

## COGNITIVE MODELS IN THE SOCIAL CONDITIONS OF THE SARS-COV-2 PANDEMIC AND THE GLOBAL CRISES.

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**Abstract:** The following article examines the cognitive models in the context of social conditions of the specifics of SARS-COV-2 Pandemic and the following global crisis. The main point of this research takes on the task to trace and reveal cognitive predispositions to the state of emotional instability which are caused by the pandemic problem itself and the related mass-media activity. Another component important to the study is to analyse logical interdependence between a set of pandemic protective measures that individual uses, the connection to their stress level associated with the pandemic, and their preferred sources of information which forms the combination of these factors.

**Keywords:** *cognitive models, pandemics, global crisis, stress levels, mass media activity.*

In the days of the height of the pandemic, its whole situation was obviously no longer just an issue of physical health and safety, and no longer just a psychophysical health issue as well. The problem has become much wider. So many researches are being conducted right now (and even more have been conducted) dedicated to the consequences and impact of SARS-CoV-2 illness on mental health of those who have personally suffered the disease. Most of them unanimously assert that SARS-CoV-2 has a direct impact on human brain state and cognitive functions, leading to cognitive deficits, which require a significant period of time to be recovered [2, 4, 5, 6].

Our research is also being conducted in the cognitive science field, but its object isn't related directly to the impact of SARS-CoV-2 as a physical disease on people's brain functions and cognitive activity. It concerns more general field of the total impact of SARS-CoV-2 as the global phenomenon on the way how people start to think and percept reality differently, how people tend to change or reinforce their mental habits during the times of the drastic changes in the external conditions of social and individual vital activities [7, 8].

Thus, we do not focus on the people who have suffered the disease physically, rather we study people's cognitive states during the pandemic independently on the fact whether they

have passed through the infection itself or have not (but this is a crucial parameter in our analysis and statistical procession). The key attribute of the people getting into the research is the fact they are affected with COVID-19 as a global life-restructuring event, and their life habits and attitudes to their daily practices were revised according to that. And certainly, we focus on people's psychological and cognitive restructurings that occurred due to the pandemic social circumstances [9,10].

In other words, we study the way how people started to think differently after the global spreading of SARS-CoV-2 and after the moment when governmental measures for stopping it were applied. And mainly the way how people react to this whole situation and new external conditions, including the mentioned governmental means and the new common lifestyle, related to it. Our research is paying the most attention to the markable psychological predispositions to one or another "reaction styles" (and points of view as well) to the COVID-19 issue [11].

These "reaction styles" include such things as the emotional and cognitive responses to the different types of forming the pandemic agenda by different mass-media, as inclination to trust or distrust mass-media in their ways to submit the "pandemic news" and to shape the social opinion on this issue. Some people have loyalty to such media with their approaches to inform people, some people are totally disloyal.

So, mentioned "reaction styles" subdivide into 2 main opposites, even polar extremes: we obviously have the category of people who were defined in the society and popularly called "COVID-dissidents" — people, who tend to neglect the COVID-19 safety means and distrust the official political position on it, who mostly do not use means of protection such as masks, gloves and liquids, who tend to consider the pandemic situation as an overrated or even a fake and its origin as an artificial conspired process. And we have the second category of people, popularly marked as "COVID-alarmists", who tend to emotionally hyperbolize the danger of the situation (either individual, or global, or both), to spread "panic attitude" to it. Who either try not to go out of home during lockdowns, to avoid contact with people and especially public places, or use the means of protection even in those moments when there is no need for them, trying to maniacally control its usage by surrounding people, alarming about the danger, and trusting the governmental sources of "pandemical information" as the most credible.

Let these 2 extremes be our opposite scale points, which measure 2 poles of "COVID attitude". Using our set of survey techniques, we are capable of placing any of the participating respondents to a point between these 2 points through digital counting of their survey responses. The hypothesis is that we can trace the influence of people's cognitive styles and habits, various

inclinations, which have been set before the pandemic started, on the way they reacted to the pandemic, and their point on our “media loyalty scale”.

One of our key hypotheses consists in the consideration that people who tend to the upper bound of our scale — so-called “COVID-alarmists”, extremely loyal to the media especially during the global crises — have a countable inclination to superstitious mindset and appropriate “cognitive model”. And for the purpose to measure it we use as the one of our diagnostic tools the survey dedicated to revealing superstition as a psychological parameter. It contains 23 questions, measurably detecting one’s superstition inclination based on observance of the folk signs. They hypothetically tend to trust official governmental data and discourse, sometimes even tend to publicly defend its reliability.

And for the people tending to the lower bound of the scale- called “COVID-dissidents” who are not complying with epidemiological safety measures dictated by the media — according to our hypothesis, have an inclination to believe in conspiracy theories. They frequently explain currently happening global pandemic processes by using conspiracy matrixes and narratives, and have a tendency to decline or ignore some (or all) pandemic “rules”, formed by the new “pandemic society”. Instead of official, often state pandemic agenda, they use as information sources various alternative discourses from the Internet: such as “politically independent” bloggers and underground media from various social-media and the web. To measure an inclination to believe in conspiracy theories, we apply the questionnaire allowing to count it with the 8 open questions about the certain popular conspiracy theories.

Thus, one of our key parameters for differentiating between “alarmists” and “dissidents” consists in the trust or loyalty criteria, which means the degree to which a person is inclined to accept the official pandemic position, how loyal they are to governmental instructions and preventative measures. This is considered especially in terms of emotional perception and definite emotional attitudes toward the problem that governments work to maintain in people’s minds through mass-media. If respondents don’t show suitable trust or loyalty extent for the official media, we study what sources do they incline to trust, and trace what psychological predispositions do they have for trusting this type of content.

For the diagnostic purposes we have prepared the set of the 4 surveys: first of them, the main for our object and the basic survey, is dedicated to the COVID issue itself and also another crises which is being affecting on people’s psychoemotional state through mass-media, such as the armed conflict between Russia and Ukraine started in winter 2022. It reveals one’s attitude to the problems, detects if they are inclined to trust the governmental mass-media, its data and

counting, their “official position”, or not, do they agree with proposed measures and do they follow it. This survey was developed by the author of the current research. The remaining 3 questionnaires are partly reworked materials from the psychological web-portals, modified by resequencing and removing unneeded (for the purposes of the current research) questions. 2 of them are dedicated to the main predispositions of our 2 measuring extremes – “COVID-alarmists”, which are hypothetically, as have already been mentioned, more inclined to superstitious beliefs, for which we have the already mentioned superstition questionnaire, and the “COVID-dissidents”, hypothetically having an inclination to believe in conspiracy theories, which we measure by applying the “Conspiracy thinking questionnaire” – popular conspiracy theories, collected from the Internet space for the purposes of the current research.

The 2<sup>nd</sup> questionnaire is the tool allowing us to trace a respondents’ inclination to the second main parameter of current research, cognitive distortions [3]. The cognitive distortions indicator is the median parameter between the superstition inclination and the conspiracy inclination, as a predisposition to follow one or another. It shows one’s basic mindset feature or tendency to distort information in general or the “pandemic data” itself in any of these two directions, it plays the role of basic predisposition to higher scores in the 3<sup>rd</sup> and the 4<sup>th</sup> surveys [1].

According to our hypothesis, people who show a critically low estimation of the COVID-measures necessity and the pandemic danger in the 1<sup>st</sup> questionnaire (“dissidents”) will probably show higher scores in the 3<sup>rd</sup> questionnaire, dedicated to conspiracy mindset. Such respondents tend to abstract from the pandemic situation on the background of propensity to generalize phenomenon, to give it all-encompassing hidden meaning, to fill in the blanks life-situations in a search for information, which can be a positive attribute in case they keep themselves in cold reason. This feature is being detected in the 2<sup>nd</sup> questionnaire, dedicated to cognitive distortions. The respondents, who show higher points of pandemic danger estimation will probably show higher points in the superstition (4<sup>th</sup>) questionnaire. Such respondents have a propensity to obsessive fears, destructive illusions, obsessive compulsions, quite similar to superstitious “rituals”. A man with such a mindset is vulnerable to information manipulations through, for example, mass-media impact, and tends to perceive the pandemic situation with high psychical tension, high emotional intensity, and excitability, instability.

But we surely do not claim that any and all of the people who highly estimate the danger from the pandemic, will also show high scores in our superstition questionnaire. A large amount of people surely trusts the official pandemic agenda or take their conclusions about the level of danger from the pandemic based on scientific materials, but their amount seems to be in

minority. Our hypothesis is that there might be interdependence between critically high ranks of pandemic danger estimation, which manifest in high levels of anxiety, in obsessive thoughts, in compulsive following the “rules of safety”, adopted as the preventive measures, and superstition thinking, which is also related to the anxious perception of many reality phenomena.

The object of our research is psychological attitude and cognitive processing of summed social and individual emotional factors of the SARS-CoV-2 pandemic, including estimation of its danger, psychological predispositions, and consequences that people experience of this whole situation. Also, it includes forming of an individual complex of protective measures (a lot of people use the means of protection selectively, some of them, for example, use only masks and antibacterial liquids, some people use only masks and gloves, some people use all mentioned), that people consider as necessary. It leads us to the next point of concern — the way of correlation between the scientific data about the pandemic and people’s own views, based on their own conclusions, which often are not based on scientific data on the topic.

Thus, we pay attention to a certain gap, emerging between the scientific information about the pandemic problem, existing and locating in open access, and individual psychological and cognitive perception of it, individual attitude, that deforms it and give a person an independent view on the problem. For instance, a lot of people suppose that for not being infected they need to use masks and gloves and other measures even if they don’t have any direct contact with public surfaces and with any people – it just gives them a sense of security (as a comparison, they use it in a similar way as people use talismans — in a comparable way), they anyway use it by each going out of home independently of the fact, if they are going to get closer than 2 meters from any other person or not. They are pretty sure that masks and gloves allow them to move around the streets more safely, even though scientifically there is no unambiguous proof that masks are truly able to really prevent the virus from getting in our respiratory tracts.

A lot of people tend to ignore or simply do not use scientific sources on the pandemic topic and base their perception and actions only on the «public consciousness», which forms a certain attitude towards the problem, based on the mass-media position, which tends to spread emotionally aggravated perception of the pandemic, which are primarily interested in maintaining emotional tension and alertness in people. It often leads to psychical consequences for the people who are most loyal to the official mass-media position and impact [12].

The current research takes on the task to trace and reveal cognitive predispositions to the state of emotional instability, caused by the pandemic problem itself and the related mass-media activity. Also, our task is to analyze logical interdependence between a set of pandemic protective measures that individual uses, their stress level associated with the pandemic, and their preferred sources of information, which form the combination of these factors.

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