The Grandnarrative of Artificial Intelligence and Modes of Human(Art)istic Resistance

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Abstract

This paper seeks to address whether computational creativity in the verbal domain is called literature. Can the agency of such a computational output be called an author? These questions are addressed in light of prevalent theories regarding the true nature of Artificial Intelligence. At the cusp of Artificial Intelligence and Humanities, this discussion would then cascade into a review of the role of literature, in its speculative fictional avatar, in problematizing the grand narrative of AI. Finally, the work of a Pakistani digital artist, Omar Gillani, is studied as a case of artistic resistance.

Keywords: artificial intelligence, Computational creativity, decoloniality, digital art, digital humanities, literature, Omar Gillani.

Introduction

The advent of artificial intelligence (AI henceforth) is considered to be the most important development of our age. Like every other phenomenon which is being readjusted according to AI principles, literature, too, is being reimagined in this context. While AI is being utilized to create literature, and imaginative works of verbal art, the literature and humanities departments in Pakistan have not started to engage with the concept. In Pakistan, no such study has so far appeared that deals with this issue. This paper seeks to initiate this debate and address some crucial questions: Can verbal creativity, artificially composed, be called literature in the

current sense of the word? What roles of resistance will/can literature/art play in an AI-dominated world?

To address these questions, this paper, first of all, reviews the discourse that is available on the subject, namely, the nature of AI, and the artificial creation of verbal art. It looks at some of the landmarks that have been accomplished so far. After citing examples of literature that has been created artificially, the paper ponders over and tries to answer the first research question: whether such artificially created verbiage be called literature in the conventional and contemporary sense of the word. The paper then moves on to cursorily glance at a few digital artworks of Pakistani digital artist Omar Gillani and identify some of the elements which hint at modes of the human resistance against the onslaught of AI.

Algorithms and Artificial Intelligence

Computers are now advanced past that phase where they only compiled information for readers and have already started producing original scripts that can be compared to human writing. AI experts predict the creation of short stories and novels that will make it to the New York Times bestsellers list by 2050 (Grace, Salvatier and Dafoe 20). Literary co-creations have also been created. Heerden and Bas (2021) mention:

> a theatrical play by THEaiTRE …, the horror story generator ShelleyAI …, a poetry collection that reimagines the classics …, the novella The Day a Computer Writes a Novel …, as well as an experimental emulation of Jack Kerouac's On the Road titled *1The Road…*, (181).

With the recent surge of artificial intelligence in every field of human life, it is now impossible to escape from algorithms that are slowly engulfing our lives. The algorithm, as

Yuval Noah Harari puts it in his *Homo Deus*: *A Brief History of the Future* is "probably the most important concept in our world" (Harari 53). today. These algorithms now colonize every facet of our life from driving cars, and recognizing the iris of the eye to perfectly translating language, and becoming personal assistants. Not even creativity, a particular human faculty, is out of its reach. Algorithms have changed the nature of creative processes as well. Where they began by offering us recommendations on what to read, they are now capable of producing poetry, stories, and even screenplays as mentioned above. Today literature is being presented in its newer avatars which have been dubbed variously: Twitterature or Twitter Fiction, Gumball poetry or vending machine poetry, holographic poetry/holo-poems, Flash fiction, interactive fiction, and much more. Literary practice is cascading into digital art, bringing AI and the traditional materiality of the book is receding (Ehrenreich). In her interview with Anthony Cawood, Nadira Azermai talked about her company Script Book whose mission is to "democratize the business of storytelling through the art of AI". She claims that "Within five years we'll have scripts written by AI that you would think are better than human writing" (Cawood). It is these and similar overenthusiastic claims that need critical scrutiny. However, in the light of the following definition, the situation may not be that simple: the creation of a literary text is understood as "…an emanation from existing discourse formations, a sociopolitical ethos, a historical period, modes of book production and circulation, and so on" (Gupta, The Place of Theory in Literary Disciplines). Each concept mentioned in this definition is multi-layered and each layer is laced with a complex network of interacting human desires, purposes, and causes. It is hard to imagine that such complex functions could ever be delegated to the automated autonomy of an AI engine. Similarly, "creativity", in the words of a psychologist, is "best conceptualized as a behavior resulting from particular constellations of personal characteristics, cognitive abilities, and social

environments" (Amabile 358). It would be hard to imagine programming such "constellations" into a computer programme. The problem with the overenthusiastic claims is that it takes a very static view of a literary work, as a finished product read and enjoyed. However, such a view ignores the multifaceted dimensions which become relevant the moment the question of literary creation is raised.

Creativity by Computers

Recent advances in machine learning (ML) have increasingly enabled computers to "'learn' and change their behavior through search, optimisation, analysis or interaction, allowing them to discover new knowledge or create artefacts which exceed that of their human designers in specific contexts" (MaCormack and DÍnverno 2). "Algorithms are becoming able to adapt, learn, and create original, unpredictable outputs. ML has also changed the field of computational creativity" (Boden 2009; Loller-Anderson and Gamback 2018; Oliveira 2009; Sloman). Many different programmes or algorithms have been developed to simulate human creativity by composing stories, creating humorous texts, or writing poetry. Most of these algorithms have been created for single objectives, however, recent developments have rendered algorithms capable of text generation across various domains. Generative Pre-Trained Transformer 2 (GPT-2) is "trained on over 1.5 billion parameters to generate the next sequence of text for a given sentence. GPT-3 utilizes 1.75 billion parameters and can write essays, summarise texts, translate language, answer questions, and produce computer code (Vu).

It is intriguing to look into the claims of how algorithms compose creativity. They have access to multiple resources of literature which give them the power to analyse ideas, structures and language. Such creativity has already gained human acknowledgment and praise. Not only have they access to the databases of literary texts but also to human experience in various big data

sets. The online data usage patterns are also used as raw materials for these algorithms. Burns explains this shift in the production of the knowledge sphere where each user of the search engines is the producer of the data which is used by the designed algorithms (Bruns). The algorithms can evaluate the sort of phrases and styles a certain writer uses and generate a text similar to that writing style. Researchers feed the data, based on which machines learn rapidly to make plausible sentences and engaging plots. Almost 11,000 novels have been fed into Google Brain by Oriol Vinyals and Andrew M Dai to improve the technology giant's conversational style. After feeding these books into a neural network, the system was able to generate fluent, natural-sounding sentences. One of the authors, Rebecca Forster, whose books were fed to Google Brain, says "Perhaps I'm still thinking in the old way, that a reader will read my book – it didn't even occur to me that a machine could read my book" (Lea). Another example of this is *True Love* which was generated by an algorithm created by Alexander Prokopovich in 2008. That algorithm was fed with data on the novel Anna Karenina along with information on Leo Tolstoy's writing style which enabled it to write an original and unique version of Anna Karenina titled *True Love* where the characters were the same yet the plot was more engaging and twisted.

Similarly, the process of artificial creativity is not restricted to fiction, the advancement is also visible in the domain of poetry and screenplay scripts. On 19th May 2017, a Chinese company Cheers Publishing published a collection of 139 sonnets titled "Sunshine Misses Window". It claimed to be the first poetry book in human history written solely by an artificially intelligent algorithm named Xiaoice or Microsoft Little Ice. This AI studied almost 519 authors from the 1920s to the present which enabled it to formulate its own unique style of writing. It has created

almost 10,000 poems which were published online, under 27 aliases and very few of the interactors online were able to distinguish the robotic writing (Jie).

Another Death of the Author

In light of the above, a claim familiar to the ears of literary critics is being made again, namely the death of the author. Although the claim was first announced way back in 1967 by Roland Barthes, this time it is being made in a newer context. Since we see the emergence of fiction, produced by intelligent machines where the necessity of the human mind is only limited to the role of supervision. Following these trends, can we speculate that in near future, this minimal role of the author will also be eliminated? Or will it be a development where the agency of the author will work alongside newer tools to facilitate her? Amidst this technological shift, will history repeat itself, as Simon Eliot observed:

> New developments, new technologies, frequently do not completely replace older versions, but only partially displace them, creating a new environment in which old and new technologies coexist in some way. (Eliot 51)

The question here is can machines replace authors? And in an AI-governed world, where even things would be connected to servers, will the authors become redundant? Only by feeding large amounts of data to sophisticated algorithms would we be able to create literary texts to instruct and offer pleasure. At the moment, some algorithms randomly select large pieces of human-authored content, while others use minimal human authoring and have more sophisticated algorithms that support solving complex design constraints, exploring design variants, and automated evaluation and aesthetic judgment (Smith 6). The human author of a system creates an implicit specified theory for what the design process is by encoding not only the processes that

the machine should follow to design an object but also the bits of data that should be used by that process. These systems act as a formal theory of design, in terms of both the products they create and the processes they follow (Cook 200). This, in the words of Mohana Das, is misleading. In an article "Artificial Intelligence can Never be Truly Intelligent" Das also claims that what is being called intelligence is actually not intelligence. By citing the Chinese Room Argument (Cole), he highlights the difference between being truly intelligent and being able to do certain things by following provided instructions. Das is of the opinion that it "is not really the 'intelligence' that you and I identify intrinsically as a trait of our species. It is but an imitation or an illusion of human intelligence" (Das). Applying this insight to the question regarding the death of the author, we might reiterate that an AI-based composition cannot be called literature in the sense defined above and thus the algorithm responsible for its creation cannot perform the function of a human author who has the capacity to answer the question of why would one write a certain text. Though it would be beyond the scope of this paper, a question worth asking would be Why has literature been produced through the ages? This question of why is what an algorithm may never answer. It is also because an algorithm operates in a self-contained environment and even an algorithm like GPT-3 which has 1.75 billion parameters to exploit, it still operates within the conditions which are set by the human programmers.

The idea that machines would replace humans—that AI would replace human authors—is a claim which is rooted in what might be called a flawed grandnarrative of AI. David Watson challenges the mainstream narrative of AI which compares it to human cognition. He says such claims pertaining to AI's similarities to human cognition are vastly overstated and narrowly construed" (Watson 417), considers it part of the 'rhetoric' and finds fault with the terminology which is used to describe what machines can do since the times of Alan Turing. The 'biomimetic

approach' to AI which is the reason for this plethora of anthropomorphic terminology is also critiqued (Watson 421). Watson has offered many examples of how Deep Neural Networks, DNNs have repeatedly been misled and have failed to detect and identify accurately what the naked human eye could clearly distinguish (Watson 422-3). Increasingly, according to Watson, the limits of Artificial Intelligence are being reported (Watson 422). In the context of these critical insights, it would be inaccurate to claim the 'imminent replacement' of human authors with AI.

Similarly, in a conversation with the writers of this paper—along with a group of humanities researchers (Gupta, Artificial Intelligence and the Humanities), Suman Gupta, one of the authors of *What Is Artificial Intelligence?: A Conversation Between An AI Engineer And A Humanities Researcher* (2020), expressed a similar reservation, namely, that what is called intelligent is not intelligent in the sense we human beings are intelligent. He emphasized, in particular, that the *reason* for doing something as part of human intelligence but is beyond the scope of AI. He stated that the tasks we humans perform *can* be programmed and much of what we do *can* be mechanized, but the question of why—of the purpose of doing something—may never be tackled by computers on their own. It is in this higher human sense of discernment that might never be taken over by computational creativity. So far, all the literature that has been produced by AI is what we may call *programmed* literature where computers were taught to produce a work from a given amount of data. It would however be impossible for computers to assess an epoch, its challenges, and their impact on the human condition, coupled with myriad other factors pertaining to the individual desires of the author, her outlook on the world, her sense of purpose and then create a work which would engage with all those challenges.

Digital Imperialism and Algorithmic Bias

It is worth noting that technology and these algorithms are not value-free. Whoever controls the algorithms controls its products and hence greater production and access to data lead to greater control marking an age of digital imperialism. An example of this nexus between values, power, and AI is discussed in a recent study by Obermeyer et al. which revealed that a widely used prediction algorithm for selecting entry into healthcare programs was exhibiting racial bias against African-American patients. The tool was designed to identify patients suitable for enrolment into a "high-risk care management" programme that provides access to enhanced medical resources and support (Obermeyer, Powers and Vogeli 453). An additional challenge is that AI can obscure uneven power relations in ways that make it difficult for advocates and concerned developers to meaningfully address during development. As Ruha Benjamin notes, "whereas in a previous era, the intention to deepen racial inequities was more explicit, today coded inequity is perpetuated precisely because those who design and adopt such tools are not thinking carefully about systemic racism" (Benjamin 422). Safiya Nobles in her book *Algorithms of Oppression* (2018) supports this concept that how algorithms reinforce the oppression of already oppressed races and minorities saying, "We now face a new era framed by what I call "technological redlining" — the way data is used to profile us. We have new models where financial institutions are looking at our social networks to make decisions about us" (Noble 1). She also highlights the coding gap regarding creativity, cultural context, and freedom which creates this "new coding divide" of the twenty-first century which renders something fundamental invisible (64). In the wake of various coding gaps, it would be hard to imagine AI rising to the challenge of creating great literary works.

Whether it is Open AI, its tool GPT-3, or Google and other IT companies that develop algorithms, the advent of the digital milieu has also produced "a new quality of economic power" called surveillance capitalism (Zuboff 6). For Zuboff it is vital to understand that surveillance capitalism cannot be reduced to "platforms," "algorithms," "machine intelligence," or any other technological manifestation" (7). It is this digital milieu from within which AI-propelled creativity is being debated without due diligence to acknowledging the corporate forces which make it possible. According to Zuboff, "wholly new axes of exclusion and domination threaten every unprotected dimension of human experience" (6-7). Though beyond the scope of this paper, it would be very important to see what sort of understanding we may arrive at when we look at the creative dimension of AI-propelled future from the standpoint of surveillance capitalism. Zuboff calls for

Human Creativity Responds to AI

We would like to end the paper by highlighting the work of a Pakistani speculative artist Omar Gillani, a Peshawar-based award-winning young conceptual artist, illustrator, creative director, and mechanical engineer who presents his art as a response of an Eastern artist in the artificially intelligent world of the 21st century that is inspired by Western modernity. He responds to AI's agenda of colonial continuity in the language of indigenous futurism and envisages a future that follows technological advancement not breaking the ties to the past. His art subverts the mainstream notions of sci-fi art through the incorporation of Pakistani culture and heritage. In an interview with Dawn news, after his solo exhibition at Aks Gallery Islamabad, Gillani told that the paramount objective behind his art project titled Pakistan+ was that "the people of the subcontinent are ignored in sci-fi art and writing… we are reduced to barbarians, living in [a] terrorist wasteland" (Gilani 16). To alter the reputation of Pakistanis, artificially ignored due to

western bias, he ventured out to present an indigenous version of Pakistani sci-fi art. The following digital pieces of art exemplify Gillani's depiction of Pakistan's future which engages with the concerns highlighted above, namely, the issue of an overenthusiastic narrativizing and anthropomorphizing of AI which would overtake human intelligence. Gillani's artworks seem to be critiquing such plain narratives as in each of the artworks discussed below one can discern an indigenous 'noise' that disturbs the triumphant trumpeting celebrating AI conquest of humanity's future. In his artistic way, Gillani seems to be reinforcing Watson's observations which show how through various experiments it was shown that the AI fails badly in image recognition when 'noise' is introduced to alter an image even slightly (Watson 422-4).

In the first digital painting, there is a local "chai dhaba" which is somehow affected by the high-tech development as a robotic tray is taking the tea tray to serve tea among the seated ones nevertheless the indigenous way of taking tea at the dhaba while talking with other village fellows in terms of "baithak" is still present. Similarly, "a dodh wala" or milk delivery man is crossing one of the narrow streets of old Lahore on his blue flying scooter keeping the old customs intact.

Fig. 1. Gilani, Omar. "Dhaba." HIP, 18 Mar 2017,

https://www.hipinpakistan.com/news/1152095. Accessed 14 March 2021.

Fig. 2. Gilani, Omar. "Cyborg-beggar." HIP, 18 Mar 2017,

https://www.hipinpakistan.com/news/1152095. Accessed 14 March 2021.

Fig. 3. Gilani, Omar. "Guy bargaining with a rickshaw wala." HIP, 18 Mar 2017,

https://www.hipinpakistan.com/news/1152095. Accessed 14 March 2021.

AI gets representation in futuristic robots. These AI-generated beings are shown in artistic

speculations of the future. In Omar Gillani, we find these robotic beings in abundance. We see

how, through the employment of various artistic devices, the critique of an AI-dominated future

is being resisted, satirized, and imagined.

The desire to resist a neat future that is built on amnesia of the past is quite manifest. In the first

art piece, figure 1, called "Dhaba", we see an indigenous Pakistani public space where people

assemble to discuss anything and everything. It is the typical Dhaba where tea is served. In the

artwork, we see a robotic drone that is shown to carry the tea to a futuristic table. The people

sitting and discussing insinuate that human agency will continue to be the pivotal factor even in a

world where AI would not dominate but augment or facilitate human activity. The role that

robots would continue to play, the artwork seems to insinuate, would be subservient. They are

thus seen filling in the role of waiters catering to human needs who would still be able to sit and

talk and continue to raise the question of 'why' in a conversational setting of public space. The

digital artwork can be read as one which engages with the most crucial debates reviewed earlier in this paper, namely, the propaganda in favour of AI, the use of human metaphors for machines, and what is called anthropomorphizing AI by Watson (Watson). The artwork depicting Chai Dhabba can be further understood if we, speculatively, invert the equation and imagine it as a Dhaba where robots sat and discussed while humans served them tea. Such a depiction would have truly meant a subservient role of humans to AI. The resistance to such a future is thus manifest in this artistic configuration where the owner of the Dhaba, a human being, sits and makes tea and where human beings sit and converse about the issues the AI robots cannot fathom or are conscious of and hence are simply running the errands they are programmed to perform.

The same subtext can be seen even more strongly resonated in the second artwork depicted above (Figure 2) titled "Cyborg Beggar" in which the child cyborg with a mechanically replaced arm *continues to* beg on roads. The work can again be read as a poignant critique of a possible future dominated by technology and the advancements in biotech which would be able to replace the arms of a poor child, amply discussed by Harari in *HomoDeus*, will still not end the prevalent state of impoverishment in societies around the world. Harari has amply highlighted the possibility of this growing divide despite advancements in AI. Similar apprehensions have also been expressed by Shoshana Zuboff in *The Age of Surveillance Capitalism* (2019). In yet another work, (Figure 3) Gilani juxtaposes a flying auto-rickshaw with two flying cars, one closer to the ground, while the other flying at a higher altitude. The theme of class divide is again seen being reinforced. A Utility Store is also visible in the background which is known for its government-backed, subsidized offerings aimed at the weaker segments of society. The artwork again depicts the theme that the future may not be an Elysium for all, rather it will continue to reinforce the existing unfair structures of the present age. The artistic take of Omar Gillani can

then be read as artistic resistance which goes against the mainstream narrative which touts a future where AI would solve most of our problems. In doing so Gillani's narrative aligns with the critiques of the overenthusiastic narratives of an AI-dominated future.

Conclusion

This paper has thus highlighted the need to critically examine the narratives that compete in the discourse pertaining to humanity's future. Here again, the biases of the neo-colonial world, are being perpetuated. On the one hand, the techno-centric biases infect even the deep neural networks of AI, while on the other the older instinct of profit maximisation is appearing in newer garbs of surveillance capitalism. In such a scenario, where algorithms continue to reinvent pre-digital defects of human thought, it becomes all the more important for humanities researchers, writers, and artists to cultivate what Shannon Vallor calls "techno-moral wisdom" (Vallor 118) as such an effort would lead to resisting the detrimental impact of AI on weaker communities and might pave the way for a more humane future.

<h3 style="text-align:center">Works Cited</h3>

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