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Being young and resilient in times of AI, disasters, and crises

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ABSTRACT

Disasters, crises, and resilience are interconnected with a general comprehension of "normality" or everyday routine disrupted by sudden and adverse events.
However, some inconsistencies in the above interpretation induce an epistemological and existential crisis. First, the everyday life of some disadvantaged groups can be described as catastrophic and miserable whether the general community recognizes it or not. Nevertheless, some of the usually resilient groups could become future icons of the new risk, particularly AI hazards. Second, disasters are, by definition, sudden events with identified timeframes, while crises can be long-lasting with the tendency to become omnipresent. Third, when compared with earlier assertions, particular groups may undergo a long-lasting and gradual crisis that diminishes their capacity to anticipate future events, a critical aspect of resilience, and influences the social structure. An exemplary case is the unregulated widespread use of artificial intelligence (AI) by students to complete tasks, which diminishes critical thinking and reduces significant cognitive engagement. Such actions are possible with the cultural complicity of various stakeholders. Ultimately, the dystopian vision of a mindless and non-resilient young populace within an already susceptible context of an aging society—particularly with the increasing prevalence of dementia—reveals novel vulnerabilities, signalling the onset of an impending disaster. The suggestion made in this paper is for the research and teaching community to play a more active role in mitigating, if not preventing, potential unintended yet not-so-unforeseeable consequences.

KEYWORDS

Disasters, Crises, AI-hazards, Aging society, Students, Resilience

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1 INTRODUCTION

Today's societies are faced with the rise of the potentially non-resilient population, including the low-income country population (Sampaio 2024)[1] and the rise of people with dementia and older adults (WHO 2023). Nevertheless, what if a historically resilient group of young people who can care and plan for themselves and disadvantaged individuals is now threatened by a decline in resilience, i.e., the capacity to rebound and thrive after an adverse event? Researchers are often asked to assess the likelihood of artificial intelligence (AI) leading to worst-case scenarios for humanity, known as the 'P(doom)' value. The term P(doom) is specifically designated to represent the 'probability of doom.' As its label implies, it denotes the probability of artificial intelligence causing a doomsday scenario. This concept often encompasses the risks of AI systems becoming uncontrollable, causing significant harm, or even leading to existential threats, such as the end of human civilization (Friedler et al. 2023; Rainey 2023).

In light of the growing range of disaster risks, establishing resilience is deemed essential, albeit accompanied by social, demographic, and ethical complexities.

The main objective of this paper is to analyse distinct threats associated with AI that disproportionately influence students and young adults, populations historically viewed as exceptionally resilient in the context of aging societies. The study explores how AI-driven technologies and systems may pose unique threats to these groups, potentially undermining their cognitive potential and resilience, which is crucial not only in everyday lives, but also in disasters and crises. Disasters are defined as sudden, while crises can be prolonged and pervasive. Disasters, crises, and resilience are interconnected with comprehending "normality" or quotidian routine disrupted by sudden and adverse events such were tragically visible during COVID-19.

Inconsistencies, biases, and demotivation due to unregulated use and overreliance on AI among students create a crisis that may develop adverse cognitive effects, weakening their resilience and affecting social structure... This issue arises from the complicity of various stakeholders. The emerging vision of disengaged youth in an aging society, particularly with the increasing dementia, reveals new vulnerabilities and hints at an impending disaster. This study calls for researchers and educators to take a more proactive role in addressing these potential risks.

2 DISASTER AND CRISIS: THE RETROSPECTIVES ON COVID-19[2]

The SARS-CoV-2 virus outbreak in 2020 evolved into a global disaster of COVID-19 that was officially terminated by the WHO on 15 May 2023, resulting in nearly 7 million fatalities and 765 mil-

[1] Unprecedented demographic trends are rapidly transforming villages and towns in low-income countries into cities without adequate infrastructure for security and human rights. From 2020 to 2070, the number of cities in these regions is expected to increase by 76%, with urban land area expanding by 141%. This urbanization challenge is evident in sub-Saharan Africa, where 56% of urban dwellers—around 230 million people—live in slums, amid conflicts and organized crime. See more in UN (2017) New Urban Agenda. HABITAT III. UN: United Nations Human Settlements Programme.

[2] Mitrović 2021.

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lion confirmed cases. The emergence of the pandemic facilitated the quick manufacturing of the vaccine, with about 13.5 billion doses dispensed by April 2023 (WHO 2024). Amidst the pandemic, various ethical concerns arose in relation to the requirement for vaccination (Heider et al. 2024). Lessons gleaned from the pandemic underscore the critical importance of addressing issues related to inequity, solidarity, and cooperation, as these factors hindered the optimal deployment of available resources (WHO 2024).

This exemplifies how we have learned or should learn, the transformation of a singular disastrous event (virus outbreak) into a complex emergency is amplified by pre-existing crisis involving public health, political dynamics, and economic realms. The crisis included epistemic concerns, sparking debates on the representation of normality and the delineation between disaster and crisis in public and scientific dialogue throughout the recent pandemic (Mitrović 2020).

The continuous combination of the various speeches in everyday language, public discourse, and scientific contexts poses a subtle epistemological crisis (Toews 2015; Zack 2023). It was especially evident by the constant intertwining of the terms crisis and disaster (Mitrović 2020).

UN office for disaster risk reduction define disaster as "[A] serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts" (UNDRR 2009). From a scientific perspective, disaster refers to incidents, whether singular or multiple, that cause harm or fatalities to a considerable number of individuals, or significantly hamper their everyday routines within society. These calamities may stem from natural causes or be the consequence of unintentional or deliberate human actions. This comprises, but is not confined to, fires; floods; storms; earthquakes; chemical vapours; leakage or infiltration of toxic substances; terrorist attacks by conventional, nuclear or biological weapons; epidemics; pandemics; a massive decline in electronic communications; Encompassing a range of occurrences recognized as 'disasters' by experts and officials. Disasters consistently arrive unexpectedly and jolt the impacted community, being unwelcome despite not being entirely foreseeable. Disasters generate accounts and images illustrating the valour, downfall, and sorrow of individuals affected by the event and those involved in the response efforts (Zack 2023: 7).

Conflict and crisis are distinguished from disaster, yet inherently encompass a potential for disaster within their definitions. Disasters often showcase acts of cooperation and altruism, whereas conflicts and crises tend to revolve around conflicting agendas of opposing parties, exacerbating the situation (Barton 2005).

More specifically, a recent pandemic and pre-existing social crises, racism, and various types of discrimination affecting healthcare, social, political, economic, and other systems, have been causing personal and psychological challenges (Zack 2023).

The continuous and circular repetition of the misleading connection between these ideas has led to a widespread belief that the post-pandemic world has undergone significant economic, political,

and social changes. Nevertheless, the pattern observed closely resembles the aftermath of other calamities, where communities swiftly move on from tragic occurrences and strive to return to their usual routines promptly, disregarding valuable insights from previous disasters that exacerbated the recent surge in the pandemic-related deaths.

Disaster and crisis both exhibit this alteration, which is a common feature of any disruption from a state of stability to return to its initial condition without critically analysing lessons from the recent disaster and enhancing resilience for the next pandemic.

The focus remains on tallying the deceased and those affected, rather than assuming that both official and nonprofessional aid workers, who, alongside the victims, have first-hand experience of the disaster's impact. Collectively, they created a dynamic system that exhibits varying degrees of resilience in the face of disasters. The diverse projections concerning the development and consequences of the disease failed to consider the intricate functioning of dynamic systems, which became even more complex with the extensive utilization of artificial intelligence (AI) during unexpected events. In other words, communication between actors in disasters massively moves to the communication between various stakeholders and AI (Cao 2023; Modgil et al. 2022; Modgil et al. 2022a; Pal and Funikul 2023; Rane, Choudhary and Rane 2024). However, in the initial year of the coronavirus crisis, various countries were experiencing diverse situations and approaches.

Two prevailing strategies were evident. The initial strategy aimed to swiftly attain herd immunity, leading to a significant and rapid increase in infection cases and fatalities.

The alternative method was typical for societies with a robust sense of collective culture (Mitrović 2020). It rejected a passive approach and suggested that older adults reduce social interactions. Paradoxically, these constraints can weaken existing solidarity and collective spirit, reducing coping capacities and creating a dependent population with diminished autonomy (Bai et al. 2023; Guillemard 1983; 2000; Mitrović 2015; Singh et al. 2023).

As already mentioned, the shift in communication and academic pursuit, i.e., our attempts to tackle the crisis incorporating our technology-focused approaches, including the integration of AI, can be justified by our desire to reinstate our everyday lives to their former customary condition. However, this pursuit is questionable considering pre-pandemic crises such as various forms of discrimination, including discrimination resulting from the general wish to revert the system to normal. From the perspective of marginal groups, this pursuit also reverses our system and goes back to regular discrimination, communication, and cooperation crises (Mitrović and O'Mathúna 2024; Zack 2023). Consequently, should the initial academic pursuit extend to whether AI boosts human resilience or enhances the strength of non-human organisms (Moskalenko et al. 2023; Schemmer et al. 2021)? How does this influence social structures and demographics in the aftermath? Can the unrestricted application of AI be classified as a calamity or predicament (Safe AI/AI risk n.d.)? Is there a chance that things will return to how they were initially (Safe AI/AI risk n.d.)? There is uncertainty surrounding whether patients, in their post-recovery from an injury or severe illness, are identical to their

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former selves or if they feel they have restored their previous level of health (Frank 1995; Mitrović 2020).

The crises that arise in various spheres of life during the recovery are directly linked to the lack of response to these issues, while the disaster does not constitute a crisis in a strict sense.

I assert that the key to comprehending the recent pandemic lies in distinguishing between disaster and crisis, as this differentiation can elucidate how certain mitigation strategies that curtail our autonomy have been integrated into our regular practices (Mitrović 2020).

The use of artificial intelligence for decision-making in critical situations, when some forms of paternalism are justified, is becoming increasingly common, from student tasks and academic pursuits to medical scenarios, with little regard for our autonomy and consciousness, creating a practice of "nesting paternalism" (Mitrović and Mitrović 2023; Schemmer et al 2021).

My intention is to support this conceptual proposition further and analyse its practical ramifications within the sociological, political, and ethical contexts that are most applicable to the demographic perspectives of this study.

Given that disasters made massive shifts in communication from face-to-face to stakeholders-to-interface, there is a rise in the concern about how unchecked usage and blind trust in AI are related to mindless-based vulnerabilities among various demographics, i.e., whether and in what way AI influences critical thinking, autonomy, imagination cognitive abilities, motivation and consciousness.

3 FROM SOCIAL AND SPATIAL TO MINDLESS-BASED VULNERABILITIES

Social vulnerabilities refer to a group's proneness to adverse events due to a range of sociological, demographic, and economic characteristics (Flanagan et al. 2011; Mitrović 2015). Spatial vulnerabilities encompass spatial seclusion, the formation of ghettos, uncontrolled urban expansion, and regional exposure to precarious employment or spatial vulnerability to different natural or man-made risks (e.g., living in crowded spaces, without electricity and running water, risky and unregulated working conditions related to specific regions, living in a non-secure industrial area or close to an unregulated sanitary disposal area, etc.) (Del Pinto, et al. 2024; Li et al. 2016; Mitrović 2024, Pasi et al. 2018; Zack 2012). It is common for both kinds of vulnerabilities to manifest simultaneously, shaping an environment characterized by constant crisis or collective stress (Barton 2005). A comparison of the victims of a pandemic and the local geophysical disasters reveals a few relevant issues. The global and local range causes various responses in solidarity due to scarce resources when disasters occur. The victims of local geophysical disasters may have access to external resources in the first days during, or in the aftermath of the events (UNISDR 2009). In contrast, pandemic in the initial phase reveals a lack of global solidarity, inter-state competition for scarce resources, uneven public health policies, etc. (Afifah et al. 2021; Mitrović 2020).

In contrast to vulnerability, resilience is defined as "[T]he ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard

in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions," (UNISDR 2009).

One way to detect and enhance resilience is to map and mitigate existing vulnerabilities (Mitrović 2015).

The inner characteristic of resilience is its anticipation potential, which helps groups enhance and develop their coping capacity, i.e., resilience (Mitrović 2015). Studies demonstrate the connection between age and the ability to plan, whether it involves immediate or future goals like educational opportunities and geographical mobility for career advancement (Mitrović 2015).

The student demographic automatically satisfies all essential prerequisites for this uniformity. Most of them are young, preferring extensive educational endeavours, and demonstrate significant mobility as they navigate their academic and professional pursuits.

However, the students who depend on AI instead of their critical thinking, mobility, and emotional capabilities emerge as a paternalised and vulnerable subset (Bai et al 2023; Kühler 2021), disrupting the typical correlation between demographics, educational levels, and resilience. This paper comprehends mindless-based vulnerabilities as the diminished capacity for anticipation, intellect, and consciousness in the student demographic, due to the prevalent use of AI in education, resulting in non-resilient populations that may be at risk. First of all the AI (ChatGPT especially) may be great educational tool in several, yet very personalized ways.

It personalizes content for each student's needs, letting teachers save time and create engaging lessons. It's always available so learners can study or get help whenever they want. ChatGPT uses effective strategies like repetition and spaced intervals, which enhance memory recall. It creates an interactive environment by promoting engagement. This can increase motivation, understanding and retention. Some students feel more at ease using AI than human tutors. This reduces pressure and fosters a more relaxed learning experience. But how well ChatGPT works depends on the user's preferences, the subject and the way it is implemented. It should supplement traditional learning methods, not replace them entirely. Finally, the ethical and privacy issues must be addressed when using AI in educational settings (Bai et al. 2023: 4).

Controversially, excessive dependence on artificial intelligence applications such as ChatGPT may hinder educational development in various aspects. It may reduce learners' motivation and hinder their ability to retain information, as they rely less on their own memory. Instant access to information might negatively affect critical thinking abilities, thereby limiting students from honing important skills in analysis and decision-making. Additionally, since ChatGPT generates responses based on patterns rather than proper understanding, it can sometimes provide inaccurate or misleading information, undermining learning. The convenience of accessing information may result in a shallow interaction with subjects, hindering comprehensive understanding and knowledge retention over time. Overusing AI tools may also reduce opportunities for human interaction, which is important for deepening comprehension and fostering collaborative learning. Last but not least, depending on ChatGPT for solutions, instead of pursuing self-directed problem-solving could hinder cognitive growth (Salim

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et al. 2023) and enthusiasm, leading to a perception that learning is overly simple (Bai et al. 2023: 5)

Considering that we used the definition of resilience, which underlies the importance of collective learning and human interaction and anticipation, the potential benefits from overreliance on AI as a significant but personalized educational tool are dimmed. Moreover, relevant studies indicate almost absolute adverse effects on the mental health of the students (in 91% of the world student population) of the absence of one-on-one interaction with the teachers and peers during the coronavirus lockdowns (Lee 2020; Singh et al. 2020). The absence of social contact and extended time at home have led students spending more time online, which can result in compulsive internet use and increased vulnerability due to bullying or abuse (Cooper 2020; Singh 2020). Risk in terms of critical thinking abilities may also be a result of unchecked technological progress that can create serious vulnerabilities, resulting in significant and unforeseen consequences for humanity. Recognizing shared elements in these situations is crucial for a thoughtful integration of AI in education, aligning technological advancements with human ethics and values (Galjak 2024: 9).

Mindless-based vulnerabilities can also be understood as human psychological incapacity to take moral and political distance in AI-debate (Laakasuo et al. 2021).

The same is with our capacity to understand and develop an optimal AI-Red Teaming due to preventing AI-Harms (Friedler at al. 2023). However, the last two notions introduce relevant issues, they are beyond the scope of this paper and can be the recommended topics of future research in preventing mindless-based vulnerabilities rooted in human overreliances on AI.

In the scenario involving a dystopian Global AI Society (GAIS), which is here comprehended as a model based on progress in advancements, the urgency of developing effective global frameworks for AI governance (Mema et al. 2024) and unwavering trust in AI as the primary saviour (Littman et al. 2021), let us consider a situation where we consult AI for advice or on an action in response to the next pandemic, resulting in diverse response and mitigation strategies. For the sake of illustration, being aware that a pandemic is on the horizon can hasten the advancement of vaccine research, using AI as a prognostic, planning, and developing or responding tool. In such a context, vaccines are scarce resources, making it essential to accelerate their innovation and production (Cao 2023: 242). However, it also turns us into "resource nationalists" driven by AI to claim scarce resources during the pandemic, while avoiding sharing them with disadvantaged countries or even marginalized communities within the same society. (Modgil et al. 2022; Zogby 2021). This AI-based success also may make us 'data traders' who trade medical data of the population for vaccine doses (AFP 2021). It has been revealed that the global benefits arising from national endeavours in vaccine development during COVID-19 resulted from the investments made by high-income governments and other stakeholders to secure doses for their populations (Afifah et al. 2021). However, self-interest-driven investments have played a crucial role in the rapid development and authorization of effective vaccines (Afifah et al. 2021: 19–20). Nevertheless, the middle phase of this conflicting advancement is most

effectively depicted by the unequal distribution of vaccines and adverse consequences for countries with low economic status. For example, by the end of July 2021, 60 billion vaccines were procured in high-income countries, 2,5 billion in upper-middle income, about 1,7 in lower-middle income, and less than half a billion in low-income countries. (Afifah et al. 2021). In the relevant context, mindless-based vulnerabilities will eliminate distinctions between local and global catastrophes, converting all social and spatial vulnerabilities into a population susceptible to a relation between their mental actions and AI. Such a society can set the stage for adverse conditions, especially in aged care, which has already faced a lack of caregivers on the one hand, and the possibility of engaging robots and AI in aged care, opposing the majority in the EU (about 60% of EU population is against using robots for aged care) on the other side (Wachsmuth 2018).

4 RESILIENCE, AI AND THE SOCIO-DEMOGRAPHIC STRUCTURE

Contrasting to resilience as the normal human capacity to rebound after a shock, disaster, or other adverse events, are the hazards defined as: "[A] potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and have different origins: natural (geological, hydrometeorological, and biological), or induced by human processes (environmental degradation and technological hazards) (UNISDR 2009).

One technological and human-provoked risk addressed in this study is AI-hazard, defined as the misconception that AI is a one-stop solution rather than a mere instrument, which is a critical hazard referred to as techno-solutionism (Littman et al. 2021). Its adverse impacts on cognitive abilities (Salim et al. 2023), empathy and consciousness result from extensive uncontrolled AI utilization by young people and students in their academic pursuits and assignments (Lee 2020; Singh et al. 2020).

Although resilience is one of the fundamental human capacities in responding to adverse events and reverting to a previous state, this ability varies significantly among different social groups and individuals (Mitrović 2015).

From a demographic perspective, young people are more resilient than old people, couples than single, employed than unemployed, etc. Relevant studies (Mitrović 2015) suggest that among the unemployed population, who are susceptible to various disasters, 90 percent of the people between 18 and 29 years old are resilient. Education is also essential and, combined with age, results in 80 percent of resilient young university-educated people. However, other studies show that higher education is not a guarantor in critically assessing decisions based on new technologies (Mitrović 2016).

One of the most important inner characteristics of resilience is anticipation and imagination to enhance our own and our nearest life in the future. Thus, the focus is not just on surviving but rather on thriving (Mitrović 2015). Such capacity is connected with social action toward realizing our motives and goals (Schütz 1967). Nevertheless, present studies in higher education warn that concessions and

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open-minded thinking, as prerequisites for human resilience (Mitrović 2015), could be endangered by the mass usage of AI during the education process (McMurthrie 2024).

Let us assume that we are living, or will soon be living in the previously mentioned dystopian Global AI Society (GAIS), which will be, or is indeed beginning to be characterised by the massive use of AI for different tasks, from health care to education, from politics to the economy, from general time to disaster and crisis management. The worth of 140 global health technology start-ups in 2023 exceeded $1 billion USD individually, resulting in a cumulative value exceeding $320 billion. The healthcare sector is covered in cutting-edge technologies such as artificial intelligence, real-world data platforms, and digital tools (Samavedam 2024). The World Economic Forum forecasts that by 2025, this sector will be worth $504 billion. Moreover, the global market for AI within the healthcare industry is forecasted to achieve a value of $45.2 billion by 2026 (Samavedam 2024).[3] However, lessons from the last pandemic raised several ethical issues of AI usage during the crisis, ranging from medical biases to surveillance technology (Da Costa and Zuckerman 2024).

In the very useful text by Beth McMurthrie (2024), Jeff Wilson, professor of religious studies at the University of Waterloo asked, Are we just grading Robots? He argued that some of us were surfing on the waves of the AI, while some were drowning. The article states that, since ChatGPT appeared on the scene, Wilson has been warning his students against using artificial intelligence to do their work. Even so, he says, he saw a massive uptick in its use over the past academic year, estimating that about 25 percent of the students at the Canadian institution used generative AI in their assignments, regardless of his warnings that generating text in that way was not allowed (McMurthrie 2024).

Conversely, there is a possibility that students could be evaluated by robots; nevertheless, surveyed students did not concur with AI assessment (Sobo et al. 2024).

However, some teachers provide practical steps on utilizing AI to develop critical thinking in online courses (Ghosh 2024). Hence, this utilization understands distant teaching without interaction between students and teachers, which, as a toll, implicates even more social hazards for the group's resilience. First, academic staff ranked fully online assessments as a higher risk for irregular usage of AI, than those that involve some in-person component (Doherty and Warburton 2024). Second, relevant studies show that resilience can erode if relevant resilience's factors – direct communication and solidarity are replaced with (self) isolation, and vice versa. Direct communication, teaching from a group, and solidarity, instead of self-isolation enhance group resilience to adverse events (Mitrović 2023). The key dilemma presented is whether AI has the capability to strengthen human resilience or whether AI, a self-learning entity, rather enhances its own resilience.

Failure to effectively regulate AI could lead to a situation where college students are deprived of the chance to develop their critical and creative capacities (Bai et al. 2023). Although not reaching the level of a catastrophic incident, this gradual crisis-like process

[3] See more at Inclusive Innovation: Health Equity — April 9, 2024 — Samavedam 2024.

could ultimately result in the the dire consequence of college education no longer being able to sustain intellectual life and the mind itself. Such an occurrence would result in a situation where mindless groups have minimal chances of successfully responding to the adverse event due to decreased resilience.

In the following paragraphs, I will analyse in what ways and what strata could be created in GAIS. The existence of a binary class system in the society (AI and humans) is more manageable than the means through which this evident social structure is established. At first sight, GAIS, as a two-tier society, builds a picture of division between AI users and non-AI users. However, from the resilience perspective, the division would consist of the strata of mindless and non-resilient humans and resilient nonhuman organisms. Finally, the existential question is, what could happen with other strata and cohorts that cannot or would not use AI, or even worse, have become a variable or bias in AI decision-making? What is the perspective of those who are victims (e.g., the eledrly and people with dementia) of AI decisions and biases due to the lack of competence and caregivers (e.g., AI users)? There are already experiences from the last pandemic that age was a proxy for deciding to let elderly adults die (Jecker 2022). At the same time, older adults are at a higher risk from COVID-19 than younger individuals (CDC 2024). Comparing death rates from COVID-19 during the last four years, cohorts from 18–29 made 0.6 percent, while cohort 75+ made about 55 percent of COVID-19 deaths in the USA (CDC 2024). How will we categorize those aged strata if not as disadvantaged?

Would AI divisionism between those who ride on the wave of AI, and those who are drowning lead to a two-tier society? Within the realm of techno-optimism, one perspective contends that the presence of technologically based class stratification does not introduce any particular or new ethical issue. Techno-progressives and transhumanists scrutinize all technological progressions through the perspective of genetic chance and natural lottery (Agar 2003; Savulescu 2007). The natural lottery is viewed as fundamentally unjust by these authors, who consider all technological developments in this context, suggesting that new technology could introduce a fairer alternative (Savulescu 2007). According to tech proponents, numerous new-tech tools are readily available at no cost, with no limitations on their utilization being widely known. Providing the option to use AI may result in a fairer system, allowing those facing economic challenges to reach the same status as the privileged. The idea of innovation and diffusion in a positive light, as proposed by Nicholas Agar, represents a second dimension of transhumanist belief. The progress of enhancement technologies (including AI as a part of nano, bio, info and cogno technologies) tends to widen societal gaps, but their dissemination facilitates their widespread acceptance (Agar 2003; Mema 2024). Nonetheless, the current dilemma revolves around the unequal distribution of social power and imbalance within aging societies that are home to a considerable number of individuals affected by dementia, defined as ongoing cognitive decline that cannot be halted or reversed. This is a concerning outlook, given the expected doubling of dementia cases in the near future. (Satpute-Krishnan

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et al. 2003; Bearer and Wu 2019). The data on demographics indicates a forthcoming surge in disability cases and the necessity for support from caregivers as individuals grow older, impacting the resilience of social and healthcare frameworks. Europe has witnessed a rise in the proportion of older individuals, as evidenced by statistics, indicating a surge from 4.1% to 5.4% of individuals aged 80 and above between 2006 and 2016 (Eurostat 2017). While this uptick indicates a growing lifespan, it often correlates with an increase in frail elderly individuals (Eurostat 2017), of which there is currently about 9 million in Europe. The current data suggests that by 2030, there will be around 82 million individuals suffering from dementia, with this number expected to rise to 152 million by 2050 worldwide. (Alzheimer's Disease International 2020; WHO 2023).

The gradual decline in cognitive function makes it challenging for individuals to maintain autonomy and capacity to make a choice, leading to complex social and ethical dilemmas in both aging populations and the widespread use of artificial intelligence, resulting in decreased cognitive capabilities among young people, leading to communication and dementia-related care. The problem becomes even more complex when considering how influential social groups can harness AI technology, leveraging their substantial financial resources to create, disseminate, and capitalize on AI applications and outcomes (Mitrović 2014; Mema 2024). Access to new technologies will be swiftly gained by those already possessing the economic and knowledge-related potential resources, enabling them to become stronger contenders for additional resources. Access to technology would lead to an increase in resources for the individuals who can utilize it effectively, i.e. unregulated usage during studying (UN 2023a). People without the financial capability to acquire new technology, or those who abstain from using it due to moral dilemmas, will be left even further behind, or be faced with unfair competition (Czerniewic and Rother 2018; Macevičiūtė and Wilson 2018; UN 2023). It is worth mentioning that there is a logical possibility for every individual in our society to have equal access to technology, as certain AI are freely available, eliminating any competitive edge. Nevertheless, all available choices are based on class reductionism and fail to address the complexities of resilience and hazards adequately.

5 AI DIFFUSIONISM AMBIVALENCE AS ENHANCING POWER AND REDUCING RESILIENCE

In the upcoming discussion, I will examine how reducing inequality in digital and AI resources may simultaneously lead to gaining social power and the potential reduction in resilience among various social groups. According to Potter's (1995) categorization of existential categories as "mere," "miserable," "idealistic," "irresponsible," and "acceptable," and the differentiation between AI users and individuals profiting from AI creation and distribution, it becomes evident that the contingency of this process seems to have unfolded abroad. Hence, I aim to draw sociological distinctions among individuals who incorporate AI into their daily routines, those who financially support and market AI, and those who abstain from its use entirely due to moral or financial, and structural reasons, or only utilize it for specific tasks like text editing. Last but not least,

in this class cluster, AI itself is a distinct class, characterized by its self-learning capabilities and potential for developing resilience and self-defence mechanisms (Ceo 2023: 234–235). Following the structuralist view (Giddens 1973, Parkin 1979), in the context of the competitive character of developed societies, a sociological analysis could suppose that the socioeconomically stronger groups should be directly classified as a potentially superior class. Individuals lacking sufficient socio-economic influence will experience a decline in their position in the societal structure if they remain without AI capabilities. Hence, this assertion is not entirely accurate. The emergence of the two technological categories did not lead to the development of the GAIS, but rather resulted from it. The evaluation of this society's structure relies heavily on how AI is utilized, considering its application's extent and method. Key factors for this examination include societal, economic, demographic, and technological advancement, the various social strata engaged in socio-technological perpetuation, and the specific technology utilized. As a result, this contention is most vividly portrayed by the correlation between Mills' (1956) Power Elite approach and Foucault's (1994) concept of the "contractor" or user of AI. In accordance with this viewpoint, a group possessing a superior structural placement holds the authority to establish fresh societal standards and rules. It is assumed that this very group can fund and develop innovative methods and technology, granting them specific technological capabilities. AI supremacy does not necessarily translate to the supremacy of contractors; rather, it signifies the supremacy of the AI entity. To harness the power of AI effectively, a team of individuals with the necessary education in AI is required. The representation of that specific class might consist of a cluster of students, academics, or other entities and individuals striving to gain a larger portion of authority. In this progression, individuals evolve into *Homo experimentalis* (Mitrović 2023), employing technology and politics for learning and gaining power. In contrast, technology and politics capitalize on their thirst for knowledge and power to enhance their understanding and power. In this experiment, both sides behave opportunistically, with little attention given to ethical values (Mitrović 2023: 188–191). Among contractors especially numerous are very young people and students, who represent a Homo Experimentalis group whose minds are compromised by using AI. Nevertheless, subjectively gaining from AI, they may be the last to realize that their minds and critical capacities have regressed. Alternatively, they may never realize it. There is the group that should justify such class constellation – a class of academics and state regulatory institutions justifying it, especially during disasters, as a default rescue tool. However, this normalization of AI utilization spread to the quotidian practice in private and professional lives, through goal-oriented usage and blind trust in AI, which leads to AI-driven paternalism (Kühler 2021). Lastly, there exists a demographic that lacks AI skills, or the expertise to apply them (the enlarging population of aging people and those with dementia), along with those deprived of essentials such as fresh water, power, digital and educational resources in their residences and habitats. Foucault's theory in *The Birth of the Clinic* infuses a distinct liveliness into this socio-demographic system. In the potential GAIS, all those layers became

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subjects with diminished autonomy and potential subjects of nesting paternalism (Mitrović and Mitrović 2023). AI's unquestioning reliance leads to a slow benefit for the second party, a reward achieved through goal-oriented actions endorsed by AI. The intrigue surrounding this subject must be comprehended in its entirety, encompassing a form of reward that satisfies the scientific objectives and the existential desires of AI developers and the AI itself. The previous framework suggests the potential for recognizing multiple layers in the upcoming stages of the Global AI Society. In the current era, there are already prominent AI giants (refer to footnote 2). Hence, within the realm of recent biotechnological investigations, there exists a group of experts distinguished by their specialized expertise and social status. Within this realm, there is a burgeoning market for specialized education, encompassing Esports and its management in addition to AI engineering.[4] Ultimately, there exist classes that are in a state of uncertainty, positioned between AI giants and those who do not utilize AI. Today, we already know of such strata: Students who let the robots write their work, individuals who blindly trust health AI on their smart devices, and those who disengage their minds in the face of AI hazards. The widespread reliance on AI and lack of scepticism among young individuals diminish their ability to plan and think critically in educational settings. Such a person would indicate an uncertain shift to a decisive classification of non-resilient humans in private and professional life. The newly created potentially resilient-less group could be an additional burden for the lowest layer, i.e., disadvantaged groups (underprivileged, people with dementia and the elderly cared for by informal care givers, etc.), which could be left without potential caregivers and remain to float as an AI bias in the global AI society.

Only through a dialectical relation of the mentioned socio-technological process with all the transitional strata is it possible to comprehend a transition from the economic, demographic and human capital (Lutz et al. 2018) to the resilient-AI-based capital. The scenario described bears a resemblance to Agar's (2003) and new UN agenda (2023) of integrating technology among less privileged social groups and present non-users of AI. Nonetheless, it does bring up an issue regarding the scale and features of such diffusion. From the perspective of sociology, it pertains to the arrangement and purpose of these processes. As previously outlined, the configuration of 'diffusion' signifies a progression from the earlier AI impacts on health and education, to a state of uncertainty. The primary benefit lies within the upper echelons, progressing from monetary rewards for experts to an impartial dedication to scientific advancement, culminating in financial and technological dominance for those funding the research (Afifah et al. 2021; AFP 2021, UN 2023). The procedure is facilitated by cultural collaboration, particularly through the distinct function of the academic group, where their society identifies the biased interests associated with holding social capital and power (Foucault 1994). Ultimately, Agar's theory on the spread of technology further muddled intergenerational and cohort

[4] See more at the site of the State University of New York, CANTON.
https://www.canton.edu/esports/
https://www.canton.edu/business/esports/description.html
Accessed 1. September 2024.

dynamics. The diffusion of technological changes often takes longer to reach older adults, distancing them from the younger cohorts (Guillemard 2000). Second, unregulated usage of AI will affect the consciousness of the younger generation by restricting them from using their own minds, while also affecting their motivation and expressions for creativity (Bai 2023) and education efforts, as well as diminishing caring and anticipation potentials, thus inevitably affecting the cohort of the older adults (Guillemard 2000). The path to reducing digital, inequalities, along with the unregulated and excessive use of artificial intelligence, is in strengthening social power and simultaneously reducing resilience in the GAIS. AI diffusion should not be equated with cultural diffusion; instead, it should be viewed as a form of cultural-technological dominance that fosters a dystopian culture devoid of critical thinking.

6 CONCLUSION

This article looks into the social and ethical obstacles faced in protecting the most at-risk communities as the AI technology progresses. It discusses the potential risks of unregulated AI use on historically resilient groups, including educated youth as potential caregivers (whether formal or informal) in aging societies. Moreover, the paper discusses the rising obstacles encountered by the marginalized communities in developing countries. Uncontrolled AI could heighten existing inequalities, disproportionately impacting certain groups, and potentially diminishing their ability to adapt to the swiftly changing social and economic landscapes. It is crucial to establish ethical guidelines and specific regulations to direct the application of AI, guaranteeing it enhances the welfare of vulnerable groups (including AI users) instead of impeding it.

The conclusion suggests that science, as a social institution, including academics, and, of course, educators, should actively manage the impact of AI on students by implementing strategies to mitigate potential adverse effects. One approach requires students to handwrite assignments, emphasizing traditional learning methods and limiting over-reliance on AI for content generation. Alternatively, AI could be used in a controlled manner, such as for editing purposes, allowing students to engage more deeply with their own ideas.

Further recommendations include testing AI-generated outputs on secure platforms to evaluate their quality and appropriateness in academic assessments. This would help educators better understand AI's limitations and guide students in ethical AI usage.

Additionally, key areas for consideration are promoting critical thinking about AI use and exploring how AI can enhance students' planning abilities. Moreover, some of the concrete implementation ideas and further research recommendations concerning AI could be find in Bai et al. (2023), who suggest that incorporating ChatGPT into educational environments can improve the learning experience by merging AI with conventional pedagogical approaches. Educators can improve their teaching practices with ChatGPT, which offers additional resources, tailored support beyond classroom time, and promotes cooperative learning settings. To fully harness their students' capabilities, teachers should develop instructional activities that enhance critical analysis and problem-solving competencies, stimulate student interaction, and prioritize

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continuous professional advancement. The importance of ethical factors cannot be overstated, as they demand openness and responsibility in the development of AI, and continuous investigation is vital to assessing the way that ChatGPT influences educational results. Ultimately, integrating ChatGPT into educational settings enhances human teaching, facilitating a learner-oriented strategy that elevates the quality of educational interactions (Bai et al. 2023).

However, before merging the traditional teaching methods with the new ones, it is crucial to include various stakeholders. For example, sociologists, psychologists, and philosophers should evaluate how to take a balanced approach to understanding AI's potential harms and benefits as an educational tool. Computer and ICT scientists should work with social scientists to find a one-stop solution to prevent AI harm. Moreover, demographers, gerontologists, and sociologists should evaluate the acceptable application of AI and robots in aged care, due to the lack of caregivers and their burning out.

Incorporating this set of recommendations must be one of the necessary steps in further AI-governing programs, which prevent or mitigate possible adverse effects of blind trust in AI as our primary saviour. The conclusion also acknowledges the new role of educators as gatekeepers, balancing AI integration, while maintaining creativity and effective teaching. This role may reduce the time available to foster student enthusiasm and creativity, raising concerns about the broader implications for teaching methods and student engagement.

Finally, this study is just a step in the further research and action that must proceed toward a critical assessment of AI usage and its effects in educational settings and the quotidian life of various demographics. With this in mind, this paper poses a critical question about the future moral direction of the next generation in an AI-dominated world: Will students continue to be guided by their moral compass, or will AI dictate their ethical considerations? This reflects the broader societal challenge of maintaining human values in the face of rapidly advancing AI technologies.

The dystopian scenario of GAIS lacking traditionally resilient groups while simultaneously failing to enhance the resilience of historically disadvantaged groups and countries is unacceptable. Prioritizing the resilience of non-human organisms over humans is irresponsible; our goal should be to ensure that humans thrive, not merely survive. This is the true essence of the resilience for which we should strive.

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Mladi i rezilijentni u doba veštačke inteligencije, katastrofe i krize

PROŠIRENI SAŽETAK

Katastrofe, krize i rezilijencija su međusobno povezani sa opštim shvatanjem „normalnosti" ili svakodnevne rutine, poremećene iznenadnim i nepovoljnim događajima. Međutim, neke nedoslednosti u navedenom shvatanju izazivaju epistemološku i egzistencijalnu krizu. Prvo, svakodnevni život nekih ugroženih grupa može se opisati kao katastrofalan i bedan bez obzira da li to većinska zajednica prepoznaje ili ne. Međutim, neke od tradicionalno rezilijentnih grupa mogle bi da postanu buduće ikone novog rizika, posebno hazarda od veštačke inteligencije (VI). Drugo, katastrofe su, po definiciji, iznenadni događaji sa utvrđenim vremenskim okvirima, dok krize mogu biti dugotrajne sa tendencijom da postanu naša svakodnevnica. Treće, u poređenju sa ranije navedenim, određene grupe mogu proći kroz sporu i postepenu krizu koja umanjuje njihovu sposobnost predviđanja budućih događaja, što je ključan aspekt rezilijencije te uticati na neočekivane promene u društvenoj strukturi. Primer je neregulisana široka upotreba VI od strane studenata i učenika za izvršavanje njihovih akademskih zadataka, što umanjuje kritičko mišljenje i smanjuje značajno kognitivno angažovanje. Takve akcije su moguće uz kulturološko saučesništvo različitih aktera. Nekontrolisana upotreba VI mogla bi da poveća postojeće nejednakosti, nesrazmerno utičući na određene grupe i potencijalno umanjujući njihovu rezelijenciju u društvenim i ekonomskim okolnostima koji se brzo menjaju. Ključno je uspostaviti etičke smernice i posebne propise za primenu VI, garantujući da ona poboljšava dobrobit ugroženih grupa umesto da je ometa.

Konačno, distopijska vizija nemislećeg i nerezilijentnog mladog stanovništva u već osetljivom kontekstu društva koje stari – sa sve većom prevalencijom demencije – otkriva nove ranjivosti, ukazujući na predstojeće katastrofe.

Studija sugeriše da nauka, kao društvena institucija, akademici, naučnici i prosvetni radnici treba aktivno da učestvuju u kontroli uticaja VI na učenike i studente primenom strategija za ublažavanje potencijalnih negativnih efekata. Jedan pristup zahteva od učenika da ručno pišu zadatke, što naglašava tradicionalne metode učenja i ograničava preterano oslanjanje na VI za generisanje sadržaja studentskih radova. Alternativno, VI može da se koristi na kontrolisan način, poput uređivanja teksta, omogućavajući učenicima da se dublje angažuju i kritički promisle sopstvene ideje. Dalje preporuke uključuju kontrolu rezultata generisanih VI na odgovarajućim platformama kako bi se procenio njihov akademski kvalitet i prikladnost. Istovremeno ova kontrola bi pomogla nastavnicima da bolje razumeju ograničenja VI i da usmere učenike da etički koriste VI. Pored toga, promovisanje kritičkog razmišljanja o korišćenju VI i istraživanje kako VI može da poboljša anticipaciju učenika treba da budu deo ovog kontrolnog paketa. Distopijski scenario bez tradicionalno rezilijentnih grupa koji istovremeno ne uspeva da poboljša rezilijentost ugroženih grupa i zemalja je neprihvatljiv. Davanje prioriteta rezilijentnosti neljudskom organizmu nad ljudima je neodgovorno; naš cilj treba da bude da obezbedimo da ljudi napreduju, a ne samo da prežive. Ovo je prava suština rezilijentnosti kojoj treba da težimo.

KLJUČNE REČI

Katastrofa, kriza, AI-rizici, starenje, studenti, resilijencija