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The Fourth Scientific and Technological Revolution and Its Social Outcomes

Oleg N. Yanitsky*

Doctor of Philosophy, Professor, Chief Researcher, the Federal Center of Theoretical and Applied Sociology of the Russian academy of sciences, Moscow, Russia

Corresponding Author:** ***Oleg N. Yanitsky, *Doctor of Philosophy, Professor, Chief Researcher, the Federal Center of Theoretical and Applied Sociology of the Russian academy of sciences, Moscow, Russia.*

Abstract: *The aim of the article is to discuss some urgent issues of the coming the Fourth scientific and technological revolution (hereafter, the STR-4) and its social consequences. Such revolutionary transformations in a mode of production and a reproduction of a society as a social entity are usually have critical character accompanied with conflicts and wars. Basing on the 'interregnum' concept offered by A. Gramsci and developed by Z. Bauman the author came to the following conclusions.* ***First,*** *the STR-4 as such and its consequences have to be analyzed together as a complex phenomenon which I call a global sociobiotechnical system (hereafter, the SBT-system).* ***Second,*** *as many social theorists showed, our world is overpopulated and experienced a lack of living resources.* ***Third,*** *the consequences of the above changes may have a multisided and cascade character.* ***Fourth,*** *the STR-4 creates a virtual space for human life and social activity.* ***Fifth,*** *any transition period is accompanied with a lot of unintended consequences and critical situations partly generated by the transition process as such partly due to the weakening of existing social order.* ***Sixth,*** *within any society will be the agents (forces) which will be pro and contra the above transition because the former are accustomed to gain profit from the existing rules of games whereas the latter will be nervous awaiting this new and uncertain future.* ***Seventh,*** *different individuals, groups and societies are not equally prepared to coming changes but the growing spatial mobility is their common feature.* ***Eighth,*** *at the same time the majority of people have to be more mentally and practically mobile; to be an experienced man means the resource for survival in that transition period.* ***Ninth,*** *under the above conditions existing social institutions are replacing by temporary agreements and roadmaps.* ***Tenth,*** *the national and global politicians have to take into account various feedbacks of repressed social and natural environment.* ***Eleventh,*** *for the reason of the growth of world population and lack of living resources the geopolitics is becoming an important instrument of survival.* ***Twelfth,*** *all-embracing and all-penetrating information networks are potentially and actually risky both for nature and humanity. The complex science that studies the hybrid wars has emerged.*

Keywords: *Agent, Civil Society, Geopolitics, Globalization, Hybrid Wars, Natural Sciences, Sociological Community, Sociology, Struggle, The SBT-System, The STR-4, Tempo-Rhythms, Theory*

1. INTRODUCTION

Recently our world is on the way towards the Fourth scientific and technological revolution (the STR-4). Such revolutionary transformations are inevitably accompanied with radical social changes which in turn are transforming the human and man-nature relationships, etc. As human history clearly shows, these transformations have never been peaceful. On the contrary, such changes have always been accompanied by a growing social tension, conflicts and the wars including the wars with own population or between its parts i.e. the civil wars.

That is why I name such transitional periods as *critical ones*. I see necessary to distinguish such periods from economic crises inherent to a capitalist system development. The critical periods are all-embracing and usually resulted in substantial changes in the world institutional structure and in a disposition of global stakeholders while the economic crises have a waving character slightly touching the global institutional system.

Following the idea of the 'interregnum' moved fourth by A. Gramsci and developed by Z. Bauman (2017) it would be correct to signify the above transition period as *global critical interregnum* in which overall functional and structural organization of a global community is entering into a certain

'transition state.' Such critical state is characterized by a break of existing institutional structure, mass migration across the world, ethno-confessional contradictions, 'frozen conflicts' and local wars.

But the STR-4 isn't the only one agent that is guilty in shaping the state of critical interregnum. As it already has been shown many times by the researches of global structures and processes J. Forrester, M. Fisher-Kowalski, H. Haberl, Von Weitszacker and many others) our world is so highly interdependent that, using the proverb of B. Commoner, the all connected with the all, the all goes somewhere and nothing is received for nothing. Besides, a man can do nothing with natural processes and events and disasters like the floods, fires, the earthquakes and above all with global warming.

The main distinguishing feature of the STR-4 is a rapidly compressing humanity by the all-embracing and all-penetrating network system. But these ties are qualitatively different from the railroads, global flight connections and the like. Global information system created by the IT-technologists plays a decisive role because it is the most rapid and universal, i.e. accessible to all. It doesn't mean that all are becoming equal in the use of its goods but it means that *a qualitatively new space of living and activity, namely the virtual one has emerged.* And simultaneously one could observe the emergence of the hybrid wars as a new form of all-embracing and all-penetrating of struggle of social agents.

2. Main Features of a Transition Period

First, an uncertainty of current state of affairs and in relation to the future is growing. The uncertainty may have the character of acceleration or slowing down of transformations, of mobilization character, or the uncertainty may be featured by the emergence of unintended consequences. **Second,** as Bauman pointed out, in any interregnum period the state and the transnationals usually intend to shift off a majority of responsibilities on the shoulders of population of the cities and states (Bauman, 2017).

Third, the human ties which seems yesterday strong are becoming uncertain and ad hoc. One part of residents became disoriented, the other joined protest movements, still others are looking for opportunity to escape by resettling to other countries. In all cases the degree of political and psychological tensions is raising. The state, in turn, is mobilizing its power forces to maintain an existing order and to prevent the mob violence.

Fourth, any transition period is accompanied with a lot of unintended consequences partly generated by the transition process as such partly due to the weakening of existing social order. **Fifth,** within any society will be the agents (forces) which will be pro and contra the above transition because the former are accustomed to gain profit from the existing rules of games whereas the latter will be nervous awaiting this new and uncertain future. It means that in this very case pro and contra forces change their places.

Sixth, does all societies prepared to such transition? I convinced that not, because the only small part of them really understand what is going on and what will be their near future. **Seventh,** different individuals, groups and societies are not equally prepared to coming changes. This thesis is first of all relates to rank-and-file people who are already tired from endless changes in the conditions of their daily life. Thus, the heading of this article, especially its second part is methodologically incorrect because the innovations and their social consequences are tightly interrelated.

3. New Interregnum or the Smooth Transition toward a New State?

To my mind, not all Russian and foreign politicians and sociologists are rightly understand, what the transition to the STR-4 actually means. Let's now turn to what may be or have to be happened in Russian society if it really begins its transition toward the STR-4? To my mind, our country should make the triple standing jump: to get off the oil needle, to modernize (or in some cases to restore) its industrial potential and to come up with those countries whose economy is already based on the inventions and achievements of the STR-4.

It's a not an easy task because the 'shift to the figure' (*perechod na tsifry*, in Russian) means an all-embracing and sometimes radical change of existing mode of production and social reproduction. To teach our bureaucracy to use computers is possible but to reconstruct their mode of thinking and their relationships with other social institutions is much more difficult. In any country the bureaucratic class never gives in without a fight their right to govern social relations.

Let's refer to K. Schwab (2017) who the most openly and in detail counted the coming consequences of the STR-4. Schwab made two preliminary remarks. On the one hand, we are still not adequately

realized the possible social consequences. On the other hand, there is still no positive and all-embracing global concept which will be capable to define the challenges and possibilities of the STR-4. Besides, the STR-4 will generate such large-scale changes which are not possible to predict.

First, a period of labor market diminishing ('compression') is coming and the process of algorithmization i.e. an IT-programming of many kinds of labor is already going on. An employment in cognitive and creative professions will grow and will be reduced in monotonous standardized ones. Schwab underscored that the labor of such professional groups as the lawyers, doctors, financial analytics, journalists, insurance agents, librarians, and bookkeepers will be automatized very soon. From this viewpoint, the US president Trump's idea to revitalize the Rust Belt that is the belt of the STR-3 is wrong. The algorithmic devices are already created 90% per cents of media news gathered and selected by the companies specialized in a 'narrative science.' Anyhow, the next five years will be critical for such transition accompanied with the growth of gender inequality, especially for those women who are working as the housekeepers. We are needed to reconsider the very notion of high qualification, prof. Schwab stated (Schwab, p.59).

More than that, Schwab openly stated, the STR-4 makes the principle the 'winner takes it all' as dominating one between the countries and inside of them. This statement contradicts with the concluding remarks of his book where he calls all of us to trust each other and to work hand-in-hand.

Second, it is the problem of identification as a process and an identity as a state. The interpretation of the STR-4 as a technological breakthrough only is incorrect because it should be analyzed together with its direct impact on a particular society and the feedbacks generated by it. I convinced that in the transition period a nation-state and civil society have to collaborate. The tempo-rhythms of their reciprocal relationships play a substantial role.

Third, the further the more a 'universalism' as an imperative to follow the global trends generated by the STR-4 is becoming the dominating one. The universalism as the distinguishing feature is generated by a growing social and spatial mobility of those who look for shelter, work and relative safety. The other side of the same coin is a 'particularism' (localism) dictated by the struggle of local communities (aborigines) for deficit resources in situ. In general, the struggle for exhausting living resources and living areas is a distinguishing feature of transition period. Besides, the universalism of the requirements to an employee has a dark side. I mean the uprooting of an individual from a specific social and cultural landscape and transforming such employee into a kind of shift worker or profiteer. Anyhow, such all-embracing universalism inevitably leads to the reducing of social diversity and therefore to diminishing of global community sustainability.

Fourth, a double global-local identity is inherent to the universal individuals. The former I call a demonstrative or symbolic identification while the latter I call an inner (deep) identity rooted into rules and norms of particular local community. Even if it's going on about high-level creative class its members are usually belong to a particular professional group or sport community.

Fifth, an ethno-confessional identity is the most sustainable because it is based on such fundamental and well-seen characteristics as the ethnos and confession. I'm not sure that prof. Schwab, St. Hawking and some other western scientists are correct stating that the main task of humanity is to raise chances for gaining profit and to avoid risks.

Sixth, the US and the EU are subjected to the invasion of migrants' masses who are the carriers of double value system but of another kind: 'traditional' but not necessarily local and a modern i.e. of universal character. This mixt is burdened by the fact that all of them are involuntary migrants mainly from Africa and the Near East.

Seventh, as to Russia it is in a transition period toward STR-4. Usually in such times the contradictions between the rich and the poor, between the young and the elders as well as ethno-confessional ones are came to the forefront. But forced repression civic activity struggling for its human rights and freedoms is wrong and may lead to more deep social conflicts as it's now going in France. In such periods the collaboration between the state and its civil society is the best instrument for the development of right decisions and for gaining common wellbeing.

4. The Scientific Core of Ongoing Transformations

Sometimes we forget that the science is the social institution because it is constructed and developed by humans, the scientists and scholars. Till now all ideas and programs for the development of this

institution are generated, programmed and realized by the scientists themselves. And a transition to the STR-4 is already designed and implemented by scientists as well. Surely, the other institutions like a market and the political machine play very important role. The practice offers us various approaches to a more detailed answer to the above question. One is when social sciences are waiting to the emergence of substantial social consequences of scientific and technological innovations. Looking back to our history we realize that this moment is coming when technological innovations are transforming into the objects of our everyday life (jets, cars, TV-sets, players, etc.). Usually, we have estimated such objects positively because they make our life more comfortable and simultaneously bring profit to their constructors and producers.

The other is when constructing a certain object or instrument of everyday life we begin to think about it pluses and minuses for us and for nature. For example, how human efforts, energy and other resources are needed for a utilization of the wastes produced by the STR-4? And what harm these wastes will exert on man and nature until they will be reworked or stored in the safe place. And is this harm is possible to remove, how quickly, what energy and other resources are needed, etc.?

The most advanced way for social participation in the processes of constructing of innovation is when the humanities are working in a constant and close contact with natural scientists and technologists. Today, it seems as utopia but I'm convinced that division on natural, social and technical sciences is coming to an end. Of course, in some cases every branch of sciences has to think over a certain idea before it will become a common good. But the trend to interdisciplinary researches is clearly seen, and in some cases it gives practical results.

An objective impediment to such collaboration is the tempo-rhythms of the processes that are going on in the natural, social and technical systems. Usually in every particular case is quite different especially if it's the tempo-rhythms of transformations that are unseen for ordinary bystander and therefore they are needed special instruments for observation and analysis.

Another impediment is a life of people and groups in two interrelated social spaces, a material and virtual ones. The latter is very attractive, especially for the youth who like to deepen into virtual reality in which the young feel themselves as masters of situation.

To my mind, the actual core of ongoing transformations is not the only one, there are a set of them. First, it is a capability to join a structural-functional analysis of the STR-4 social consequences with their transformative character. An interrelation between structures and functions, on the one hand, and the results of their metabolic transformations on the other hand, came to the forefront. Second, It is *a capability of people to foresee their 'internet-future*' because in it there are a lot of dangers and the deadlocks. And the third one is the capability to translate the cumulative results of the above transformations into social and political languages.

5. The Role of Science in Global Affairs

Natural sciences have done much in the struggle with many illnesses, epidemics and many other problems of modern world. But these sciences are totally subjected to the law of capital accumulation. Under its conditions these sciences are the Janus-like. On the one hand, they help to cure mass of people but on the other hand, they are involved in an invention of the means of mass destruction, be it the people, their habitats, natural and cultivated landscapes or technical constructions.

Therefore, it's indicative that the role of natural sciences in nature protection despite a lot of already existed codes (laws, norms, instructions and other means of an administering of environmental protection) is insufficient. The other threat is the mode of thinking of modern natural and technical scientists. They are very seldom reflects on possible natural and social consequences of their own ideas and inventions. In particular, they are never build the scenarios of possible outcomes of practical realization of their inventions, be it medicine or new type of arms.

The reverse side of the same coin is the negative stand of natural scientists to their social counterparts or to a society as a whole. The overwhelming majority of the natural scientists are deeply convinced that they are working for the good of mankind. And only a very small part of it is deeply concerned with possible negative consequences of the STR-4 and its cascade effects.

In the Soviet times there were a lot of people who worked as propagators of the natural and technical sciences achievements. There were a special institution titled the 'Knowledge' called for the spread

scientific knowledges among population and first of all among the youth. The Soviet Union had disappeared but the Marxism is still alive. The class struggle has changed its forms but it has not disappeared. The struggle between the reach North and the poor South is continued involving in it the other nation-states and alliances, that is this struggle acquires the global scale.

I'm not an economist but I agree with the viewpoint of some Russian and foreign economists who state that from the 1980s onwards the US economy as one of the most powerful economies in the world is in crisis because the US citizens spend more than produced. The demand is insufficient and any war including a hybrid one cannot to enlarge it. Modern wars with their total distractive direct and side-effects can only to reduce further overall demands. As the authors of the 'Limits to Growth' warned us more than half-a-century ago (see, for example, Von Weizsäcker et al., 2018) the economists and politicians must to think how to slow down the demands of reach countries and to replace their consumer orientation by more modest demands, and how to replace the oil-based energy production and consumption by solar, wind and other energy sources?

Nevertheless, the population of the US is still indifferent to such appeals. To be a reach doesn't mean that any person or family has a lot of money. It also means that the reach may use and spend so many resources as they want. In this particular sense they are extreme egoists and individualists. But what should be done with those people from the 'third world' countries that are being taught in the US or the EU serves as carriers of consumerism as the ideology and mode of living into their poor countries?

Another global trend is that the further the more the natural and technical sciences are participating in a creation of arms, conventional and the new ones.

To my mind, backed by my own long-term field researches (Yanitsky, 2005), in modern conditions the scientists and scholars have to develop their activity simultaneously in three directions. First, they have to realize that one-sided decisions and constructions are already inefficient or even threatening. They need to join their efforts making interdisciplinary researches in order to find the most efficient and human-oriented solutions. Second, they have to join their efforts with the grassroots activism because local residents know a situation in situ much better. Local activists are well-experienced men. Third and very important, an exchange of experience and knowledge should develop in two directions: vertical i.e. local-global and horizontal i.e. in the frames of particular territory defined by natural, social and technical networks and communications. All said in this paragraph is the way to surmount an existed submission of the science as a social institution to mass-media production.

In any case, the politics of mass building of scientific reserves has become obsolescent. I'm not in favor of politics of high barriers between disciplines. On the contrary, I'm the adherent of the interdisciplinary communications between various branches of sciences but I clearly realize that their contacts will be specific in each case. Here I'm could to appeal to both the Soviet and world practice. First of all I mean the politics of forced modernization of the USSR in the 1930-40s. Of course, the secret labs for arms constructing are existed everywhere but to make a breakthrough in the sphere of new technologies by organizing a set of scientific and technological reserve is necessary but insufficient.

6. The Hybrid Wars as an Old-New Phenomenon

A competition and conflict are the basements of modern global community. It's strange that the wars are usually studied by the historians and the war scientists. But a dependence of a war emergence simultaneously from the relationships of many agents is a very ancient social phenomenon. What the STR-4 brings new?

First, due to the global information networks modern hybrid wars are becoming all-embracing and all-penetrating. It means that all communities of places on the planet are at risk of being disoriented, weakening or even fully destroyed. **Second,** for the reason that modern mode of production and social reproduction are dependent on these networks the difference between the war and the peace is becoming relative. The threat of unintended strike is growing.

The third, it means that usual meanings of notions the 'war' and the 'peace' have to be reconsidered by all social sciences. As the world geopolitical practice clearly shows, any 'struggle' includes the periods of the armistice i.e. the periods of a specific interregnums like the 'neither peace no war' state of affairs. **The fourth,** the hybrid wars may exert an immediate or postponed effect. If one refers to the Fucusima-1 incident, for the first glance it seems that had been a technological mistake of its

designers. But the further the more it appears itself as multi-sided disaster with many local and global unintended consequences.

Fifth, the timing of the emergence of any hybrid war is compressed giving very little room for accepted procedures of decision-making and response. **Sixth,** therefore in the case of hybrid wars a technological advances and developments are coming to the forefront. **Seventh,** a well-known phenomenon the 'power of the weakness' coupled with accelerated speed of unseen informational activity of possible adversary requires a sociological reconsideration of many 'stable' structural-functional notions and forms of social activity. In any case, there is a screaming discrepancy between stable social structures including a system of social institutions and extremely mobile activity of global stakeholders.

Eighth, a total dependence of a majority of social functions from global networks means the same dependence of the users that is all of us, from them. **Ninth,** a creation of artificial intellect means that the farther the more the wars will be conducted by the 'machines' and not by people and their generals. **Tenth** and it's the most important question: *what is about a safety of world population?* Is the nuclear weapons parity an only one 'remedy' for the peace maintenance? Social sciences are never seriously dealt with this issue. **Eleventh,** hybrid wars may fastened by so-called 'colored revolutions' or to be continued half-a-century [Sivkov, 2018]. In any case the tempo-rhythms of ongoing processes have to be carefully investigated as well. **Twelfth,** in sum the hybridization is not a new phenomenon but the very science and crafts to construct new things is relatively new.

7. Science-Media Relationships in Current Transition Period

Already now the science as the institution has much less impact on political processes at large and on the transition process in question in particular. And the further the more this gap is widening. This statement is especially right in relation to the social sciences. Recently, being the basis of public policy the 'face' of sciences is hardly seen by the majority of population. Except some unique technological innovations the public policy is constructed and disseminated by the mass-media. *The media is a real fourth power because all political decisions and actions are made though and by means of mass-media.* Modern social and political sciences may analyze current political processes and sometimes make prognoses related to their future but real government or even ruling are actually implemented be the media.

This fact has at least two outcomes. We've to recognize that the current political processes are perceived by the people from the lenses of mass-media. At the same time the science as an institution and competent political figure is disappearing from global political arenas. At best, the results of scientific research play a service role confirming the statements of politicians (the formulae the 'sociology said' is the best example). Such shifts have a set of long-term results.

First, written texts have been replaced by the 'images' that are much easier to perceive and a presence effect is much more convincing. **Second,** a public figure is needn't long education and training as a scientist does. **Third,** therefore, the 'speaking heads' began to force out the scientists from political arena and the simultaneously the media begins to produce their own 'speaking heads.' **Fourth,** as everybody can see, global and regional political leaders begin to rule either by short statements at world summits or by the twitter or by means of other mass-media channels. It's a quick and convincing mode of ruling. **Fifth**, on the other hand, world population is becoming accustomed to behave in accordance with such 'signals.' There is no reason to wait when a scientist will announce his/her political verdict. And nobody knows in what degree this verdict will be convincing to the masses of world population.

A reflection of social activity of a civil society and especially in the cases of protest movements deserve a special attention because again the sociologists are usually afraid to work as the insiders of such events preferring to work with the information gained from the second hands. In particular, what had happened in France in the end of the 2018? Does it was the political protest, civil protest like in the 1968 or the protest of a consumer society members? What kind of political aims does the protestors pursued? Discussions on that issue revealed a very wide complex of opinions from the general radicalization of France and the EU at large till the sign of the beginning of the EU decay.

Besides, in the cases of critical situations (the revolts, mass protests, or technological or natural disasters) the sociologists are incapable to gain information from the first hands i.e. in situand begin to

gather various 'opinions' related to a particular matter or event. Meanwhile, the civil organizations and their movements are a very important source of knowledge of real needs and demands of the rank-and-file people. More than that, a long-term experience of the environment and other social movements shows that their most positive effect is achieved when grassroots' activists and civil-oriented scientists are closely collaborated.

Anyhow, it's indicative that the very concept of the interregnum had been constructed and developed by humanistic-oriented scientists and scholars. It's also indicative that recently after a long period of the institutionally-oriented sociological investigations the researchers again showed their interest in the study of local organizations (so-called informalities. See, for example, Boudreau and Davis, 2017).

In sum, a long-term and usually very expensive scientific research is replacing by a quickly summarizing of the experts' opinions (who are usually politically-engaged ones) and then publicized by political leaders and commented by the 'speaking heads.' These processes are meant that *a field of socially-constructed facts is rapidly widening*. The reverse side of the same coin is that a multi-sided scientific analysis of a complex and movable reality is replaced by the so-called discursive processes. Human discourse is rather selective, it chooses only the facts (and opinions as well) that are interesting to the discussants here and now by unknown reasons. *As a result, we are not dealing with the analysis of real facts but with their reflection in human discourse only*. Another conclusion is much more troubling. A scientific research as such is eliminated from the processes of prognoses-building and decision-making.

8. Geopolitical Aspects of Global Struggle

The geopolitics is understood here as special disposition of forces on world arena. This arena is not empty territory including a cosmic space. In geopolitical terms any space has its own 'voice', be it particular social agent or natural resource, a natural landscape as such as well as a disposition of military and other forces within a certain regional or global arena. It means that any geopolitics has two meanings: a specific economic, social or political capital ready to use of a particular geopolitical agent and the character of the relationships between many geopolitical agents.

It should be noted that in this context any 'environment' is a sum of geopolitical agents and their resources is a geopolitical agent (force) as well. In this context, for example, a space of a particular nation-state or their alliances is simultaneously a resource and the agent of political activity.

Why I speak about geopolitics in terms of the struggle? First, because of the struggle is an essence of any geopolitics. The global politics always means the struggle in a peaceful or military form. Second, because of any conquest means an enhancement of a conquistador, and as a result an access to new sources of deficit resources, additional labor power and in the result an opportunity to establish its rules of games on the conquered space. Finally, the geopolitics means the repression of extremist forces in situ and therefore to lessen their penetration on the territory of the defender.

All said above is correct but it relates to the geopolitics of previous epochs. Recently, any country being armed with various kinds of information weapons are capable to resist. I think that to consider geopolitical wars as events belong to the past as a majority of modern historians did is a serious methodological mistake. Under conditions of the STR-4 the information operations (pressure, disinformation, blocking international information channels and cyber-wars) is inseparable part of global geopolitics. We are all now in a vicious circle: we are within an all-embracing information field which is a very important resource and at the same time are obliged to defend themselves from cyber-attacks, false information, destruction of our information systems, etc. Besides, the more developed countries use conventional means of their geopolitical attacks: economic and political pressure, sanctions, building up their military forces together with blocking the access to deficit resources and so on and so forth. In this context, the true and false information are both important resources.

Besides, in contrast to the 1930s when the US and some European politicians had been highly interested in modernization of the Soviet industry recently they are not. Or like the EU they are interested in Russian gas and oils resources only. On the contrary, strategically the Anglo-Saxon block of the most developed world countries is aimed at the isolation of Russia from the rest world. Therefore, this block trying by all means to destroy any nation-state alliances with participation of Russia like the BRICS or any forms of military, politically and-economic collaboration between the post-soviet countries.

The fateful questions arise: does such politics of compression and isolation fruitful or extremely dangerous for the world at large? And is there the means to stop it? Or the Anglo-Saxon military alliance hopes to disarm Russia and for this purpose all means are good? For example, some Asian countries besides conventional cyber-attacks began to use such weapons as the rivers and other water communications. Or, instead, began to build the artificial channels or artificially-constructed natural disasters, etc.

9. CONCLUSION

Revolutionary transformations in a mode of production and a reproduction of a society as a social entity are usually have critical character accompanied with conflicts and wars. These transformations are aggravated by the transition period from previous mode of production and social reproduction to the new ones. The transition period to the STR-4 as such and its possible consequences have to be analyzed together as a complex phenomenon which I call as global SBT-system.

Accordingly, a sociological interpretation of this phenomenon and its outcomes are different. But recently the sociological interpretation may be given not only by social sciences but by the economic ones as well. To get the most counterviews on the issue in question I've compared the conclusions of two recently published books. The former is summarizing a world-view of global sociological community (Schultz, 2018) while the latter is summarizing a world-view of global economic community and some outstanding scientists (Schwab, 2016). The former offered practically no radical social changes whereas the latter laid down a program of radical transformation on humanity on the ground of the IT-technologies. It's interesting that quite a few economists have analyzed social consequences of economic transformations like growing mobility of people, the population-environment relationships, images, and a very complex phenomenon of so-called social constructivism when social and other events are socially-constructed and then depicted (portrayed) as real ones. In turn, the sociologists quite rare analyze social outcomes of current economic transformations and first of all the negative effects of rapid mobility of financial capital of the transnationals. The sociologists and economists are agreed that the STR-4 creates a virtual space for human life and social activity.

In current scientific literature there are a lot of articles concerning the STR-4 but the majority of them are constructed in accordance with a principle: the STR-4 *and* its political, social, natural and other consequences. It's a methodologically wrong approach, to my mind because natural, social and technical structures and processes are more and more integrating in various kinds of a sociobio technical systems and a researcher has to analyze them not only separately but as integral wholeness.

The STR-4 has very different results. For some its brings profit, capital accumulation, and wellbeing, for others – new kinds of work and social activity, for still others – poverty, starvation, illnesses, involuntary migration and a loss of habitual way of life.

How long the above transition period i.e. the interregnum will continue and what will be its results? Recently it's hard to predict because the risk of global annihilation is very high and many continue continuing to accumulate the arms of mass destruction. Already now the world is balancing on the edge of the abyss. To my mind, modern capitalist system in its existing form and with its growing appetites is on the way to its self-distraction and the development of its IT-networks will only accelerate this process. In any case, a hunger and mass unemployment are very mighty explosives.

A transition toward an information society is the Janus-like. On the one hand, it opened an access of many people to the achievements of global science and cultural heritage. But on the other hand, the STR-4 constructed the weapons that are capable to destroy our planet. Recently, our world is teeter on the brink of nuclear catastrophe. Therefore, social sciences plus mass-media have to play a role of a restrictor of unlimited appetites of military hawks.

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