

ePoetics: Examination of ePoetry and the Influence of Informatics on Poetics.

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Abstract:

This paper examines the influence of the digital revolution on poetic expression. The outcome of this influence is an electronic form of poetry that displays a variety of approaches to poetry with a significant and central use of computers and internet. The rationality of this paper is attained through the understanding of the influence of informatics on the making of meaning and the ability of the artificial intelligence in producing and composing authentic verses in the digital sphere. Therefore, this allows for the acceptance of the ePoem as a new poetic genre that has influences on poetic expression.

Keywords: ePoetry - ePoem - ePoet - Digital Poetry - Electronic Literature

"Studied poets usually feel the presence of other writers' words"

Virginia Woolf

The focus of this paper is an examination of the impact of the digital realm on poetic expression. In an online article "Electronic Literature: What is it?" (2007), N.K. Hayles surveys the development and the latest movements of electronic literature from the popularity of the hypertext fiction in the 1980s to the present time. She discusses the central controversial issues about the electronic literature and the overlapping with the print tradition of literature. She clarifies that when using the term electronic literature, this refers to the type of literature that is born, created and performed in the context of networks and programmable media. Regarding the overlapping between the electronic literature and the printed tradition, Hayles perceives that what distinguishes the electronic literature over the printed tradition is that the electronic literature cannot be accessed until it is performed by probably executed code. She believes that the major types of the canon of the electronic literature appeared not only from the different ways in which the user accesses them, but also from the structure and the specificity of the underlying code. She sees that nothing surprising that some genre of electronic literature have come to be known by the software used to create and perform them. According to Hayles, moving the literature to the web, by doing this the nature of the literature changed. She notes that the early works of electronic literature tended to be blocks of texts with limited graphics, animation, color and sound. On the other hand the later works of electronic literature that appeared make more use of multi-modal capacities of the Web; while the hypertext link is considered the distinguishing feature of the earlier works. The later works tend to use more of a wide variety of navigation schemes and interfaces. In her list of the different types and forms of electronic literature, Hayles lists Flash poem; Flash is an interactive software which is an application of those wishing to produce online interactive animated content.

When it comes to the definition of ePoetry, it appears to be vast and varied. Between Funkhouser's *Prehistoric Digital Poetry: An Archaeology of Forms* (2007) and Simanowski's *Digital Art and Meaning: Reading Kinetic Poetry, Text Machines, Mapping Art and Interactive Installations* (2011) the list of ePoetry includes along different types of what can be called types of digital poetry. For example this list includes: text generators, video text, Kinetic concrete poetry, digital videopoems, animated poems, computer poems, digital poems, hypertext poetry, automatic poems, and visual poems. Simanowski uses the term "Kinetic concrete poetry" (58), "Kinetic" means the movement and "Kinetic poetry" is regarded as an interactive form of poetry and poems where the words on the screen are moving and drifting around and are drawn to each other, gradually sticking end to end, and accumulating into phases. Then the reader is able to grab any word and move it by dragging on it with the mouse of the computer or the reader can get rid of any word by dragging it off the

window. On the other hand the term "concrete poetry" is sometimes called the "shape poetry", which is defined as the poetry that visual appearance resembles the topic of the poem. The words of the poem form a shape which elucidates the poem subject as a picture, as well as through their literal meaning. That is to say the fixed arrangement of the linguistic elements in which the typographical effect is more important in conveying meaning than verbal significance.

According to Simanowski, the "Kinetic concrete poetry" is a poem that is represented in a manner more in line with the mainstream aesthetics of movement providing a communicative value in much the same way as text and visuals (58). He adds that in "Kinetic concrete poetry" the representational functional of the word has been dismissed in favor of the technical effect (58). This could remind the reader with what Jay David Bolter tried to do in his book *Writing Space: The Computer, Hypertext, and the History of Writing* (2001) when he tried to establish a connection between digital media and concrete poetry. Bolter says "concrete poetry too belongs in the computer; indeed, the computer makes possible truly kinetic poetry, a poetry which letters and words can dance across screen before the reader's eyes" (145).

The discussion about the definition of ePoetry leads to understand that the term ePoetry refers to that type of poetry that arises from the applications of and engagements with the possibilities offered by the digital realm. It is important to remark that the term digital poetry or ePoetry is not simply referred to the poems that are written on computers and published on the web. The most appropriate term that most common and describes the use of computer in the creation of poetry is a "word processor" which resembles the "typewriter in its capabilities". In *Remediation: Understanding new media* (2000) both Bolter and Grusin coin the term "remediation" (45) to define the process of representing an old medium in a new one. Both writers assert the point that the using of computer as a typewriter in writing poetry does not mean that the outcome is a digital poem or an ePoetry. This is because this kind of software is designed primarily to produce printed copies. Hayles in her article "Intermediation: The pursuit of a vision" (2007) differentiates between electronic literature "digital born" (99) and contemporary works designed with computers for a print publication paradigm:

More than being marked by digitality, electronic literature is actively formed by it... electronic literature raises complex, diverse, and compelling issues... electronic literature in dynamic interplay with computational media... Computation is not peripheral or incidental to electronic literature but central to its performance, play, and interpretation. (99)

This reminds the reader with what Glazier mentions in his article (2002) in his discussion of digital poetics:

The poet thinks through the poem. Similarly, investigated here is not the idea of the digital work as an extension of the printed poem, but the idea of the digital poem as the process of thinking through this new medium, thinking through making. As the poet works, the work discovers. (6)

Both Hayles and Glazier focus on the role of the digital media in the creative process as a defining factor in the formation of digital poetry. The definition of digital poetry or ePoetry accounts for different types, conceptions, textuality and media that construct different shapes or genre of ePoetry such as the following list:

- Generative Poetry: It is a production of programming process that uses algorithms and drawing from corpora to create poetic lines.
- Code Poetry: It is written for a dual audience: computer and human readers.
- Visual Digital Poetry: It arises from visual and concrete poetic traditions.
- Kinetic Poetry: It is the type that uses the computer's ability to display animation and changing information over time.
- Multimedia Poetry: It utilizes audio, video, images, text, and other modes of communication in its strategies.
- Interactive Poetry: It incorporates input from the reader in the e-poem's expressive strategies.
- Hypertext Poetry: uses nodes and links to structure the poem into spaces for the reader to explore.

Searching online for ePoems gives a completely different experience of ePoetry. The following example "Smoke" is an ePoem that says:

Imagine now the dark smoke
Awaken to fly
all these years
to another day
notions of tangled trees
the other side of water
I see it is already here
sequences of her face
see it is shared
and old friends

passed their
dreams http://www.kurzweilcyberart.com/poetry/rkcp_additional_poetry_samples.php
p

Surprisingly, this www.botpoet.com's poem is written by computer not a human. The question is how this type of digital poetry or ePoetry is generated completely by a computer? Firstly, the website defines the digital poetry or the "computer poetry", the name that the website itself uses, as "text that is generated through an algorithm, which is executed by a digital, electronic computer, which is intended, by whoever it may be, to be read as poetry". According to "botpoet.com", its poems are generated completely by computers using different types of artificial intelligence, software and applications. Another example "Pirates", an authentic computer poem, says:

All pirates command lively, rainy clouds.
Where is the small cloud?
Die quietly like a[n] old sailor.
Wave swiftly like a small captain.
<http://botpoet.com/vote/pirates/> 8 November 2018

This poem is generated by using algorithm. Firstly, this randomly selects a sentence pattern from the pattern list. Then, wherever the pattern has a number, it randomly selects a word from one of the numbered word lists. "The Bookcase" is also another example of a poem that is composed by computer:

Off the bookcase
searching for art's sake. Life for myself to
this solitude among
collective images.
<http://botpoet.com/vote/pirates/> 8 November 2018

This poem is generated by Ray Kurzweil's Cybernetic Poet. The RKCP reads a selection of poems written by a particular author and then creates a "language model" of that author's work. This model utilizes computer-based language analysis and mathematical modeling techniques. RKCP can then write original poems from that model. The poems have a similar style to the author that originally analyzed, but are completely original new poetry. RKCP can help to find rhymes, alliterations, assonance, consonance, ideas for the next word or poem or song, ideas for turns of phrase, and more.

According to the Kurzweil CyberArt Technologies, the system manufacturer, the RKCP includes features of plagiarism avoidance algorithm that works to avoid plagiarism of the original poet. According to the programming protocol of RKCP, plagiarism is defined as more than three words in row that appear anywhere in the original poet's writings. RKCP works to analyze the original poems depending on the following aspects: words, word structures, sequence patterns based on RKCP's language modeling techniques that works to avoid plagiarism, rhythm patterns and overall poem structure. When RKCP begins to write a new poem, it follows the following steps to write each word: firstly, it determines a set of goals for the word that are related to the association of this word to be written with other words already written. In case that it finds more than one word that is able to achieve the goal, it rates them giving each a score. According to the programming protocol of the application, it does not necessarily select the highest scoring word because that would cause RKCP to always write the same poem for a given poet personality. A higher ranking word is, however, more likely to be selected. Additionally, like human poet, the process of writing poem is not always going in a forward direction. RKCP is continually reconsidering its tentative words until it reaches the set of words that all accomplish the goals at each point.

Kurzweil CyberArt Technologies also asserts that their RKCP has the criteria and knows when to end each line and when to end a poem. It also knows that when it ends any line it must be in connectedness with the previous and the next lines. But this does not mean that RKCP is always able to write poems, it will stop and fail when it tries all the possibilities to generate words and lines. It uses algorithm to ease the constraints inherent in the goals for particular words. It continues this process of easing constraints until it can successfully write the poem or section of the poem.

Another example is the following poem "#5":

On
health
that's regained
On
danger

that's past
 On
hope
without
me
<http://botpoet.com/vote/5/> 8 November 2018

This poem is written by JanusNode, user-configurable dynamic textual projective surface. This software is able to create original texts using a rule-based system or can morph texts using a mathematical system that experiences transitions from one state to another according to certain probabilistic rules called Markov chain. JanusNode is regarded as descendent of an old program called McPoet that appeared mid-1980s.

Flounders and lobsters are munched by famished theoreticians who
drink champagne and tepid seltzer. Theoreticians desire sloppy
stenographers and will chew their lobsters with them and will
drink their tepid seltzer with them. The stenographers are
sloppy because their appalling dreams contain reflections and
images of unhinged passion. They understand that theoreticians
are worried and nervous but they do not know that theoreticians
are obscurely demented. The stenographers do not understand.

<http://www.ubu.com/concept/racter.html>

This poem "Untitled" is written by computer not human. It is generated by Racter, which is an artificial intelligence computer program that generates English language, poetry and prose at random. This program started in 1983 and it runs on Control Program for Microcomputers. 1983's vision of this program is allegedly wrote a book, but this book was not release to the general public.

The previous examples of poetry that is generated by computers come under the umbrella of Machine-learning technology. It is a technology that with no doubts the future technology that will shape our future digital life. This is regarded as a very significant branch of artificial intelligence. The basic process is feeding a machine-learning algorithm with specific data-set and its predictive powers and abilities can become very surprising. Man is not excluded from this, but the machine-learning process is still collaboration between man and machine.

The paper here poses an example of machine-learning technology with collaboration with the English poet William Shakespeare. In UK, SwiftKey is a company of technology and artificial intelligence that aims to enhance the interaction between keyboards, smart devices and man. It upgrades smartphone keyboards to make typing faster, by utilizing artificial intelligence to learn from each user in order to autocorrect and predict their next word or phrase. The SwiftKey programmers work to train and teach the application the complete works of Shakespeare. Then later the application can suggest lines from Shakespeare's works from *Macbeth* to the *Tempest*, allowing the users to type passages of Shakespeare more quickly directly from the keyboard. SwiftKey learns from users and what they type and by feeding it with Shakespeare sonnets and complete works, gradually it becomes accustomed to Shakespeare's language. The keyboard will recognize which play you are quoting from and suggest popular phrases to include in your typing. Through doing this, the programmers of SwiftKey extend the core and the ability of the machine-learning technology to specifically aid poetry creation. This project is called "Swift-Speare" and the result is something completely new a co-created pieces of poetry between Shakespeare and machine-learning technology:

When I in dream behold thy fairest shade
Whose shade in dreams doth wake the sleeping morn
The daytime shadow of my love betray'd
Lends hideous night to dreaming's faded form
Were painted frowns to gild mere false rebuff
Then shouldn't my heart be patient as the sands
...

(Daily Mail 27 January 2014)

By using this keyboard users become able to co-create poetry in the style of other famous writers including William Gibson and John Denham. In order to support their project and asserting their viewpoint, SwiftKey team quoted Virginia Woolf when she said "studied poets usually feel the presence of other writers' words" (Daily Mail 27 January 2014).

To put it in a nutshell, this paper presents an observation of the poetic attempts that born digital. It shows how ePoetry belongs to computer realm and it is unlike the printed poetry; it represents a simulation and representation that illustrates the impact of the digital realm on human poetic expression. ePoem is an environment of multimodal nature of text, image, graphic and sound. Text is essential in ePoem and it always appears either visually or audibly. Necessary to understanding the meaning of ePoetry is to understand that a lot

of poems are written by word processing applications on computers for the sake of printing and these are excluded from the ePoetry.

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