of change in modern societies. The evolution of structured transportation routes is investigated, from ancient Roman Empire itineraries to modern digital trajectories in the era of artificial intelligence and neural interfaces. The author considers the iterarium as a universal archetype — not only a logistics tool, but also a model for organizing knowledge, information, and power. Through the comparison of the ancient Cursus Publicus and modern cognitive systems, a methodological line is laid from physical movement to mental navigation in the infosphere. The article draws a parallel between the itinerary of an ancient Roman merchant and digital maps of the 21st century as forms of programmable movement through the space of knowledge. Special attention is paid to the concept of homo navigans digitalis, a new type of subject capable of interacting with algorithmic systems in real time through a mental query. The mechanisms of transition from linear reading to neural network thinking, from external libraries to internally integrated exocognitive platforms are revealed. The work offers an interpretation of neuroimplantation, AI chats, and distributed decision-making systems as modern forms of itineraries — digital routers that shape the trajectories of thinking and action. The emergence of a new social model, the neuroimpery, is conceptually justified, where the basis of sovereignty is not control over territories, but management of information routes and cognitive access to knowledge. In this paradigm, the strategic resource of the future is not the amount of information, but the ability to formulate and direct a request: prompt as an intellectual tool for new thinking. The article is addressed to researchers in the fields of philosophy of technology, cognitive science, digital humanities and futurology, as well as anyone interested in the intersection of ancient heritage and high technology.*

Keywords: track, Ancient Rome, institutional transformations, mental and cultural aspects, civilizational breakthrough, cultural code, history of human civilization, routes, technologies, engineering, information protocols, digital navigation, artificial intelligence.

INTRODUCTION

The historical path of each nation is shaped by a unique combination of geographical, cultural, political, and mental factors. These features form a kind of "rut" — a stable trajectory of development, the deviation from which requires significant efforts, both internal and external. The most striking example of the national track, its overcoming and transformation is the path of Ancient Rome — from a small settlement to a global political and cultural center. This article is devoted to the analysis of the mechanisms of getting out of the historical rut using the example of the Roman civilization. Both institutional and legal transformations, as well as mental and cultural aspects affecting the ability of society to change the trajectory of its development are considered. Special attention is paid to the concept of "freedom lanes" — a window of opportunity that allows people to make a civilizational leap. The work compares historical and modern cases, revealing how the cultural code, language, institutions and leadership figures influence the processes of people getting out of the rut.

The cultural code, or cultural matrix, of the ancient Romans impresses with its complete civilizational cyclicality. People and nations are unique and have different histories, forming unique cultural features. All people are descended from Adam, but God, in His omniscience, made distinctions between them and assigned them different paths (the Bible). It is these different paths that form the differences between peoples — in particular, the ancient Romans — from the rest. The history of human civilization is the history of routes. Paths along which not only bodies moved, but also ideas, goods, technologies, and meanings. One of the first recorded forms of such organized movement was the itineraries of Ancient Rome — itinerary lists, which were systematic instructions for travelers, merchants and officials moving through the vast empire. These coded traffic patterns were not just navigation cues, but harbingers of logistics and information protocols that would form the basis of digital navigation of data and knowledge two thousand years later. In the era of the Roman Empire, the iterarium was a tool for optimizing the route, a means of speeding up communications and logistics. Today, in the era of artificial intelligence, cloud computing and neuroimplants, we are returning to this idea again — but at a new stage of evolution. A modern user, armed with neural network interfaces, plots his mental routes in digital space — from request to response, from task to solution — just as a Roman merchant followed from station to station, guided by an ancient coded sheet.

The purpose of this article is to explore the parallels between ancient Roman itineraries as a form of spatial and information movement organization and modern digital routes, from search algorithms to neural interfaces. We propose to consider the cognitive evolution of the "journey for knowledge" — from a parchment to an implant, from a road to an information channel, from physical movement to cognitive routing in a digital environment.

The paths of nations form the "rut of nations" (according to Professor Auzan). The path of the Roman people and the building of the Roman Empire were shaped and honed in the mouth of a competitive struggle for survival: competition is the motivation to pave the way in the people's rut. Or, the formation of this rut is associated with the development of skills necessary to defeat competitors.

The Roman Empire, like any other entity, can produce concrete results: conquered territories, industrial discoveries, constructed buildings, created systems and institutions, both political and

social. Any person and the nation as a whole, striving to eradicate destructive states, is able to be inspired by future victories and, analyzing specific positive results, feel calm — confident that everything is happening correctly. The result is a measure of effectiveness, and it, in turn, is the path to the mental health of both an individual and the nation as a whole. Repeated, end—to-end manifestations of the signs of the "rut of peoples" represent a way of analyzing the national path from the point of view of civilizational development, if we take as the unit of analysis such a community as the people of Ancient Rome - especially during the transition period from the republic to the empire. Repeated approaches to life, politics, and the structure of society from century to century make it possible to trace the circular vector orientation of the Romans — from one cadence of rulers to the next — through the prism of the behavior of the people as a whole. France, for example, cyclically reproduces a unitary centralized super-presidential form of government, whereas England, on the contrary, initially relies on the splitting and separation of all authorities and advisory functions in order to limit sole power.: As it began with the Magna Carta, so the people's rut continues to this day.

The people of the Roman community — the Empire of Ancient Rome — had stable trends in their development — the ruts.

The track structure of the people of Rome was shaped by the peculiarity of its geographical location: Ancient Rome at the time of its origin was a small settlement surrounded by hostile polis. And in order to become at least a polis state itself, it was first necessary to win the competition for the physical survival of one's own ethnic group. The geographical environment affects organisms forcibly, although there are exceptions — the Empire of the Venetians, the modern UAE or Japan in the middle of the 20th century — which emerged from their own negative ruts in order to make a civilizational breakthrough. The geographical factor can — and often does — influence the political and social conditions of a people's functioning.

Montesquieu, with his geographical determinism, and Wittfogel, who wrote about irrigation farming in river valleys, pointed out that such conditions could lead to a degeneration of awareness in power — from Egypt to China in ancient times. There are other examples, such as Finland and Canada, which, despite the harsh climate, are able to correct their rut to a civilizationally acceptable one, having competitive advantages.

The next factor shaping the rut of a nation in its mental and sociological path is language. Mastering it, people and people absorb a huge number of narratives.:

- "Where you were born, that's where you came in handy",
- "Keep your head down",
- "Nothing depends on us",
- "Do you need more than anyone?",
- "Work is not a wolf – it won't run away into the woods".

These are bases of cognitive distortions that form an internal track.



Fig. 1. The image was created using AI. Compilation of the author's thoughts.

Foreigners don't just speak another language, they think in it. Learning foreign languages (especially English and Latin) allows you to work with the student's mindset, which means changing the rut in the minds of people learning new languages. Consciousness can expand, the ability to think wider and see further will appear. Klyuchevsky wrote about the geographical and cultural predestination of Russian history. Every person has a "band of freedom" in his personal life, which means that by studying the path of the Roman people in the process of forming the Roman Empire and its legacy, one can trace the band of freedom of an entire nation, within which the people can get out of the rut. Technological and economic determinism does not strictly limit nations. There are completely different examples of countries built around civilization, as Ortega wrote, of a "conveyor belt" type of civilizational development (like Ford's in the United States — democratically, for example). There is no natural predestination or fatalism that dominates nations and man. There is a rut, and there are chances for the people walking along it to either get out of it or stay in it for centuries. The period of freedom on the path of the formation of the empire of Ancient Rome included the construction of Roman law as an institution and as an instrument for the fair functioning of society.

Ajtemoglu's book "Why Some Countries are Rich and Others are Not" focuses on two types of institutions: extractive and inclusive. The first ones are aimed at benefiting a limited number of people with a difficult social lift — these are extractive institutions. The latter, inclusive ones, on the contrary, are designed to maximize benefits for the largest number of people and are characterized by high social mobility.

Ajtemoglu argues that if social and political institutions are "transplanted" into different countries, this can solve the problem of poverty and inequality. However, cultural peculiarities modify even those institutions that were copied from the model models. For example, the experience of Japan has shown that the transplantation of American institutions of government — when the Americans wrote the Japanese constitution and introduced laws copied from the United States — did not lead to the creation of a copy of American democracy, but led to the formation of an original, effective Japanese model, which was significantly influenced by the Japanese people. Japan has managed to preserve its cultural memory and historical heritage, transforming itself as a nation — mentally and structurally — to successfully compete in the international arena in the technological, social, ethical and even aesthetic aspects of its future path. Thus, there is a "band of freedom" when people can be vaccinated, like an injection that modifies "genetics", and a person stops suffering from congenital diseases, and the people stop suffering from historical rut.

Ancient Rome used Greek philosophical technologies to create elective but fair institutions of governance of the Roman state — these were a kind of "injections" of development that allowed Rome to go beyond the original rut.

Modern democracy in Europe has largely developed within the framework of the so-called "Holy Roman Empire of the German Nation," which inherited a number of elements from Rome. As Voltaire aptly noted, "The Holy Roman Empire was neither holy, nor Roman, nor an empire" — rather a confederation. But it is important that the people of the First Roman Empire, despite the formal preservation of the name, transformed towards democracy with an increase in the quality of life of citizens. This, in turn, enhanced the competitiveness of the people on the world stage.

Ultimately, improving the quality of life — by expanding rights and freedoms and reducing the number of restrictions and responsibilities — can be the key to getting people out of the historical rut. However, the transplantation of institutions can lead to the opposite effect if one does not take into account the direct connection between the moral state of society and the system of government. Therefore, the introduction of inclusive institutions is a special path that takes time. In some cases, it is very small: for example, as in the UAE, Singapore, Taiwan or Japan, where similar changes have occurred in half a generation, while these countries have not lost their cultural identity, but on the contrary have increased their civilizational competitiveness. The moral basis of society is changing much more slowly than the political system. This must be taken into account when analyzing the ways out of the rut of the people.

Ancient Rome managed to change the vector of its civilizational path several times — after the end of the reign of Tarquin the Proud and after the establishment of Octavian Augustus in power. Forms of government are secondary in comparison with an increase in people's standard of living and a qualitative leap in improving their living conditions — this is the real measure of a nation's exit from the civilizational rut. The cycle of a people's existence is also important for creating the conditions under which it is possible to exit the historical trajectory.

Ancient Rome is an example of a change in political statehood. State forms can change: the transition from a republic to an empire is a way of transforming the political system of Rome. Changes in history are possible both towards democratization and towards the centralization of power. Ancient Rome provides a unique opportunity to analyze the completed historical cycle — from a small settlement to a huge empire. There is a theory that freedoms are necessary for technological development, since the mind is productive in a comfortable environment. Octavian Augustus called himself "the first among the Romans" — precisely to create an environment comfortable for minds striving for civilizational development. He masked the inevitable rut of the people, but at the same time created more favorable conditions for activities that allowed the Romans to create added value to the mutual benefit of a large number of citizens. When the later Roman emperors, following the example of Eastern despots, began to declare themselves gods (like Diocletian), technological development slowed down, and then almost came to naught. This worsened the conditions for passionately minded people, reduced the level of freedoms and opportunities, and returned people to a deeper groove.

The cycle of completion of the development of the statehood of Ancient Rome allows us to trace the moments of bifurcation — the very turning points that create the conditions for the people to get out of the historical rut. These are moments of economic and technological growth, as well as improving the quality of life of the population. It is during such periods that people can get out of

the rut. Can a state move in the opposite direction — from an empire to a republic, and then to a union of poleis, such as the cantons in modern Switzerland? Analyzing the end of the reign of Tarquin the Proud and the formation of the Roman Republic, one can conclude that the state, like the queen in chess, is capable of moving in any direction.

Like its predecessors, the ancient Greeks, who could transition from monarchy to democracy, Rome also changed its form of government. He went from the royal power of the Etruscans (who, we recall, were not Romans) to the republic, a dream of an ideal state structure that was realized in practice. The vast Roman Empire, which encompassed the entire Mediterranean world, formally remained a republic in name — Res Publica, which means "common cause." And it is this common cause — to create a just state — that becomes a form of breaking out of the rut for the benefit of the people living in it.

Carthage, a contemporary of Ancient Rome, also managed to get out of the rut and move to an aristocratic republic that resembled the Venetian form of government or even ancient Novgorod. Antiquity stands as a positive example of how nations got out of historical ruts and embarked on a path leading to increased competition in a global world where there is a struggle for human capital and resources. These societies created the best living conditions for people.

The Romans were a great people of Antiquity, who left not only a cultural and legal legacy (through the reception of Roman law), but also technologies for cooperation with the population, including the introduction of mental narratives. Thus, the example of replacing the power of the Etruscans with a republic shows how the people can get out of the rut and gain technological and civilizational acceleration. The history of civil society in Ancient Rome demonstrates that people are capable of change, and change depends on effort and discipline. The track of Rome changed several times during the existence of the state — and with it the Romans themselves changed. Therefore, the change of a nation and its path begins with the change of one person. If you want to change the world, make a bed.

The future is filled with positivity, because people are able to change, and nations are able to change their rut. Itineraries are coded itineraries, with the help of which participants in the business turnover of Ancient Rome moved through space in search of information, as well as to find or provide necessary goods and services. The Romans wrote detailed comments in their itineraries — where there were stops with the possibility of overnight accommodation and where it was possible to change horses. Such a system significantly accelerated travel and was called *Cursus Publicus*. The Emperor Septimius Severus himself writes in the *History of Augustus*: "I will move out and, with God's help, I will reach the first stop marked in itineraria, then I will reach the food warehouses and horse replacement points, and after arriving at the borders of the barbarian lands, I will change the route" (this was done so that the enemies would not take advantage of his publicity).

There were already 255 stations in the Antonin College with coded instructions for their location — using a special cipher. The itinerary of the Romans is like the punched cards of programmers at the end of the 20th century: the way to search for information and form trade relations at different stages of its evolutionary development.

Today, there are various formats of business communications: the sale of goods and services by one company to another (B2B), the sale of goods by companies to end-users — individuals (B2C),

as well as modern models in which purchases are made by machines themselves without the participation of people (for example, a washing machine that orders powder on the marketplace itself) — B2Machine customers. And finally, it is possible to purchase using neuroimplants in people's heads — Brain-to-Brain neuro customers.

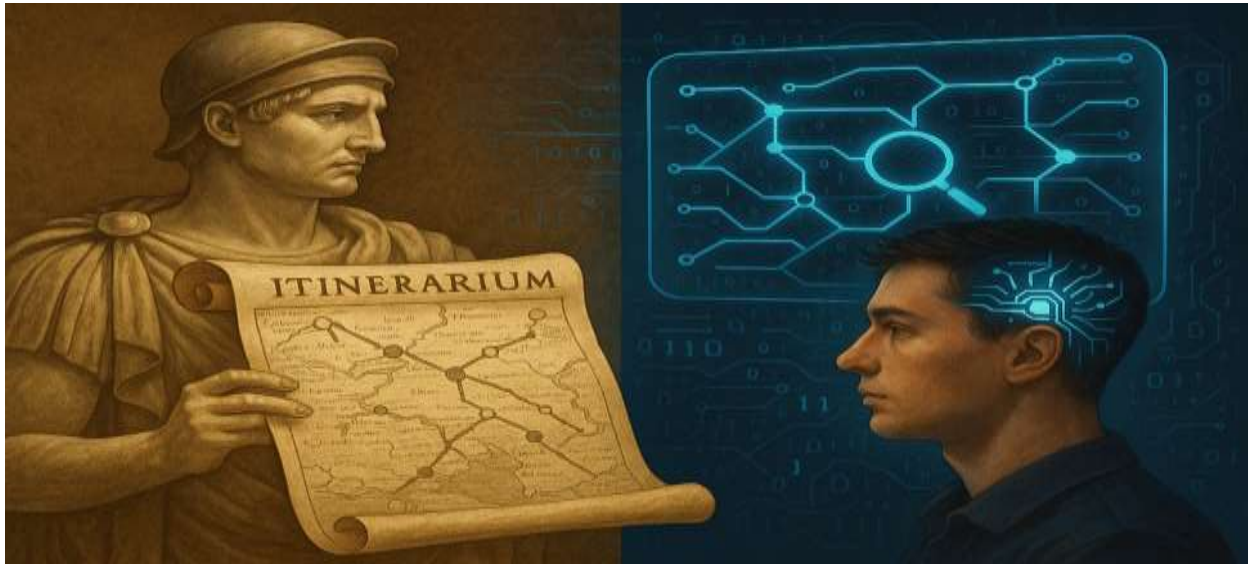


Fig. 2.

The development of information search coincides in its trajectory with the development of travel in Ancient Rome. Even 50 years ago, people searched for information by moving through time and space — in libraries and other places where books were stored, which structured knowledge in accordance with the opinions of specific authors. 30 years ago, with the invention of the Internet and the ability to connect to it from home computers, mental journeys in search of information, goods and services moved into the realm of search engine queries. 10 years ago, technology made it possible to disconnect consumers of information from stationary devices by providing them with remote access devices — smartphones.

And two years ago, the system made another evolutionary leap: now the search for goods, services and useful information takes place using modern technologies — through chats with artificial intelligence. Request — response — and the next step. The next stage of software evolution improves the life of a mental traveler by saving time and freeing up resources, eliminating the need to physically move to a data source.

We are talking about chips implanted in the brain, from which goods and services will be ordered, bought and sold, as well as the search for necessary information. The most important thing here is the symbiosis of AI and humans through implantation into consciousness. Neuralink is already doing this, having implanted such chips for computer control, training, information retrieval and storage to dozens of people.

The route coding system developed in Rome today allows, through software code, to overcome the temporal and spatial continuum, using artificial intelligence technologies to scan and process information, as well as to plan their own movements.

The empire of Ancient Rome developed dynamically, its growth was organic, not artificial — largely due to the technology of encoding travel through the program code and workshops. Today, the implantation of chips and the use of AI chats can accelerate the organics of human development. The skill of setting up industrial queries in artificial intelligence chats comes to the fore as a tool for business planning and cognitive navigation in the information world. Developing the idea of the relationship between the ancient Roman mining system and modern AI technologies, including neural interfaces and algorithmic planning, Rome's mining facilities, as a kind of routers of the ancient world, formed the first recorded system of structured movement through space for the purposes of information and material exchange. These traffic maps are not just lists of stops, but real communication protocols, the primary analogues of transport and information networks. In an era when data transfer speeds were limited by the speed of a rider, the *Cursus Publicus* architecture allowed for maximizing logistics efficiency, making the Roman Empire the first low-latency network.

In the 21st century, a person is definitively separated from physical space in the process of receiving information. If a Roman had to personally arrive at the station to find out the news or buy grain, then a modern user, armed with neural networks and cloud computing, is able to request and analyze terabytes of data in a split second. In this context, AI chats become modern itinerariums - they guide the user from the query to the result, just as ancient itineraries led a merchant from Miletus to Lugdunum.

Today, the travel route has become not physical, but cognitive. Mental movement, based on a system of requests and responses, replaced the physical journey. Just as the engineering department set the vector of movement from station to station, modern industrial technology in an AI system sets the trajectory of reasoning, analysis, and decision-making. The strategic value of modern business and scientific activity increasingly depends on the quality of the query — the skill of setting a standard, which can be considered as a new form of literacy of the 21st century.

Digital Courier and Cognitive Implant

At the next stage of technological evolution, a symbiosis of man and machine is formed that goes beyond traditional interface interactions. We are talking about neural integration, in which the boundary between biological and digital consciousness is gradually blurring. Modern neurotechnologies, such as the Neuralink, Synchron, and others projects, open the way to the formation of cognitive hybrid subjectivity, a new type of agent in which the functions of memory, analysis, information processing, and even creative thinking are partially delegated to artificial systems.

If the itinerarium in Ancient Rome served as an extension of the traveler's bodily experience, providing a structured model of movement in space, then the neurointerface in the 21st century becomes an exocognitive tool — an extension and amplifier of the human mind. He performs the role of not just an intermediary, but an active participant in the cognitive process, able to maintain context, predict intentions and adapt information in real time.

A fundamental transformation is taking place in the new architecture of thinking: the travel code, previously recorded on papyri and tablets, is evolving into an algorithmic decision-making model embedded directly into human neural structures. The request no longer requires physical input or even voice utterance — it is formed at the level of a mental impulse. In response, the artificial system performs instant cognitive routing, analyzing the context, goals, and preferences of the

user, and suggests relevant actions.: from choosing the optimal solution to personalized delivery of knowledge, services, goods, or behavioral strategies.

Thus, the very concept of thinking is being transformed: from a consistent logical process to a flexible, modular and polymorphic cognitive system in which a person and a machine act as a single intellectual ensemble. This symbiosis anticipates the birth of a new form of subjectivity, in which the interface disappears as an intermediate link, and interaction moves to the level of integrative cognitive unity.

From Infrastructure to the Infosphere

If ancient Rome was a civilization of roads, then the 21st century is shaping a new civilization — a civilization of information flows, where data transmission, storage and processing channels become transport arteries. In antiquity, roads acted not only as a means of transportation, but also as an infrastructural metaphor of power, ensuring control over territories, communications and logistics. In the digital economy, information infrastructures perform a similar function, from data centers and cloud platforms to artificial intelligence protocols and quantum networks. Today, power belongs to those who control not the land, but the routes of information and algorithms for accessing knowledge.

Just as control over the *Cursus Publicus* hubs ensured the governance of the provinces of the Roman Empire, so in modern reality, access to computing resources, data, and AI architectures determines the degree of cognitive and economic sovereignty - be it an individual, a corporation, or a state. Information traffic management is becoming the equivalent of political domination, and the possession of keys to digital routes is a sign of systemic power (see Floridi, 2020; Zuboff, 2019).

The next stage of digital transformation is the decentralization of routes and the personalization of cognitive navigation. Unlike hierarchically defined imperial transport routes, modern knowledge technologies are becoming dynamically formed trajectories, depending on the context, goals and preferences of the user. Each individual builds his own route in the infosphere, using artificial intelligence as an intelligent guide — navigator in the vast fields of data.

These personalized neuromarkets, formed in real time, protected by blockchain structures and managed by biocipheral trust protocols, become the basic unit of a new form of social organization, the neuroimpery, in which consciousness as a platform is the main value and universal currency, and the cognitive ability to navigate data is the basis of power and interaction.

In such a system, it's not just data that has value—the ability to interpret, combine, and apply it acquires value. From the "possession of information" we move to the possession of the trajectory of thinking, where the route is more important than the final destination. As a result, a new paradigm of subjectivity is being formed — *Homo navigans digitalis*: a person who thinks in routes, able to control not space, but the architecture of access to meaning.

Futurum Via Romana: From the Hospital to the Implant-The Evolution of Thinking Routes

The Digital Age of Cartography of Consciousness

The future of information retrieval and decision—making is entering a qualitatively new phase, which can be designated as cognitive transhumanism, a stage at which the boundaries between natural intelligence and artificial cognitive systems begin to blur at the level of neurophysiology

and algorithmic consciousness. If in Ancient Rome routes were written in ink on parchment, and knowledge was transmitted through physical media, then in the future reality routes of thinking will be integrated directly into the neural networks of the human brain, becoming part of its functional architecture — not metaphorically, but literally.

The fusion of neuroimplants, artificial intelligence, and Distributed Decision-Making Systems gives rise to a new class of subjectivity, a cognitive—algorithmic hybrid in which biological structures and machine computing processes act as a single entity. This subject transcends the traditional human model of *Homo sapiens*, forming a new anthropological dimension — *Homo navigans digitalis* — a "digital thinking wanderer" capable of navigating complex logical, informational and ethical landscapes in real time.

With the exponential growth of computing power, the widespread introduction of AI into everyday life, and the expansion of the capabilities of neurotechnology (see Tegmark, 2017; Kurzweil, 2005; Harari, 2016), navigating knowledge rather than storing it becomes a crucial cognitive skill. Memory as a function is being replaced by strategic routing of consciousness, where the key tool is prompt, a targeted, structured query capable of launching decision chains in a digital environment. Prompt is not just a text, it is a unit of cognitive programming, a compressed model of intention, an intelligent vector that guides the AI system to a relevant result. In this sense, prompt becomes a new epistemological weapon — a tool for managing knowledge, meanings, and strategies. It transforms the user from a passive consumer of information into an active architect of semantic trajectories. "Prompt is the new sword of reason, and artificial intelligence is its armor. Whoever owns the query logic owns the architecture of reality."

Thus, in the context of cognitive transhumanism and human integration into the digital infosphere, the ability to generate accurate, ethically and logically verified queries becomes not only a technological, but also a cultural and philosophical skill that defines the boundaries of human action in the hyperconnected world of the future.

The Rock and Roll of Intelligence: Where Science Meets the Future

The intellectual revolution that began in the creaking silence of libraries is exploding before our eyes today — not in the walls of academies, but in the chaotically electrified atmosphere of the digital environment, where instead of rustling pages, clusters of code, syncopations of algorithms and improvisations of neural networks sound. Human thinking is less and less tied to linear text and more and more resembles musical improvisation in the style of progressive rock: multi-layered, nonlinear, saturated with semantic transitions.

We no longer just read books — we embed data into the architecture of consciousness, like bass riffs in a concept album: not a sequence of facts, but an interweaving of meanings organized into cognitive structures capable of adaptation and transformation. In this new format of thinking, each product becomes an intellectual solo on the keyboard of the mind — a manifestation of the user's style, intuition, logic and cultural memory.

Each neural network is a jam session with machine mnemonics, a session in which algorithms adjust to the rhythm and timbre of your thought. The user is no longer a consumer, but the conductor of a cognitive ensemble that sets the tempo, style, and modulations. Here, it is not the amount of memory that comes to the fore, but the flexibility of interpretation, the speed of semantic

transformation, and the ability to improvise outside the box within architectures built according to a standard, but unfolding outside it.

"The Roman legions marched through the iterarii. Today, digital legions of ideas are marching along the routes of neural networks. But now it's not the emperor, but you who are the commander of this cognitive battalion."

In this new digital landscape, thinking becomes a form of execution, and intelligence becomes a tool that requires attunement, sensitivity, and aesthetic flair. The world of the future belongs not to those who know, but to those who know how to play on the interface of reality, turning the data stream into a symphony of meaningful solutions.

Futurological Forecast: The Empire of Neuro-marketing

According to forecasts (Floridi, 2020; Harari, 2016), by the middle of the 21st century, up to 40% of all decisions in the field of procurement, education and medicine will be made with or under the control of AI systems integrated into neural interfaces. This will lead to the birth of a new social structure — a neuro-integrative economy, where value is measured not by labor or capital, but by the depth and speed of cognitive access to knowledge. We are witnessing a transition from a civilization of roads to a civilization of neural routes. Those who used to own the communication routes owned the Empire. Today, whoever owns cognitive interfaces will own its future.

An iterarium is not just a historical artifact, but an archetype of a route that sets the trajectory of movement, thinking and communication. From the stone roads of Rome to the cognitive trails of the 21st century, there is a continuous line of evolution of ways to search for information and organize interaction. It is in this ancient Roman invention — a structured and encoded path — that the logic is laid, which digital algorithms, neural networks and neuroimplants have inherited today. The transition from physical movement to cognitive movement has become a turning point: the user no longer goes to knowledge — knowledge comes to him, often faster than he has time to realize the request itself. A person becomes a navigator in the vast landscapes of data, where prompt is a map and AI is a compass. New literacy is the ability to formulate a question so that an algorithm opens the door to an answer.

Thus, we are entering an era where the implant and intelligence, interface and consciousness, data and solution merge into a single ecosystem. Just as the iterarium provided Rome with dynamic development and sustainable space management, so today neurocipheral routes are becoming the foundation of a new empire — an empire of data, driven by requests and synchronized with human thinking.

And it is in this new reality that the winner is not the one who owns the information, but the one who knows how to travel through it. An analysis of the historical experience of Ancient Rome demonstrates that the track of national development is not a fatal predestination, but only one of the possible trajectories formed by a multitude of interrelated factors. A way out of it is possible with internal discipline, a desire for transformation, and a conscious choice in favor of inclusive and progressive institutions. The history of Rome shows how cultural stratifications, language, geography and institutions of power can both consolidate and destroy traditional models of development. The model of the Roman republic and the subsequent empire illustrates the cyclical nature of political forms and the possibility of transition between them without loss of cultural integrity. Ultimately, every nation has a chance to change its historical vector — to get out of the

rut if it is able to realize its position, recognize the "freedom lane" and take advantage of the moment. Rome's past, as a complete historical cycle, gives us not only knowledge, but also a method — a method of analysis applicable to modern states at the crossroads of civilizational choice.

REFERENCES

- Floridi, L. (2020). *The Logic of Information: A Theory of Philosophy as Conceptual Design*. Oxford University Press.
- Kurzweil, R. (2005). *The Singularity is Near: When Humans Transcend Biology*. Penguin Books.
- Harari, Y. N. (2016). *Homo Deus: A Brief History of Tomorrow*. Harper.
- Tegmark, M. (2017). *Life 3.0: Being Human in the Age of Artificial Intelligence*. Alfred A. Knopf.
- McLuhan, M. (1964). *Understanding Media: The Extensions of Man*. McGraw-Hill.
- Galloway, A. (2004). *Protocol: How Control Exists After Decentralization*. MIT Press.
- Marvin, C. (1988). *When Old Technologies Were New*. Oxford University Press.