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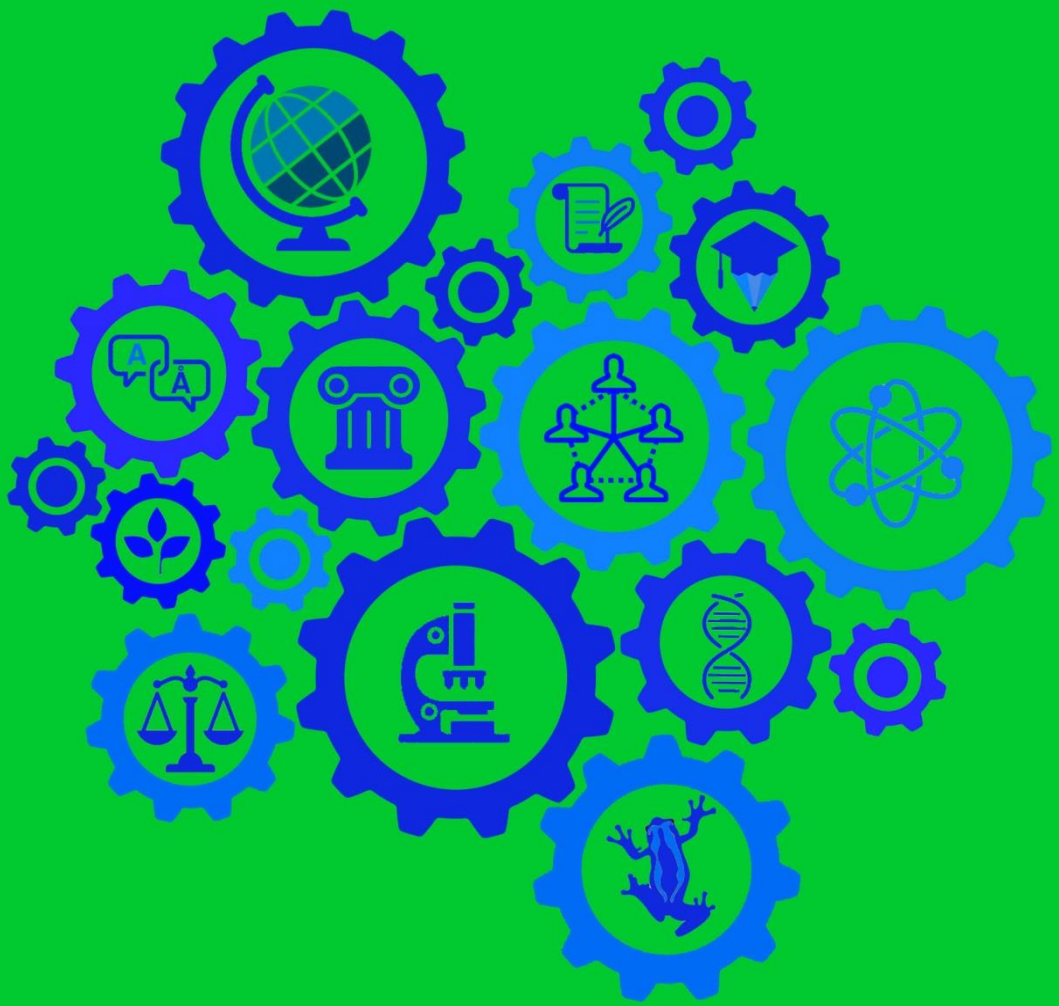

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Thematics journals PVT. LTD.
Address: A-9, Local Shopping Complex, B-Block, Naraina Vihar, Ring Road, New Delhi - 110027
Tel: +91-11-45055556, 45055533, 45055537
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Increased risk of "Z" generation representatives' involvement in destructive religious organizations

(Based on the cognitive functions decrease)

Ayrapetova A.G.
Doctor of Psychological Sciences

Abstract: The article observes the impact of modern information and communication technologies on the cognitive status of generation "Z" representatives. The role of multitasking and information overload on the perception, attention, memory and thinking parameters reduction is demonstrated. The relationship between reduced cognitive status and the possibility of involvement in destructive religious organizations is shown.

Keywords: "Z" generation, IT environment, information and communication technologies, cognitive status, information overload, multitasking, "second screening", virtualization of consciousness, collective unconscious, cultural archetypes, destructive religious organizations, "multiplication of selves", destructive religious indoctrination.

Every generation has its own outlook on life, peculiarities of perception and thinking. The term "Z" generation appeared thanks to the theory of generations by William Strauss and Neil Howe at the end of the 20th century. "Z" generation is young people who grew up in the era of digital technologies and social changes. "Z" is the first generation born in a world where any physical object (people and places) has a digital equivalent. These are young people who do not remember their lives without smartphones, social networks, web-resources, messengers and Internet. They are considered dependent on the IT environment and unable to focus.

Information and communication technologies play a significant role in modern education, which is already difficult to imagine without the latest multimedia interactive computer programs and electronic media as a way of reproducing audiovisual information. Internet is actively used in the process of preparing homework, writing articles, essays, reports and scientific papers.

At the same time, there is a downside. Along with terabytes of useful information and the opportunity to significantly improve general educational and cultural level, too active use of information and communication technologies can lead to cyber addiction, deterioration of physical and mental health, negative changes in social status and involvement in various destructive religious organizations.

The first alarming symptom of the negative influence of the cyber environment is information overload. The most obvious reasons for this are:

- uncertainty, ambiguity, complexity of information;
- novelty and ambiguity of cognitive tasks requiring the involvement of information, for the search and recognition of which additional time and intellectual resources are used;

- information redundancy - a huge gap that exists between the growing flow of information and the organism's ability to perceive and process it;
- absence or insufficiency of special skills and experience in navigating the network, sufficient media competence, and pronounced cognitive motivation [1].

Information overload occurs as a result of multitasking - the desire to perform several tasks at the same time. Representatives of "Z" generation have to cope with a huge amount of information. By solving several tasks at the same time, young people think that they can do much more - for example, they do not consider it necessary to tear themselves away from the screen of their computer, smartphone or tablet while watching TV. This phenomenon is known as "second screening".

However, using a TV screen, computer monitor or smartphone screen at the same time can change the structure of the brain. The fact that multitasking has a direct impact on brain activity is shown by a study from the University of Sussex, which found that people who often use several multimedia devices at the same time have a lower density of gray matter in the anterior part of the cerebral cortex compared to those who use only one device at a time. It is this area of the brain that is responsible for cognitive control.

75 volunteers took part in this study. The experiment involved checking the brain with an MRI, and then asking respondents how often they use mobile devices, TVs, computers, tablets, and other gadgets. In the report the scientists indicated that the simultaneous use of various electronic devices can cause depression, emotional disorders, problems with attention, perception, and memory.

Similar studies were also conducted at Stanford University, which found that those who are used to concentrating on several tasks at once remember information worse, have difficulty organizing their thoughts, and are unable to filter out unnecessary information. Stanford scientists also found out using MRI that the human brain has enough resources to do two things at once, but if you add a third task, the speed of information processing drops, and the number of errors increases significantly.

The experiment "Infomania" by psychologist Glenn Wilson from the Institute of Psychiatry at the University of London had a great resonance. It showed that representatives of "Z" generation who try to perform intellectual work in multitasking mode experience a noticeable drop in IQ scores up to 10 points.

It should be noted that for the full implementation of the cognitive process, a combination of perception, attention, memory, thinking and speech is involved.

The Internet sets new standards for the perception of information: it is necessary to quickly concentrate perception in a fairly large range of the information field. Users do not have to read the text of the site, but "scan" it: "pick out" individual facts, read disparate pieces of data, try to assess the potential importance of information, constantly switch to hyperlinks and related materials.

One of the first to write about this in 1997 was Jakob Nielsen, an expert in usability, Head of the research organization "Nielsen Norman Group" [2]. Analyzing the eye movements of Internet users, J. Nielsen found out that web pages are viewed in the shape of the Latin letter F: after a horizontal movement along the top of the

content, another horizontal movement follows and a vertical shift from the top to the bottom edge.

Journalist Nicholas Carr published an article, “Is Google making us stupid?”, in which he admitted that he had begun to experience difficulty during reading books and long texts [3]. After interviewing his colleagues, N. Carr found that many of them were experiencing the same problems. In his subsequent publications, N. Carr continued to develop the topic of the negative impact of the Internet on perception and eventually released the book “The Shallows: What the Internet Is Doing to Our Brains” (for which, by the way, he received the Pulitzer Prize). The book cited research data indicating the vulnerability of Internet users to distractions, a decrease in the depth of understanding of information and concentration [4].

Another parameter involved in the cognitive process and subject to the negative influence of the information environment is attention. According to the study, which was conducted by the Canadian division of Microsoft, a number of interesting patterns were identified. The study used data obtained in various ways (including recording brain activity using EEG methods) from a sample of 2,000 Canadians. The study used a model for assessing attention divided into three main categories:

- stable attention, responsible for long-term focus on repetitive actions;
- selective attention, allowing to avoid distractions (information filtering);
- switching attention, responsible for effective switching between tasks requiring the use of different types of perception [5].

Each of these subtypes was studied separately. According to the results of the studies concerning sustained attention, it turned out that respondents had problems with concentration, which in turn had a significant impact on work (study). This was especially pronounced in people who often and extensively use various modern information technologies in everyday life. Thus, 44% of respondents admitted that they have to make significant efforts to concentrate on their tasks.

Research by Japanese and English psychotherapists on the impact of the Internet on memory among patients aged 16 to 35 years showed that representatives of “Z” generation brought up on all kinds of devices with external memory, lose the ability to memorize new things, recall old things, and also to select the necessary information from a huge amount of information.

According to doctors, such degradation of the “computer generation” is associated with the spread of various organizers and similar servers on the Internet, where absolutely all information can be entered. Representatives of “Z” generation are losing the habit of training their own memory, because “external memory” is always at hand. In addition, due to the virtually unlimited memory capacity of these devices, the ability to adequately assess what information is really necessary and what can be done without is lost.

Another side of the problem is the fact that with the constant use of ready-made models, in a wide range provided by the global network, the ability to create own visual images or ideas is reduced, and in some cases atrophies. This mainly happens because the human psyche follows the path of least resistance, guided by the principle of “why waste your own resources when you can use a ready-made template”.

Frequent and active use of electronic resources causes irreversible changes in another component of cognitive status - thinking. The main threat of the negative impact of the IT environment on thought processes is a change in the perception of reality. The danger is that people receive a lot of impressions from various websites, social networks, blogs, etc. Perception of such volumes of information in a very short time can completely change the course of a person's thinking and make changes to the structure of the human brain. The essence of these changes is that a person stops deeply and critically analyzing situations, simply memorizing the necessary information. On the one hand, this allows one to perceive and remember huge amounts of data, but on the other hand, the ability to experience emotions from what one sees or hears is lost. Difficulties also arise when analyzing events in the real world, in the processes of abstract and creative thinking.

The virtualization of consciousness provokes profound personality changes, including the syndrome of "multiplication of selves", thereby increasing the number of mental illnesses such as schizophrenia and autism [6].

No less alarming is the picture in relation to speech skills. Representatives of "Z" generation have a decrease in language literacy and an increase in the inability to correctly compose a text of any length: from a simple message to a scientific paper. In the communication sphere in the real (not virtual) world, there is also a growing trend indicating that in the process of communication representatives of "Z" generation face problems in forming and maintaining social contacts. The reason for this is the new standards of social and normative relations and online communications of network users. The Internet, which has a specific technological language, dictates social standards, norms, values, role positions, the regulations of which are determined by the rules of specific virtual network communities.

Many representatives of "Z" generation actively communicate with each other online, but when they have to do it offline in public, they experience serious difficulties, and their speech noticeably deteriorates - it becomes slurred, difficult to distinguish, thoughts are poorly expressed in words, there is no connection between sentences, filler words appear ("m-m", "um", "actually", "so", "well", "basically", "just", "really" etc.), as markers of language deficiency. All this makes it difficult to understand the interlocutor, and sometimes irritates others [7].

Analysis of the information presented in this article leads to highlighting the problem of youth involvement in destructive religious organizations.

How is this problem related to a decrease in cognitive status?

There is no doubt that representatives of "Z" generation in a state of information overload, with a lack of practical experience, maladapted in the flow of multidirectional information, dependent on the cyber environment, have difficulty navigating the real world.

As a result of constant multitasking with overactive use of information and communication devices, the parameters of perception, attention, and memory are reduced. Logic also suffers - those standards of good and evil in their pure form that representatives of "Z" generation are accustomed to seeing in computer games "do not work" in real reality. In the surrounding reality, everything is much more complicated - it is not always possible to draw a clear line: here are "ours", and there

are “strangers”. Logical thinking, accustomed to dividing the world into “black” and “white”, does not cope with situations present in real life. As a result, problems with studies begin, which further provokes problems with parents. A paradox arises: the more conflicts with parents, the greater the desire to escape from parental care, to find own “comfort zone”. The first thing recruiters use is empathy and “love bombardment”. Against the background of frequent conflicts with parents, “understanding” and “support” of the involved person is the most sought-after aspect. The social instinct is also actively exploited - a person strives to be among people, to communicate, to love and receive love, to care and accept care, to subordinate and to obey.

In addition, all destructive religious organizations have simple logic - there is a clear division into friends and enemies, “ours” and “others”, which is very familiar to representatives of “Z” generation who encounter a similar aspect in the virtual space. And, finally, there is no need to process multidirectional information, to find answers to complex questions in a large information flow. Everything that a destructive religious organization puts into consciousness is clearly structured, extremely distinctly and reflects knowledge in only one direction.

Influencing the psyche, in the process of destructive religious indoctrination, archetypes of the collective unconscious are used. These are universal stimuluses that trigger an unconscious response, associations, urges to action and determine the value choice [8]. In particular, recruiters often use cultural archetypes familiar and close to representatives of “Z” generation from the virtual environment: images of ancient mythology, mentioning various deities and heroes. The image of the “beyond” and traditional storylines are widely used: the confrontation between Good and Evil, saving the world (humanity), initiation into the secrets of the past and the future. Such archetypes can be found in any dialogue that accompanies involvement in destructive religious organizations. Taking advantage of gaps in knowledge, which again arose on the basis of reduced cognitive status in the practice of destructive religious organizations scientific terms are also used for greater persuasiveness. Recruiters skillfully manipulate such concepts as extraterrestrial civilizations, waves, fields, rays, genes, etc.

Scientists emphasize that a reduced cognitive status and, as a result, an insufficient educational level do not allow modern young people to understand that in the real world everything happens differently than in the proposed storylines, and insufficient religious literacy in the field of the confessional direction of faith provides an opportunity to form any image and model of behavior.

Thus, it can be summarized that the relationship between a decrease in cognitive status and the increased risk of “Z” generation representatives’ involvement in destructive religious organizations is obvious. In conclusion, we would like to note that despite the attachment to gadgets literally from birth, the brain of representatives of “Z” generation does not always keep up with the development of technology - it is forced to withstand an ever-increasing information load, which entails physiological changes and affects cognitive processes, work efficiency and much more.

In this regard, it is important to understand that in modern conditions it is impossible to isolate representatives of “Z” generation either from modern

technologies or from the risk of being involved in destructive religious organizations. However, it is possible to think through and implement into practice various measures aimed at regulating the use of modern technologies in order to avoid a decrease in cognitive status.

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