

Virtual universes: the various impacts of conspicuous alternative realities

The various impacts of conspicuous alternative realities

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ABSTRACT

The so-called post-postmodern cyber era is spectacularly looming upon users of versatile digital communication platforms and omnipresent virtual reality dimensions. The ‘brave new times’ have also resulted in the rising importance of various computerized applications aiming for spreading mass persuasion, disinformation, propaganda, and fake news, primarily targeting users belonging to two distinguished age groups: teenagers, young adult and senior citizens. The pandemic and the war in East Europe have also demonstrated the enormous power and influence of informational warfare and cyber security operations, which may threaten even the normal operation of democratic societies and jeopardize the right of millions for reliable and authentic information resources and knowledge. The article presents a designated educational module on media literacy with the objective to prepare both students and educators for the various challenges of the cyber era. The paper also highlights upon the most ardent threats, various challenges posed by social media sites and all the new phenomena endemic of these virtual reality platforms.

CCS CONCEPTS

• knowledge representation computer science

KEYWORDS

Media literacy, News awareness, Digital technologies, Cyber security

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1 Introduction

This paper aims to highlight upon the theoretical background and the various challenges, best practices of a highly sophisticated and important topic, namely sharing awareness raising techniques on media and news literacy and facilitating rudimentary cyber security measures to be implemented by students, educators and

common end-users alike. This endeavor is particularly relevant and significant, in the light of the devastating events taking place in the war in Ukraine.

It is a commonly shared wisdom and durable experience drawn from our common 20th century European history that in times of military conflicts, political turmoil, or extraordinary events, such as a pandemic, the amount of fake news, disinformation, misinformation, hoax stories and misleading propaganda materials along with all sorts of new types of criminal activities tend to soar and prevail in an unprecedented manner and amount.

As one may expect, sad but true, most of the common users of new technologies, including decision-makers are not generally prepared for the unprecedented challenges posed by the flow of incomprehensible amount of digital information and the power of online communication and media platforms in the 21st century. The informational toolkits and useful methodological techniques are mostly missing from the national curricula and syllabus of most countries for various reasons, though many zealous educators tend to come together, merge their skills, expertise and experiences to tackle this problem all over the world.

They came to the revelation and bitter conclusion that despite the powerful counter-trends waging a seemingly windmill fight against the antihuman dark segment of the post-postmodern world [1] still proves to be one of the ultimate splendid pedagogic objective to accomplish. This rather Orwellian Huxleyan medley of ‘brave new world’ and the unfolding new paradigm of cyber era are dominated by cutting edge technological innovations, such as smart devices and featured by virtual communication platforms and digital applications, which pose versatile challenges and threats for the unprepared users.

2 DIGITAL GLOBALISATION AND ITS CHALLENGES

The Washington DC based Spy Museum share its famous motto at the main entrance hall: “Trust nobody, question everything” that might as well be a suitable slogan of our over-communicated and under-grasped world. In the tormented present era, when Europe faces the most devastating large scale regional conventional war in Ukraine, we can state that there are few more important and influential factors than the reliable, objective, factual information

resources and descriptions about the ongoing bloody conflict in our neighborhood. With the quick rise of global digital culture and internet-based communication platforms since the mid-1990s, information has become a power tool and a weapon, as well. Informational operations within the context of strategic information warfare along with its cyber counterparts have also become the fourth and fifth new military domains [2] in the 21st century.

The much quoted virtual dimension or cyber sphere tends to be the actual living condition and almost primary sense of reality for about half of the world's population [3], though all the same the other half of the world still faces daily problems of getting fresh water, enough nutrition and electricity not to mention computers and smart devices to communicate and learn.

The various cyber threats prevailing in the new informational dimension can also be labelled with the growing importance and prevalence of malicious side-effects and new phenomena, such as fake news, extreme political demagoguery, socio-psychological influencers, disinformation, echo chambers, cognitive bias and paradoxically the more information resulting in less informed and more disoriented people. The rise of artificial intelligence with the dawn of robotic chat networks, news editing algorithms and computerized content creation altogether turn the unfolding digital universe even less humanistic and, basically more antisocial in a self-generating and seemingly unstoppable manner. These new technological trends affect not only common users' attitudes and lifestyles but even reshape the frameworks and political dimensions of international relations in the 21st century [4].

Many philosophers and futurologists tend to claim that the means (technology) has become the ultimate goal (more technology) [5] leading towards an unprecedented new futuristic dimension of prevailing general artificial intelligence and human-machine interfaces, which will certainly dominate and alter even the course of human history as wittily predicted by John von Neumann or Ray Kurzweil decades ago [6].

3 THE REALM OF EDUCATION

The article tends to present the various experiences, feed-backs and reviews gathered through years-long educational projects concerning media and news literacy, internet security issues and best practices carried out and experienced in institutions of secondary and tertiary education in the Central East European region.

To provide a general outline and overview of the conditions prevailing among adolescence and young adults, especially in Hungary, several studies and specific surveys have been conducted both by academics as well as by common educators in the field. These studies share some common points, which may as well be relevant for other young people in the countries of the Visegrád Four region and in South East Europe, too. Namely, the results and conclusions of the rather comprehensive surveys and study book compiled by sociologist scholars András B r -Nagy and Andrea Szab  [7] claim that young people aged between 15 and 29 years are predominantly determined and affected by their peers, social media-driven influencers living, learning and having fun within the dimensions of their convenient information bubbles or notoriously

powerful echo chambers determined by virtual 'talking head top influencers'. Even the political affiliations (mostly Right or Left without clear-cut political philosophical refinements) tend to be affected and elaborated by these information clusters also providing examples of self-declared virtual prophets and experts of Dunning-Kruger effect's [8] manifestation of cognitive bias.

These latter factors prove to be significantly relevant and influential elements upon the life conducts and habits of the mind of both teenagers and young adults, since even their social, political and cultural attitudes, optimistic or pessimistic outlook concerning their personal objectives and nationwide future prospects are predominantly shaped by their online activities and the impacts, inputs received from various media platforms.

The personal experiences of the author of this paper also supported by minor scale survey conducted among few hundred Hungarian, American and Czech students tend to justify the presumptions that students belonging to the Western civilization, in broad context, tend to share similar or identical attitudes, internet usage patterns and media literacy skills irrespective of their nationalities or affiliations. Some sort of na vet  and sound skepticism are also common features of young users from Hungary to the United States, supplemented by the lack of applying rudimentary security measures on their smart devices and superficial naive trust laid in their internet service providers for protecting them from malicious intruders. Most of the students involved in the surveys or in the projects mentioned above, have received some preliminary educational modules and training sessions on safe internet usage and possible cyber threats. However, in terms of the versatile and multilevel hazards and challenges they might encounter or may have to cope with in the cyber space or on their favorite digital platforms, they prove to be rather unprepared, vulnerable as well as unskilled. The distinguished target group of multimedia video sharing and chatting platforms, featured by the unfiltered controversial contents flooded upon the users, happen to be the adolescents or young users primarily aged under 25 years. The other much targeted and highly vulnerable age group significantly exposed to disinformation, fake news contents and various conspiracy theories are meant to be the senior citizens [9].

The methods applied through the media literacy project, and in the related paper presented here involve content analytic methodology supplemented with online as well as personal questionnaire-based surveys which had been carried out among students and educators alike from three Central European countries, including Hungary, Czech Republic, and Serbia. The findings were compared with the results of similar though much larger and extensive researches from the United States and some member states of the European Union, like the one elaborated by B r -Nagy and Szab , mentioned above.

These preferred target groups are eager to fall into the trap of sophisticated mis- and disinformation campaigns, deep faking footages not hanging the proper background knowledge and technological expertise. Despite the commonly held topology and misconception of generations of digital immigrants (generations X, Y,) versus digital natives (millennials, generation alpha) coined

by an American web-geek Marc Prensky [10] in 2001, these categories fall short of depicting the complex reality, vulnerability and attitude of young and senior people, nowadays in this matter. Namely, provided that one learns and thoroughly prepares for tackling with the new technology-driven challenges and brand new cyber paradigms surrounding the end-users, ultimately no one can really navigate safely on his/her own among the clusters of information and grasp the true authentic message of all the digital content. To put it into context, the daily amount of digital information generated by more than 4 billion internet users is around 44 zettabytes [11], which is about four times the amount of digitalized volume of the biggest library in the world, the Washington D.C.-based American Library of Congress with more than 45 million separate book volumes. It may not come as a surprise that common users seem to be losing ground against the exponentially growing flood of digital information and much less and less are inclined and bound by the classic paper-based Gutenberg galaxy of printed knowledge content.

In other words, nowadays students around the world are inclined to be left alone with facing the data generator platforms and infinite flow of information on unprecedented scales and manners. They are also advised to obtain the fundamental background knowledge and develop the necessary skills to be able to navigate and find the answers for their queries in this new chaotic, virtual paradigm. As many surveys convey youngsters stand on their own without proper guidance and solid intellectual fundamentals to find their way around in the digital maze of online scams, hoaxes and fake news [12]. Furthermore, their primary helpers and alternative gatekeepers of knowledge and information resources have become their own peers, friends and social media influencers list which is followed by their teachers and parents with tertiary importance.

Without the prerequisite set of skills and knowledge toolkit, based on critical and creative thinking and analytic problem solution skills, the aforementioned young or aging people of the cyber era are and will be utterly unable to differentiate between authentic, real information resources, and great variety of hoaxes, distorted or fully fake news, mass manipulation, disinformation and even extremist warmongering hate speech. The dramatic American events around the siege of Capitolium on January 6, 2021, with the addlepat QAnon [13] cult believer mob demonstrated the disruptive power of disinformation, online conspiracy theories. Moreover, suffice it to mention the conspicuous phenomena of fake theories related to the devastating Covid-19 pandemic as well as the various propaganda and information warfare campaigns witnessed at the virtual battlefields of the Ukrainian war.

The lack of so-called gatekeepers of knowledge, such as medieval scholarly monks, teachers, academics, who used to be functioning as the ultimate sources of reliable information on the world and authorities of knowledge for centuries have basically vanished, or were pushed to their limits of oblivion in the postmodern open societies. Nowadays, it is common to deal with instant superficial answers on the internet featured by the virtual omnipresence of data of all kinds, leaked confidential information, and even data bases from the 'dark web', which pose significant threats in their sheer existence for the users without any proper

guidelines, skills or user's handbook to the twilight zone of the internet [14].

4 SPIN DOCTORS OF MASS INFLUENCE: from the past to the present

Influencing the masses and public opinion has been the core interest of political elites practically ever since the Middle Ages, and they accomplished this end through various means. This included the creation and dissemination of hoaxes, distorted or fully fake news or falsifying important incendiary documents on designated purposes, such as the famous early medieval forged church document Donation of Constantine [16] revealed by humanist priest Lorenzo Valla in 1440, or the notorious Protocols of the Learned Elders of Zion [16] both documents exercised enormous intellectual and political impact upon their age with controversial and even devastating consequences. The rather diversified and sophisticated techniques of dis, and misinformation, persuasion, manipulation, emotional blackmailing and facilitating nationalistic upheaval had been initiated and elaborated around the turn of the 20th century and became prevalent political tools particularly with the 1st world war.

Through the pioneering work of Gustave LeBon, a French physician and social psychologist, the new techniques of so-called mass psychologic operations, special power tools of persuasion had become of primary importance with the rise of populist political and social movements. LeBon's masterpiece bestseller book from 1894 entitled *The Crowd: a study of the popular mind* [18] provided a significantly useful intellectual manual for future political leaders as well as for skillful demagogue orators and bloodthirsty dictators, ranging from Walter Lippmann, Theodore Roosevelt, Woodrow Wilson to Mussolini, Goebbels, Trotsky and Lenin. He provided a comprehensive and efficient, easily achievable recipe about the patterns and habits of the souls and minds of big masses of millions of people, who can be nonchalantly manipulated by shallow, easily conceivable and comprehensible rhetoric formulas affecting the basic most persistent human emotional structures of the audience, like fear and joy, hatred and sympathy. All these phenomena and measures compiled by professor LeBon and his disciples and also enforced with continuous, repetitive messages through all forms of communication platforms may result in the desired effect and outcome on the targeted masses of people, namely: almost total control or emotional power influence.

At the turn of the 20th century, two famous American media moguls, namely William R. Hearst and his ardent rival, the Hungarian American Joseph Pulitzer managed to grasp and efficiently implement for the first time in history the enormous media and political power they accumulated through the impact of their newspapers. Their influence and controversial activity through tabloid-like "yellow journalism", writing distorted and fake news articles on various events and politicians, heralded the rise of mass media and national manipulation simply by editing, interpreting and sharing stories from around the world. Strange as it may sound, though by the end of the 19th century without the consent and support of the above mentioned media tycoons,

practically no political figure could ascend to power in the United States, as the case of Grover Cleveland had significantly illustrated it [18].

The political advertisements, propaganda campaigns and information operations seem to pursue this pattern and socio-psychological methodology even in the digital age of the 21st century, with even more emphatic and powerful impact upon the users in the plethora of digital communication platforms and applications.

The extremely controversial global experiences related to the interpretation and media manifestation of the origin of Covid-19 pandemic as well as the much debated lockdown measures and mandatory vaccination policies had altogether cast dark shadows on the media consumption habits, critical thinking and intellectual skills of many end-users and organizations alike. Furthermore, the recent devastating war in Eastern Europe, in Ukraine has spectacularly displayed the historically unprecedented, immense power of online war propaganda, mass manipulation and digital informational warfare, which practically engulfed the global virtual sphere without limits. Unfortunately, the various state responses to the twofold controversial challenge concerning access to and control of information prove to be rather questionable and regrettable, taken the strict authoritarian cyber countermeasures implemented by the Russian government [19] and previously, particularly by China, through their sophisticated dystopian AI-run Social Credit System in place since 2017 [20].

5 CONCLUSIONS

When the mini survey was finalized, evaluated and the present article started getting its final shape in early February 2022, the author did not know the topic would become even much more relevant and globally outstanding than it has been for the past years. The latest unique ‘black swan-type’ [18] coronavirus pandemic that everyone feared but no one really expected struck upon human race with unprecedented social, economic and cognitive effects, while the war in Ukraine demonstrated the enormous power of social media and the digital disinformation bubbles, virtual echo chambers upon modern, educated societies. It is quite a well-established common revelation that media has been the fourth power branch ever since the beginning of the 20th century, and it is so even on larger and deeper scale in the digital age. The online communication platforms, particularly the social media sites, have managed to obtain previously unprecedented power on people’s opinion, worldviews, attitudes and values.

As we could witness along the latest American elections or the Brexit-referendum with the affiliated Cambridge Analytica controversy [21], the big tech corporations and their political affiliations can truly influence, manipulate elections and drastically shape the future of societies, furthermore in worst case scenarios even jeopardize the sound, unbiased, impartial functioning of democratic societies. In order to mitigate the emergence of these risks and to hinder the unsolicited hazardous phenomena to prevail in the postmodern digitalized societies, more and more users, primarily belonging to the younger generations must be educated and prepared, shielded with the proper intellectual toolkit for this

uneven and unprecedented challenge in human history. They have to tackle with the controversial though attractive virtual reality of overwhelming alternative facts, hoaxes, fake news, cyber threats and information warfare operations on global scale targeting each and every one of them linked to the ubiquitous matrix.

The theoretical background of digital news and media literacy with proper educational training modules may provide useful guidance and intellectual fundamentals in this battle raging for the primary target groups of possible hoax content consumers: the teenagers and the elderly citizens. Moreover, the reestablishment of the classic paradigm of authentic, reliable and revered ‘knowledge gate keepers’ would promote the stability of the social, political and cultural fabric of post-modern societies even in the looming cyber age.

As it has been highlighted in this paper, the classic fundamental knowledge accompanied with common sense and analytic critical thinking skills prove to be good recipes and manuals for reliable navigation through the digital maze.

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