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**EVOLUTION OF SOVEREIGNTY IN CONDITIONS
OF THE FOURTH INDUSTRIAL REVOLUTION**

ABSTRACT OF A DISSERTATION

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1. GENERAL CHARACTERISTICS OF THE DISSERTATION

1.1. Relevance of the topic

The analysis of contemporary socio-political realities allows us to ascertain the presence of a significant and growing influence of digital technologies on the structure and character of the socio-political space and the heterogeneous processes taking place in it. Digitalization, both directly and indirectly, has a very significant impact on the state of sovereignty.

As a result of the introduction of the technologies of the Fourth Industrial Revolution, the digitalization processes spread more intensively among the participants in the modern political landscape, creating new conditions for the implementation of various state policies, national economies, as well as for the formation and specific demonstration of national identity of the citizens of the state.

In the context of digitalization, new risks arise in the implementation of state policy. The contradictions between the main actors in geopolitics in solving acute socio-political and economic issues have a negative impact on the sovereignty of some countries. The large-scale processes of digitization raise the need to strengthen and protect their sovereignties.

The governing elites, forming and approving certain state policies, should take into account the various – external and internal – threats from several influential political and economic subjects in the context of strengthening the sovereignty of their state.

At a critical moment, digitization gives rise to the necessity to guarantee the digital sovereignty of the state and the intergovernmental organizations, of which sovereign countries are part. As a result of that, the leaders of sovereign countries around the world are aware of the need to change and adapt state policies to take into account potential risks and develop the necessary effective mechanisms for their timely and successful prevention.

The processes of digitalization, formed by the technologies of

the Fourth Industrial Revolution, with their positive possibilities (efficiency in the distribution of information, transparency of government authorities, etc.), also bring risks to the national security of the state. These risks, due to their global nature, are sometimes difficult to predict and the competent authorities cannot always make decisions in advance in order to counteract and minimize them.

The relevance of the research is determined by several factors. First, it is the dynamics of the development of global political processes and, in particular, the closing of national borders as a result of the spread of the COVID-19 pandemic and Russia's war in Ukraine. Second, the development of digitization and technology in the context of the Fourth Industrial Revolution, can contribute to the protection of sovereignty, but also contain some hidden potential risks. Third, the widespread exploitation of digitization in the political sphere and the need for public authorities to update their working approaches to minimize the negative consequences of this.

In modern scientific literature, both foreign and Bulgarian, there are several significant studies dedicated to the sovereignty of a number of countries. At the same time, however, there is no contemporary political science research specifically in the area of the evolution of sovereignty in the context of digitalization and its effects.

The conducted analysis of scientific works dedicated to sovereignty and the spread of digitalization in various public spheres allows us to focus our attention on sovereignty in the context of digitalization in Bulgaria as a member of the European Union. To carry out a comparative analysis, we also take into account foreign experience, emphasizing the practices of countries such as Russia, China, and the USA.

1.2. Purpose, Object, and Subject

The main purpose of the present dissertation research is to establish the dynamics in the evolution of sovereignty from its origin to the assertion of the Fourth Industrial Revolution. Regarding the development of sovereignty in the conditions of the Fourth Industrial Revolution, it is researched in the context of Bulgaria as part

of the European Union and Russia.

The object of research in this dissertation is sovereignty.

The subject of the study is the evolution of sovereignty from its origin to the Fourth Industrial Revolution with an emphasis on the latest.

1.3. Research thesis, Hypotheses, and Tasks

The main thesis of the dissertation is that the evolution of sovereignty is related to the cycles of capitalism, with sovereignty itself undergoing a qualitative change, and its most significant dimension in the conditions of the Fourth Industrial Revolution is the digital one. This thesis is detailed in three main research **hypotheses**:

Hypothesis 1: Four long cycles will be distinguished in the evolution of sovereignty, just as there are four long cycles of capitalism. The cycles of sovereignty and capitalism are inversely related to each other. Each of them contains within itself an ascending and descending phase, in which, in a period of development of capitalism, for example, sovereignty is in decline, and the opposite, when capitalism is in crisis, there is an increase in sovereignty.

Hypothesis 2: The four cycles of sovereignty rather, i.e. under certain conditions, will complement and build upon rather than replace one dimension of sovereignty with another. In the cycles of sovereignty, there is no simple cyclical repetition, but qualitative changes at each phase of development.

Hypothesis 3: In the conditions of technological development of the Fourth Industrial Revolution, the problems of sovereignty will be associated not as much with its state, public or national dimension, as with their digital aspect in the form of digital sovereignty.

To verify the three hypotheses and, accordingly, the main thesis, five **research tasks** are planned to be carried out:

The first is to examine the main theoretical and methodological approaches to the study of the formation, development, transformation, and interaction of sovereignty and capitalism by establishing their cyclical and dialectical nature, as well as their inversely pro-

portional relationship.

The second is to examine the four dimensions of sovereignty (state, popular, national, digital) and their interaction.

The third is to trace the cycles of sovereignty and capitalism in the context of the four industrial revolutions, identifying their relationship.

The fourth is to systematize the main characteristics of the Fourth Industrial Revolution, thus bringing out its role in the formation and development of the current phase of sovereignty, which is in the form of digital sovereignty.

The fifth is to analyze the strategic and normative documents of Bulgaria, the European Union (EU), and Russia for the period 2010-2020, in which the implementation of the technologies of the Fourth Industrial Revolution is set, and the period 2020-2030, in which it is set the development of digital sovereignty in conditions of the Fourth Industrial Revolution.

1.4. Research methodology

When researching the evolution of sovereignty in the context of the Fourth Industrial Revolution, the author uses various scientific approaches and methods, the fundamental being **the systemic approach of the world** (F. Braudel, J. Arrighi, I. Wallerstein). This approach allows the capitalist system to be singled out for analysis as a whole on a global scale. The cycles of capitalism are compared to the cycles of sovereignty and their inverse relationship is established. This approach makes it possible to create a universal model to explain the behavior of the majority of countries in the world that belong to the semi-periphery and periphery regarding the policies that lead to the implementation of digital sovereignty in their territories.

In the dissertation work, we do not use the systemic approach of D. Easton, T. Parsons, and G. Almond, because it focuses on the specifics of the nation-state.

The historical method makes it possible to trace the cycles of capitalism and sovereignty in different periods – from their origin

to the present time.

The dialectical method allows us to identify the qualitative changes in the essence of sovereignty as a result of each of its cycles in history.

With the help of the *holistic approach*, an interpretation is given of the essence of sovereignty, which contains several interconnected cycles and processes in time, which are connected and run in parallel. For this reason, their relationship must be analyzed to derive the overall interpretation of sovereignty.

The comparative approach of state policies carried out by Bulgaria and Russia allows for identifying the similarities and differences in the mechanisms for building digital sovereignty on the territory of these two countries, as well as determining the degree of development of their digital sovereignty compared to these of the US and China.

Content analysis analyzes state documents and documents of intergovernmental organizations, such as laws, strategies, plans, doctrines, and other normative documents that arrange and regulate the sovereignty of states in the context of the Fourth Industrial Revolution.

1.5. Limitations of Dissertation Research

The first chapter of the dissertation is aimed at the study of the essence of sovereignty, representing a higher state power, which has a holistic essence but is fragmented over time. We note that we are not researching power in general because it has manifestations in all social spheres, including and in many other sciences, such as philosophy, theology, cultural studies, etc., and *we surveying power only within the framework of the state*.

To provide a holistic explanation for the definition of sovereignty, the study summarizes historically all its fragmented entities that emerged from the development of the system of capitalism, and more specifically, these are state sovereignty, popular sovereignty, national sovereignty, and its last phase – digital sovereignty. The dissertation study examines the emergence of dif-

ferent types of sovereignty and their essences but *perceives them as a holistic whole*. Holistically researching the genesis of sovereignty, it is established that its transformations, which are also its fragments (state sovereignty, popular sovereignty, national sovereignty, and digital sovereignty) are dependent on capitalism.

The study of sovereignty is based on its classification of the subject it affects (state, popular, national, digital) and not about the object (political, economic, cultural, etc.), the object and the subject being the basis of the essence and the realization of power, realizing subject-object relations¹. The limitation of the research is aimed at the subjects of power that it covers within the framework of a state, a people, a nation, and their reflection in the digital space through digital sovereignty.

Nor is the focus of the study the scope and influence of cycles of sovereignty vis-à-vis changes in state security structures in history, which at different periods first encompassed land space, then the sea, then air, then space, and finally digital space.

The dissertation uses works by K. Marx and F. Engels and some neo-Marxists, such as I. Wallerstein, F. Braudel, and J. Arrighi, who, through research on a large amount of empirical data, prove the dialectical nature of capitalism. We emphasize that in our *study we do not focus on the different schools of neo-Marxism, deducing their distinguishing characteristics*, but on the contrary – we look for similarities between them in their research on the nature of capitalism, its origin, and development, stepping on the empiricism they use.

Based on the similarities in the research on capitalism, in our historical research on sovereignty, we find common periods that contain certain features through which we create an imaginary model of the cycles of capitalism and sovereignty. In the two mod-

¹Prezhdarova, Veronika, Subaekt i obaekt vlasti: svezhiy vzglyad na svobodu i nezavisimosty v tsifrovom prostranstve, In: Materialy VIII Vserossiyskogo kongresa politologov. Pod obsht. Red. O. V. Gaman-Golutvinoy, L. V. Smorgunov, L. N. Timofeevov, Moskva,, Izdatelystvo “Aspekt Press”, 2018, pp. 431–432.

els we have created, we find some similarities and an inverse relationship between the cycles of sovereignty and capitalism. When capitalism is in crisis, sovereignty is strengthened and vice versa, thus proving that like capitalism, sovereignty has a dialectical nature and the two are interdependent in the world system.

The time frames that limit the dissertation research are related to the emergence of the capitalist system, which, in our opinion, gives the beginning of the genesis of sovereignty as a meaningful entity, which is the object of our research. Summarizing the theories of some neo-Marxist scholars describing the hegemony of certain states over others, we take as the starting time point of our study of sovereignty the birth of finance capital in Florence and Genoa and continue the research through the time of the world hegemony of the Netherlands, England, the USA and the intervening times in which the world is multipolar and the developed countries are fighting for dominance, as is the situation today after the hegemony of the USA. Referring to J. Arrigi, we believe that capitalism is born as a world system with the beginning of the formation of financial capital. *The qualitative transformations of capitalism in its various phases are also not the subject of the study.*

We note the fact that the model describing the genesis of sovereignty that we create in our study is *valid for dominant states in the era in which they are world hegemons*, as well as for the states that follow them through their overt policies and cultural matrices based on democratic values. *The theoretical model we create is not valid for states that retain strong territorial sovereignty to reduce capital outflows to the existing hegemon and accelerate their development.* Such is the example of China, which is gaining supremacy while the USA is a world hegemon and the world is unipolar in conditions of neoliberal democracy.

We do not concentrate on studies of the nature of dialectics, history as a cycle, evolution, and revolution. We study evolution primarily through a dialectic and historical method that includes the ideas of progress and cyclicity.

Also fundamental to the dissertation work are the views of K.

Marx and F. Engels regarding the idea "being determines consciousness", as well as the opposite view of F. Hegel "consciousness determines being", looking at them synchronically, as parallel existing statements.

In *the second chapter* of the dissertation work, we limit ourselves by examining *the wave theories of J. Schumpeter and N. Kondratiev, whose empirical basis we refer to*. The average cycles that we create as a model and in correlation with the industrial revolutions, refer as we have noted, to the countries that, firstly, implement this mode of production on their territory in a certain historical era and, secondly, are characteristic rather of the countries, which follow democratic universal patterns of behavior.

The focus of the study *is not the forms of organization of social and political systems*, such as anarchism, socialism, communism, fascism, totalitarianism, and authoritarianism, as well as their modern interpretations in the form of digital anarchism, digital authoritarianism, digital communism, digital socialism, digital fascism, digital totalitarianism, and others, but rather the aim is to review the possible scenarios for future development, which scenarios will serve to identify the current and future political system of the countries that we are looking into the next chapter – Russia and Bulgaria. The establishment of the ideal models of "digital authoritarianism" and "digital anarchism" is based on a study of the degree of development of digital sovereignty based on normative documents of the two countries, and our goal is to establish in which direction they are moving after each of them takes its civilizational path after the Cold War.

Digital capitalism and post-capitalism are also not the focus of the present study but serve conditionally as orientations for the possible future development of sovereignty in the conditions of the Fourth Industrial Revolution.

In *the third chapter* of the study, we present the short cycle of sovereignty and capitalism, limiting ourselves to a content analysis of normative and strategic documents, with the help of which we examine its socio-political essence. *The dissertation research does*

not make legal analyzes of the essence of sovereignty.

The strategic and normative documents that we consider have a duration of 20 years – from 2010 to 2030. We make this time limitation because theoretically the beginning of the Fourth Industrial Revolution is considered to be 2008, and we notice the development of digital sovereignty in practice in the strategic documents for the decade from 2020 to 2030. Through the analysis of these documents, we explore digital sovereignty in the conditions of the Fourth Industrial Revolution, which is also the subject of research in the dissertation work.

Another limitation we set ourselves is that the studied documents, between which a comparative analysis is made, are Bulgaria, as part of the European Union, and Russia, compared to those of the USA and China. The aim is, based on the conducted research, to establish and analyze the degree and features of the digital sovereignty of Bulgaria, as part of the EU, as well as that of Russia vis-à-vis the USA and China.

We choose to conduct a comparative analysis between Bulgaria and Russia to establish the degree of development of their sovereignties in the period after their common civilizational paths diverged after the collapse of The Council for Mutual Economic Assistance (Comecon), of which Bulgaria was a part and is now part of the EU. Russia takes its path, and Bulgaria becomes part of the European Union and accepts Euro-Atlantic values. For this reason, the model we are creating to measure the degree of development of digital sovereignty applies ***only to Bulgaria and Russia*** and cannot be applied to other countries and intergovernmental organizations. Also, the focus of the study ***is not the development in all relations between Bulgaria and Russia after the collapse of the Comecon and the end of the Cold War***, but above all the digital sovereignties that they formed during this period and up to the present moment.

The dissertation does not claim to be thorough in the research of the digital sovereignty of the USA and China but uses their examples as a model of behavior to determine the degree of development of the digital sovereignty of Bulgaria, as part of the EU, and Russia.

When establishing the degree of digital sovereignty of countries, *we do not use quantitative, but qualitative characteristics*, which do not show with full accuracy the level of the measured object. The above is sufficient to draw general conclusions about the degree of development of state and intergovernmental policies in the field of the Fourth Industrial Revolution and the implementation of digital sovereignty in the territories of the states and intergovernmental organizations that we study.

2. BRIEF DESCRIPTION OF THE DISSERTATION

INTRODUCTION

In the introduction of the dissertation, the relevance of the researched issues is substantiated, the object and subject of the dissertation research are defined, the main research thesis, the goal, the tasks are explained and the main hypotheses are formulated. The perceived subjective and objective limitations are systematized.

CHAPTER ONE

Theoretical foundations for studying the evolution of sovereignty (Cycles of Sovereignty)

In *the first paragraph* of the dissertation work, which is called "Theoretical and methodological concepts of the cyclicity of capitalism", the reasons for choosing the methodological concept of the systemic approach to the world are justified, with the help of which the cyclical nature of sovereignty about the cycles of capitalism, which were derived by scientists F. Braudel¹, J. Arrighi², I. Wallerstein³. Comparing the cycles of capitalism with the cy-

¹Brodel, Fernan, Strukturite na vsekidnevieto: Vazmozhnoto i nevazmozhnoto, Sofia, Prozorets, 2017.

²Arrighi, Giovanni, The Long Twentieth Century. Money, Power, and the Origins of Our Times", London, New York, Verso, 2010.

³Vallersteyn, Imanuel, Analiz mirovyh sistem i situatsia v sovremennom mire, Pr. s angliyskogo P. M. Kudyukina. Pod redaktsiy k.polit.n. B. Yu. Kagarlitskiy, Sankt Peterburg, Izdatelystvo „Universitetskaya kniga", 2001.

cles of sovereignty proves that there is an inverse relationship between them. With the help of their inverse proportional relationship, the qualitative changes of sovereignty in each successive cycle of sovereignty are deduced, as well as its dialectical character is proven.

The second paragraph is called "Theoretical and Methodological Concepts of Cyclicity of Sovereignty". It argues for the application of the holistic approach conditioned by the post-postmodernity⁴ in which the society is located. It examines the syncretic existence and interaction of political, economic, social, technological, and cultural processes that lead to the qualitative leap in the development of cycles of sovereignty. Through this approach, a comprehensive definition of sovereignty is derived, which includes tracing the political, social, economic, and technological processes and the relations of sovereignty with them, both theoretically and historically. We find that the theory of sovereignty is constantly transformed under the influence of political, economic, and social processes over time.

The analysis of sovereignty starts from the period of Antiquity, where the initial phase of the development of sovereignty was discovered, but it was not yet developed enough to be realized and described by the thinkers of that era. The Middle Ages is the period in which the term sovereignty was first introduced into scientific circulation, and subsequently into practice in the form of state sovereignty. A basic definition of state sovereignty is derived, which represents supreme state power that is absolute and indivisible within the state, as well as independent of the interference of other states in its internal politics. This definition is contained in all subsequent phases of the development of sovereignty, but expands its scope, as state power (sovereignty) expands its scope among other entities.

Subsequently, the New Age is examined, in which liberalism, democracy, and capitalism are developed, and state

⁴Toth, Josh, *The Passing of Postmodernism. A Spectroanalysis of the Contemporary*, Albany, State University of New York Press, 2010, pp.5–10.

sovereignty is transformed into popular sovereignty⁵, with popular sovereignty containing the characteristics of state sovereignty. National sovereignty is its next phase of development in Modernity, uniting state and people's sovereignty, as its main tool is the formation of national identity among the citizens of the state. The last phase of the development of sovereignty is digital sovereignty, which covers all the listed forms of sovereignty, but in contrast to them includes, as a new subject of state power, the digital space.

Based on the analysis carried out, four cycles of sovereignty in the form of a spiral are established as follows:

I cycle *State sovereignty* is the basis of sovereignty and is a basic element for building the next three cycles of sovereignty. The existence of the concept of sovereignty begins as the main feature of the state, and without it, its existence as an entity is impossible.

II cycle *Popular sovereignty* – makes citizens the subject of sovereignty, thereby realizing state sovereignty, which is the basis of popular sovereignty.

III cycle *National sovereignty* – the highest degree of inclusion of citizens to the state through various mechanisms for creating a common national identity. National sovereignty contributes to the formation of the national state, which has new institutions for the realization of supreme state power. State and popular sovereignty are contained in it.

IV Cycle *Digital Sovereignty*, uniting in itself all the cycles of sovereignty listed above (state, popular, and national) is the highest form of manifestation of sovereignty up to this point. The qualitative change that occurs with it is that it unites all the previous phases of the development of sovereignty, but adds the digital space, which has its reflection and variations of the previously listed phases of sovereignty. For this reason, nation-states are also changing, along with the institutions for realizing their power.

Digital sovereignty, which is formed in the conditions of the Fourth Industrial Revolution, as the last transformation of

⁵Russo, Zhan-Zhak, Ob obshtestvennom dogovore. Traktaty, Kanon-press. Kuchkovo pole, Moskva, 1998.

sovereignty, is the subject of our dissertation research, which we examine in more detail in the second and third chapters of the dissertation work.

All the transformations of sovereignty in history, expressed in each of its cycles, do not replace each other but are layered and thus assume an increasingly complex form. Sovereignty (as a concept) unites the essences of all its cycles, which we describe in different historical eras. They co-exist in the concept of sovereignty, changing its character with each cycle of its birth.

This chapter also presents the great cycles of sovereignty and capitalism, which, when synthesized, form the spiral development of cycles of sovereignty that change qualitatively over time and create the holistic concept of sovereignty. The holistic concept of sovereignty represents a supreme state power that constantly evolves in time and space, embracing within its qualitative spiral leaps of development of new subjects and spaces.

To identify the evolution of sovereignty as a long historical process, the first chapter examines the cycles of capitalism against which the cycles of sovereignty are derived.

The qualitative transformations in the concept of sovereignty, which we trace based on the cycles of capitalism, using the historical approach, are helping to explore its cyclical nature. It contains cycles that do not simply repeat themselves in time, but change qualitatively, thus sovereignty evolves.

By proving the cyclical nature of sovereignty, its dialectical nature and its connection with capitalism, which is also dialectical, is also brought out. The transformations of sovereignty that we are examining occur precisely in periods of the rise of sovereignty, but this period appears to be a crisis for the development of capitalism. Thus, through its development, sovereignty helps the functioning of capitalism as a world system.

The cycles of sovereignty that we derive do not apply to all countries in the world, therefore they cannot be considered universal, and the time periods for each country are strictly individual. The dissertation selects the most influential countries in the world

regarding the development of the system of capitalism at the time. As follows, the derived cycles of sovereignty, which contain within them a descending phase, a peak development point, and a descending phase, are:

I cycle of sovereignty – State sovereignty: *Descending wave* – from 1517 – beginning of Reformation; ***High point and beginning of a downward wave*** – 1648 – Peace Treaty of Westphalia and affirmation of the sovereignty of states in international law.

II cycle of sovereignty – Popular sovereignty: *Descending wave* – from 1756 – beginning of the Seven Years’ War; ***High point and beginning of a downward wave*** in America 1776 and France 1789 – end of the American Revolution and adoption of the ”Declaration of Independence” in America, as well as the end of the French Revolution and adoption of the ”Declaration of the Rights of Man” and the citizen”.

Sovereignty Cycle III – National Sovereignty: *Downward Wave* – 1914 – the start of World War I, continuing with World War II, ending in 1944; ***A high point*** is the end of World War II; ***The beginning of a downward wave*** is the end of the Cold War in 1989.

Sovereignty Cycle IV – Digital Sovereignty: *Downward Wave* – 2008 – the beginning of the economic crisis, then ***it continues to grow upwards*** with the beginning of the spread of the coronavirus infection around the world and the crisis that it creates from the year 2020 and the war in Ukraine, which starts in 2022; ***A high point*** is the end of the epidemiological situation and the period of war in Ukraine, and the beginning of a receding wave of sovereignty has not yet begun.

Cycles of capitalism are:

I cycle of capitalism: *Rising wave* – The great geographical discoveries – World hegemon in this period are Venice and Genoa; ***Descending Wave*** – 1517 – Reform movements and the 30 Years’ War 1618 to 1648 – Peace of Westphalia.

II Cycle of Capitalism: *Rising Wave* – World Hegemon Netherlands; ***Downswing*** – from 1756 – from the beginning to the end

(1763) of the Seven Years' War, as well as the end of the American Revolution and the adoption of the "Declaration of Independence" in America, as well as the end of the French Revolution and the adoption of the "Declaration of the rights of man and citizen" in America in 1776 and in France in 1789.

III Cycle of Capitalism: *Rising Wave* – World Hegemon England; ***Downward Wave*** – from 1914 when World War I began, continuing through World War II which ended in 1944, then continuing to decline until 1970 with the onset of the oil crisis and continuing until 1989 when it was the End of The Cold War.

IV Cycle of Capitalism: *Rising Wave* – World Hegemon USA; ***Descending wave*** – the beginning of the economic crisis in 2008, then it continues to grow upwards with the beginning of the spread of the coronavirus infection around the world and the crisis it creates from 2020 and the war in Ukraine from 2022. Currently, humanity has reached development at this stage.

V Cycle of Capitalism has a probabilistic character because it has not yet been formed and represents a future forecast for the development of capitalism. A prediction is made that: ***Rising wave*** – the world hegemon can be China or the USA, if it is a country, and if it is an intergovernmental organization – BRICS or another organization in coalition with the USA and NATO. It is possible that ***the beginning of a tipping point*** for capitalism will occur with the end of the war in Ukraine. After the fifth cycle of capitalism has occurred, it will be possible to make a forecast for the next – **V cycle of sovereignty**.

In the following second chapter, a more detailed elaboration is made of the middle cycles of sovereignty about the industrial revolutions (III and IV cycle of sovereignty). In the third chapter, we present the short cycles of sovereignty during the Fourth Industrial Revolution, analyzing the IV cycle of sovereignty, which starts from the period of the economic crisis in 2008, which also begins the implementation of the technologies of the Fourth Industrial Revolution, which gradually replace the technologies of the third industrial revolution and together with this we give a fore-

cast for the future development of the fifth cycle of capitalism. The medium and small cycles of sovereignty build the large cycles of sovereignty.

In the *third paragraph* of the first chapter, which is called "Theoretical concepts of sovereignty in conditions of globalization", special attention is paid to the process of globalization, which leads to a significant decline of sovereignty in history. The theoretical directions of neoliberalism and its idea of the "end of the state" are examined, as well as the realistic views of weakening sovereignties, but preserving the state as a structure. Time has shown that the realist views of sovereignty and the state are more accurate, and for that their ideas are used as an indicator in the third chapter when conducting the content analysis of normative and strategic documents. Following the realist theory, we focus on the cyber security strategies of the studied countries, as basic documents for conducting a policy on building and developing digital sovereignty on their territory.

This paragraph also describes and analyzes various scenarios for the transformation of the state as a consequence of the decline of sovereignty, which are as follows: a state corporation in which the business model of governance prevails in the social activity of the state. Another scenario is a state empire, where large states vying for world domination by conquering other states' territories encroach on their sovereign territories. And the third scenario is a civilization-state in which the culture of certain nations begins to dominate the culture of others and so coexist⁶. Formations between countries in intergovernmental organizations are considered, which are based on a cultural feature and implement the civilizational model. From the considered scenario of the deformation of the states, it is concluded that each one of them comprehensively describes reality.

The ideas of the scientists who developed the idea of post-sovereignty are taken as the basis for the third chapter of the dis-

⁶Harin, Aleksey, Evolyutsionnye modeli gosudarstva postmoderna, Svobodnaya mysly, 2012, 11, pp. 92–100.

sertation⁷. The representatives of this direction believe that inter-governmental organizations take away part of the sovereignty of national states. The main purpose of creating these inter-governmental organizations is to avoid future wars again, but in doing so, some of the nation-states are deprived of full sovereignty over their territory. Such organizations that were created after the Second World War for Europe are the EU and the Comecon, and for this reason, in this paragraph, we methodologically set the need to study full members of these organizations in the form of Bulgaria and Russia, which were part of the Comecon, and in subsequently, Bulgaria became a member of the EU, and Russia took its path of development. In the next chapter, we examine the strategies of these two countries to explore how the sovereignty of these countries in the context of the Fourth Industrial Revolution is changing and what is the degree of development of their digital sovereignties. This paragraph also considers the duration of the story as a constant quantity that cannot be changed. The idea of the "end of history" of F. Fukuyama and the supremacy of the universal values of neoliberal democracy around the world is proclaimed, which S. Huntington disputes, describing the civilizational model that is examined in detail. This confirms the thesis of the evolution of sovereignty, which, contrary to the idea of the "end of history", continues its development in history.

SECOND CHAPTER

A theoretical analysis of the formation of the Fourth Industrial Revolution and its impact on the evolution of sovereignty

The second chapter of the dissertation is focused on the evolution of sovereignty in conditions of the Fourth Industrial Revolution.

In *the first paragraph* of this chapter, which is called "Genesis of the theories of industrial revolutions", the ideas of historical materialism of K. Marx and F. Engels are of leading importance. If in the previous chapter the focus was placed on the Hegelian idea of

⁷Lucas, Michael, Nationalism, Sovereignty, and Supranational Organizations, Hamburg, Heft, 1999.

”consciousness determines being”, then in this chapter the fundamental statement is ”being determines consciousness”, returning to the analysis of antiquity by K. Marx and F. Engels and the progress of humanity.

Then, the more modern theoretical statements of M. Castells, A. Toffler, D. Bell, J. Schumpeter, N. Kondratiev about the origin, development, and content of the three industrial revolutions, which preceded the Fourth Industrial Revolution and played a major role in the emergence in theory and practice.

A comparison of the four industrial revolutions with the crises of the III and IV cycles of capitalism is made. It is proved that these two cycles accompany the four industrial revolutions and arise during crises of capitalism, contributing to its exit from the crisis in which it is. Through the technologies of the industrial revolutions, capitalism constantly innovates, thereby systematically changing society and the nature of sovereignty and the state.

Establishing these dependencies between industrial revolutions and capitalism also proves the connection between sovereignty and industrial revolutions, referring to the inversely proportional dependency between the cycles of sovereignty and the cycles of capitalism that we prove in the previous first chapter. In this way, the average waves of sovereignty relative to the industrial revolutions are derived, which are as follows: **First Industrial Revolution** – Descending Wave of Second Cycle of Sovereignty; **Second Industrial Revolution** – Rising Wave of Third Cycle of Sovereignty; **Third Industrial Revolution** – Descending Wave of Third Cycle of Sovereignty; **Fourth Industrial Revolution** – Rising Wave of Fifth Cycle of Sovereignty.

The cycles of capitalism relative to the four industrial revolutions are: **First Industrial Revolution** – A rising wave of the third cycle of capitalism; **Second Industrial Revolution** – Descending Wave of Third Cycle of Capitalism; **Third Industrial Revolution** – A rising wave of the fourth cycle of capitalism; **Fourth Industrial Revolution** – Downward Wave of Capitalism’s Fourth Cycle.

Linking the cycles of sovereignty and capitalism with the cycles of industrial revolutions, they are divided into a stage of growth and implementation and growth and decline, in which mechanisms to protect society from given technologies begin to be implemented.

The rise and fall phases of industrial revolutions become even more visible in the following third chapter of the dissertation, where short cycles of sovereignty are explored. There are examples of specific normative and strategic documents for the implementation and development of the technologies of the Fourth Industrial Revolution and then of documents for the implementation of protective mechanisms in society from the relevant technologies. Once a phase of protection from the technologies of a particular industrial revolution is reached, those technologies are replaced by the technologies of the next industrial revolution so that capitalism can continue its development. Such is the example of the technologies of the Fifth Industrial Revolution, which the scientist K. Schwab mentions⁸.

The second paragraph is entitled "Confirmation of the Fourth Industrial Revolution in theory and practice". In it, we focus on the theoretical frameworks for the Fourth Industrial Revolution by K. Schwab, M. Casey, P. Vigna, N. Bostrom, K. Kelly, M. Minsky, D. McCarthy, G. Simon, Kai-Fu Li, H. Prodanov. In this paragraph, we look at the key technologies of the Fourth Industrial Revolution, such as artificial intelligence, 3D printer, drone, quantum computer, and others, and how these technologies are systemically covering the entire society. As the main consequence of this is the transformation of big data into a major factor of production, along with land, labor, and capital. This is how the new cycle of capitalism is formed, which is called digital capitalism. This form of capitalism needs to be protected, which can only be realized through the implementation of digital sovereignty by the state.

It also examines the dangers that arise in social, political, economic, cultural, and ecological terms, and the only way to mitigate

⁸Shvab, Klaus, *Tehnologii Chetvertoy promishlennoy revolyutsii*, Moskva, Bombora, 2018.

and counter them is through the introduction of digital sovereignty.

In *the third paragraph*, which is called "Implementation of protective mechanisms of states in the digital space", we present the theoretical propositions of digital sovereignty, which is the last evolved form of sovereignty, discussed in the first chapter as a holistic entity. Digital sovereignty arises as a result of the self-limitation of states in their Internet, or the so-called "Splinternet" phenomenon, "Internet fragmentation" and "Internet balkanization".

We define the dangers in the digital space with the concept of "the digital sword" and the protective mechanisms of digital sovereignty that are created to counteract them – "the digital shield", which we explore in detail in the third chapter of the dissertation.

Different varieties of sovereignty in the digital space are distinguished: informational, virtual, data sovereignty, technological and cyber sovereignty, but we consider that the concept of digital sovereignty summarizes all these manifestations. The fields that digital sovereignty protects are examined. These are citizens, businesses, non-governmental organizations, and the state and intergovernmental organizations, which unite to counter digital dangers together.

The signs by which countries unite in intergovernmental organizations to realize their digital sovereignty are described, such as economic, regional, and cultural⁹. They correspond to the different concepts of different types of states, which were derived by A. Harin and we describe in the first chapter of the dissertation, or as follows: economic (union between states-corporations), regional (state-empire) and cultural (state-civilization).

The transformation of the last cycle of capitalism, which takes place similarly to the qualitative changes of the cycles of sovereignty, is analyzed in the form of digital capitalism under the influence of the technologies of the Fourth Industrial Revolution and the next future phase of digital capitalism, which P. Mason calls "post-capitalism".

⁹Vinnik, Dmitriy, Tsifrovoy suverenitet: Politicheskie i pravovye rezhimi fitratsii danyh, *Filosofia nauki*, 2014, 2 (61), pp. 108-111.

Political and societal systems within digital capitalism and post-capitalism are presented. The political and social systems envisioned within digital capitalism are being realized in the present moment and will unfold shortly, and those within post-capitalism will evolve in the distant future, after the deployment of the technologies of the next industrial revolutions.

Within digital capitalism, two perfect models stand out: "digital authoritarianism" and "digital anarchism", which serve as a measure of the level of development of the digital sovereignty of the states, which we examine in the next chapter of the dissertation.

Digital authoritarianism and digital anarchism exist within the framework of digital capitalism and digital sovereignty, which are developing under the conditions of the Fourth Industrial Revolution. While digital socialism and digital communism will be able to develop on the basis of post-capitalism, which is currently far in the future.

Digital authoritarianism includes the following political systems: digital fascism and digital totalitarianism¹⁰. It represents the mass tracking of the actions of citizens in the digital space by the authoritarian state, in which a strong digital sovereignty is realized. An example of such a country is China, which, thanks to the technologies it produces and the data it collects from its users, serves to train the artificial intelligence it put into the military sphere. In this way, China becomes one of the main contenders for world leadership. The US, like China, tracks and collects data on its users, training its artificial intelligence for military use.

Digital anarchy is widespread in the countries that, without forming digital sovereignty on their territory – a "digital shield", follow the universal models for network dominance in the world of the USA and China. They are the countries that have the most advanced "digital sword" technologies, which they use to penetrate the countries that are not protected in the digital space. Thanks to the global chaos created initially by the USA, and now supported

¹⁰Prodanov, Hristo, *Digitalnata ikonomika i badeshteto na kapitalizma*, Sofia, Izdatelski kompleks – UNSS, 2018.

by China to weaken the governments of a large part of the countries in the world, the conditions are created for the development of digital oligarchy¹¹, which leads to an even greater accumulation of capital by a small percentage people in the world.

The fact is noted that the two universal models – ”digital authoritarianism” and ”digital anarchism” are convergently applied¹² in practice by the USA and China to realize their hegemony. Therefore, these two countries serve as a baseline model for evaluating the degree of policy implementation for the development of digital sovereignty of the countries we study. In the following third chapter, policies in the field of digitization are analyzed about various public spheres, as well as the measures laid down in normative and strategic documents, with the help of which the degree of implementation of digital sovereignty is determined in the countries we have studied.

CHAPTER THREE

Policy for strengthening sovereignty in conditions of the Fourth Industrial Revolution: foreign experience and Bulgarian practice

This chapter covers the subject of dissertation research in practice. If the second chapter of the dissertation examines the theoretical aspects of the evolution of sovereignty in the conditions of the Fourth Industrial Revolution and its last cycle of evolution – digital sovereignty, this chapter analyzes the same, but through the prism of practice. A content analysis of strategic and normative documents of Bulgaria, as part of the EU and Russia, is being conducted.

In *the first paragraph*, which is called ”State and interstate policies, strategies and laws to strengthen sovereignty in conditions of

¹¹Nekova, Ivka, Oligarhizatsia na politikata, [avtoreferat na disertatsia za prisazhdane na nauchna stepen „Doktor na naukite”, Sofia, Universitet za nacionalno i svetovno stopanstvo], Sofia, 2021.

¹²Pirgova, Maria, Konvergentsiata i globalizatsia. Konvergentsiyata – istoricheski kazusi s globalni proektsii, Sofia, Universititsko izdatelstvo „Sv. Kliment Ohridski”, 2020.

the Fourth Industrial Revolution: foreign experience and Bulgarian practice”, the choice of Bulgaria and Russia is argued for as an example of research in this chapter. It is due to the need to identify the degree of development of the policies of Bulgaria and Russia on the implementation of digital sovereignty in their territories.

It takes into account the fact that Bulgaria and Russia are former members of the Council for Mutual Economic Assistance (Comecon) and the Warsaw Pact, within which they were full members and had close political, economic, military, and cultural relations. After the collapse of the Comecon, Bulgaria accepted Euro-Atlantic values by joining NATO and the EU, while Russia continued its development along its civilizational path. It is necessary to take into account how the policies that Bulgaria and Russia implemented after they separated affected the development of their sovereignties in the conditions of the Fourth Industrial Revolution.

During the content analysis of the strategic documents of Bulgaria, the EU, and Russia, two similarities are found. The first similarity is that in the strategies of the two countries for the first decade (2010-2020) there are pledged measures to deal with the financial crisis that systematically covered the whole world in 2008. The goals of the strategies adopted in the second decade (2020-2030) are focused on dealing with the economic, social, and political crisis that has arisen as a result of the coronavirus pandemic in 2020.

Second, in periodization, strategic documents are divided into two decades, which describe two different phases of development. The first phase is for the period 2010-2020, in which the technologies of the Fourth Industrial Revolution are being implemented, and the second phase, which is in the period 2020-2030, is implementing a policy for the development of digital sovereignty. This confirms the main thesis of the study regarding the existence of an evolution of sovereignty in the conditions of the Fourth Industrial Revolution.

Based on the analyzed normative documents of Bulgaria, the EU, and the Russian Federation for the two decades (2010-2020 and 2020-2030), we divide the last (short) wave of sovereignty into

two periods during the development of the Fourth Industrial revolution in which sovereignty has two phases as follows: **Descending phase of digital** sovereignty from 2010 to 2020; **Ascending phase of digital sovereignty** from 2020 to 2030.

At the same time, the phases of the last downward short wave of capitalism that transformed into digital capitalism in the development time of the Fourth Industrial Revolution are as follows: **The rising phase of digital capitalism** from 2010 to 2020; **Decline phase of digital capitalism** from 2020 to 2030.

Through the relationship between digital capitalism and digital sovereignty at the micro level, the ascending and descending phases of the cycle of the Fourth Industrial Revolution are established.

In *the second paragraph* of the dissertation, which is called "Vulnerabilities and dangers in state and interstate policies, strategies, and laws for sovereignty in conditions of the Fourth Industrial Revolution", strategic and normative documents of Bulgaria, the EU, and Russia are examined, revealing their connections with constitutional and international law, in which the main concepts of sovereignty are laid down in the regulatory framework. It is established that the constitutions of the states, as well as the strategic and legislative documents subordinate to it, are related to the United Nations (UN) Charter, which is the fundamental document for all states, through which peace is observed between states in conditions of democracy.

The analysis reveals vulnerabilities in international law enforcement in the field of cyber security, as a new field in which there are not yet established state-wide mechanisms for preserving digital sovereignty and limiting cyber attacks.

From the content analysis to 2030, the development of digital sovereignties at the national and intergovernmental level is outlined, assuming that in the next decade (2030-2040) mechanisms for international cooperation will be built and reflected in the UN Charter.

Emphasis is placed on the Cyber Security Strategy of Bulgaria, the EU, and Russia, as fundamental to the construction of their dig-

ital sovereignties. Basic dangers are analyzed, some of which are noted in the strategies, but others are not, and the goal is to add to them in order to pay special attention to them and thus to complete the mechanisms in the normative documents for their counteraction.

The dangers in the digital space are conventionally called "digital swords" and are divided into three groups – technological, social, and cultural.

Together with the dangers, the existing protection mechanisms in Bulgaria, the EU, and Russia, which are called "digital shields", are described and analyzed. Defense mechanisms are divided into four groups – technological, social, economic, and cultural. The dangers and protective mechanisms with which Bulgaria, as part of the EU and Russia are countering them, are analyzed. It is concluded that both digital anarchism and digital authoritarianism, which are theoretically and divergently defined in the previous chapter, function convergently in their political systems for the implementation of a policy for digital sovereignty. It is proven that they are applicable not only in the leading countries – the USA and China, but also in Bulgaria, as part of the EU, and in Russia.

On the one hand, in the EU and Bulgaria, as its member, there is no state regulation on certain spheres, so the rights and freedoms of citizens are not limited, observing the values of democracy, and on the other hand, there are legal regulations, but they also limit the freedoms of citizens in the digital space, but digital sovereignty is developing. This is a sign of an internal contradiction in Bulgaria, as a member of the EU, in the pursuit of a balance between freedom and security, which is the basis of digital anarchism.

The content analysis of Russia's "digital shield" concluded that the rights and freedoms of its citizens in the digital space are more limited than in Bulgaria, which brings it closer to digital authoritarianism. Based on these criteria, a qualitative measure is created for the degree of implementation of a policy of building digital sovereignty on the territory of Bulgaria and Russia.

This gauge is presented in *the third paragraph*, which is called

”Displacement of the states from the center, semi-periphery, and periphery according to the degree of development of their digital sovereignty in geopolitics”.

According to this measure, Russia has a higher level of development of its policy on the implementation of digital sovereignty in its territory compared to Bulgaria, as a member of the EU, which has a lower level of policy on the implementation of digital sovereignty. Bulgaria has a higher level of digital freedom for the citizens of its territory than the citizens of Russia.

The US and China are the countries with the most digital independence in their territory, and they are the countries that have both the most ”digital swords” to enforce their global dominance, and the most ”digital shields” to protect against ” the digital swords” of adversary states. For the USA, the main adversary country is China, and for China, similarly, the USA. The two world powers (US and China) are in rivalry with each other, fighting for digital control over the world.

The political regime that prevails in the respective countries is determined by the level of implementation of policies to build the digital sovereignty of the countries. In China, digital authoritarianism prevails to the greatest extent, in Bulgaria, as a member of the EU, digital anarchism. Digital authoritarianism is also practiced in the US through global espionage, as evidenced by the revelations of E. Snowden and J. Assange. China, for its part, also applies digital anarchism, whose tools of the ”digital sword” serve it to attack other weaker sovereign states, as well as against its main adversary – the United States.

3. CONCLUSION

In the final part of the dissertation, the results of the research are summarized, and its contributions to the theory and practice in the field of political science are presented. The research objective was achieved by solving the set tasks and using the initially selected approaches and methods.

At the end of each chapter, the relevant conclusions are also pre-

sented. The following more important conclusions corresponding to the three research hypotheses are formulated in the dissertation work:

1. The cyclic nature of sovereignty compared to the cycles of capitalism is established, which confirms the first hypothesis that was laid down in the dissertation research, namely that four long cycles are distinguished in the evolution of sovereignty, which are related to the four long cycles of capitalism through an inverse relationship.

2. In establishing the nature of the evolution of sovereignty, to confirm the second hypothesis in the study, it is proved that the four cycles of sovereignty complement and build on, rather than replace each other. It follows from this that the cycles of sovereignty are not only and only cyclical repetition, but have qualitative changes in each phase of their development. The first cycle of sovereignty is state sovereignty, the second is popular sovereignty, which contains signs of state sovereignty, the third is national sovereignty, which contains state and popular sovereignty, and the fourth cycle is digital sovereignty, which contains all previous forms of sovereignty – state, popular and national, but also includes the digital space.

3. From the derived fourth cycle of sovereignty, which we call digital sovereignty, and the analysis of numerous normative documents and state and intergovernmental strategies, the third hypothesis laid down in the research is confirmed. The technologies of the Fourth Industrial Revolution contribute to the development of the digital space, in which the problems of sovereignty are associated not so much with its state, people, or national dimensions, but with their digital aspect in the form of digital sovereignty. Capitalism is also transforming into digital capitalism, and digital sovereignty is the last evolved form of sovereignty to protect emerging digital capitalism in the conditions of the Fourth Industrial Revolution.

4. SELF-ASSESSMENT OF SCIENTIFIC CONTRIBUTIONS

1. The relationship between sovereignty and the cycles of capitalism is conceptualized, establishing an inversely proportional dependence;

2. The key role of the digital dimension of sovereignty in modern times, caused by the technological development of the Fourth Industrial Revolution, is systematized and substantiated in detail;

3. A qualitative measure of the degree of development of digital sovereignty is proposed, which can be applied directly to countries that were members of the Comecon and are currently part of the EU, and after its adaptation and upgrading to a wide range of countries;

4. Based on the research realized in the dissertation, a forecast was made for the next fifth cycle of capitalism and the political systems developing within it. It can serve to identify the needs and wants in the strategic plans of the countries for the next decade in establishing the next Fifth Industrial Revolution¹.

¹Nahavandi, Saeid, Human-Centric Solution, Sustainability, 11 (4371), 2019, pp. 1–13.

5. PUBLICATIONS ON THE THEME OF THE DISSERTATION

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