The Behavioural Economics of Belarus

Praise for the Book

"Fiscal problems are a particular type of public choice in which not all stakeholders are included. Shifting global political, financial orders, globalization, all make this book a must-read not for just the current generation, but many more to come. It draws a lot of parallels between Belarus and China".
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Professor of Finance, Tsinghua University, China; author of China's Guaranteed Bubble.

"To 'decode' traditionally has two meanings: to 'decipher', i.e., to find the meaning of something hidden behind symbols, and to 'deprogramme', i.e., to free from an imposed programme, from the spell of an inserted code. Kiryl Rudy's book copes brilliantly with the first aspect of decoding. It is to be hoped that the author will take an active part in the implementation of the second aspect of the process."
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"A bright look at the economy through the everyday values and stereotypes of modern Belarusians. It is original research which shows how cultural codes determine national economy and economic policy. It is a fascinating and easy read which will attract wide range of readers."
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Author of *Belarusians: From 'tuteishyh' to Nation,* Belarus.

The Behavioural Economics of Belarus:

"Because We Decided So"

By
Kiryl Rudy

Cambridge Scholars Publishing

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To my parents
In memory of my father

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INTRODUCTION

In my student years, when I went to parties, discos, or Students' Day events, my father would often admonish me with sobering stories about fights ending in stab wounds, burnt corpses, and other frightening things. His stories stayed with me for a long time, rather than changing my mood just for the night. On the one hand, I have thought about that, and see that I believed my father, as a doctor and head of the emergency room, who was aware of admission department statistics. On the other hand, now I realise that there was something else behind his stories. These were his own childhood fears — during World War II he miraculously escaped fascists by hiding among typhoid patients, while some of our other relatives were shot for cooperating with partisans, and were not allowed to be buried, with their bodies left in the street for days. And his post-war relocation from Belarus to the east of the Urals in Russia, following my purged grandfather because the last was held captive by fascists during the war. And his choice of medical career, despite his haemophobia, as my grandfather was convinced that "only doctors survive when taken captive". This entanglement of the conscious and the unconscious made my father's stories vivid and crisp and affected my seemingly personal decisions and behaviour.

It is also sometimes unclear how the Belarusian economy behaves, how Belarusians make their economic decisions, and what affects such decisions — economic laws, personal experience, habits, phobias, intuition, mood, or something else. Or maybe all of these at a time? All the things that are daily 'encoded' in us in the form of information, emotions, or events, are then reproduced in our collective memory, grasp of the present, and vision of the future. In this way, our cultural environment forms the code that determines our economic behaviour. This is our economic code, our DNA, which is passed, not genetically, but socially. Therefore, a man's psyche and economic behaviour are determined by uploaded information, rather than by his nationality, race, or faith, i.e., something inherited.

Belarus, as well as its cultural matrix, is transformational, complex, and changeable. It is neither the Russian nor the European world. It tends to lean to the former and then to the latter. It fasts and then feasts.

It pulls back and then pushes ahead. It inspires hope and then brings depression. According to all reasonable economic laws, the economy of Belarus should have halted long ago, but its 'character' simultaneously saves and kills it. When one tries to understand it, and asks why this, or that, decision is taken, Belarusians respond with an indisputable argument — "because I decided so". The 'I' of every Belarusian combines into 'we', and then manifested in "Because we decided so". One can attempt to find, or come up with, a sound justification for this decision. But there is none. Just "I want, and I will", "I want to do it, not the best way, but my way". This puzzles further, and creates uncertainty.

It is obvious, however, that the behaviour of the Belarusian economy has its own logic, a clear desire to keep (even by force) the inherited post-Soviet structure and system of management. This gives a mental support point, and instils self-confidence and permissiveness. Such economic psyche is both individual and collective. The Belarusian society is characterised by a 'common sense syndrome' (also known as the 'Stockholm syndrome'), which describes joint engagement in behavioural economics. The Belarusian society is like a bird released from its cage — it does not fly away, fighting its desire to return. It is mesmerised by its memories, its familiar karma of suffering, and disappointment at the idealised freedom.

It is always a challenge to give a diagnosis to society. The problem is that people largely do not want to acknowledge it. It is not always pleasant to see oneself through others' eyes, to realise that one's psyche and behaviour are barriers rather than incentives for the economy. It's always easier to claim that, in the context of 'because we decided so', someone else, not 'we', decides everything for us and is to be blamed and bear the responsibility for everything. But this is not true. It's impossible to escape from oneself. One would not be able to hide behind the screen of the cultural matrix, public stereotypes, customary behaviour, '*pamiarkoŭnasć*' (forbearance – slow decision-making), '*moža tak i treba*' (maybe it is to be so – inherited humbleness), '*geta ŭsio roŭna ne maio*' (anyway, it's not my business – shifting responsibility), '*agulnaja mliavasć*' (fatigue), '*abyjakavasć da žyćcia*' (apathy), and other things. Such avoidance of decision-making is also a decision! Hence, "because I decided so", which forms "because we decided so", is the personal choice of every Belarusian. And this choice has certain consequences; it is necessary to bear responsibility for that choice, and it affects everyone; the entire Belarusian economy.

On the one hand, there is rational behavior based on financial abilities. On the other, 'normal' refers to a set of norms, habits, and traditions that has built up over time. Certainly, those two sides do not always see eye to eye, which is why it is important for each person to understand whether they are rational or normal.

Rational people always think and act correctly. They experience reasonable emotions. They evaluate risks as well as their own desires and abilities. They follow economic laws, responding appropriately to changes in prices, exchange rates, and interest rates. They plan out their lives, and those of their children, decades in advance. They value education as a profitable investment in human capital. They live strictly within their means. They are disciplined, they pay taxes, and they do not break the law. They stick to a diet (not only a financial one), eating food that, while healthy, does not always taste as good as they might like. They go for regular check-ups and do not try to treat themselves at home. They neither smoke nor drink alcohol. They are rational, if not always normal, people.

Normal people, for example, in Belarus, takes out large loans to buy the latest gadgets, electronic appliances, and expensive cars, pay for grand wedding celebrations and anniversaries, finance their trips abroad, and remodel their apartments. It is normal to borrow money to pay off loans and interest; they also borrow to finance their daily lives. It is normal to expect payment for doing nothing more than just showing up at work. It is normal to work and receive a pension at the same time. It is normal to value intellectual work less than physical labor. It is normal to make quick money. It is normal to risk public capital competing with private corporations. It is normal to confuse economic optimism with patriotism, work according to one's own rules, and live for today.

There is a unique understanding of fairness and an urge to be just like everyone else in Belarus: "they're no better than we are", "we have to save face", "don't be greedy and arrogant". This understanding, urge, and focus on getting fast results, as paradoxical as it may be, was born during a long period of stability. That led to a build-up of unused emotional and intellectual energy, as well as a confidence that many problems will take care of themselves at some point in an unknown future. In that context, all one can do is enjoy today and live for one's own satisfaction. A troubled past casts doubt on the future. Conservatism is born out of a desire to avoid mistakes, and new initiatives have to bear fruit immediately. Drawn-out economic problems lead to a pervasive depression, and expectations look no further than the short term.

There is no financial normalcy that holds true the world over. For example, in the US, borrowing to pay for university is normal. In China, whole families save up for old age, healthcare costs, or, for example, sending what is often their only child to study in the US. In Belarus, financial normalcy has changed with each of the last three generations.

The first is the Soviet generation. They consume little, appreciating above all what used to be hard to find. Those that lived through post-war hunger value food products. Others focus on household goods, the latest in fashion, and quality of life. Still others are more concerned with job stability than they are with their salary. When it comes to economic problems, they blame everyone but themselves.

The second is the post-Soviet generation raised by their Soviet parents. They lived through perestroika, the wild 1990s, and the rich 2000s. They value the wider opportunities that come with meeting new, more expensive demands: cars, homes, and tourism. They make up a consumer-based society in which individual values crowd out public values. Consumerism is the currency of success. Their behavior is based on individual survival ("Who cares, so long as it doesn't affect me?") with minimal socialization, annoyance at those around them, a trust deficit, and suspicion toward success, and each other.

The third is the modern generation born in independent Belarus. They make up the middle class as well as civil society. Yes, they carry on the individual values of their parents as well as their overinflated social expectations. On the other hand, they are taking more and more responsibility for cultivating themselves and getting the older generations accustomed to social values: national culture, language, sovereignty, healthcare, education, sports, the environment, public order. There is an internal struggle between individual and social values, one in which the winner is tough to predict.

The three generations all have in common a desire to move from state capitalism to a human capitalism that prioritizes individual and social values. At the heart of that system is human capital, civil society, and the welfare state. Only a glimpse of the future, hope, trust, well-founded optimism, and the everyday banality of common sense and kindness will foster growth and prosperity.

The Belarusian economy has been stagnating since 2015, though, paradoxically, stagnating systems can maintain stability for quite a while. In Belarus' case it boils down to the values and habits of each generation: those who lived through the tough times would probably not mind suffering a little to avoid the war, hunger, deficit, and other memories

haunting them from the Soviet and post-Soviet years. The second generation would be more reticent to slip back into recession, having once tasted shopping tours and sunny holidays at the beach. A lack of experience makes the reaction of the third generation hard to predict, as it happened after the President's election in August 2020, when this generation raised the whole country to become politically active.

This book concerns the approach to decoding the economy, changing the determinism of the psyche and behaviour. The common perception is that it would take centuries, decades at best, as new values are to come with the arrival of new generations. But new values will not appear by themselves. Things embedded are then reproduced. And nowadays it is quite a quick process. The time needed to apprehend new information is rapidly diminishing. It used to take years, now it takes a few months. For instance, when a person gets to a foreign country, with a different cultural matrix, he intuitively feels the difference, and adapts quickly, owing to his instinct for self-preservation. Similarly, when the country's economic climate changes, people will inevitably adapt. The only thing that matters is that the goal of transformation should be their improved wellbeing, rather than some other non-economic goals.

In a nutshell, decoding leads to transparency and openness. To achieve that, the economy needs to 'turn on the light' and 'open the door', creating an understandable and favourable climate for foreign investors, in the first place. They serve as a channel for the transfer to Belarus not only of money, technology, and expertise, but also – most importantly – of universal international values, which transform national models of behaviour, highlight advantages, and form the features necessary for the transformation of behavioural economics into classical economics.

This book is the non-economic answer to the economic challenges faced by Belarus in recent decades. Let me briefly explain the logic behind my working as Economic Advisor in President's Administration in 2013 – 2016 and why classical economic instruments (I called them "The Financial Diet") didn't work for economic reforms in Belarus.

First, I used to think that budget constraints would create sound incentives in the Belarusian economy. If the monetary conditions were tightened (through balancing the budget, bringing inflation down, quenching devaluation expectations), then the remaining budget funds would flow, not to state-owned enterprises, but to the state – to finance the social sphere, security, and public administration. I assumed that if there was no wind, one would have to row. In other words, a deficit of

financial resources would push economic reforms and preserve social stability. I expected that, to avoid a recession caused by a lack of budget financing, the economy would open up for private and foreign investments. But that did not happen. The economy was in recession, while there were no reforms and subsequent investments. Decision-making was led not by economic incentives, but by something else – habits, instincts, and stereotypes. The forceful conservatism and the desire to stop and wait surfaced in the context of stronger economic uncertainty and difficulties with understanding it. But that results only in retarding the future and lagging further behind.

Second, I expected that the technocratic approach was working. Figuratively speaking, if one fixed a single grain of sand, one would be able to prevent an avalanche. If we adopted certain decisions on specific projects, without changing the 'abstract' business climate, we would be able to avoid a crisis. And then, the mix of separate decisions would generate a tangible effect for the whole economy. But this gives only a sense of effect. It's like walking around in a dark room with a candle. It is impossible to capture everything and create favourable conditions for everyone in this way. But the issue is not that the Belarusian economy does not work in such conditions. It does! Unsustainably and slowly. It adapts in any case, acquiring hybrid features. The issue is rather whether the economy is the main goal for Belarus. There are different economic models, including those with low living standards, vague prospects, which are, however, acceptable for the public. Hence, the society focuses not on economic, but on other priorities, which become a barrier to the economy. And if it is true, everyone – not a single, but every grain of sand – is to blame when an avalanche strikes.

Third, time seemed to be the main factor of change. If the internal conditions for economic reforms are ripe, the external factors are pushing towards that, and there is a team of like-minded people, it is the best time. However, this is not enough. Social aspirations and political will are uppermost. It is precisely the combination of social and political activity oriented in the same direction that could generate coordinated 'pulsing', pushing economic growth. Or that could be held back, accumulating until breakthrough is possible. Or could spread evenly, ensuring economic stability. In addition to social and political activity, another essential element is economists. Even under some ideal conditions, decisions are made by people often under the influence of socio-cultural, rather than economic, factors. It reduces the demand for economists, leading to their outflow to other areas and a drop in the overall level of competence in

the economy. As a result, more and more problems surface in the economy, like in a shoaling pond. Therefore, it is not time, but activity and competence that are vital to reform the Belarusian economy, establishing an upward trend in its growth.

All these misconceptions have shaped the need to take a broader approach, and look at the Belarusian economy not only from the point of view of an economist. International readers also have an opportunity to look at Belarusians and their economic behaviour from a different angle. Would they recognise them, accept the assessments and proposals? When I stand in their shoes, re-reading the introduction, I get to see a vague image of something strange and familiar in the text. There are my running medical metaphors (diet, diagnosis), probably popping up from the depths of my childhood memories under the influence of my father and other relatives, who worked in the medical field. And the term the 'Stockholm syndrome', which is used here for some reason, and resonates only too well with my grandfather's "only doctors survive when taken captive". Even now, it is difficult to find a simple and reasonable explanation why those expressions and comparisons have come up in particular, and why I have undertaken to write this book. The first answer that comes, and stays deep inside, is "because I decided so". Such answers form something bigger, the cultural matrix of Belarus – "because we decided so".

CHAPTER 1

THE CULTURAL MATRIX

Introduction

In April 2016, as Economic Advisor to the President of the Republic of Belarus together with other Belarusian regulators, I had a few meetings with foreign investors and holders of Belarusian government bonds within the framework of the Spring Meetings of the International Monetary Fund and the World Bank, in Washington. In one of the meetings, foreign investors asked me very straightforward questions: "Will there be economic reforms in Belarus or not?" "What do you think about it?" "We hear contradictory statements. How should we understand you, Belarusians?" The investors got seemingly satisfactory responses from me as a member of the Belarusian delegation: "It is more important what we do, rather than what we think or say! If we implement tax, pension, and other reforms, you see that. Therefore, the main thing is how we behave, the main thing is our behaviour."

In June 2018, as Ambassador of Belarus in China, I gave a lecture to Chinese generals and admirals at the Chinese Academy of National Defence. After my diplomatic speech about Belarus and Sino-Belarus relations, one of the high-level Chinese officers asked a very interesting question: "How come, that during economic recession and the fall of incomes in your country, Belarusians don't go out to protest and strike in the streets?" My answer was the following: "There is one behavioural trick. When you jump in the hot tub, you immediately jump out. But if you get in the hot water slowly you'll get used to that and stay there".

These two stories can briefly characterise the Belarusian cultural matrix and its impact on the economy — the behaviour of Belarusians forms the behavioural economics of Belarus.

Behavioural economics is not unique to Belarus.[1] Back in 1953, Milton Friedman, a Nobel Memorial Prize laureate in Economic Sciences, used an apt analogy in this context — when a snooker player makes a shot, he hardly considers the laws of geometry and physics, and similarly,

when making economic decisions, he is unlikely to be guided by statistics and economic laws in his behaviour.[2] In classical economics, it is assumed that one would act logically and reasonably in extreme cases – intuitively relying on knowledge, statistics and experience. Sometimes one makes mistakes, of course, under the influence of emotions, but it rarely happens, since it is believed that one controls oneself so these errors can be neglected.

In theory, everything is supported with facts and statistics, and established patterns should become norms and stereotypes of human behaviour, i.e. the theory of classical (non-emotional) economics. But, in practice, the opposite is often true. All our emotions, speculations, norms, and stereotypes, take possession of us, and lead us, interpreting reality, new facts, statistics, and consistent patterns. We make everything that happens around us fit our mood, and our conception of the surrounding world; we interpret facts through the prism of our beliefs; we build everything into our cultural matrix, distorting new phenomena and facts. Thus, in behavioural economics, it is often the theory that shapes the practice of our behaviour, rather than the practice that shapes the theory. As a result, everything is reversed in behavioural economics. 'Theoreticians' are those who cannot cope with their beliefs, habits, or memories, and are trapped in their 'theories'. While 'practitioners' are those who change and adapt to the new reality, relying on continuously arriving new knowledge, facts, and statistics.

So, behavioural economics is economics based on real-world practice, with its irrationality, emotions, social norms and stereotypes of people's behaviour. Unlike classical economics, which relies on smart incentives, logical (easy) choice, laws of minimising risks and maximising benefits (values), behavioural economics is empirical economics based on facts, experiments, established practices, prejudices and decisions, sometimes made in an unreasonable, intuitive and chaotic way, in the environment of market and government failures. The similarity between behavioural and classical economics is that the irrationality of the former is also regular, repeatable, and predictable, in its own way, which enables its study and application of scientific methods.

Studies of behavioural economics through the prism of interrelations between culture and economics trace their lineage to the classical works of Adam Smith, John Stuart Mill, Karl Marx, and Max Weber,[3] and are further undertaken today by modern Israeli, American, and European scientific schools.[4][5] Given that it is mathematically difficult to give a straightforward description of interrelationships between culture and

economics, mathematical economists tend not to be very interested in this field, yielding it to economic sociologists and economic psychologists. In this regard, the science of behavioural economics has become best known in identifying interrelationships based on examples of certain economic activities and target groups of people, for instance in the field of finance.[67] In particular, the fundamental and technical analysis of financial markets is nothing more than a study of respectively classical and behavioural economics of finance. Attempts to apply behavioural economics at the national level, and estimate the influence of the cultural matrix on the entire economy, disclose the need to take a broader view, with cross-disciplinary research carried out in the fields of sociology, cultural studies, history, psychology, and other areas.

Economics is only part of our life. Behavioural economics, the economic code, is also only one element, a branch of something bigger, more general – the cultural matrix.

The cultural matrix — defined as the habitus by French sociologist Pierre Bourdieu — is understood here as the collective programming of psyche and behaviour.[89] Ordinary people may sometimes call it the 'national character'. This system includes values, habits, norms, rules, behavioural practices, and stereotypes, cultural implications that are common to a group of people. The cultural matrix depends on the human environment — the society, politics, economics, laws, institutions, and nature, i.e. everything that surrounds a person. Therefore, people representing different cultures have different perceptions of what is normal, valuable and functioning. Something that is considered common sense and acceptable in one culture seems strange, and is rejected, in another. Differences in thinking are reflected in differences in languages, actions, behaviour, appearance, and even facial expressions. The variety of cultural matrices always enables comparisons to be made, and conclusions to be drawn about the distinctive features of this or that matrix.

The concept of the cultural code also appears in this book. It is seen here as a form of transmission of the cultural matrix and its elements in the process of communication, when the cultural code is used to decode elements of the cultural matrix, for instance cultural implications, stereotypes and behavioural practices. When the cultural matrix interacts with economics and economic relations, the economic code, which characterises our economic psyche and behaviour, is displayed.

The Cultural Matrix in Various Fields of Science

The cultural matrix is quite a complex system that is studied in different ways by different sciences, ranging from medicine to mathematics.

In the field of neuroscience, the cultural matrix is usually studied in the limbic system of the brain. According to Paul MacLean's theory of the 'Triune Brain', the human brain can be divided into three complexes: limbic, reptilian, and cognitive. The limbic complex is responsible for emotions, memory, instincts, charm, sleep, wakefulness, and the functioning of internal organs. This is the complex that characterises the socialisation of humans. The reptilian complex regulates the basic vital activities: breathing, pulse, body temperature and some primitive emotions, such as fear and aggression. The cognitive complex, that accounts for 80% of the brain, is responsible for abstraction, the ability to think and speak, and to analyse and make rational decisions. The attribution of the cultural matrix to the limbic complex is explained by mental convenience; the comfort of passivity. Although the cognitive complex occupies most of the brain, the limbic complex of the human brain appeared earlier, has developed longer, and is estimated to influence decision-making by 95%.[10] It should be noted that, although the theory of the 'Triune Brain' is useful, it is not universal. Other research methods are also used, for instance monitoring the human pupil's response to his thinking and behaviour, as driven by the cultural matrix.[11] The human brain has yet to be properly studied and is complex to understand. In this context, behavioural reflexes are sometimes studied through the reaction of animals most similar to humans, as well as the evolution of living beings. In general, studies of the cultural matrix are essential for neuroscience, as well as for cross-disciplinary areas at the interface of psychology, sociology, culture studies, political science, and economics.

In the field of psychology, the cultural matrix is studied as an element of human unconscious behaviour. Proposed theories are tested on representative groups, being proved or disproved. In the theory of behaviourism, humans are viewed as information systems.[12] They accumulate information using all their senses and then reproduce it. When the available information is utilised to build logical chains, their actions are rational. But when there is more information than can be comprehended, the unconscious cultural matrix is triggered. Under its influence, humans try to adjust the reality to their beliefs, habits, norms, and stereotypes, and act automatically, unconsciously selecting similar scenarios from their memory and reproducing them to obtain the

expected result. At the same time, they hardly realise they are behaving irrationally, 'going around in circles'. Everything seems familiar and logical in its own way. Paradoxically, this is combined with our desire to manage and control everything. In view of this, it is sometimes scary that the unconscious can guide us. So, in fact, we do not always manage and control ourselves and our decisions. Since the human brain is unable to embrace all the necessary facts, probabilities, and figures, in the process of decision-making, people think in words, sentences, and stories, which indicates the predominance of the emotional over the rational in us. In this case, big decisions are often chaotic, formed under the influence of random external events and the things and people we hear, see, or encounter at that moment. Small decisions, in their turn, characterise the internal logic of psyche and behaviour. In psychology, it is the chain of small decisions that characterises the cultural matrix.

In the fields of sociology and social psychology, the cultural matrix is viewed in terms of the way individuals' mentalities interact, and social orientations are formed. The latter create a 'lens' through which society sees reality and reacts to it. There is a range of social orientations: collectivism or individualism, paternalism or liberalism, masculinity or feminism, chaos or uncertainty avoidance, short-term or long-term planning, high or low level general credibility, the attitude toward risk, self-expression and survival,[13] the process or the result, universality or specialisation, emotional expressiveness or emotional restraint,[14] multi-activity, reactivity or linear activity,[15] and past, present, or future.[16] For example, orientation to the past makes one recall old practices to solve current problems. Nostalgia leads to repetition and imitation. Orientation to the present results in emotionality, impulsiveness, impatience for results, and evasion of long-term decisions. Orientation to the future results in regularity, order, and greater rationality. In other words, under the impact of its orientations, the society follows the general flow of stereotypes and platitudes that shape its current cultural status.

In the fields of cultural studies, ethnology and anthropology, the cultural matrix is studied in the framework of ethnicity and identity. At the same time, there can be collective, individual, and group ethnicity. The cultural matrix can be classified as collective unconscious ethnicity, which is also called mentality. It is formed under the influence of everyday life, and unconsciously teaches a person 'what is good' and 'what is bad'.[17] Ethnologists place special emphasis on the unconsciousness of the cultural matrix, which helps the population maintain the integrity and specific orientation of their psyche and behaviour. The ethnic culture

includes two types of values – the propensity for development (change) and the propensity for stability (affirmation), which alternate under the impact of external challenges. There are also studies that connect human values and behaviour with religion, and outline the limits of tolerance and the nature of religious fanaticism.[18]

In the field of political science, the cultural matrix is most often found in studies on informal institutions, nationalism, and authoritarianism. In the context of underdeveloped institutions, where the credibility of the government and society is low, family, friends, informal and traditional ties, and social capital, gain greater value. In such conditions, the cultural matrix becomes the driver of behaviour. It serves as the basis for manifesting nationalism, populism, and authoritarianism, which are opposed to multiculturalism, rationalism, and democracy. However, such opposition tends to be temporary, as all political systems somehow move towards democracy and pluralism, but at a different pace. The more deeply rooted the cultural matrix is, the more difficult it is to embrace other cultures, and the slower the movement of society towards democracy. Moreover, in the environment of populism and authoritarianism, the cultural matrix becomes more deeply rooted. Popular politicians themselves try to approach it, and relay it back to the public, who respond by adjusting. As a result, the cultural matrix becomes closed and less decodable. Amid the fear of cultural shock and mental discomfort, the cultural matrix strengthens, and can turn into a barrier to society's ability to adapt to change and even to survive. In this regard, the role of politicians is to be able to help people perceive reality, inspire hope, and mobilise for adaptation, in other words – to change the cultural matrix, saving it from itself.

In economics, the cultural matrix is studied within the framework of the economic cycle.[19] "In the economic boom phase, the cultural matrix is loaded with resources, can afford cultural and social experiments, for instance democratisation, personal autonomy, and gender equality. At the peak of economic growth, a certain social balance prevails over rational thinking that does not support further economic growth and creates conditions for conservative stagnation. In the environment of an economic recession, the cultural matrix can yield to rational behaviour based on the sense of self-preservation of the society. At the same time, political will is essential to suppress the cultural matrix in order to recover economic growth. However, as political will is manifested under the influence of political and socio-cultural, rather than economic factors, it may be trapped within the cultural matrix. The closer politicians are to

the cultural matrix the more popular they are, the greater support they get from the population, and the more difficult it is to get out of the matrix to lift the cultural barriers to economic growth. This is mainly the reason why popular leaders (populists, demagogues, nationalists) often remain in the collective memory for a long time, although they tend to bring their countries to economic disaster (Joseph Stalin, Mao Zedong, Nicolae Ceauşescu, Slobodan Milošević, Hugo Chavez, to name a few).

In the field of information technology, the cultural matrix becomes a new environment in the social networks, like Facebook and Twitter, to get big behavioural data, to machine learn them, and predict the behaviour of users. In the book *Age of Surveillance Capitalism*, by Harvard professor Shoshana Zuboff, it's mentioned that IT platforms like Facebook, Instagram, and others, use automated machine processes to not only know our behaviour, but also shape our behaviour at scale.[20] With this reorientation from knowledge to power, it's no longer enough to automate information flows about people; the goal now is to automate them, and instead of labor, surveillance capitalism uses every aspect of every human's experience.

In the field of mathematics, the socio-cultural mentality and behaviour of the population (among other things in economics) are studied in the light of the theory of 'games of strategy', developed by John von Neumann.[21] The application of the mathematical apparatus to socio-cultural and economic processes has natural limitations related to knowledge, imperfections in the description of facts, uncertainty of terminology, vagueness of formulated problems, and absence of quantitative measures. Therefore, the cultural matrix is studied, element by element, in mathematics, with simple interdependencies of behaviour built, and with progressive movement towards more complex interrelationships. As the mathematical apparatus develops further, the interest of mathematical economists shifts from the cultural matrix to other problems, which they see as more urgent. At present, despite the availability of modern computer mathematical simulation software, mathematics is still inferior to other scientific methods, such as a thorough description of facts, in the field of comprehensive investigation of the entire cultural matrix. In this regard, the most typical and effective tools for studying the cultural matrix are verbally expressed humanitarian statements, rather than precise mathematical evidence.

The Cultural Matrix: Features

Given the diversity of scientific theories, it should be noted that the cultural matrix is complex, and has many dimensions to study. A common cross-disciplinary denominator for its investigation can be found in the Complex Systems Theory, the Theory of Chaos, Bayes' Theorem (its formula was accidentally found in Thomas Bayes' records after he died in 1761), Bernoulli's Equation, the law of 'large numbers', 'The Butterfly Effect' formulated by Edward Lorenz, the methods of assessing the collective memory, historical analogies, scientific descriptions, and so on.

The cultural matrix is a complex dynamic system, which most often depends on past events. Thus, when studying it, it is first necessary to take into account the information previously known within the framework of this culture, and then weigh and structure it, factoring in the values of the society.

The study of the cultural matrix is simplified by the fact that its agents are, on average, similar, share common values, prefer interaction within their group, tend to make decisions, and shape their behaviour based on known past events. In addition, the information filling the matrix is limited to the existing generations and the values circulating between them. Within the cultural matrix, there is undoubtedly some diversification of social values, depending on sex, age, education, income, occupation, place of residence, and so on. However, cultural factors still prevail in the formation of common values and are easier to explore.

The fact that the cultural matrix is an open system complicates its scientific understanding, making it incomplete and deceptive. Therefore, it is also necessary to assess the probability of events, which could occur in their own right, based on incoming new information, and the interaction of this cultural matrix with others. In view of its openness, the cultural matrix is constantly engaged in the process of self-reflection and adaptation, thus it is unpredictable. It may change the structure of its agents, the weights of values in the system, or accept new elements with unknown influence on the whole system. In this regard, the cultural matrix is unstable and unbalanced, and can, surprisingly quickly, plunge into chaos all the way down to self-destruction. At the same time, the risk of disintegration of the cultural matrix depends on its size and the speed at which its representatives adjust to changes. In view of this, specific qualities, such as flexibility and dynamism, are to be studied separately.

The cultural matrix is a very flexible system that changes both vertically and horizontally, going beyond national boundaries.

Vertically, it manifests itself in the process of education and the transfer of cultural values to children within their family. The cultural matrix becomes most deeply rooted in a person during childhood, when he is most influenced by it. Family-orientation nurtures collectivism, opposing 'us to them'. The division of people into 'friends' and 'foes', who are correspondingly seen as 'good' and 'bad', begins within the family. In addition, the negative attitude towards 'foes' is more pronounced than the positive attitude toward 'friends', and the understanding that both leagues include both 'bad' and 'good' ones is dulled. This lays the foundations of social discrimination, which is then unconsciously reproduced in relation to people representing a different cultural matrix, country, nation, race, faith, body build, and sexual and other orientations. This dulls traits such as openness and tolerance.

Horizontally, the cultural matrix extends along with the expansion of the circle of trust. It goes beyond the family circle, covering educational institutions, professional, religious, and other elements of one's social environment. In this regard, members of respective groups develop cultural and mental similarity and increased trust, for instance, between graduates of one form, school, group, university, and between different people of the same profession or religion. This is the way the structure of the cultural matrix is formed with the values, behavioural practices, and other elements of different groups.

Horizontally, the cultural matrix can cross borders, spreading to several countries, becoming regional and global.

The regional cultural matrix is formed by entangled national values, typically those of neighbouring countries.[22] Depending on the country, elements of a certain national matrix may dominate in the regional matrix. Examples of regional cultural matrices include: the European (EU countries), American (US, Canada), Soviet (USSR), Russian (Russian-speaking countries), Asian (PRC, Southeast Asian countries), and African (Central and Southern Africa) matrices. The regional matrix can suppress national ones, for example, the Soviet matrix. After the collapse of the Soviet Union, it seemed that there would be regional decoding and that the national matrices would revive. Twenty five years on, it is obvious that in a few post-Soviet countries the regional matrix has not disappeared, it has been transformed.

The global cultural matrix is formed under the influence of universal values, fashion, openness, mobility of information, people, goods,

technologies, and the interpenetration of national and regional matrices.[23] Different ideas have unsuccessfully aspired to the status of the global matrix. In the early and mid-20th century, those were conservatism, communism, and fascism. In the 1980s and 1990s, it was liberalism, in the 2000s, pragmatism, and in the 2010s, populism. These ideas extended to different countries, fired the imagination, became popular, spanning entire continents. National matrices have also attempted to play the role of the global one. The globalisation of the 1990s and 2000s, for instance, was often perceived as Americanisation, accompanied by an expansion of American values. With the rise of the PRC's role in the world economy, the global importance of the US has become less obvious. Thus, the global matrix cannot be monocultural. It is always multicultural and preaches universal values: openness, transparency, tolerance, pluralism, etc. Venice and Genoa in the past, and Hong Kong and Singapore today, could be mentioned as real examples of global multicultural matrices.

The cultural matrix is a fairly dynamic system that can change at different rates, both in an evolutionary and a revolutionary way, depending on the adaptation of its individual agents to change.

When generations 'digest' historic events, political regimes, revolutions, wars, new technologies, urbanisation, transformations of the middle class, and the aging of the population, it is transmitted and developed in an evolutionary way. If we take the structure of society, businesses respond to change first. They operate in a competitive environment, where changes trigger smart incentives, and the instinct of self-preservation pushes them to adapt faster than everyone else. Then follows the civil society (non-governmental organisations), the family, and the government. Religious institutions are the slowest in responding to change.[24]

A revolutionary change (break) in the cultural matrix implies a transition to a different matrix. The techniques of the so-called 'colour revolutions' usually include such elements as the involvement of foreign non-governmental organisations in the preparation of coups d'état, ideological discrediting of government, consolidation of supporters through social networks, and choosing the moment of social instability to mobilise mass public support. However, it is important to consider not so much the techniques and triggers, but rather the causes and the driving force of the break in the cultural matrix. As a rule, the causes include social inequality and long-lasting economic depression. In turn, the main driver of revolutionary change is typically the younger (third) generation, which is most sensitive to change and is characterised by low fear barriers – the so-called 'unwhipped generation'. It is the demographic shift and

the opening of the 'age window' of the active population which are used by many researchers to explain the 'colour revolutions' of recent years.[25][26]

In summary, the cultural matrix is a complex, open, flexible, and dynamic system of values that determines national features. The national matrix is formed under the influence of a variety of natural, geographical, historical, cultural, religious, racial, age, linguistic, political, economic, and other factors. It is noteworthy that, sometimes due to short-term and superficial reasons, certain features are fixed in the culture, determining the psyche and behaviour and sticking for a long time as a label (most often negative) used to describe the cultural matrix. For example, the opinions that Asians are hardworking, Africans are lazy, the Chinese are Asian Jews, and Jews, in their turn, are cunning, smart, successful businessmen, that Germans are disciplined, the French are stylish, the British are mannered and formal, Americans are unique, Latinos are cheerful, Russians are doomed to suffer, Ukrainians are impudent and cunning, Belarusians are greedy, and so on. The national specifics of behaviour are sometimes generalised, in quite a sketchy way, through the manners of driving – observance of traffic regulations; civility to others, such as those driving more expensive cars, cyclists, pedestrians; frequency of warning signals; speed; etc. To take a few examples, the observed chaotic traffic discipline in China and India is characterised by the 'common sense' of being the first, but avoiding conflicts; in the former Soviet Union countries, it is the inevitability of punishment, observance of the rules 'no matter what'; while in Western Europe it is mutual respect and a general understanding of fairness and traffic manners.

National features can be explained in different ways. For example, in the early 20th century, German sociologist Max Weber noted that the determinant of the social and economic successes of Germany and Switzerland was the fact that people in these countries were Protestants, unlike in the less successful Southern European countries inhabited by Catholics.[27] The success of Southeast Asian countries and China, in recent decades, is often explained by the Confucian values and diligence inherent in their people. The problems of a number of Arab and Muslim countries are sometimes explained by their overestimated self-esteem, national pride, and painful apprehension of others' superiority, which leads to the perception of reality through the lens of "who did this to us?" rather than "why am I what I am?".[28] Cultures are sometimes grouped depending on whether they gravitate towards, or resist, progress. For example, it is justified that Protestantism is much more conducive to modernisation than Catholicism, especially in the Western Hemisphere;

Confucianism is more conducive to development than Islam, Buddhism, or Hinduism; Orthodox Christianity is similar to Catholicism, but Orthodox countries still gravitate to communism, etc. In general, Jews, Confucians, and Protestants are considered the most progressive.[29] At the same time, some scientists argue that the higher the urbanisation, the lower the level of religious devotedness, and the more open and more highly-educated the country is, the more it relies on international norms and laws, and the less it depends on its cultural matrix.[3031]

Is There a Cultural Matrix?

The theoretical controversy and complexity of the cultural matrix sometimes cause reasonable doubt as to whether it exists at all.[3233] Could it be merely self-induced public hypnosis, some mythical explanation of complex socio-economic phenomena? For example, there are a few studies pointing at the fact that there is no correlation between the 'national character' and personality traits.[34] Another example is the research approach based on studying the behaviour of migrants from different countries within one country, which also calls into question the impact of the cultural matrix of the recipient country on migrants. In this case, the social circle plays a greater role in adaptation to the new matrix, rather than the whole new cultural matrix itself.[35] In the popular book *Outliers,* by Malcolm Gladwell, the secret of the success of certain individuals is also explained by the time they spent in education and on the development of their practical skills, rather than by their belonging to a particular nation.[36] In the provocative book *Blank Slate*, by Harvard professor Steven Pinker, he insists that the inherited values play the main role in human behaviour rather than collected values in cultural environment.[37]

Another example is the ideology of multiculturalism and internationalism based on the equality and interaction of nations as an alternative to the proletarian internationalism of Marxism, nationalism, and globalism. If there are generally accepted international universal human values, then they become the priority, prevailing over national ones, which calls into question the need for the national cultural matrix. If there are international threats to national matrices (terrorism, biological and social diseases, the proliferation of weapons of mass destruction, etc.), they bring the national matrices together within the framework of a common international platform, reducing the value of the former.

The cultural matrix includes a set of values, behavioural practices, stereotypes, and other elements and, thus, can be regarded in some sense as something generally irrational, unconscious, and unstable, that can be changed. *And if it is subject to influence and can be changed, then does it exist at all?*

In his hypothesis of 'path dependence', Russian economist Alexander Auzan relies on the research by Richard D. North to prove how a country and its economy could escape from the cultural rut, i.e. the cultural matrix.[3839] The countries that are stuck in the cultural rut have three similarities:

1) the elites create laws for others, and exceptions for themselves;
2) for-profit, political, and non-profit organisations are built around individuals, and die with them; and
3) the tools of violence are distributed among groups of elites.

The countries whose economies have managed to overcome the barrier of the cultural rut, having proved the non-existence of the cultural matrix, in their turn they have the opposite similarities:

1) the elites create laws for themselves and expand them to cover others;
2) for-profit, political, and non-profit organisations outlast their creators;
3) the elites jointly exercise control over the tools of violence.

Examples of the latter countries and territories include Japan, Singapore, Taiwan, Hong Kong, and Korea.

In practice, the importance of the cultural matrix is sometimes distorted in the public perception, which at times justifies both national superiority and humiliation (even genocide), for example with the Romans, Mongols, Japanese, Chinese, 'Aryans', Armenians, and Jews. At the same time, the existence of the cultural matrix and its impact on the economy are questioned, based on convincing historical examples of people of one nation or one culture diverging in their economic development within different times, or even within the same period.

Sweden. Prior to the openness and reforms carried out by Minister of Finance Johan August Gripenstedt in the 1860s, it had been a poor country, not only by European standards, but even poorer than the

Congo. Only after decoding and opening up the country and its economy did Sweden enter the so-called era of '100 years of growth'.

Argentina. In 1870-1914, Argentina boasted the highest GDP growth in the world – about 6% per year – due to the openness of its economy, migration of labour resources from Italy, inflow of foreign investment, and the export of beef and wheat. In 1914, Argentina was one of the ten richest countries in the world, ahead of Germany and France. The situation changed after the country turned to the policies of protection of national values, import substitution, restrictions on the movement of capital, and reinforced state controls. This led to a century of Argentina falling behind.

Japan. In the *Japan Herald*, a Japanese newspaper, one can find the following quote, dated 1881: "Wealthy we do not at all think [Japan] will ever become: the advantages conferred by nature, … and the love of indolence and pleasure of the people themselves, forbid it. The Japanese are a happy race, and being content with little, are not likely to achieve much." It is noteworthy, that as early as the 16th century, the isolated Japanese society nearly reached a fatal extreme when it denounced firearms (considering guns an invention of strangers). But the opening of Japanese ports for foreign trade, and the introduction of advanced Western standards, put an end to the centuries-long isolation of the country and placed it among the world leaders. At present, there are renewed attempts in Japan to pursue the policy of "one race, one civilisation, one language, and one culture", which serves as a contradictory explanation of both the past achievements and the current slowdown in the country's development.

France. In the 1890s, import substitution, and the introduction of high tariffs for agricultural imports, led to higher food prices, increased wages in this sector, growing birth rates in rural areas, abandonment of education, and lower urbanisation. In the long run, it resulted in a declining middle class and poorer human development, with the economy of Britain, which pursued the opposite policy, outperforming France's during the early 20th century.[40]

Spain. The period of Franco's dictatorship (1939-1975) can be divided into two periods: the first one, lasting twenty years until 1959, and the second one following it, when economic reform began. For ten years, a stabilisation plan was implemented aimed at ensuring the openness and liberalisation of the economy. In the late 1960s, political reforms began: the law on the press was adopted, local self-government was expanded, and non-political strikes were allowed. According to a few researchers, it