Social constructing of risks / disasters

In the *risk society* [Beck 1992a] unfavourable anthropogenic or environmental events are determined first of all by social, political and cultural factors but not economic or technological ones. Risks as potential threats to prioritized social values (health, welfare, human rights) are integrated into intrinsic social development as destructive phenomena. Numerous experts who possess their knowledge and skills, interests and preferences, hopes and fears are involved into identification and ranging of risks. But this inevitable affective and cognitive subjectivity of the experts is in many cases counterbalanced with the scale of risk communications: the so-called *laypeople* use *folk theories* [Kempton 1986] heuristically for intuitive evaluation of the risks, which may differ greatly from scientific views.

The interpretation of risks as *potential* threats and risks as *real* incidents as well as following behavioral reactions (including making rational and spontaneous decisions) are determined by the combination of specific cognitive and affective factors including *anticipatory emotions* [Baumgartner, Pieters, Bagozzi 2008]: «The worst disease here is not radiation sickness. The truth is that the fear of Chernobyl has done more damage than Chernobyl itself» [Specter 1996]. These judgments generate initially controversial forecasts, that serve as a basis to make managerial decisions including governmental programmes.

Disasters can be referred to social risk incidents; they are experienced by a large number of people and are generated by natural or technogenic factors (hurricanes, floods, earth-quakes, accidents, catastrophes, acts of terror). Unlike other incidents, disasters have serious physical, social, psychosocial, demographic, economic, and political consequences. Furthermore, disasters as logical and irremovable components of social processes unveil and record numerous vulnerabilities in institutional structures and social systems including social inequality: «The decision about what to call a disaster and how much relief provided depends on who is suffering» [Stromberg 2007: 200].

Risk forecasts occur suddenly, thus forcing actors to take unpopular and often ill-thought restrictive measures. They may also ruin collective behavioral patterns of daily routine to the degree of social and political destabilization.

Risks as potential incidents and disasters as realized risks obtain the status of significant social phenomena due to interested actors, who initiate their 'problematization' or are involved in this process in present sociocultural and political context: «Danger is real, but risk is socially constructed» [Slovic 1999: 689]. The framing of risks and disasters as social problems gradually shifts from public agenda into administrative one. The latter makes legal and managerial decisions taking public opinion into account. As risks/disasters is nothing else but a *wicked problem* [Rittel, Webber 1973], then the decisions would at its best be *satisficing* [Simon 1982]: «As the risk society develops, so does the antagonism between those *afflicted* by risks and those who *profit* from them…Thus new antagonisms grow up between those who *produce* risk definitions and those who consume them» [Beck,1992b: 46]. It's also important to mention: «There is no institution, neither concrete nor probably even conceivable, that would be prepared for the 'WIA', the 'worst imaginable accident', and there is no social order that could guarantee its social and political constitution in this worst possible case» [Beck 1992a: 101].

Ambivalence

The state of uncertainty, which is typical for any risk or disaster is followed by *hyperchoice* [Mick, Broniarczyk, Haidt 2004], *information pollution* [Wardle, Derakhshan 2018], *infodemic* [Koroleva et al 2010], when academic experts, moral entrepreneurs, bloggers, etc., produce *dread rumors* [Knapp 1944] in the context of popular *theories of conspiracy* [Douglas, Cichocka, Sutton 2017]. The growth of situation interpretations and variants of defensive behavior is confusing; thus, it generates large-scale *emotional ambivalence* [Weingardt 2000] as a single- or multi-step experiencing of at least two strong emotions with polar valence towards one and the same social phenomenon (subject, behavior, object, situation, issue). The state of total cognitive and emotional

ambivalence forces the subjects to *decision avoidance* [Anderson 2003: 7], *procrastination* [Akerlof 1991], and active *information avoidance* [Colman, Hagmann, Loewenstein 2017]. To reduce the *ambivalence* [Hanze 2001] in order to gain at least minimal confidence, the subjects implement one of the three known strategies.

Firstly, normative switching to sound and rational way of thinking and interpreting (System #1 in the model of a *dual process* [Haidt 2001; Kahneman 2011]). It is stated, that «… such effortful information seeking – objectivity, validity seeking, or message scrutiny – produces even more ambivalence» [Rudolph, Popp 2007].

Secondly, accepting available cues for granted and using heuristics (both cognitive and affective). As a matter of fact, it's a concession and a voluntary approval of somebody's choice.

Thirdly, *motivated reasoning* [Taber, Cann, Kucsova 2009] on the basis of selected (preconceived) search of information that complies with one of the 'poles' of ambivalence. It is pointed out, though, that sometimes people «have already made up their mind, even though they do not know it yet» [Galdi et al 2008: 1102].

Emotions that are experiences in the situation of uncertainty, may be divided into two classes. One – *anticipatory emotions* [Baumgartner, Pieters, Bagozzi 2008], experienced here and now, about upcoming events that cause either hope (if the event is desired), or fear (if the event is undesired). Two – 'anticipated emotions' as affective forecasts that are generated by the wish to experience the outcomes of the event that will take place in the future (*counterfactual thinking* [Roese 1997]). In plainer words, if anticipatory emotions are reactions *now* on the events (incidents) *later* (e.g. fear of future or the hope on the future), then anticipated emotions are estimated reactions on the events (incidents) *later* (e.g. expected joy or regret in the future). If fear as a negative emotion narrows the focus of attention, then hope vice versa, broadens it [Easterbrook 1959; Derryberry, Tucker 1994]. In the situation of risk/disaster hope and fear as anticipatory emotions are coupled and amplify large-scale ambivalence.

Discursive amplification of risks/disasters

As risks «are based on *causal interpretations*, and thus initially only exist in terms of the (scientific or anti-scientific) *knowledge* about them… can thus be changed, magnified, dramatized or minimized within knowledge, and to that extent they are particularly *open to social definition and construction*» [Beck, 1992b: 22-23]. Actions of this kind – *social amplification* [Kasperson et al 1988] – takes place in public discourse by powerful actors, who know that defining the risk is exercising power [Slovic 1999]. Consequently, relatively neutral events (as viewed by unengaged experts) turn into an object of concern and social (political) activity (*risk amplification*); while grave concerns and threats seem insignificant (*risk attenuation* [Kasperson et al 2003]).

Exceeding ambivalent emotional state up to a *collective stress situation* [Barton 1989] is the target of *fear-and-hope politics* [Boukala, Dimitrakopoulou 2016].

Opinion polls seem to confirm realizied social fears, but only because polls themselves are the mechanisms of *truth regime* (Foucalt), that is implemented by the actors with considerable *discursive power* [Jungherr, Posegga 2019]. The policy of intimidation and encouragement (Fear vs. Hope) suppresses *reactance* [Brehm, Brehm 1981) towards newly-practiced legal and non-legal restrictions for account of spinning the *spiral of silence* [Noelle-Neumann 1974] as one of *manufacturing consent* mechanisms [Herman, Chomsky 1988]: «The media may not be very influential in telling us what to think, but they do have the ability to influence our perceptions of what others think» [Tsfati 2003: 66].

Assuming the fact that real and imaginary things leave identical imprints in the memory (corresponding brain substrates have an approximate match of 66%) and virtualization of media blurs the border between mediated and unmediated perception, then in the course of time media-phenomena are revised as real events and become parts of life experience that affects prospective behaviour: « If men define situations as real, they are real in their consequences» [Thomas 1932:

572]. Moreover, media affect the subjects by visual content, media-person's emotional behavior, and encouraging empathy, which induces emotional feedback rather than rational.

As a result, allegedly objective and rational coverage of an incident tends to intimidate, or frighten, potential victims than dispose towards reasonable behavior: «It is, as Sen. John O. Pastore of Rhode Island is alleged to have said, easier to scare people than it is to unscare them» [Weinberg 1977: 55].

Media amplification [Smith, Fischbacher 2009], due to *ripple effect* [Williams 2002] causes vast, remote and intersectional consequences. *Hyping* the risk/disaster activates social memory about past disasters. The experience of passing through them is transmitted between individuals, groups and generations in the form of 'narratives of disasters [Webb, Wachtendorf, Eyre 2000].

It's estimated that, according to *impersonal impact hypothesis* [Tyler, Cook 1984], the subjects who have received information about a risk/disaster via news media, are prone to suppose that others are more likely to become victims, but not themselves. Moreover, discursive amplification of risks/disasters is bound by the law of diminishing marginal productivity: «If the government plays the fear card too much, it overloads the public's sensibilities, and eventually people discount almost entirely the government's attempts to frighten them further… Fear is a depreciating asset. Unless the foretold threat eventuates, the people come to doubt its substance or its predicted magnitude. The government must make up for the depreciation by investing in the maintenance, modernization, and replacement of its stock of fear capital» [Higgs 2005: 456-457].

The representation of risks and disasters in media sphere is likely to include standard parameters of their *social evaluation* [Pidgeon, Barnett 2013]: 1. collective or personal responsibility; 2 dissemination of costs and profits; 3. set of circumstances or malevolent intention; 4. unidentified or known source of danger; 5. natural or man-made source of danger; 6. concealed and irreversible consequences; 7. danger for next generations; 8. degree of affection on health, life and society; 9. the threat to higher social values; 10. definite or virtual victims; 11. absence of scientific knowledge; 12. controversial expert views; 13. social infrastructure level of preparedness.

Epidemic discourse

Emergency *risk communication* [Reynolds 2002] forms not only cognitive representation and affective reactions to each risk as a danger of inevitable damage, but also evokes *protection motivation* [Rogers 1975] to diminish social harm: «Risk communication frequently operates in emotionally-charged environments as fear, anxiety, distrust, anger, outrage, helplessness, and frustration are common reactions to the health risks associated with communicable diseases» [Infanti et al 2013: 2).

A very vivid and acute manifestation of discursive amplification are the cases of the so-called emerging infectious diseases (SARS, AIDS, cholera, H5N1, H1N1, Ebola, COVID-19), that are followed by a large-scale of *fear-mongering narrative* [Glassner 2004] in the media sphere. Some infectious diseases – Spanish influenza in 1918, HIV/AIDS in 1980-s, COVID-19 today – generate *moral panic* [Cohen 1972]. The memories of past epidemics when a new outbreak occurs amplify social fears and inspire the authorities to over- or underestimate the threat: H1N1 flu did not differ much from annual flu epidemics in morbidity and prevalence but was associated with SARS and thus urged the governments to apply excessive countermeasures.

In the end of December 2013 in Guinea an outbreak of Ebola fever took place, which later on spread on Sierra-Leone and Liberia. As a result, over 28000 were infected and more than 11000 died. Higher virulence and death rate alongside visually appalling symptoms skyrocketed this disease to the top of epidemics rate in media sphere: when a traveler from Liberia contaminated two nurses in the USA on September, 24th, 2014, mainstream media claimed the civilized world had faced a deadly threat.

Ebola's medical characteristics made it a perfect prototype of a *public fear* [Herrick 2019]: utterly painful and bloodstained symptoms (hemorrhagic fever), high death rate, weird origin,

uncertainty of emergence factors, and absence of clinically proven vaccine.

Ebola fever had captured public thoughts as no other epidemics due to the fact that tiny and remote outbreaks became striking stories in global media sphere and the name of the epidemics became common in Europe and USA: the disease that had never caused more than a few hundreds of deaths during previous outbreaks now became a global disaster in health-care (Lakoff 2017] and produced a term *fear-bola* [Robbins 2014].

Owning to journalists, Ebola gained *charismatic valence* [Lorimer 2007], having caused large-scale emotional reactions, that were well-used by governments, medical and pharmaceutical companies for allocating more resources and attention, despite the fact that other diseases affect more people and are more contagious and mortal [Leach, Hewlett 2010]. In additional, it was *the first time* to introduce symbolic potential of Ebola epidemics on the pretext of maintaining security and well-being in the society by politicians when imposing serious restrictions on the citizens' rights and freedoms.

Onwards, an attempt of a discursive amplification model of an epidemic in global media sphere, exemplified by a 2014-2015 Ebola outbreak, is going to be described.

Appeal to emotions

Core function of emotions, which are based on unconscious, conscious, biochemical, physiologic, affective, cognitive and behavioral processes, is the decoding of inner and outer stimuli: «Emotions automatically guide attention to particular cues and information, influence the organization of memory schemes, give differential weight to specific stored knowledge, activate relevant associative networks in memory, influence the order of cognitive processing priorities, provide interpretative frameworks to perceived situations and on this basis pull toward certain objects, situations, individuals, or groups, while abstaining from others» [Jarymowicz, Bar-Tal 2006: 369].

One and the same emotion can be experienced by a number of members of a social group, which possesses specific emotional culture that is formed under the influence of common knowledge, discourses, symbols, values, narratives, beliefs [Jarymowicz, Bar-Tal 2006].

If *emotional atmosphere* is expressed in one and the same emotional reaction on a certain event, then *emotional climate* is a stable *collective emotional orientation* [Bar-Tal 2001], which is experienced by the majority of a social group; is integrated into common beliefs system; is expressed in cultural artefacts; modulates public discourse; is appropriated though socialization, and – primarily – is used by influential actors and media-agents in strategic communications.

Massive inducing of emotional conditions takes place as a result of uncontrolled and/or intentional *emotional contagion* [Schoenewolf 1990] outside and inside (mainly) the media sphere due to affecting content that influences further interpretation of a problem situation and consequent behavior.

In an uncertain crisis situation dominating emotions are usually fear and hope that are simultaneously or successively evoked by 'the policy of intimidating' or 'the policy of encouragement'.

Fear appeal [Witte 1994] forms the idea of the threat scale and its personal value for a subject. The idea is also characterized by high probability of facing the threat, and the belief in the efficiency and realizability of suggested countermeasures: «Fear arousal is less important in motivating precautionary action than perceptions of action effectiveness and self-efficacy. Moreover, perceived personal relevance may be critical to the emotional and cognitive impact of threat information» [Ruiter, Abraham, Kok 2001: 613].

Hope appeal [Chadwick 2015] forms the idea of favourable evaluation of a logical result of suggested actions (i.e. countermeasures). The result in any form is considered to be accomplishable with personal goals and beliefs that seem to guarantee a better future: «If things are certain and in one's control, there is not much need to hope, but if one does not have control and there is great

uncertainty, hope becomes very relevant» [Huang, Souitaris, Barsade 2019].

Under equal conditions (perceived personal importance and self-efficiency) fear appeal suppresses oncoming hope appeal [Dalley, Buunk 2011].

Firstly, because of innate *negativity bias* [Rozin et al 1989] – frightening events affect memory deeply, while the brain demonstrates a stronger reaction to negative stimuli, rather than positive ones [Baumeister et al 2001: 336].

Secondly, hope has a more complicated structure: «Hope is less automatic and requires more complex processing as it is a higher-order, more deliberate emotion that depends on the ability to imagine a better future» [Jarymowicz, Bar-Tal 2006]. Hope is yet an unfulfilled dream that exists only in one's imagination, while fear poses a threat to the existing conditions. Respectively, «If hope can subdue the often irrational and spontaneous domination of fear, it must do so through reasoning and imagination» [Bar-Tal 2001: 605].

Thirdly, fear activates known behavioral patterns (which seem easy), while hope stimulates the introduction of new frames (which seems hard): «Fear focusses and narrows, hope opens and broadens the mind» [Coker 2016: 47].

Fourthly, fear is an evolutionary reaction that ensures surviving, and hope is a mere prospect for improving the state of conditions: «Because it is more difficult to reverse the consequences of an injurious or fatal assault than those of an opportunity unpursued, the process of natural selection may also have resulted in the propensity to react more strongly to negative than to positive stimuli. Thus, as determinants of behavior, fear and hope are asymmetrical» [Cacioppo, Gardner 1999: 205].

In the situation of uncertainty fear and hope intertwine and, as supposed, take turns in occurrence: «It may be said that hope and fear are the Clarke Kent and Superman of emotions inasmuch as although they wear very different outfits and they exhibit very different extreme polar personalities – there is evidence to suggest that they are in fact one and the same!» [Coker 2016: 51].

The dynamics of fear and hope interchange (at least on a large-scale) has been studied only at the example of competing political communication, but little is known about the construction of a 'fear – hope – fear' ambivalent epidemic discourse.

We suppose that the influence of ambivalent epidemic discourse on the receiver might be explained by the effect of *emotional seesaw* [Dolinski et al 2002]: the unpredicted change of dominating emotional impact valence from positive to negative and back weakens the reactive resistance of the recipient.

Empirical base and research findings

The sub-corpus of the empirical base (65.210.674 texts) was composed of *headlines* connected with the Ebola fever (Russian media 2014-2020). The following entity categories were found in the texts: personality, organization, locations and geographical landmarks.

Each headline was placed in a big text field, processed by algorithms, indexed, and as a result we got a frequency word list with their concordances. After that, throughout field analysis the classification of terms was performed, including named entities and list of word frequency from the indexed headlines.

Discursive amplification of risks and disasters is formed in public discourse by many actors and generates ambivalent narrative of disaster. The scale of given research was limited by empiric verification of the central hypothesis: low level of regional media-users' and media-agents' involvement into the representation of the event, that is perceived rather as a risk than a real disaster, produces impersonal sinuous discourse 'Fear – Hope – Fear'. In plainer words, those circumstances appear to be in the limelight, that either endanger people's lives (Fear) or give them some hope for survival (Hope).

The FEAR field includes subfields 'Fear', 'Panic', 'Death', 'Threat', fear-related medical terms (like 'hemorrhagic fever'), mythology (Apocalypse, Armageddon, Judgement Day, etc.), 'Mistrust'.

The HOPE field includes subfields ‘Vaccine’, ‘Medicine’, ‘Treatment’, ‘Recovery’, ‘Hope’, ‘Science’, ‘Miracle’, ‘Trust’, ‘False diagnosis’ (when some other disease had been taken for Ebola).

It is clearly seen from the bar chart that the media coverage of the pandemic and fighting the disease comes through a number of stages where fear gives way to hope and then the situation goes back into fear (Ambivalent emotional field of Ebola is aimed at evoking the interest towards the problem, because such fluctuations enable the problem to become a story. They create temporary bifurcation points, introduce actors and then withdraw them from information field, create heroes, use various formats of information presentation (e.g. the description of single cases or statistics overview). Emotional volatility as the difference between Fear and Hope, present in the media during one and the same time period, is visualized in Fig 1.

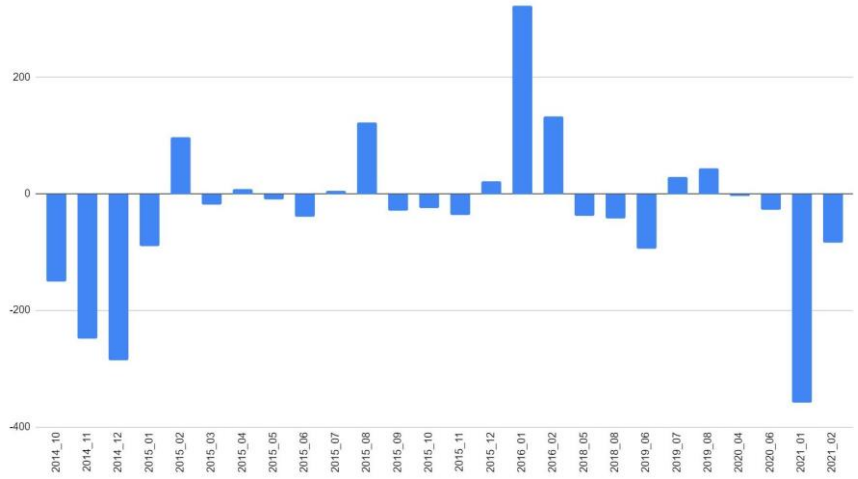

Fig. 1. The difference between the explication of fear and hope in publications.

Ebola in Russia, though it remained behind the borders of the country, from an unknown disease turned to a part of some cultural space, a precedent text, which seems convenient to convey the message of fear, panic and uncertain future to a general public. Ebola stayed behind other real problems, as proved by symbolic $20 million what were allocated by the government on fighting Ebola in September, 2015.

Summing up the findings allows to introduce a scheme of a *cyclic ambivalent discourse*, where it is also possible to monitor potential cognitive differentials alongside affective ones (Fig. 2).

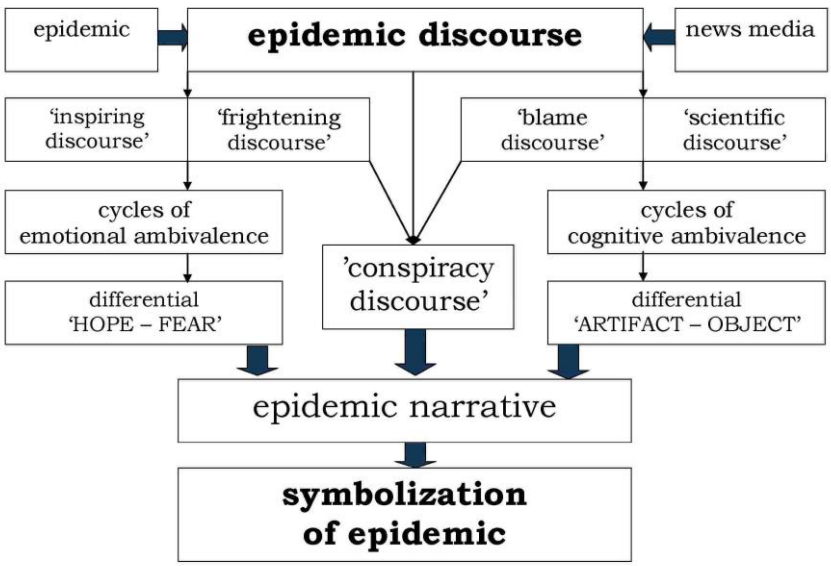

Fig. 2. Cyclic discursive amplification (CDA model).

Conclusions

Total mediatization of social reality has generated a relatively autonomous media reality with its own media phenomena including media events and media agents. As a result, common people navigate in social reality as media users who are submerged in media sphere. Thus, media phenomena, which are formed mainly by influential media agents rather than social interactions, are perceived by individuals as genuine social events, but not as artifacts of media culture.

At the surface semiotic level media events are formed from a multitude of event-linking media texts, but at the conceptual level they are autonomous clusters of concepts revolving around a topical core. Sporadic media events of the kind that arise in the public discourse, shape topical, problematic and causal configurations that may correspond to each other in various media narratives.

The patterns of affective and cognitive structuring in the media sphere are the areas of special interest, because these patterns are extended in time, connected with social problems, and implicate those media phenomena that are related to 'wicked problems'; the latter requiring not only the coordination of a wide range of actors, but also a propagandistic appeal to the general public.

Great duration and routine character of such a 'motivating discourse' (in particular during long-running epidemics) creates the risk of cognitive tiredness, lack of attention and growing apathy, and thus requires epistemic diversity from a narrative for cognitive and affective variety.

The given research shows that 'Ebola epidemic discourse' in the Russian-speaking Internet zone had produced a remarkable epidemic narrative. It's worth mentioning that this narrative was formed only due to media logic but not the requests of influential Russian actors, because the epidemic as a disaster didn't relate to Russia directly – neither common citizens, nor government agencies. Therefore, this narrative possesses three structural features. Firstly, discursive amplification as continuous 'exceeding' of emotional state and emotional reactions of the audience. Secondly, discursive ambivalence as retaining uncertainty and evoking interest to the course of events. Thirdly, discursive cyclicity as a recurrent change of affective ('fear-hope') and/or cognitive dominant ('Artifact-Object') that enhances the disposition to following countermeasures against a disaster.

It should be noted that in the given pilot study the media narrative of disaster is seen as a stochastic result of non-cohesive actions of the journalists, but not as a planned product of concerned political actors and media agents. In further studies the public discourse of COVID-19 is going to be investigated. A narrative paradigm that will take into account the role of definite actors, intersections of certain discursive areas, various affective, cognitive and probably moral cycles is going to be tackled.