
Modern Networks and Infrastructures in Light of the Risk-Society Theory¹

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Drawing on a review of risk and network studies, his own experience in these research areas including case-studies of three current critical events, the author has organized his argument into ten theses related to the changes accompanying the development of globalization. First, in the all-penetrating risk society, all social institutes and ordinary people should be prepared to respond to network-like risks both globally and locally. Second, the environment of these risks is a 'collective actor' and it bites back if its carrying capacity is exceeded. It seems therefore more productive to analyse actor-environment relationships together. Third, in our tightly intertwined modern society any long-term and well-organized protest action would have a cascading effect. Thus the maxim of 'the strength of a weakness' is confirmed and the relationship between privacy and security should be reconsidered. Fourth, modern 'network wars' have neither fronts nor margins. Their cells, troops and individual combatants are mobile and flexible. Therefore, they adapt easily to any social environment and have become invisible. Fifth, today Touraine's 'return of the actor' principle is laden with the risk of the actor's consciousness being manipulated. Mobile and socially immature individuals have become Janus-like, their everyday behaviour is often directed by the media reprogramming his/her worldview. Sixth, the concept of a primary eco-structure (i.e. basic micro-social structure) should be reconsidered. It can no longer be seen as a crucial factor for the maintenance of the inclusion-exclusion balance. Individuals should constantly correlate their life-plans with unintended risks. The balance between the public and the private, between openness and closeness should be reconsidered. Seventh, small disorganizing actions at the nodes of social networks may have not only a large one-time critical impact but a long-term cascading

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effect as well. Eighth, Beck's concept of a global risk society has been confirmed. He was right when stating that the risks of this society have an inherent nature: the society produces not only 'goods' but 'bads'. But these 'bads' produce 'windows of opportunities.' Ninth, well-structured and human-oriented civil networks are an antidote to terrorist attacks. We ought to study the forms of covert (hidden or concealed) activity as carefully as we have studied other forms of communication. This type of inclusive field research is dangerous but absolutely necessary. Tenth, scholars and scientists cannot understand anything if they fail to apply a problem-oriented and multidisciplinary methodology in their studies both in situ and elsewhere.

Keywords: critical areas, environment, ideology, metabolism, privacy, problem-oriented analysis, risk society theory, social networks, time

Introduction

This article is the result of research carried out between 1998 and 2015. A variety of methods have been used including semi-structured in-depth interviews, chronicle building, media surveys, observation and theorizing (see, for example, [Yanitsky 1999; Yanitsky (1) 2000; Yanitsky (2) 2000; Yanitsky 2010; Yanitsky 2014].

Social networks, public, economic or interpersonal, are complex interconnected systems. The misuse, slow down or failure of one of them may cause serious harm to many other vital processes in society as a whole. These networks are especially important during critical states of society such as mass protests, subversive activity, terrorist attacks, and local wars. These networks are built in the 'body' of any society and have ties across the world.

Three events which happened in different parts of the world: terrorist attacks in France and the US, the demolition of the high-voltage power line from Ukraine to Crimea, and the truck drivers' strike in Russia, on the face of it, do not appear to have much in common. The political and cultural characteristics of these countries and localities are quite different, as are the causes behind these events. However their fundamental common feature is that they are all exert influence on infrastructure or network structures.

Infrastructure and networks may converge or intersect, but they also can turn into each other by means of "two turns of the key", namely by switching and reprogramming [Arsenault, Castells 2008]. Today, any object or action can be used for good or bad ends. For example, sometimes it is difficult to distinguish which side in a conflict is 'Us' and which is 'Them'. Today, 'We' and 'They' may coincide, swap their roles, and repolarize. We are currently observing a new 'Return of the Actor' [Touraine 1988] but of a rather specific kind which has a very mobile and quickly changing set of values, is inclined to use weapons and other aggressive behaviour, but a minute later he or she may become indiscernible in the crowd. That is the phenomenon of the two-faced Janus-like actor.

The other side of the coin is the sharp growth of Conquistador-like ideology used as a tool (or weapon) for re-dividing the world and its resources. At its extreme, radical form it is a terrorist ideology whose adherents are prepared to kill and to be killed. This kind of ideology and its liberal opposite are both struggling for domination in the economic and public arenas worldwide.

Another well-known feature of this ideological reversal is its network character. Networks have become important structural-functional elements of modern society given their mass consumer-oriented character. Ironically, part of the impoverished and ruined South is now struggling for world domination using extremist ideology and open networks which have deeply penetrated the rich North.

These two shifts actually represent a distinguishing feature of the modern global social order: it is becoming more and more unstable and conditional. That is why polls and focus-group discussions are no longer adequate as tools for understanding global societal dynamics. They may give us a generalized picture of the public mood ‘here and now’, but nothing more than that. Global risks may be caused by unidentified small and very mobile groups or even individuals. These empirical facts require more embracing and at the same time detailed field research *in situ*, because no respondent would tell the interviewer that their neighbour is a terrorist or an antisocial person.

Theoretical Underpinnings

This section feels like it needs an introductory paragraph. Otherwise it is just a big list. First, every society produces ‘goods’ and ‘bads’. It is wrong to regard the ‘bads’ simply as by-products of social progress. In some particular cases the ‘goods’ may play the role of the ‘bads’ and vice versa. In other words, there is a ‘boomerang effect’ when the ‘goods’ are back to front. More than that, for some people certain things (persons, actions, states of environment) may be ‘good’ while for others they are ‘bad.’ History shows that what at one time had been seen as ‘bad’ was later interpreted as a ‘good’. Therefore, any ‘bad’ should be analysed as a social actor.

Second, the world has entered a state of all-embracing and all-penetrating risk [Beck 1992; Beck 1999; Beck 2015; Yanitsky (1) 2000; Yanitsky 2014]. This means that there are no longer any absolutely safe places—only more or less safe ones. Further, this difference is conditional: what seems safe today can become very dangerous tomorrow. The emergence of the ‘hybrid war’ phenomenon on the global scale means that there are no boundaries between war and peace. A spot-like risk such as a virus *in vitro* may abruptly turn into an epidemic *in vivo*. All these processes are manifestations of the modern world’s principal uncertainty and unpredictability.

Third, risk is neither an event nor a particular state of an organism. Risk is not a ‘spot’ or an ‘affected area’ [Yanitsky 2014]. Risk is both a network (infrastructure) and a cascading process because it changes social orders and the carrying capacity of the environment. Time is a critical variable here. When the carrying capacity of an environment is exceeded as time passes, it turns from a risk-absorber into a risk-producer. In my view, global risks are subjected to the law of entropy the second law of thermodynamics, but not immediately. All risks involved in global circulation process have their own ‘harm-making’ time. For example, the dust generated by a large volcanic eruption will eventually dissipate but humanity and a large part of the biota will have died.

Four, the collective actor and its environment are equal entities in their nature and therefore they can be analysed separately only conditionally. In essence, an environment is a powerful multidimensional actor which is governed by natural and social laws.

Any environment has a carrying capacity, and its potential depends on the time-pressure of something 'bad'. A destructive force in relation to an existing social milieu later on may turn into a creative mobilizing local and regional force (see, for example, [Tilly 2004; Olsen 2005]). This means that there is a dialectic interplay between destructive and creative forces. Sometimes, the actor and its social milieu can operate as a single entity.

Fifth, the very idea of 'open society' as a basic democratic principle is brought into question. The relationship between openness and closeness is relative and temporary. These are two sides of the same coin. The movement to total control means a shift towards the destruction of democracy and the elimination of privacy while an absolutely transparent society would be in permanent danger. Thus, the balance between public and private should be reconsidered.

Sixth, an actor actually returns to the public arena but it does so in a two-faced Janus-like way. An actor can be a creative mobile person making 'goods' and stimulating the progress in science, technology and social life, or be a potential destroyer of these achievements who is struggling by all means for world domination. Excessive privacy for strangers is a potential risk for the established social order. All of the achievements in IT in the hands of strangers potentially enhance possible risks. A network structure of privacy with the condition of all-penetrating risk should be reconsidered.

Seventh, natural and social actors do not just simply interact. They can remain unchanged, or destroy one another, or merge into a new entity, or engender a new actor with unknown qualities. That is, the realm of interactions has a *metabolic* character, with an unknown duration and unknown consequences. The very notion of consequence has acquired a conditional character. That is why the question 'Where does the Wasteland End?' is not a metaphor but an actual process which must be carefully investigated.

Eighth, there are a number of works on *urban metabolism* [Wolman 1965; Fisher-Kowalski 1997; Fisher-Kowalski, Habert 2007; Kennedy, Cuddihy, Engel Yan 2007; Yanitsky 2013; Ermolaeva 2015] notwithstanding our underestimation of its transformative nature and spatial distribution. The issue is that these processes may have unexpected results as happened in Chernobyl and Fukushima-1. All the prognoses related to the mitigation of these global risks proved to be wrong. There is a reason to consider any socio-ecological metabolism as a mechanism of the prolonged distribution and spatial spread of risk.

Ninth, social-structure analysis should be reconsidered according to the new social and technological challenges. Ideas and political will are again as important as actions. The modern social world is so strongly manipulated that sometimes it is difficult to separate the truth from lies. That is why, in particular, words function now as deeds and vice versa as nowadays symbolic behaviour is widespread.

Tenth, today all natural and social processes circulate globally. The risk of global warming is the best example of global social-ecological metabolism. As in the above cases, the process of global warming is not linear. Instead, it has a cumulative or/and cascade character.

My research on social networks is based on two sources reflecting field and theoretical work. I draw upon the works of my western colleagues which have been summarized by Diani as follows: network processes are dual in nature; these processes connect

events, activities, and ideas; networks potentially linking different actors and events are multiple; time is a crucial dimension in the above processes; these approaches are applicable to the social movement studies [*Diani* 2003, p. 318]. My study is also based on my own long-term investigations of networks within the Soviet/Russian students' nature protection movement (the 'Druzhina movement') which have been summed up in a number of my books and articles [*Yanitsky* 1993; *Yanitsky* 1999; *Yanitsky* (1) 2000; *Yanitsky* (2) 2012; *Yanitsky* (3) 2012 and others].

'The Strength of a Weakness' and the Problem of Privacy

The problem is that a single suicidal person could cause large-scale or even global harm. It turns out that the concept of mass society works only for the more or less calm economic and social milieu of western society. During the last year the terrorist attacks in Paris and Brussels stirred up France, Belgium and the EU as a whole. After a Russian aircraft was shot down near the Turkish-Syrian border by a Turkish fighter, Russia-Turkish economic relations deteriorated and political contact practically frozen. Network and spot-like aggressive actions have become an instrument of modern 'hybrid war.' The 'calm Sun' era of relative sustainability is over, and war and peace are becoming less and less distinguishable.

Theoretically speaking, today there are two extremes: peaceful and calm populations who are mainly concerned with their careers and with maintaining their consumerist way of life, and armed combatants. The former are those who wish to maintain their primary eco-structure [*Yanitsky* (1) 2012] or, in Giddens's terms, to maintain a cocoon of basic trust, and to develop and implement their individual life-plans. These people are subject to the routine of everyday urban life which, in turn, is based on a sustainable social order. The latter are those armed with radical or extremist ideology and striving to dominate the world at any price—that is, to construct a social order of their own. The theoretical dilemma is that these extremists are 'We' and 'They' at the same time, but they are so inspired with their ideology that they do not experience any cognitive dissonance. Such people may live in a certain human milieu for months and even years, maintaining everyday routine contacts and at the same time be alienated socially and psychologically from the social milieu they live in. I suppose extremists perceive the surrounding world as black and white simultaneously. Nobody knows exactly who is between these two extremes, and therefore this particular type of marginal, i.e. double-sided, individual should be studied in detail.

What is clear is that 'no commonly shared definitions of privacy and security exist' and that 'privacy and security are multidimensional and contextual concepts' [*Van Lieshout, Friedewald, Wright, Gutwirth* 2013, p. 123]. Up until now, 'individuals do not know that their data have been processed unless they are faced with a (negative) decision against them' [*De Hert, Papakonstantinou, Wright, Gutwirth* 2013, p. 139].

It seems that lone-actor terrorists are the hardest to detect. Nevertheless, the US specialists showed that these actors are to some extent involved in the urban context. First, researchers indicated that there is no uniform profile of a lone-actor terrorist. Some of them maintain contacts with the likes of café staff and shop-keepers.

Second, in general, some of their neighbours knew something about their grievances, their ideology and views and their intention to engage in violence. Third, the range of activities preceding lone-actor terrorist attacks is more or less known. Fourth, not all such terrorists were socially isolated; they engaged in face-to-face or cell-phone contacts with others. Fifth, a lone-actor terrorist regularly engages in a detectable and observable range of activities with legal groups, social movements or terrorist organizations. Sixth, their actions were rarely sudden and impulsive. Typically they resulted from chains of acts. These chains included such steps as adopting an extremist ideology, thinking about their engagement in violence, acquiring the necessary materials, and training. Besides the diversity of their personalities, there are distinguishable differences between their subgroups, for example, between right-wing and left-wing offenders [Gill, Horgan, Deckert 2013]. These groups, peaceful or radical, are based on and tied to networks which are important resource channels, helping people ideologically and psychologically. Finally, 'privacy is both an issue of political regulation and one of personal concern, in the sense that it concerns the balance between public/personal security and liberty'. Users 'tend to underestimate the dangers of publishing private matters and, hence, tend to underestimate the importance of carefully choosing what they want to keep private.' [Friedwald 2010, p. 3].

Emergency Ecology 1: the Case of Local War

The two-year-long war in south-eastern Ukraine and the acts of terrorism in some African countries give rich material for some preliminary considerations as to the changes in the ecological structural-functional organization of cities. Using media reports from the 'hot spots', accounts of 'included observers' and our previous data gathered while studying the wildfires in 2011 in Russia [Yanitsky (3) 2012], the following positions can be laid down:

- (1) A major feature of the emergency ecology of a city is its *ad hoc* character. The city ceases to function as an organism and turns into an *ad hoc* structure depending, first of all, on the rhythms of military operations rather than on its inner demands and regularities. In other words, a 'normal' mode of functioning is replaced by one directed from without.
- (2) The critical state of the city organism has numerous consequences. First, major urban infrastructure begins to function irregularly. Neither city dwellers nor infrastructure managers know when and where they can get help and supplies or escape danger. City infrastructure and services work irregularly, hospitals are overloaded, there is a permanent shortage of medicines and other supplies. Shop shelves are empty, and residents can rely upon their home reserves only.
- (3) The residents' privacy has been totally destroyed, and they are forced to adapt to an unknown regime. That is, the habitual primary eco-structures of city dwellers which used to serve as a 'cocoon of a basic trust' and to maintain interpersonal ties do not work anymore. This is a serious shock for peaceful citizens and their children. These people are accustomed to their small circle and are not very mobile.

- (4) The infrastructure damaged by bombing or shelling can be off for hours or days. The lack of heating, electricity and water causes diseases and epidemics or at least gradually decreases immunity. Moreover, damaged infrastructure is a source of unintended risks such as floods, fires, or poisoning.
- (5) Normal business cannot function, it has been replaced by black markets and criminal operations aimed at making criminals rich at the expense of refugees, making use of destroyed private houses and apartments and what has been abandoned there. In Donbass in Ukraine which was the main coal region of the country we can see the re-emergence of *kopanka*, a very backward form of coal mining. Private transportation businesses are flourishing as some urban residents try escape from this dangerous area. This business is very profitable but risky because nobody knows when and where bombing takes place. As a result, criminal businesses are flourishing at bottlenecks such as, destroyed roads, refuelling stations, and border checkpoints. I speak here about the local business in the affected areas only, but there is some media evidence that big business is involved in these areas, too. For example, some factories and their infrastructure within areas-at-war remained safe whereas others have been totally destroyed. It is indicative that the internet and its infrastructure have not been seriously damaged. If one compares all this damage to those described in Smith's scenario, there are no substantial differences between the two.

Emergency Ecology 2: The Case of the Crimea Blackout

There is not much detailed information concerning this case. Therefore, I confine myself to a description of the case and its major consequences without any political estimates and prognoses. The population of Crimea is about 2.3 million. Between late spring and the end of October the population grew by about 0.5 million.

The Crimean Peninsula can supply itself with only 20% of its electricity needs, the rest comes from Ukraine. It seems rather strange that the authorities of the Crimea Republic did not worry about such an imbalance. During the night of 22 November 2015 there was a blackout in the Crimea as a result of a terrorist attack in southern Ukraine. Responsibility for the blast was claimed by a group of radical Crimean Tatar nationalists, who called this act 'peaceful pressure on Russian government.' This blast, some independent experts said, could have caused a serious accident at the Zaporozhskaya power plant or in the worst case a catastrophe comparable with Chernobyl or Fukushima-1.

What were the main losses? First, most of the population was deprived of electricity and therefore of heating and daily services. This blackout happened on the eve of the winter which could have been severe especially if accompanied by strong cold winds. Forests are scarce on the peninsula (and the majority of those remaining have been turned into reserves) so that cooking on wood stoves and heating homes with firewood was difficult.

Second, a state of emergency was imposed on the peninsula. In particular, that meant that the majority of public services, schools and the university were closed, and trolley-buses in cities and between them stopped operating. Truck transportation was minimized.

Third, the Russian government spent millions of rubles to supply Crimea with mobile generators. By experts' estimates, the average market cost of the simplest gas generator is about 15,000 rubles (about 215 euros). This is more than 1.5 the monthly salary of ordinary people or one month's pension.

Fourth, the financial and material losses currently total about 1 million rubles, according to the Crimea Prosecutor General Natalia Poklonskaya. And this sum grew as the blackout continued. Poklonskaya went on to say, there were non-material losses too, i.e. cultural ones and those concerning public health. She concluded that the greatest harm has been caused to the health and normal life of the Crimea's inhabitants [*Poklonskaya* 2015].

Fifth, the water supply was limited. Sixth, extra efforts had to be made to build a temporary power 'bridge' between the south of Krasnodarsky region and the eastern part of the Crimea. Once again: Smith's scenario seems realistic. Finally, every year Russian regions suffer from hurricanes, floods, forest fires, and the Ministry of Emergencies has enough power to deal with the consequences of such events. We are entering in the era of 'normal accidents' [*Perrow* 1984].

Emergency Ecology 3: Is Peaceful Protest Dangerous?

In November 2015 about 100 Russian truckers took to the streets protesting against the introduction of a special tax to finance the repairs of federal roads. The protest actions were peaceful and non-political, participants emphasized that they were law-abiding citizens. Protesters asked the federal authorities to meet with them so as to reach a compromise because, according to their calculations, if the decree should be enacted they would lose all their income. In Russia, truck driving is a very difficult job because of the low quality of some roads, the absence of necessary services, and the absence of strong trade unions. Russian truckers had never before taken part in such actions. Nevertheless, the authorities rejected all their demands and tried to cancel this protest using administrative and political resources [*Matytsyn* 2015]. Why was this response so decisive?

Truck drivers' strikes are not a new phenomenon. The world economy is periodically shaken by such risks. But how is this peaceful protest really harmful? What follows are some points taken from the scenario presented in Smith [2010], a former US truck driver and now an advocate of the truckers' trade union. If it were a well-organized long-term strike, it could have a cascade of consequences: (1) within several days, petrol stations would run out of fuel; (2) school buses could not run, so schools, colleges and universities would be shut down; (3) law enforcement vehicles would be left on roadsides; (4) shop shelves would empty; (5) factories would be shut down; (6) restaurants would be closed; (7) trucking companies and regulatory agencies would be shut down; (8) airplanes would be stranded; (9) if strikes are nation-wide and long-term strike, every business would be closed, and millions upon millions would become partially unemployed; and (10) if strikers shut down for a long time, the US would fall into chaos and panic. There are two main conclusions are: first, even a small disorganized strike may have a huge

impact. Second, a long-term truckers' strike would inevitably lead to a global technological breakdown [Smith 2010]. This is a worst case scenario which demonstrates the risk potential of peaceful action which may disrupt any national economic system. And if other collective actors joined this strike it could have a much more destructive effect. What matters is that the organizers of such campaigns, especially long-term ones, should carefully calculate the possible outcomes of their activity including any unintended consequences. The last notion is important in theory and practice for any mass action in our tightly interconnected world.

Conclusions

First, in the global and all-penetrating risk society all social institutions and ordinary people should be prepared to respond to network-like risks both globally and locally. These risks exert a multiplying impact: there may be only tens of people immediately affected but the ultimate result may affect hundreds of thousands. Unfortunately, institutions and civil society organizations are not prepared for these kinds of risks, though these networks are an old form of human existence and communication. For centuries, legal and illegal, public and hidden networks have fulfilled very important social and political functions. Risk is neither a 'single-moment' strike, spatially and temporally localized, nor a linear process. Risk-production is a cascading process with long-term and uncertain consequences.

Second, today it is clear that these all-embracing risks are not only the result of structural-functional chaos. As a rule, social chaos, poverty and injustice generate 'feedback' initially in the form of peaceful protest, and if this is ineffective, then it takes on the form of radical and extremist ideologies and protests. These ideologies have their own networks, backers and sympathizers across the world. There is also the possibility that destructive forces would attempt to use these life-supporting social networks for their ideological and political aims. The environment is a 'collective actor' and it always bites back if its carrying capacity is exceeded. It seems more productive to analyse actor-environment relationships together. Therefore, the very notion of modern social order becomes more and more conditional.

Third, in the tightly intertwined modern society any long-term and well-organized peaceful protest action will have a cascading effect as well. Thus the maxim of 'the strength of a weakness' is confirmed. Modern politicians and social scientists are primarily concerned about the public reaction to their ideas and decisions, often forgetting that every society is a complicated structure of individuals and networks. Therefore, the prevailing view that any decision should be first of all based on public opinion surveys must be adapted to the on-going reality which is full of temporal, fragile and permanently switching individual networks.

Fourth, in a world based on an ideology of accumulation and consumption the waste areas of social chaos and devastation, i.e. critical areas, in various parts of the planet offer global stakeholders access to new resources and therefore to maximize accumulation. The reverse is that some extra-radical quasi-states and groups are sponsored by powerful stakeholders within the critical areas and outside them.

New ideologists and geo-politicians should take into account that modern ‘network wars’ have neither fronts nor margins. Their cells and individual combatants are mobile and flexible. Therefore, they adapt easily to any social environment and can be invisible. This statement does not neglect the ‘open’ forms of modern soft wars like sanctions and counter-sanctions. But these ‘open’ forms are always based on information and other networks.

Fifth, the recent ‘return of the actor’ is laden with the risk that his/her consciousness and networks are being manipulated. A mobile and socially immature individual has become two-faced, his everyday behaviour is often directed by the media reprogramming his/her worldview. At the same time the privacy issue has become double-sided: one needs to maintain a psychological climate of trust, but one also needs to minimize the risk of manipulation from without.

Sixth, in the current conditions, the notion of a primary eco-structure (the cocoon of basic trust) should be reconsidered as well. This very functional structure can no longer be regarded as a stable factor in the maintenance of the optimal balance between the processes of inclusion and exclusion, the essential equilibrium for the maintenance of individual identity. Variables such as internal and external threats should be included in this concept. People must constantly correlate their individual life-plans with the unintended emergence of the risks and threats described above. In light of current events, the balance between the public and the private, between openness and closeness should be reconsidered, too. Private data protection is an urgent issue.

Seventh, ‘the strength of a weakness’ is not just a slogan. Even small disorganizing actions at the nodes of social networks may have a significant local impact and a long-term cascade effect. As has been shown, a peaceful but long-term trucking strike inevitably leads gradually to a local, regional and finally global technological breakdown. Another slogan generated by the green movement, ‘think globally—act locally’, should now be read as ‘everyone must be careful, because each local action may have a global effect’. Special operations implemented by emergency units should be combined with a dispersed network of grassroots actors and (in some critical cases) by armed citizens. In sum, a civic network should be set up against terrorist networks.

Eighth, the tragic events mentioned above as well as peaceful protest actions urge sociologists and other social scientists to address more fundamental theoretical issues. Beck’s concept (1999) of a global risk society has been confirmed and developed in some respects. In particular, Beck has been proven to be absolutely right stating that the risks of modern society have an inherent nature: the society produces not only ‘goods’ but ‘bads’. He was right in saying that these ‘bads’ have a double character. They worsen the local/global situation, but they produce ‘windows of opportunities.’ Finally, I agree with Beck’s statement ‘history is back’ [Beck 2015, p. 77]. It does not mean a full turning back but it means that historic macro- and micro-events bite back sooner or later.

Ninth, when analysing the tragic events in Paris and elsewhere across the world the focus should be shifted from the empirical facts and public opinion surveys to more general issues. Not all public protests or terrorist threats can be countered by special services or military force. The role of civic society should be reconsidered in light of its all-embracing network character. The terrorist attacks target peaceful people and their living milieu first and foremost. This shift poses the question of an

asymmetrical response. The issue is that the pace of the transformation of political and social institutions is far behind the swift changes in the global state of affairs and network structures. This means the necessity to remodel ‘behaviour’ and typical transformations of social networks. As terrorist attacks in France, Belgium, Germany and Sweden showed, well-structured and human-oriented civil networks are a mighty antidote to such attacks. We ought to study the forms of covert or subversive activity as carefully as we study other forms of social communication. This type of field research is dangerous but absolutely necessary.

Finally, time is a crucial variable because in some respects the modern world is becoming more complex, diverse and therefore more resistant, while in others it is becoming simpler and more easily transformable. These two opposite processes are developing at different speeds. Researchers cannot understand anything if they fail to apply a problem-oriented and multidisciplinary methodology in their studies both *in situ* and elsewhere. Some other Russian researchers and I [Brezkun 2015] stress the necessity of a problem-focused analysis. The analysis of the ‘hybrid war’ should be based on this approach and not on scenario-constructed methodology.

References

- Arsenalt A., Castells M. (2008) Switching Power: Rupert Murdoch and the Global Business of Media Politic. *International Sociology*, vol. 23, no 4, pp. 488–513.
- Beck U. (1992) *Risk Society. Toward a New Modernity*, London: SAGE.
- Beck U. (1999) *World Risk Society*, Malden, MA: Polity Press.
- Beck U. (2015) Emancipatory Catastrophism: What does it mean to Climate Change and Risk Society? *Current Sociology*, vol. 63, no 1, pp. 75–88.
- Brezkun S. (2015) Vmesto ‘stsenariiev’ – reshenie problem [Instead of ‘Scenarios’ – Problem-Solving]. *Nezavisimoe voennoe obozrenie*, no 46 (881), pp. 12–13.
- De Hert P., Papakonstantinou V., Wright D. and Gutwirth S. (2013) The Proposed Regulation and the Construction of a Principles-driven System for Individual Data Protection. *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 133–144.
- Diani M. (2003) Networks and Social Movements: a Research Programme. *Social Movements and Networks: A Relational Approaches to Collective Action* (eds. Diani M., McAdam D.), Oxford and New York: Oxford University Press, pp. 299–319.
- Ermolaeva P. (2015) Sotsial’no-ekologicheskii metabolizm gorodov: kontseptualizatsiya, nauchnye shkoly, sovremennye zarubezhnye issledovaniya [Socio-ecological Metabolism of Cities: Concepts, Scientific Schools, and Current Research]. *Sotsiologicheskaya nauka i sotsial’naya praktika*, vol. 3, no 11, pp. 34–50.
- Fisher-Kowalski M. (1997) Society’s Metabolism: On the Childhood and Adolescence of a Rising Conceptual Star. *The International Handbook of Environmental Sociology* (eds. Redclift M., Woodgate G.), Northampton, MA: Edward Elgar, pp. 119–137.
- Fisher-Kowalski M., Haberl H. (2007) *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use*, Vienna: Klagenfurt University.
- Friedewald M. (2013) Editorial. Technology and Privacy. *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 1–6.
- Gill P., Horgan J., Deckert P. (2013) Bombing Alone: Tracing the Motivations and Antecedent Behaviors of Lone-Actor Terrorists. *Journal of Forensic Sciences* (on-line), vol. 59, no 2, pp. 425–435. DOI: 10.1111/1556-4029.12312
- Kennedy C., Cuddihy J., Engel Yan J. (2007) The Changing Metabolism of Cities. *Journal of Industrial Ecology*, no 11, pp. 43–59.

- Matushin V. (2015) 'Platon', idi von! Kto stoit za protestom dal'noboishchikov? ['Plato', Go Out! Who is Behind the Truckers' Protest?]. *Versiya*, vol. 46, no 521, p. 3.
- Olsen Th. (2005) *International Zapatismo. The Construction of Solidarity in the Age of Globalization*, London: Zed Books.
- Perrow Ch. (1984) *The Normal Accidents. Living with High-Risk Technologies*, N. Y.: Basic Books.
- Poklonskaya N. (2015) Ushcherb ot podryva linii elektroperedach iz Ukrainy v Krym uvelichivaetsya s kazhdym dnem [The Losses from the Blast of Electricity Power Line from Ukraine to Crimea is Growing Every Day (video)]. *Krym-inform. ru*. Available at: <http://www.c-inform.info/news/id/32833>, accessed 31 May 2016.
- Smith A. (2010) Long Term Trucking Strike Would Devastate US. Available at: <http://askthetrucker.com/long-term-trucking-strike-would-devastate-u-s/>, accessed 31 May 2016.
- Tilly Ch. (2004) *Social Movements, 1768—2004*, London: Paradigm Publisher.
- Touraine A. (1988) *Return of the Actor. Social Theory in Postindustrial Society*, Minneapolis: University of Minnesota Press.
- Van Lieshout M., Friedewald M., Wright D. and Gutwirth S. (2013) Reconciling Privacy and Security. *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 119–132.
- Wolman A. (1965) The Metabolism of Cities. *Scientific American*, vol. 213, no 3, pp. 179–190.
- Yanitsky O. (1993) *Russian Environmentalism: Leading Figures, Facts, Opinions*, Moscow: Mezhdunarodnye Otnosheniya Publishing House.
- Yanitsky O. (1999) The Environmental Movement in a Hostile Context. The Case of Russia. *International Sociology*, vol. 14, no 2, pp. 157–172.
- Yanitsky O. (2000) *Russian Greens in a Risk Society. A Structural Analysis*, Helsinki: Kikimora Publications.
- Yanitsky O. (2) (2000) Sustainability and Risk: The Case of Russia. *Innovation: The European Journal of Social Sciences*, vol. 13, no 3, pp. 265–277.
- Yanitsky O. (2010) Russia's Changing World: Resources, Networks, Localities. *Social Sciences. A Quarterly Journal of the Russian Academy of Sciences*, no 4, pp. 103–122.
- Yanitsky O. (1) (2012) A Primary Eco-Structure: The Concept and its Testing. *Social Analysis*, vol. 2, no 2, pp. 7–24.
- Yanitsky O. (2) (2012) From Nature Protection to Politics: The Russian Environmental Movement 1960–2010. *Environmental Politics*, vol. 21, no 6, pp. 922–940.
- Yanitsky O. (3) (2012) The 2010 Wildfires in Russia. An Ecosociological Analysis. *Sociological Research*, vol. 51, no 2, pp. 57–75.
- Yanitsky O. (2013) Metabolicheskaya konseptsiya sovremennogo goroda [Metabolic Concept of a Modern City]. *Sotsiologicheskaya nauka i sotsial'naya praktika*, no 3, pp. 16–32.
- Yanitsky O. (2014) Sociology of Critical Areas. *Open Journal of Social Science Research*, vol. 2, no 3, pp. 112–118.

Современные сети и инфраструктуры в свете теории общества риска

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Ключевые слова: критические зоны, среда, идеология, метаболизм, приватность, проблемно-ориентированный подход, теория общества риска, социальные сети, время

Социальные, экономические или межличностные сети современного общества являются чрезвычайно сложными системами. Злоупотребление ими, равно как и их нецелевое использование или разрушение, может нанести значительный вред многим другим жизненно важным процессам и миру в целом. Познание структуры этих сетей и характера их использования особенно существенны в ситуации критических состояний общества (массовые протесты, подрывная деятельность, террористические атаки, локальные войны и т.д.). Эти сети встроены в тело общественного организма и зависимы от подобных же глобальных сетей.

Социальные сети могут соединяться, пересекаться и даже изменять свою структуру и текущую по ним информацию посредством всего двух ключей: переключения и перепрограммирования. В настоящее время любой вид материального или социального взаимодействия может быть использован двояко: во благо или же для причинения вреда. Более того, трудно различить, какая сторона конфликта есть «мы», и какая «они», то есть противостоящая сторона. «Мы» и «они» все чаще могут совпадать, меняться ролями и даже меняться «полюсами». Мы вступаем в новый период «возвращения человека действующего», но весьма специфического характера: очень мобильного, с быстро меняющимися ценностными ориентациями, склонного к использованию вооруженной силы и других средств агрессивного поведения. По сути, это феномен «двуликого Януса».

Другая сторона «сетевого поворота» – это резкий рост «покорительской» идеологии и терроризма как ее наиболее радикальной формы, которая используется ее носителями как орудие для передела мира и его ресурсов. Эта идеология и ее оппонент, либеральная доктрина, борются за доминирование на глобальной экономической и политической арене. Так или иначе, сетевые структуры становятся важнейшим структурно-функциональным элементом современного общества потребления. Ирония истории заключается в том, что сегодня часть беднейшего

и структурно-хаотизированного Юга борется за глобальное доминирование, используя именно сетевые системы, которыми пронизан весь богатый Север.

Названные сдвиги являются отличительной чертой современного глобального социального порядка, который становится все более и более нестабильным и «условным». Вот почему массовые опросы и фокус-группы более не являются достаточными инструментами для понимания этой сетевой динамики. Эти методы, несомненно, дают общую картину общественных настроений «здесь и сейчас», но не более того, потому что глобальные риски могут быть порождены малыми группами и даже отдельными индивидами. Названные сдвиги требуют всеобъемлющего и в то же время углубленного и детализированного анализа на местах.

Некоторые теоретические позиции

Во-первых, всякое общество производит «блага» и «бедствия», причем последние не являются обязательно побочными продуктами социального прогресса. Названные понятия также относительны: для одних они являются «благами», тогда как для других – «бедствиями». Уже не раз случалось, когда некоторые исторические события получали иную интерпретацию и оценку. В любом случае, «бедствие» – не только теоретическая конструкция, но и социальный актор. Во-вторых, мир уже вошел в состояние всеохватывающего и всепроникающего риска. Поэтому в нем уже нет абсолютно безопасных мест: есть только относительно безопасные, однако и это различие – условное. Фактически мир стал «гибридным»: сегодня отсутствуют границы между миром и войной, фронтом и тылом. В-третьих, современные риски – это не «точки» или зоны повышенной опасности. Они представляют собой одновременно инфраструктурные системы и каскадные процессы, критической переменной в которых является время. Если «несущая способность» некоторой социальной системы превышена, она превращается из поглотителя рисков в их источник. Наконец, все риски включены в круговорот вещества и энергии в биосфере, которая сама может порождать глобальные риски (например, потепление климата). В-четвертых, в рамках данного подхода «актор» и «среда» остаются равнозначными сущностями, поэтому их раздельное изучение весьма проблематично. В процессе взаимодействия со средой актор может трансформироваться из разрушительной силы в креативную. Но бывают случаи, когда они действуют заодно. В-пятых, сама идея «открытости общества» как базовый принцип демократического устройства относительна, так как отношение между открытостью и закрытостью социальных систем – относительное и временное. Этот тезис касается и соотношения между приватной и публичной жизнью индивидов. В-шестых, как отмечалось выше, «возвращение человека деятельного» на общественную арену также диалектично: он может играть как креативную, так и разрушительную роль. К сожалению, слишком большая открытость европейцев по отношению к инокультурным мигрантам есть потенциальный риск для существующего социального порядка. И массовый приток мигрантов есть также вызов для европейских форм приватности. В-седьмых, природные и социальные силы не просто взаимодействуют: они могут оставаться неизменными, сливаться, разрушать один другого или порождать авторов с неизвестными ранее качествами.

Это процесс получил название «социального метаболизма», который может продолжаться много дольше, чем породившее его взаимодействие. В-восьмых, катастрофы на Чернобыльской АЭС и «Фукусиме-1» свидетельствуют, что нельзя недооценивать их глобального и длительного трансформирующего характера. По сути, социально-экологический метаболизм есть форма пролонгированного риска с неопределенными пространственными параметрами. В-девятых, методы социально-структурного анализа должны быть пересмотрены в свете новых технологических вызовов. Идеи и политическая воля снова столь же существенны, как и конкретные действия. Слова снова функционируют как дела и наоборот. В-десятых, сегодня все природные и социальные процессы включены в глобальный круговорот, однако он не линейен, напротив, он имеет кумулятивный или каскадный характер. Риск глобального потепления – это наглядный пример такого нелинейного глобального социально-экологического метаболизма. В-одиннадцатых, исследования автора данной статьи основаны на двух основных источниках. Он опирался на работы своих западных коллег, итог которых можно суммировать следующим образом: сетевые процессы дуальны по своей природе; они соединяют идеи, события и социальные действия; эти сети потенциально многосторонни; время – их ключевая переменная; социальные инициативы и движения – их драйвер. Автор также опирался на собственные многолетние исследования в сфере социального активизма, прежде всего на изучение студенческого и «взрослого» природоохранного движения в СССР/РФ.

«Сила слабости» и проблема приватности

Проблема в том, что даже самоубийца-одиночка может принести огромный, если не глобальный, вред. Таким образом, концепция массового общества пригодна только для более или менее спокойной социальной и экономической обстановки в западном обществе. Как показали события во Франции, Бельгии, Египте, Турции, террористические атаки породили серьезные изменения в международной обстановке и общественных настроениях, особенно когда «точечные» действия террористов стали инструментом гибридной войны. Эпоха «спокойного солнца» закончилась, а состояния мира и войны все менее различимы.

Теоретически в мире и каждом обществе сегодня существуют два полюса. На одном из них – мирное население, озабоченное семьей, карьерой, достатком и другими повседневными делами. Эти люди культивируют свою «экологическую нишу», или, согласно Э. Гидденсу, «кочон основополагающего доверия», что естественно предполагает стабильность социального порядка. На другом полюсе – люди, живущие борьбой. Сегодня их радикальное крыло стремится к доминированию над остальным миром любой ценой. Они – одновременно «мы» и «они», они видят мир в черно-белом свете, но не испытывают при этом никакого когнитивного диссонанса. Большую озабоченность вызывает тот факт, что есть люди, маргинальные по своей сути, то есть они одновременно «там» и «здесь». Поэтому «приватность» более не является синонимом безопасности, приватность – это многосторонняя и контекстуально-зависимая концепция. Кажется, что таких террористов-одиночек невозможно вычислить, однако это не совсем так: американские специалисты по антитеррору утверждают, что эти одиночки так или иначе вовлечены в контекст городской жизни.

Одни замечают их отличия в поведении в общественных местах, другие – по контактам в местных сообществах. Одиночки используют мобильную связь, их фиксируют камеры наружного и внутреннего наблюдения и т.д. В разговорах в кафе, магазине, на улице эти люди так или иначе проявляют свои убеждения и предпочтения, тем более, если они иного, нежели коренное население, вероисповедания. Да, эти люди готовятся к актам террора загодя, но они не могут при этом избежать общения с законопослушными гражданами, поэтому следы такой подготовки также остаются. Все это требует не только использования новейших технических средств, но и включенного наблюдения, причем не стороннего наблюдателя, а специалиста, способного видеть ситуацию изнутри и глазами многих. Поэтому, по мнению западных ученых, «приватность» сегодня – это уже не столько дело личного выбора, сколько объект политического регулирования и гражданской самоорганизации с целью поддержания баланса между личной свободой и общественной безопасностью.

«Эмерджентная экология»: три случая изучения критической ситуации

В изучении критических ситуаций были использованы следующие методы:

- наблюдение (со стороны и включенное),
- глубинные интервью,
- исследование СМИ,
- построение хроник событий,
- изучение литературы.

Анализ первого случая (локальный вооруженный конфликт) дал следующие результаты. Городские поселения перестают функционировать как социальный организм, превращаясь в *ad hoc* структуры, зависящие от хода военных действий. Это состояние имеет множество последствий: городская инфраструктура более не функционирует регулярно, а только «время от времени»; одни учреждения города переполнены (больницы), другие пустуют или закрываются совсем; приватность жизни горожан нарушена, и они вынуждены подчиняться ритмам войны; горожане постоянно испытывают недостаток необходимых средств жизнеобеспечения (воды, тепла, продуктов питания, медикаментов); жизнь в полуразрушенных зданиях или подвалах, скученность снижают человеческий иммунитет, провоцируют болезни и эпидемии. Нормальный бизнес вытесняется «черным рынком», в поддержании которого, как свидетельствуют СМИ, участвует и большой бизнес; криминал наживается, население беднеет.

Случай второй: отключение Крыма от энергоснабжения. 22 ноября 2015 г. Крым, обеспечивающий себя электроэнергией только на 20% (80% поступало из Украины), был практически обесточен. Каковы были наиболее существенные потери? Прежде всего, серьезно пострадало все население, поскольку отключение было произведено накануне зимы. Введенный режим чрезвычайного положения означал, что большинство социальных учреждений, включая детские сады, школы, больницы и университет, были закрыты. Снабжение населения водой было ограничено, а доставка продуктов питания и медикаментов резко затруднена. В короткий срок из других российских регионов в республику были поставлены

сотни мобильных электрогенераторов. Экономические потери также были весьма существенны, но не меньший урон был нанесен здоровью и безопасности населения полуострова. Правительство РФ приложило экстра-усилия для создания временного энергетического моста между Краснодарским краем и Крымом. Заметим, что этот случай – далеко не единичный: другие регионы РФ периодически страдают от ураганов, наводнений, лесных пожаров и т.д., именно по этой причине Министерство по чрезвычайным ситуациям постоянно работает в мобилизационном режиме.

Случай третий: опасен ли мирный протест в сетевом обществе? Российские дальнобойщики вышли на мирный протест, так как новый налог лишил их возможности нормальных дивидендов, учитывая их тяжелый труд, плохое качество российских дорог, недостаток необходимых линейных служб и сервиса, отсутствие сильных профсоюзов. Однако власти отказались вести с забастовщиками прямые переговоры и постарались погасить это протест административными средствами. Современный, сетевой, глубоко интегрированный мир периодически сотрясается забастовщиками дальнобойщиков. При написании статьи автор опирался на сценарий подобных процессов, разработанный бывшим американским дальнобойщиком, а ныне руководителем одного из профсоюзов, который утверждал, что такая забастовка может иметь «каскадный» эффект: начинается забастовка дальнобойщиков, заправочные станции остаются без топлива, значит, школьные автобусы не могут перевозить детей в школы, возможно, закрываются и университеты; полиция и другие дорожные службы также не в состоянии следить за трафиком; не только кафе и рестораны, но фабрики и заводы вскоре также закрываются; самолеты без горючего не летают, аэропорты перестают функционировать. И вообще, любому бизнесу будет нанесен серьезный урон, и, как следствие, начнется паника. Итог: небольшая по масштабам забастовка дальнобойщиков может нанести серьезный вред, а длительный и хорошо организованный протест способен значительно нарушить всю современную «экосистему» производства и воспроизводства жизни в национальных масштабах. Наконец, такие акции всегда имеют непредвиденные последствия.

Выводы и результаты

Разворачивающаяся на наших глазах глобализация – многосторонний процесс. Изменение его структурно-функциональной организации, новые идеологические ориентиры, порождаемые глобализацией блага и бедствия – все эти процессы происходят одновременно и во взаимосвязи. Автор, опираясь на изучение литературы по сетям и рискам глобального и национального масштаба, а также на собственные многолетние исследования в этой области, подводит итог своих размышлений по данной теме в форме десяти тезисов, касающихся развития этих структур и рисков в современном мире. Первый тезис: в обществе всепроникающего риска индивиды и социальные институты должны быть готовы к ответу на сетевые риски локально и глобально. Второй: среда этих рисков – тоже социальный актор, поэтому их следует изучать в «связке». Третий: в современном тесно взаимосвя-

занном мире всякий длительный социальный протест может иметь «каскадный» эффект, чем подтверждается данная максима. Отсюда: отношения между приватностью и безопасностью должны быть пересмотрены. Четвертый: современные сетевые войны не имеют ни фронта, ни тыла. Их подразделения, ячейки и отдельные воины чрезвычайно подвижны и изменчивы; они легко адаптируются к изменяющейся среде и часто просто невидимы. Пятый: модус «человек активный» (А. Турэн) обременен риском манипуляции его сознанием. Сегодня повседневное поведение мобильного индивида все более программируется СМИ. Шестой: концепция «первичной эко-структуры» (или «кокона основополагающего доверия») должна быть пересмотрена, так как она уже не способна выполнять регулятивную функцию «включения» индивида в общественную жизнь и обособления от нее. Сегодня индивиды вынуждены соотносить свои жизненные планы с неожиданными рисками и изменениями среды обитания, а также с растущей неопределенностью самого понятия «доверие», более того, баланс между публичностью и приватностью личной жизни индивида должен быть пересмотрен. Седьмой: незначительные ошибочные действия в «узлах» сетевых систем могут порождать не только одномоментные риски в них самих, но и «каскадные» негативные эффекты самого разного масштаба. Восьмой: концепция «общества риска» У. Бека подтверждается. Он был прав, говоря, что общество не только производит блага и бедствия, но последние при определенных обстоятельствах могут обернуться благами. Бек был также прав, утверждая, что история возвращается. Это не означает поворота истории вспять, но значит, что малые и большие исторические события рано или поздно повторяются. Девятый: хорошо структурированные и гуманистически ориентированные гражданские сети являются мощным антидотом против радикальной идеологии и террористических атак. Социологи должны изучать скрытые сети «подрывной» деятельности столь же тщательно, как и другие формы социальной коммуникации. Отсюда – ценность длительного включенного наблюдения. Этот вид анализа опасен для самого исследователя, но он абсолютно необходим. Десятый: представители естественных и общественных наук не смогут ответить на названные вызовы, если они не будут пользоваться в своих исследованиях проблемно-ориентированной и междисциплинарной методологией.

Литература

- Брезкун С. (2015) Вместо сценариев – решение проблем // Независимое военное обозрение. № 46 (881). С. 12–13.
- Ермолаева П. (2015) Социально-экологический метаболизм городов: концептуализация, научные школы, современные зарубежные исследования // Социологическая наука и социальная практика. Т. 3. № 11. С. 34–50.
- Матюшин В. (2015) «Платон», иди вон! Кто стоит за протестом дальнобойщиков? // Версия. Т. 46. № 521. С. 3.
- Поклонская Н. (2015) Ущерб от подрыва линий электропередач из Украины в Крым увеличивается с каждым днем // Крым-Информ // <http://www.c-inform.info/news/id/32833>
- Яницкий О. (2013) Метаболическая концепция города // Социологическая наука и социальная практика. № 3. С. 16–32.

- Arsenault A., Castells M. (2008) Switching Power: Rupert Murdoch and the Global Business of Media Politic // *International Sociology*, vol. 23, no 4, pp. 488–513.
- Beck U. (1992) *Risk Society. Toward a New Modernity*, London: SAGE.
- Beck U. (1999) *World Risk Society*, Malden, MA: Polity Press.
- Beck U. (2015) Emancipatory Catastrophism: What does it mean to Climate Change and Risk Society? // *Current Sociology*, vol. 63, no 1, pp. 75–88.
- Diani M. (2003) Networks and Social Movements: a Research Programme // *Social Movements and Networks: A Relational Approaches to Collective Action* (eds. Diani M., McAdam D.), Oxford and New York: Oxford University Press, pp. 299–319.
- Fisher-Kowalski M. (1997) Society's Metabolism: On the Childhood and Adolescence of a Rising Conceptual Star // *The International Handbook of Environmental Sociology* (eds. Redklift M., Woodgate G.), Northampton, MA: Edward Elgar, pp. 119–137.
- Fisher-Kowalski M., Haberl H. (2007) *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use*, Vienna: Klagenfurt University.
- Friedewald M. (2013) Editorial. Technology and Privacy // *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 1–6.
- Gill P., Horgan J., Deckert P. (2013) Bombing Alone: Tracing the Motivations and Antecedent Behaviors of Lone-Actor Terrorists // *Journal of Forensic Sciences (on-line)*, vol. 59, no 2, pp. 425–435. DOI: 10. 1111/1556-4029. 12312
- De Hert P., Papakonstantinou V., Wright D. and Gutwirth S. (2013) The Proposed Regulation and the Construction of a Principles-driven System for Individual Data Protection // *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 133–144.
- Kennedy C., Cuddihy J., Engel Yan J. (2007) The Changing Metabolism of Cities // *Journal of Industrial Ecology*, no 11, pp. 43–59.
- Olsen Th. (2005) *International Zapatismo. The Construction of Solidarity in the Age of Globalization*, London: Zed Books.
- Perrow Ch. (1984) *The Normal Accidents. Living with High-Risk Technologies*, N.Y.: Basic Books.
- Smith A. (2010) Long Term Truckling Strike Would Devastate US // <http://askthetrucker.com/long-term-trucking-strike-would-devastate-u-s/>
- Tilly Ch. (2004) *Social Movements, 1768–2004*, London: Paradigm Publisher.
- Touraine A. (1988) *Return of the Actor. Social Theory in Postindustrial Society*, Minneapolis: University of Minnesota Press.
- Van Lieshout M., Friedewald M., Wright D. and Gutwirth S. (2013) Reconciling Privacy and Security // *Innovation: The European Journal of Social Science Research*, vol. 26, no 1–2, pp. 119–132.
- Wolman A. (1965) The Metabolism of Cities // *Scientific American*, vol. 213, no 3, pp. 179–190.
- Yanitsky O. (1993) *Russian Environmentalism: Leading Figures, Facts, Opinions*, Moscow: Mezhdunarodnye Otnosheniya Publishing House.
- Yanitsky O. (1999) The Environmental Movement in a Hostile Context. The Case of Russia // *International Sociology*, vol. 14, no 2, pp. 157–172.
- Yanitsky O. (1) (2000) *Russian Greens in a Risk Society. A Structural Analysis*, Helsinki: Kikumora Publications.
- Yanitsky O. (2) (2000) Sustainability and Risk: The Case of Russia // *Innovation: The European Journal of Social Sciences*, vol. 13, no 3, pp. 265–277.
- Yanitsky O. (2010) *Russia's Changing World: Resources, Networks, Localities* // *Social Sciences. A Quarterly Journal of the Russian Academy of Sciences*, no 4, pp. 103–122.
- Yanitsky O. (1) (2012) A Primary Eco-Structure: The Concept and its Testing // *Social Analysis*, vol. 2, no 2, pp. 7–24.
- Yanitsky O. (2) (2012) From Nature Protection to Politics: The Russian Environmental Movement 1960–2010 // *Environmental Politics*, vol. 21, no 6, pp. 922–940.
- Yanitsky O. (3) (2012) The 2010 Wildfires in Russia. An Ecosociological Analysis // *Sociological Research*, vol. 51, no 2, pp. 57–75.
- Yanitsky O. (2014) *Sociology of Critical Areas* // *Open Journal of Social Science Research*, vol. 2, no 3, pp. 112–118.