Digital Dementia

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Abstract: The development of communication technology, especially mobile technology, which has become almost indispensable, leads in some situations to negative effects on users' cognitive abilities, effects named "digital dementia". The diagnosis of digital dementia has been said to bring together a series of symptoms similar to those of Alzheimer's in the case of intensive use of mobile phones and the habit of performing several digital activities simultaneously at the same time.

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1. Introduction

The development of communication technology, especially mobile technology, which has become almost indispensable, leads in some situations to negative effects on users' cognitive abilities, effects named "digital dementia" (Hideya et al., 2018).

Studies conducted by Hideya Yamamoto and collaborators on 1,000 participants confirm the existence of cognitive dysfunctions, the results showing that the age at which individuals begin to use mobile terminals, and the intensity of their use, are factors for a potential cognitive decline (Hideya et al., 2018). Other studies draw attention to the relationship between the use of communication technology and the simultaneous performance of multiple tasks (multitasking) - an aspect that can lead to declining attention and memory (Brandon et al., 2015; Hideya et al., 2018).

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Other studies cited by Hideya Yamamoto and collaborators (Hideya et al., 2018) dispute the existence of a causal relationship between the multitasking use of multimedia technology and the decline of cognitive skills. The conclusion of the study by Hideya Yamamoto and his collaborators (Hideya et al., 2018) is particularly worrying, namely that the state of digital dementia will be a common state of consciousness due to the number of people who will be affected due to excessive use of mobile technology (Arakelyan, 2019).

2. The meaning of the term digital dementia

The term digital dementia was introduced by Manfred Spitzer (2020), a researcher in the field of neuroscience, to describe the phenomena of destructuring cognitive abilities resulting from excessive use of digital technology (Spitzer, 2020).

According to Hayk S. Arakelyan (Arakelyan, 2019), the term dementia refers to a broad category of brain disorders, which cause long-term and usually gradual decline in cognitive abilities - especially thinking and memory - that can go as far as to the irreversible impairment of the person's mental functioning and even to their inability to perform current tasks, completely losing their autonomy. Other symptoms of dementia include emotional problems, language difficulties, decreased motivation, loss of spatial orientation and the ability to solve problems. The most common

form of dementia is Alzheimer's disease, along with it we can ennumerate vascular dementia, Lewy body dementia, frontotemporal dementia (Pick's disease). (Spitzer, 2020).

Digital dementia is described by Malfred Spitzer (2020) as a process that affects short-term memory, with synaptic pathways beginning to deteriorate, being less and less stimulated due to excessive use of technology (Arakelyan, 2019). Moreover, it is appreciated that research is needed on the possibility that a screen-dependent lifestyle (TV, telephone, monitor, tablet) may induce pathological conditions similar to dementia. As an example, the author states a possible causal relationship between the abuse of video games and the possibility of mental dysfunction that includes dementia. The described experiment targets the ability to orient and how it is affected - in people who are addicted to video games - including changes in cortical areas that respond to stimuli when the need for spatial orientation is involved. Spatial orientation is thus affected, neural pathways are altered and the brain response is different in people who do not use video games than those who use them, when they are forced to orient themselves in a virtual or real maze.

Malfred Spitzer shows that the impairment of memory but also of other higher cognitive processes, such as thinking, is due to the emergence of new habits - such as those to search Google for any information, giving up both other sources of information and the construction of one's own critical reaction to the information obtained, which affects critical thinking. The habit of always finding information in the digital environment affects the memory, which is underused, the individual relying on various information storage devices - phone, computer, internet. This is true both for the common information - friends' birthdays, phone numbers, etc. - which are no longer stored within one's personal memory, but stored in external sources. The same is true for detailed information on science, technology, art, culture, which are no longer filtered through learning processes, but updated from external databases. Malfred Spitzer also draws attention to the risks of replacing interpersonal contact between individuals with the virtual one - a phenomenon that we have studied and named "virtualization of social space" (Sandu, 2003, 2020).

According to Malfred Spitzer (2020), digital dementia mainly affects children and adolescents - especially those in the generation of digital natives - but it is very likely that other age groups will be affected in the future, depending on the degree of use of digital communication technology.

3. Views on the volume "Digital Dementia" by Malfred Spitzer in the context of the pandemic

During a televised intervention with the show 100% Guaranteed on TVR 1 ("Stop Virtual Autism", 2018), Malfred Spitzer stated that "The mobile phone can lower the IQ by simply being present. No study shows that using computers in schools is a good thing. On the contrary! The more teenagers use the smartphone, the less empathy they have for parents and friends. The smartphone is one of the most dangerous killers in history". These statements are generally about the risks of overuse of technology, including in order to replace mental processes with artificial surrogates. The statements were made in February 2020, before the declaration of the state of emergency, but they went viral especially in the context that in the last year we are talking about an accelerated virtualization of social interactions, including educational ones.

Malfred Spitzer believes that "Digital media is detrimental to education, and the level of education depends on the extent to which dementia will affect you, in the medical sense of the term, that of declining mental capacity as we age" (Georgescu, 2020). The experience of digitizing educational activities during 2020 affected the entire school population, regardless of age, when for reasons of public health schools had to close and the entire educational activity moved online. Teachers and students alike complained in the media or on social networks about the difficulty of online learning, and the "little circle phenomenon" has grown, bringing with it an increase in reluctance to cognitive activities related to the act of simply participating in online courses. The name "little circle phenomenon" was introduced by the undersigned in an online meeting with students, in which they refused to be visible on the video camera during the online courses, being present only in the form of an avatar that appears as a circle with a letter in the middle or as an account holder photo - in the Google meet app. The presence of an avatar does not ensure a real physical presence of the virtual student in online courses, but even if he is behind the screen, the student's attention is greatly diminished by the multitasking nature of the activity. In addition to the partial reception of the course, the student is often involved in other activities, such as social networking, instant messaging, talking on the phone, or even activities that allow a vague reception of the course during adjacent physical activities in the room or home, where the digital student is physically situated.

4. Digital dementia and the virtualization of social space

By the virtualization the social space we understand a series of phenomena related to the gradual transition to the virtual environment of activities that leave the specifics of social action, borrowing some of the virtually mediated communicative action (Habermas, 2000).

We have presented in detail in a series of articles a series of features of this process of virtualization of social space, including the relocation of communicative action and virtual ubiquity (Sandu & Vlad, 2018; Sandu, 2015). Especially this last phenomenon, of virtual ubiquity, places the communicative interaction in an extended, non-topological space, which brings with it an artificial transcendence of the human condition, traditionally linked to contact with the Other - in the sense of a physical closeness and not only an existential one.

The emergence of an extended space, in the noetic dimension (Sandu, 2021), raises, from a psychological, but also anthropological point of view, the need to reinterpret concepts such as normality, but even fundamental concepts - such as human nature or human condition, as long as corporeality loses its defining properties over what humanity means.

Digital dementia can be an epiphenomenon of the virtualization of social space, which occurs as a result of cognitive maladaptation to the extended noetic space.

5. Conclusions

Digital dementia is, if it will prove through further research, a real neurological phenomenon, a psychological condition based on the frequent and long-term use of digital communication technologies.

The literature presents studies for and against the existence of this phenomenon, however a study on a significant group of 1,000 people seems to highlight a series of cognitive impairment phenomena, similar in terms of symptoms with classic dementia.

Malfred Spitzer blames these phenomena on the underutilization of the brain, but this causality is not yet fully proven, being speculated even in conspiracy theories that criticize the technologization of the educational activity.

Without a neurological basis, we formulate the opinion that digital dementia can be, at least partially, explained by correlation with the virtualization of social space and a number of related phenomena, such as the relocation of interactions and their depersonalization.

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