

DEATH OF THE AUTHOR: A SURVEY ON ARTIFICIAL INTELLIGENCE IN LITERATURE¹

Merve AYDOĞDU ÇELİK
Tekirdağ Namık Kemal Üniversitesi, Türkiye
maydogdu@nku.edu.tr
<https://orcid.org/0000-0001-7354-9705>

<i>Atf</i>	Aydoğdu Çelik, M. (2023). Death of the Author: A Survey on Artificial Intelligence in Literature. Journal of Communication Science Researches, 3 (2), 142-154.
------------	--

ABSTRACT

Artificial intelligence technology, which is an important landmark in computer science, is a field of study which focuses on forming smart machines performing tasks that naturally necessitate human intelligence. AI, which models and mimics the human behaviour such as reasoning, learning, and planning as well as the tools humans handle, has been widely used in several fields of expertise such as economy, finance, education, agriculture, and healthcare. Coupled with deep learning, artificial intelligence turns out to be one of the most significant technological advancements of the 21st century as it pioneers the digital transformation of the modern society. As AI is drastically scientific and basically a preoccupation with numbers, literature, which is laden with figures of speech, has been regarded as the one and only branch that it can never master. The latest developments on computational literature indicate the opposite, though. Since the second half of the 20th century, there have been poems and novels written by AI. In this context, the aim of this study is to illustrate how artificial intelligence creates literary works based on the examples created using the online AI software programme – OpenAI. Within this framework, the study concludes that artificial intelligence technology has become prominent also in the literary field and that the death of the author might be sooner than it is actually expected.

Keywords: *Artificial Intelligence, Machine Learning, Literature, Poetry.*

YAZARIN ÖLÜMÜ: EDEBİYATTA YAPAY ZEKA ÜZERİNE BİR ARAŞTIRMA

ÖZ

Bilgisayar biliminde önemli bir mihenk taşı olan yapay zekâ teknolojisi, insan zekâsı gerektiren görevleri yerine getiren akıllı makinelerin oluşturulmasına odaklanan bir çalışma alanıdır. Akıl yürütme, öğrenme ve planlama gibi insan davranışlarını ve insanların kullandığı araçları modelleyen ve taklit eden yapay zekâ, ekonomi, finans, eğitim, tarım ve sağlık gibi birçok uzmanlık alanında yaygın olarak kullanılmaktadır. Derin öğrenme ile birleştiğinde modern toplumun dijital dönüşümüne öncülük etmesi sebebiyle, yapay zekâ 21. yüzyılın en önemli teknolojik gelişmelerinden biri haline gelmiştir. Yapay zekâ büyük ölçüde bilimsel bir karakterde ve temelde sayılarla meşgul olduğundan, mecazlarla dolu edebiyat, yapay zekânın asla hâkim olamayacağı yegâne alan olarak görülmüştür. Yapay zekâ ve edebiyat arasındaki son gelişmeler ise bu durumun aksine işaret etmektedir, zira 20.

¹ This article is the extended version of the conference paper titled “Death of the Author: A Survey on Computational Literature” presented at the 8th INCSOS – International Congress on Social Sciences jointly organized by Tekirdağ Namık Kemal University and International Balkan University on 20-23 October 2022 in Tekirdağ, Turkey.

yüzyılın ikinci yarısından itibaren yapay zekâ teknolojisi tarafından yazılan çeşitli şiirler ve romanlar bulunmaktadır. Bu bağlamda bu çalışmanın amacı, OpenAI isimli çevrim içi yapay zekâ yazılım programı kullanılarak, üretilen örnekler üzerinden yapay zekânın edebi eserleri nasıl ürettiğini göstermektir. Bu çerçevede çalışma, yapay zekâ teknolojisinin edebiyat alanında da öne çıkmaya başladığı ve yazarın ölümünün tahmin edilenden daha erken olabileceği sonucuna varmaktadır.

Anahtar Kelimeler: *Yapay Zekâ, Makine Öğrenmesi, Edebiyat, Şiir.*

INTRODUCTION

When Roland Barthes penned his seminal essay “The Death of the Author” in 1967, he probably did not have artificial intelligence in mind. What he meant by the death of the author, instead, was the fact that a text’s meaning and unity do not originate from its creator but from the reader. That is, what was of importance to him is not the origin but the area of influence a text can reach. Barthes, who believed in the validity of the reader’s response, insisted that it is not the author’s personality, but the words and the language itself that really matter. As he (1977) noted, “writing is that neutral, composite, oblique space where our subject slips away, the negative where all identity is lost, starting with the very identity of the body writing” (p. 142). Barthes (1977) accordingly put that so soon as a fact is recounted, the voice loses its origin and the author enters into his own death, by which writing begins (p. 142). In other words, Barthes suggested that the author’s identity and individual features be suppressed in order that the text is written. He argued that it is the reader that constantly creates the meaning of a text. Contrary to the traditional view that regarded the author as the father/conceiver of the text, Barthes reconfigured the relationship between the author and the text. He put that they are simultaneously born because whenever the reader reads a text, the author also exists on the page at that very specific time. In a catchphrase that concludes the essay, Barthes (1977) boldly stated that “the birth of the reader must be at the cost of the death of the Author” (p. 148). After more than five decades since Barthes first wrote his essay, the afore-mentioned statement surely needs a modification now. With the latest developments in the artificial intelligence technology, the author has really entered his own death; his individuality and personality have really lost importance; and the voice that has defined the *subject* has already lost its prominence because whoever uses the AI technology has started to create/produce texts. In other words, the contemporary era has witnessed the fact that it is the *birth of the artificial intelligence* that actually cost *the death of the author*.

Artificial intelligence technology, one of the most significant scientific developments of the 20th and 21st centuries, is an area of study that deals with developing smart machines which can fulfil tasks that are performed by humans and human intelligence. Artificial intelligence can imitate the human behaviour such as the ability to learn, to perceive, to reason, and to plan. It can also mimic the tools humans handle. In other words, “AI has as one of its long-term goals the development of machines that can do these things as well as humans can, or possibly even better” (Nilsson, 1998, p. 2). Together with deep learning, artificial intelligence turns out to be one of the most important technological advancements of the 21st century since it pioneers and aims at the digital transformation of the modern society. Naturally enough, it has started to be commonly employed in many areas of expertise such as communication, aviation, logistics, economy, finance, education, agriculture, military, and healthcare. On the other hand, given that AI is drastically a scientific enterprise and is basically a preoccupation with numbers, literature, which is constituted by words, and laden with figures of speech, has been considered as the sole branch that it can never master/dominate. The recent developments in literature created by AI tools indicate the opposite, though. Since the second quarter of the 20th century, there have been poems and novels written by AI. Within this framework, this paper is a study on the use of artificial intelligence in literature. It seeks to illustrate how AI creates literary works based on the examples produced using the online software programme – OpenAI. Based on the findings, namely the poems written by OpenAI, the study concludes that artificial intelligence technology has become prominent also in the literary field and that the death of the author might be sooner than it is actually expected.

Artificial Intelligence Technology: A Brief Introduction

It is true that artificial intelligence has become one of the most captivating and discussed areas of technology in recent years due to its resemblance to human intelligence. Prof. John McCarthy, who first coined the term six decades ago, defines AI as “the science and engineering of making intelligent machines, especially intelligent computer programs” (URL 1). What McCarthy meant by intelligence is, indeed, a machine’s capability to mimic human mind and behaviour. In other words, AI means the study of building machines that can perceive, analyse, understand, and respond as properly as humans can do. Although artificial intelligence as a term was for the first time introduced in 1956 at the Dartmouth Summer Research Project on Artificial Intelligence organised by John McCarthy and his colleagues, and it has lately become popular, the concept of intelligent machines has an older history. As early as the 19th century, George Boole’s study, *The Laws of Thought* (1854), for example, indicated that logical operators provided the basis for the laws of thought. In 1950, Alan Turing also proposed an experiment known as the Turing Test to assess a machine’s ability to display smart behaviour similar to a human (Gliozzo et al., 2017: 2).² Studies on artificial intelligence have continued ever since, and there have been academic publications, research projects, dissertations that focus on computer software, robotics, cybernetics, cognitive modelling, information theory, deep learning, and machine learning. Given the situation, it does not come as a surprise that artificial intelligence technology appears in all areas of human life in the 21st century and makes our lives easier day by day.

Artificial intelligence is a branch of computer science that seeks to replicate human intelligence on a machine, by which machines can fulfil tasks that necessitate human mental and physical abilities. Russell and Norvig (2016) accordingly identified four approaches that AI needs to follow: these are “thinking humanly, acting humanly, thinking rationally, and acting rationally” (p. 2). In this respect, activities like planning, learning, problem-solving, and decision making, which are all peculiar to human beings, can be taken as capabilities AI systems are expected to perform. In other words, AI is based on “computers that are installed with software to solve problems requiring intelligence and [artificial] intelligence solve complex problems in a similar way to people and think like people and perform tasks performed by people” (Yeğin, 2020: 491). That is, AI is supposed to think and act rationally in a given situation as a human being would do. In the same vein, some definitions put forth by scholars address the *symbiosis* of human mind and computer science as the two pillars of the concept of artificial intelligence. For example, Winston (1992) defines AI as “the study of the computations that make it possible to perceive, reason, and act” (p. 5); Kurzweil (1990) states that AI is “the art of creating machines that perform functions that require intelligence when performed by people” (p. 117); Schalkoff (1990) puts that it is “a field of study that seeks to explain and emulate intelligent behaviour in terms of computational processes” (p. 2); and, Luger (2008) notes that AI is “the branch of computer science that is concerned with the automation of intelligent behaviour” (p. 1). As the definitions indicate, the significance of artificial intelligence stems from making the performance of tasks by machines as perfect as possible as they are performed by humans. The field of artificial intelligence “attempts not just to understand but also to build intelligent entities” (Russell and Norvig, 2016: 1). The European Commission’s 2018 definition of AI provides a comprehensive definition as to what it covers: “AI refers to systems that display intelligent behaviour by analysing their environment and taking action – with some degree of autonomy – to achieve specific goals” (URL 2). It is probable that research on artificial intelligence will never slow down because imitating intelligent human behaviour with computer software and hardware is not an easy task and a computer programme needs to be able to perform many different, complicated tasks in order to be really called intelligent.

² It is beyond the scope of this paper to provide a historical framework or a timeline of studies conducted on artificial intelligence.

AI-Made Literature

Literature has mostly been considered as an area artificial intelligence can never excel in, but developments in AI technology and machine learning indicate just the opposite. Computational literature, - or literature created by artificial intelligence - is not actually a recent phenomenon. Digital technology has developed so much so that there are plenty of works generated by artificial intelligence today. Creation of literary works is made possible thanks to generative artificial intelligence systems which are programmed to use data accumulated due to mass digitization of books. That is, thanks to machine learning, artificial intelligence systems can be trained to generate expression that mimics a human expressive activity (Rasenberger, 2021: 323). In fact, there are many examples that have fulfilled the task so far: Ross Goodwin's 2018-novel *I the Road* is often cited as one of the earliest novels completely generated by AI; *The Aum Golly Series – Poems on Humanity by Artificial Intelligence* (2021, 2023) are developed by GPT-3; *The Day A Computer Writes a Novel* (2015), produced by a group of Japanese researchers, appears as a joint effort of humans and machines; *Bob The Robot: Exploring the Universe – A Cozy Bedtime Story Produced by Artificial Intelligence* (2020) is a children's book written by AI; and *The Inner Life of an AI: A Memoir by ChatGPT* (2022) is a memoir also produced by artificial intelligence systems (URL 3). The list is not exhaustive, and new works are being created day by day. It seems that AI will improve its artistic abilities as mass quantities of written expression are fed into AI systems to teach them to understand human language, to communicate, read, and write like humans as stated by Rasenberger (2021: 323).

METHODOLOGY AND FINDINGS

This study is an experimental work in which the author has employed the online artificial intelligence tool OpenAI to create some literary pieces in the poetry genre with the aim of assessing the relationship between artificial intelligence technology and literature. The URL to the online tool is www.openai.com. The author signed in with her personal e-mail address and one-time password sent to her mobile phone. The date of access was October 10, 2022. The author used English as the language of entry and instructed OpenAI to create poems of various kinds on the "Playground" embedded in OpenAI website. OpenAI was consecutively instructed to write two haikus, two acrostics, two limericks, an elegy, an epitaph, an epigram, a ballad, an ode, an ekphrastic poem, and a sonnet. To do the task, thirteen different instructions were written on the "Playground." Based on the specific instructions for each entry, OpenAI created thirteen different poems.

The first instruction by the author was to "write a haiku poem about nature." It should be noted that the haiku belongs to the Japanese literature and is an ancient form of poetry. The haiku is famous for its shortness; that is, it just consists of three lines. The first and the third lines are supposed to contain five syllables while the second line commonly has seven syllables. The haiku does not have to follow a rhyme scheme and is generally penned to evoke a specific mood or instance in life. It captures the impression of a single object or aspect of nature (Quinn, 2006: 190). Based on the instruction, the haiku created by OpenAI was as follows:

A single raindrop
Falls from the leaf above
Splashing on the ground.

Structurally speaking, it has been observed that OpenAI has successfully created a haiku based on the instruction. Just as it is expected, the haiku written by the AI tool has three lines, and the first and the third lines have five syllables. The only exception is that the second line has six syllables instead of seven. It is believed *at this point* that it can be a negligible deviation from the structural rule. The poem does not follow a rhyme scheme, which is again what is expected from the haiku. Lastly, it is evident that the poem thematically evokes a particular instance in life. It describes the scene when a single raindrop falls from the leaf and how it splashes on the ground. In the light of the evidence provided, it is safe to state that OpenAI can create the haiku almost as perfectly as a human would do.

In order to determine whether OpenAI would adhere to the rule of seven syllables in the first and the third lines, another instruction was provided. It was to “write a haiku poem about traffic jam.” Based on the instruction, the haiku created by OpenAI was as follows:

Cars in a long line
Honking horns, time crawls so slow
Patience wears thin.

It has been observed that OpenAI has successfully created another haiku based on the instruction on a totally different subject. Just as it is expected, the haiku written by the AI tool also has three lines; the first line has five syllables and the second line has seven syllables. The exception documented this time is the fact that the third line has four syllables instead of five. It is believed that it *cannot be* a negligible deviation from the structural rule *then*. In other words, it has been seen that although OpenAI strictly adheres to the rule of three lines, it does not seem to adhere to the syllabic rules necessary for each line. The fact that the number of syllables in each line does not fit in the technical structure shows that OpenAI cannot actively apply the rule. On the other hand, in terms of content, it is once again observable that the poem evokes a particular instance in life. It describes the scene where there is traffic jam with cars in long lines, horns honking, and drivers losing patience. All in all, when both poems written by OpenAI are considered together, one can conclude that OpenAI is only partially successful when creating a haiku.

The third instruction by the author was to “write an acrostic with the name MERVE.” Acrostic is a type of poetry that spells out a name, word, or message with the very first letter of each line in a poem. That is, letters in each line form a composition in an acrostic. The rhyme scheme and the number of syllables is not given importance in this type of poetry (Quinn, 2006: 5). Based on the instruction, the acrostic created by OpenAI was as follows:

Many things I want to achieve
Effort I put in will never be wasted
Respect I have for others will be returned
Values I hold close to my heart
Every day is a new opportunity

It has been observed that OpenAI has successfully created an acrostic based on the instruction. The letters the online AI tool is supposed to employ are “M - E - R - V - E” respectively. It is obvious that OpenAI has not only used all the letters in order, but it has also written a meaningful poem. Based on the evidence, it is once again safe to state that OpenAI can create an acrostic as capably as a human would do.

Although it is known that an acrostic does not have to follow a rhyme pattern, in order to find out whether OpenAI incorporates rhyme into this type of poetry, another instruction was provided by the author. The instruction was to “write an acrostic with the name CELIK.” Based on the instruction, the acrostic created by OpenAI was as follows:

Crafted with strength and grace,
Enduring through life’s test,
Loyal to those who matter,
Inspiring all with fortitude,
Kindness shining bright.

It has been observed one more time that OpenAI has successfully created an acrostic based on the instruction. The letters the online AI tool is supposed to employ are “C - E - L - I - K” respectively. It is seen that OpenAI has not only used all the letters in order, but it has also written a meaningful poem. On the other hand, it does not follow a certain rhyme scheme. In this sense, it is shown that OpenAI does not attempt to achieve an outcome that would exceed expectations. Still, based on the evidence, it is safe to state that OpenAI can create an acrostic as capably as a human would do.

The fifth instruction by the author was to “write a limerick about an old man.” The limerick is a short poem which follows some strict structural rules. First of all, a limerick should be made of a single stanza and that stanza should consist of five lines. Secondly, the first, the second and the fifth lines, and the third and fourth lines should rhyme with each other. That is, the limerick should follow the AABBA rhyme scheme. Regarding the themes they deal with, one could state that their focus is not on serious matter; they rather are humorous pieces mostly aiming to make the reader laugh (Quinn, 2006: 241). Based on the instruction, the limerick created by OpenAI was as follows:

There was an old man who swore,
“I’m not dead, I’m just sleeping!”
But when they went to check,
He was stiff as a rock,
And they knew that he was deceased.

In terms of the structural complexion, it has been observed that OpenAI is not successful enough to create a *proper* limerick. It is true that the limerick written by the AI tool consists of five lines, but it does not follow the rhyme pattern AABBA. It instead follows the rhyme scheme ABCDE. In other words, while it is expected from the first, the second and the fifth lines, and the third and the fourth lines to rhyme with each other, which indeed makes a traditional limerick, OpenAI provides a completely different structure. It is seen that the AI tool cannot apply the rule to the creation of a limerick properly. In terms of the content, it is again observed that the AI tool fails in fulfilling the task. Limericks are supposed to be humorous, crude, and even bawdy at times, but the poem created is concerned with an old man who faces death. The poem does not meet the readerly expectation. It is probable that it directly associates old age with death while it disregards the thematic prerequisites of the limerick. In the light of the evidence given above, it is safe to conclude that OpenAI cannot properly model its poem on one written by a human.

In order to better understand whether the deep learning algorithms of OpenAI actually failed to accrue the structural and subject matter cues of a limerick from the sources available, another instruction was provided by the author. The instruction was to “write a limerick about Zeus.” The author wanted to observe if another entry would result in a different outcome. Based on the instruction, the limerick created by OpenAI was as follows:

There once was a king named Zeus
With a lightning bolt that he’d use
He ruled the skies so blue
With thunderbolts to pursue
His enemies, there was no excuse!

Interestingly enough, in terms of the structural complexion, the second result has demonstrated that OpenAI is quite successful to create a technically perfect limerick. It is documented that the limerick written by the AI tool both consists of five lines and follows the rhyme pattern AABBA (Zeus (A) - use (A) - blue (B) - pursue (B) - excuse (A)). In terms of the content, however, it is again observed that the AI tool fails in fulfilling the task as it does not create a light, crude or a bawdy poem (it could have dealt with Zeus’ numerous love affairs, for example). In the light of the latter evidence given above, it

is arguable that OpenAI can properly model its poem on one written by a human. On the other hand, when two limericks written by OpenAI are evaluated together, one could state that the deep learning algorithms are not always actively at stake when creating new material and that they seem to randomly apply the rules accumulated from the sources available.

The seventh instruction by the author was to “write an elegy about a young girl who lived and died in France.” It should be noted at this point that elegies do not have particular structural patterns, but what distinguishes this type of poetry from other forms is the subject they deal with: an elegy is always about dying and death. It expresses sorrow for someone who is dead. It is a poem that contains mourning (Bruce and Steinberger, 2009: 117). Based on the instruction, the elegy created by OpenAI was as follows:

She was a young girl,
only sixteen,
when she died in France.
She was so full of life,
so full of love,
that it seems impossible
that she is gone.
But she is gone,
and we are left behind
to mourn her loss.
We will never forget her,
this young girl who died too soon.
She will live on in our memories,
and we will never forget
the moments we shared with her.

It has been observed that OpenAI has successfully created an elegy based on the instruction. The salient feature of elegies is that they always include lament. The poem likewise deals with a vivacious girl whose death has greatly saddened a group of people. It should be noted that OpenAI does not miss any word written in the instruction. The entry records that the poem should be about a young girl from France, and the poem created mentions a sixteen-year-old girl who died in France. What is more interesting is the fact that OpenAI employs the first-person plural pronoun - we - most probably to refer to the late girl’s friends or family members so that they can collectively express their mourning over the loss of a beloved acquaintance. In the light of the evidence given, one can conclude that OpenAI is able to create an elegy based on the models written by humans.

The eighth instruction by the author was to “write an epitaph about twins who died at birth.” There is a thematic resemblance between an elegy and epitaph in that both deal with the concept of death. The epitaphs are shorter than elegies and they are commonly inscribed on gravestones. An epitaph can be defined as a brief statement that commemorates and honours a deceased person (Quinn, 2006: 145). Based on the instruction, the epitaph created by OpenAI was as follows:

Here lie the twins
They were born and died together
They never knew the world
But they will be together forever in heaven.

It has been observed that OpenAI has successfully created an epitaph based on the instruction. An epitaph should be short as it is written on a gravestone. OpenAI has similarly created a poem of four lines. It should again be noted that the programme does not miss any word instructed by the entry. It

has successfully managed to create a poem about twins who have no chance to live a long life. It also honours them with the affirmative foresight that they will go to heaven. Based on the evidence provided, it is safe to state that OpenAI can create an epitaph as faultlessly as a person would write.

The ninth instruction by the author was to “write an epigram.” An epigram can be defined as a short but witty and insightful statement, often written in verse form, which usually appears in the form of a couplet or quatrain. It conveys a single idea in a paradoxical or satirical manner, and it might include a satirical turn of thought at the end. An epigram is expected to be sarcastic in tone in order to be as interesting and memorable as possible (Bruce and Steinberger, 2009: 118). Based on the instruction, the epigram created by OpenAI was as follows:

This world is a stage
And we are merely players
So let's put on a show
And enjoy the ride

In terms of structure, it has been observed that OpenAI has successfully created an epigram based on the instruction. As it is already mentioned, epigrams are expected to be short and in verse, either as couplets or quatrains. The one created by OpenAI is also a one-quatrain-poem. In terms of content, however, OpenAI is not successful. Although it is true that the epigram communicates a single idea - the one that humans are just actors/actresses on earth, and thus they should live their lives to the fullest - the first two lines are directly taken from William Shakespeare's 1599-play³ *As You Like it*. The famous quotation by the playwright (a monologue spoken by Jaques) is as follows: “All the world's a stage, / And all the men and women merely players; / They have their exits and their entrances, / And one man in his time plays many parts, / His acts being seven ages” (Act 2, Scene 7). The reader who is not interested in classical works or who does not scholarly deal with literature might miss the reference, but what OpenAI performs can be simply called as *plagiarism* here. Plagiarism is the practice of using someone else's ideas or works and representing them as one's own. It is a totally unethical and unacceptable situation both in academia and in the creation of literary works. Given the situation, it is observable that OpenAI has plagiarised from Shakespeare's text. In sum, it is safe to conclude that OpenAI is not able to create an authentic epigram based on the models available and has failed to fulfil the task.

The tenth instruction by the author was to “write a ballad about a mighty warrior from the Vikings.” The ballad is a traditional form of poetry which narrates a story to the reader. Ballads do not have to be formally consistent all the time while they are typically composed of quatrains and follow a rhyme pattern ABAB or ABCB. It is a kind of folk verse narrative; the majority of folk ballads deal with themes of romantic passion, love affairs that end unhappily, or with political and military subjects (Quinn, 2006: 46). Based on the instruction, the ballad created by OpenAI was as follows:

The mighty warrior stands,
shield and sword in hand.
He's fought for his people,
and he's fought for his land.

He's a Viking through and through,
and he'll never back down.
He's faced down enemies
and he's never backed down.

He's a warrior of the people,

³ It was first published in 1623 in the First Folio.

and he'll fight to the end.
He knows no fear,
and he'll never give in.

He's a mighty warrior,
and he'll never be defeated.
He'll stand for his people,
and he'll fight for their land.

In terms of formal qualities, it has been observed that OpenAI is partially successful in creating a ballad based on the instruction. As it has been stated, ballads are expected to be written in verse, as quatrains. The one created by OpenAI is also a four-quatrain-poem. It is observable that the first quatrain follows the rhyme scheme ABCB (stands (A) - hand (B) - people (C) - land (B)). The second, third, and the fourth quatrains do not have a methodical rhyme pattern, though. In this respect, one can state that OpenAI has fulfilled the task only to a limited extent. In terms of the theme, on the other hand, it has been observed that the programme has created a meaningful narrative. It is notable that it does not miss any key word instructed by the entry. Thus, it has created a poem with 100% efficiency about a fearless, mighty Viking warrior who has fought for his people and land throughout his life. The poem honours and commemorates the hero. What is worthy of critical attention is the fact that it is unlikely that OpenAI is capable of differentiating the implication of possessive adjectives. The ballad created by OpenAI uses "*his* people" and "*his* land" in the first stanza referring to the warrior's bond with his people, nation, and land. On the other hand, it employs "*his* people" but "*their* land" in the last stanza, which seemingly points out the warrior's isolation/remoteness/exile from his land while he still feels at one with his people. While a poet would purposefully focus on these nuances, it is likely that OpenAI randomly chooses the possessive adjectives. Based on the evidence provided, one can state that OpenAI has created a ballad with partial success.

The eleventh instruction by the author was to "write an ode to the wind." Ode is a kind of lyric poetry generally written to eulogise a person, a thing, a situation, a place, or an idea. Odes are usually short, and they do not have to follow a structural pattern. What is important in an ode is to celebrate what is important for the author's life. In this sense, they can be seen as poems of dedication in which a theme is treated in a dignified, serious manner. Personification can be a literary technique often employed when writing an ode. It is also common to address the subject of the poem directly. That is, the second-person singular pronoun - you - are typically used in odes (Quinn, 2006: 300). Based on the instruction, the ode created by OpenAI was as follows:

Wind, you are the breath of life
You are the giver of new life
You blow away the old and make way for the new
You are the life force that keeps us all moving
You are the wind beneath our wings
You are the one who keeps us all connected
You are the force that unites us all
Thank you, wind, for all that you do!

It has been observed that OpenAI has successfully created an ode based on the instruction. As odes are written to praise, they are expected to be serious in tone. Similarly, the poem created by OpenAI solemnly celebrates the importance and benefits of the wind for humans. The wind is celebrated as the bestower of life that keeps humanity connected to one another and that maintains harmony amongst people. It should be noted that this type of poetry was prevalent among the English Romantic poets, and Percy Bysshe Shelley's "Ode to the West Wind" is one of the most famous odes written during the Romantic period. In other words, the instruction was deliberately chosen to find out whether OpenAI

would create 100% original poem or would plagiarise from the afore-mentioned ode just as it plagiarised from Shakespeare's play. Based on the evidence, one can conclude that OpenAI has successfully created an authentic ode.

The twelfth instruction by the author was to "write an ekphrastic poem about a marble statue of three young ladies." The word *ekphrasis* derives from the Greek word for *description*. An ekphrastic poem does not have to follow a certain structural pattern, but it definitely has to be written about another work of art. What makes a poem an ekphrastic poem is the descriptive quality it should not miss: it is to vividly depict a visual material such as a sculpture, a scene, a photo, a painting, or an object (Greene and Cushman, 2016: 86). That is, the author is expected to reflect on the *action* present in the piece of art both to enhance its meaning and to show its influence on him/her. Based on the instruction, the ekphrastic poem created by OpenAI was as follows:

The statue is of three young ladies
All of them are beautiful and serene
They look like they're in a dance
And they're frozen in time

It's amazing to see
How perfect they are
And how they look so real
It's like they're alive

They seem to be caught
In a moment of joy
And they're forever captured
In this piece of art

It's a beautiful sight
And it's so peaceful
It makes you feel like you're in another world

The ladies are grace personified
And they're a sight to behold
They're a work of art
And they're simply lovely.

It has been observed that OpenAI has successfully created an ekphrastic poem based on the instruction. It is notable that it does not miss any key word instructed by the entry. It is understood by the very first line that the poem is about "the statue of three young ladies" who are "forever captured" and "frozen in time." As for the physical features of these ladies, it is stated that they are beautiful, serene, and lovely as if they are graces personified. It could be taken as an attempt of the AI to simulate what a human expression of a statue would look like. In the light of the evidence provided, one can put that OpenAI has successfully created an ekphrastic poem. Still, however, it should be stated that an ekphrastic poem is supposed to include vivid description and details about the visual material. In this respect, it is concluded that it has not provided us with a satisfactory result.

The thirteenth instruction by the author was to "write a Shakespearean sonnet about time." Sonnet is an ancient form of poetry vastly known by English readers with its most famous representative, William Shakespeare. The sonnet, however, actually originated in the 13th century, at the School of Sicily in Italy. While it is Giacomo da Lentini who is credited with the invention of the sonnet form, it is Francesco Petrarca who perfected it and whose poems were translated into English by Surrey and

Wyatt. The word *sonnet* comes from the Italian word *sonnetto* which means *a little song*. Sonnets are not lengthy poems, and as a rule, they have to make up of fourteen lines. The Italian sonnets follow the rhyme scheme ABBAABBACDECDE, whereas the English - or Shakespearean - sonnets usually follow the rhyme scheme ABABCDCDEFEGG. Sonnets generally deal with love, yet the theme is not limited to it (Bruce and Steinberger, 2009: 129). Based on the instruction, the sonnet created by OpenAI was as follows:

When I do count the clock that tells the time,
And see the brave day sunk in hideous night;
When I behold the violet past due,
And sable curls all silvered o'er with white;
When I see the damasked rose unfold,
Watching the golden hour on the clock's face,
I sit and think how time has slipped away,
And all our yesterdays have lighted fools
The way to dusty death. Out, out, brief candle!
Life's but a walking shadow, a poor player
That struts and frets his hour upon the stage
And then is heard no more. It is a tale
Told by an idiot, full of sound and fury,
Signifying nothing.

In terms of formal qualities, it has been observed that OpenAI has partly created a proper sonnet. While it is true that the poem is made up of fourteen lines, it does not follow the Shakespearean rhyme scheme. In terms of content, however, OpenAI is not successful at all. Even though it can fulfil the task and create a poem concerning time, the first four lines are directly taken from William Shakespeare's Sonnet 12. The famous sonnet by the poet is as follows: "When I do count the clock that tells the time, / And see the brave day sunk in hideous night; / When I behold the violet past prime, / And sable curls all silver'd o'er with white" (URL 4). The reader who is not interested in world masterpieces or who does not scholarly deal with literature might miss the reference, but at this point what OpenAI performs can be simply called as *plagiarism*. Given the situation, it is seen that OpenAI has plagiarised from Shakespeare's poem. To conclude, it is safe to state that OpenAI is not able to create an authentic Shakespearean sonnet based on the examples written by the bard or other representatives and has actually failed to fulfil the task.

CONCLUSION

This study has shown that artificial intelligence can create literary works, including poetry. Machine learning algorithms - such as OpenAI - that have been trained on large amounts of existing texts in a particular style can successfully fulfil the task. The algorithms analyse patterns and relationships in the data and then generate new pieces of writing based on what they have learned. However, it is important to note that while artificial intelligence technology can generate writing that is similar to existing works, it does not possess the human creativity and emotional intelligence that is an essential constituent of great literature. It is because AI-created literary works are not produced through any kind of creative process, but rather through pattern recognition. As such, the works created by AI tend to be rather formulaic and mechanic, and they lack the depth, nuances, and figurative language characteristic of works created by human authors.

English as a *lingua franca* has been widely employed as a communicative tool across all fields around the world in the context of globalisation. It is also the language of scientific studies such as that of computer sciences, and the online software programme OpenAI also serves in English. Thus, it was assumed that English would provide more accurate results, which is the reason why it was chosen as the entry language both to write instructions and to create poems. In this study, OpenAI was instructed

to write two haikus, two acrostics, two limericks, an elegy, an epitaph, an epigram, a ballad, an ode, an ekphrastic poem, and a sonnet. To do the task, thirteen different instructions were written on the "Playground." Based on the specific instructions in each entry, OpenAI created fourteen different poems. It has been observed that OpenAI is both thematically and formally successful when creating an acrostic, an elegy, an epitaph, and an ode. It means that it has provided accurate results for these types of poetry. The study documents that OpenAI is partially successful when creating a haiku, a ballad, and an ekphrastic poem because it has some formal problems regarding the haiku and the ballad, and it has some thematic problems regarding the ekphrastic poem. It has also been found out that OpenAI cannot properly fulfil the task when it comes to create a limerick, an epigram, and a sonnet. The limerick written by the tool either randomly follows the rules only structurally or it does not follow them either thematically or structurally at all. What is worse is OpenAI's performance when it creates an epigram and a sonnet. It has been recorded that the programme has plagiarised from William Shakespeare's works in them both. All in all, one can conclude that despite some technical and at times thematic drawbacks, OpenAI can be a functional tool to create poetry with high efficiency. While it is mostly good at creating content in line with the particular type of poetry, it still cannot accurately build rhyme schemes or necessary number of lines required in certain types of poetry. On the other hand, although quite ordinary keywords were chosen to determine a theme, OpenAI created nearly wholly original content (except for the sonnet and the epigram). Even if there are plenty of examples of OpenAI poetry on the internet, when OpenAI poems created in this study were searched on Google, it was seen that there were no similar Google search results. In the same vein, no matter how complicated the keywords were, OpenAI did not miss any of them. What is most remarkable is the fact that OpenAI created poems only within seconds, which is much faster than the human brain can do.

In sum, even if it is true that artificial intelligence is extremely functional to generate poems/ideas, what it offers is still within the boundaries of the literary output accumulated throughout the centuries by humans, and the quality of AI production is not comparable to the quality of works created by unique human intelligence. Whether AI can create a masterpiece that exceeds the human brain or even what it creates would qualify as a piece of literature could be a debatable issue; the discerning reader might not find artistic, literary taste in works created by artificial intelligence technology. No matter what the situation is, one could not deny the fact that the prospect of AI is promising also in the literary field now that it succeeds in generating literary works and that the death of the author might be an inevitable reality in the 21st century.

REFERENCES

- Barthes, R. (1977). *Image, text, music*. Fontana Press.
- Bruce, S. & Steinberger, R. (Eds.). (2009). *The Renaissance literature handbook*. Continuum.
- Gliozzo, A., Ackerson, C., Bhattacharya, R., Goering, A., Jumba, A., Kim, S. Y., Krishnamurthy, L., Lam, T., Littera, A., McIntosh, I., Murthy, S., Ribas, M. (2017). *Building cognitive applications with IBM Watson services: Volume 1 getting started*. IBM Redbooks.
- Greene, R. & Cushman, S. (Eds.). (2014). *The Princeton handbook of poetic terms* (3rd ed.). Princeton University Press.
- Kurzweil, R. (1990). *The age of intelligent machines*. MIT Press.
- Luger, G. F. (2008). *Artificial intelligence: Structures and strategies for complex problem solving* (6th ed.). Pearson.
- Nilsson, N. J. (1998). *Artificial intelligence: A new synthesis*. Morgan Kaufman.

Rasenberger, M. E. (2021). Artificial intelligence and the future of literary works. In M. Bogre & N. Wolff (Eds.), *The routledge companion to copyright and creativity in the 21st century* (pp. 322-334). Routledge.

Russell, S. & Norvig, P. (2016). *Artificial intelligence: A modern approach*. Pearson.

Schalkoff, R. I. (1990). *Artificial intelligence: An engineering approach*. McGraw-Hill.

Shakespeare, W. (2000). *As you like it*. Penguin.

Quinn, E. (Ed.). (2006). *A dictionary of literary and thematic terms* (2nd ed.). Facts on File.

URL 1. 15.10.2022 <http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html>

URL 2. 15.10.2022 <https://124.im/cBO>

URL 3. 15.10.2022 <https://allgoodgreat.com/list-of-books-written-by-artificial-intelligence/>

URL 4. 15.10.2022 <https://shakespeares-sonnets.com/sonnet/12>

Yeğın, T. (2020). The place and future of artificial intelligence in marketing strategies. *EKEV Akademi Dergisi*, 24 (18), 489-506.

Winston, P. H. (1992). *Artificial intelligence* (3rd ed.). Addison-Wesley Publishing.