

Session Title: Visualizing English Poetry

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The papers in this session are derived from the collaborative research project “Visualizing English Poetry” jointly conducted by four literary scholars of the English Literature Department at Ewha Womans University, Korea, and two computer scientists

from the Multimedia Lab of Soongsil University, Korea. Our common interest is to determine how to apply 3-D visualizing techniques to the texts of English Poetry to see what kind of insight we literary scholars can ascertain during and after the application of such techniques, and in what way our literary understanding is affected by such technological engagements with poetic texts. We share many techniques provided by our expert partners, but the objectives and strategies for visualization are somewhat different from paper to paper; Paper 1 is an attempt to visualize traditional textual sources into a three dimensional multi-layered text for better accessibility and manipulabilty whereas Paper 2 and Paper 3 try to “animate” the contents of the poems with various visualizing techniques. Paper 1 has a more research oriented objective within the interest of traditional textual studies, but Paper 2 and Paper 3 involve more creative engagements with poetical texts. The result of our experiments is hard to predict and we may not expect a profound insight from our pilot research, but we do hope that we can claim a unique contribution not only to the existing literary scholarship but also to literary computing in general; our multi-layered electronic text of *The Ruined Cottage* will be the most advanced form of electronic text witnessed so far in the scholarship of romantic studies. In addition, our “animated” Blake and “moving” Carlos Williams will pose very provocative research questions to the existing

scholarship asking whether the literary understanding based on the traditional texts can accommodate new textual experiences brought about by our innovative technological initiative.

Paper 1: A Multi-layered Electronic Text of Wordsworth's *The Ruined Cottage*

Chankil Park and Dongho Kim

Background and Objective

Wordsworth defined poetry as "spontaneous overflow of powerful feelings," but he never wrote his poems "spontaneously." Quite to the contrary, he revised the drafts again and again even after manuscripts were in the publisher's hands giving him the notorious title of a "publishers' nightmare." *The Prelude* being the prime example, he sometimes decided not to publish the poems he had laboriously revised for a long time.

The Ruined Cottage, generally regarded as one of the finest achievements of Wordsworth's entire poetic career, was another example that was never given the chance to be published as a separate poem in Wordsworth's lifetime. Wordsworth started to work on it from as early as 1796 and presented it to the world after many revisions in 1814 as the first book of *The Excursion*. Even after publication, the poet did not stop

tinkering with the poem until as late as 1845, five years before he died. But *The Ruined Cottage* had to wait more than a century to encounter scholars who appreciated it enough to think that it deserved publication as an independent poem. *The Ruined Cottage* was finally presented to the general public as a separate work (MS B) by Jonathan Wordsworth in 1969 with his meticulous study of its long and complicated textual history. James Butler completed Jonathan Wordsworth's pioneering editorial efforts when he published *The Cornell Wordsworth* edition of *The Ruined Cottage* in 1979 offering three versions of reading texts along with an exhaustive textual history. There is no doubt that the Cornell series is an example of the best textual scholarship imaginable within the limits of print book technology: laboriously prepared reading texts presented as parallel pages, photographic reproduction of original manuscripts with their professionally deciphered readings printed alongside, and all the related source material available then. The Cornell edition of *The Ruined Cottage* has been accepted as a standard reference by all Wordsworthian scholars since its publication but its use has been by and large limited to Wordsworth specialists. Our objective is to develop a multi-layered electronic edition of *The Ruined Cottage*, making use of recently developed encoding technique, which we hope will render the results of textual

scholarship contained within the Cornell edition more readily available to the general readers through multimedia visualizing technology.

Purpose

As a “computing” literary scholar of Wordsworth, I have always dreamed of an ultimate text of Wordsworth which somehow visualizes the poetical texts that are constantly evolving within the poet's mind, only a few slices of which materialized in printed editions. The ultimate text made possible by digital technology would have the following features:

- * The E-text would accommodate all the surviving materials that contributed to the making of *The Ruined Cottage* from a short fragment to a full scale printed version.

That is, the collection of related materials must be comprehensive and complete.

- * The E-text would show clearly the evolving process of the poem, not only as a whole but also part by part even to the level of a single word, which will be made possible by the multi-layer encoding technique along with a related visualizing method.

* The E-text would be malleable enough to allow non-specialist end-users (readers) easy accessibility and maximum manipulability. Readers should be able to access easily a particular part of a particular version with hypertextually linked and graphically connected materials. Readers should also be allowed to bring out a particular part of a particular version and compare it easily with another part of another version, assuming himself a temporary editorial authority.

Technology

Apart from basic background knowledge gleaned from McGann and Hockey, we have been greatly inspired by Dino Buzzetti's model of dynamic text and Casey Due's multitext project of Homer, both of which were presented at the 2008 Digital Humanities conference. we also learned a lot from *The Canterbury Tales* project by Peter Robinson of University of Birmingham. Making the best of all the useful knowledge from the preceding research, we hope to contribute to the scholarship of electronic text with our multilayered electronic text of *The Ruined Cottage* by incorporating:

- User-friendly interface using multimedia visualization techniques
- Increased interactivity between the text and the user by the "autopoietic" structure of the e-text
- Three-dimensional graphic images showing the depth of multilayered e-texts
- VR navigation techniques to feel the volumetric effects of the layers
- Comparison among various hypertext poems using XML techniques
- Graphical rendering with the original calligraphy and material according to the change of some parts in the e-texts

Significance

Wordsworth's life-long textual manipulation of his major works makes him in hindsight a precursor to the hypertextual author; he, for example, had an ambition to organize all his poetic texts into one great work allocating a proper place for each poetical text in the hierarchical structure of his poetic *corpus* where each poem is implicitly or explicitly cross-referenced ("linked") with each other, which was all done within the limits of print book technology. In other words, the *corpus* of Wordsworth's poetry was already

structured like the Web and his inveterate habit of revision might well be understood as a reflection of his efforts to weave a particular poem into his own *docuverse* by placing it in a new context with a new link. The textual history of any single poem of Wordsworth, therefore, cannot be revealed until it is shown within the complex web-like structure of his poetic *corpus*. Our multi-layered text with its three-dimensional visualizing technique will offer a clearer picture of a poem's connection to the Wordsworthian *docuverse* system, the e-text of *The Ruined Cottage* first to be showcased.

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Paper 2: Digital Poetics through Animation Rendering of Blake's Illuminated text

The Songs of Innocence and of Experience

Eunryung Kim, Ji-Eun Lee, and Dongho Kim

Background and Objective: Toward Embodied Texts

This project seeks to set, Blake's illuminated text, *The Songs of Innocence and of Experience*, in the context of other disciplines such as computer science, media engineering, and arts for the expanded poetry texts like digital poetry based on the medial changes. Since the current textual conditions have changed the concepts of what we used to call 'reading' and 'writing, 'Digital Humanities' is suffering "archive fever", an emphasis on textual editing and archiving. And the *William Blake Archive* (<http://www.blakearchive.org>) launched as a free website in 1996, is a good example of demonstrating a high level of creativity in the early adoption of digital technology and in its refusal to traditionally demarcate the textual/word and the visual/image. However, we thought the application of new technologies to digital literary studies should be more creative for expanding texts, extending the perceiving senses of cultural products, and exploring a heuristic way of digital humanities. In these contexts, we began to model the digital media texts of Blake's composite arts composed of poems and illustrations with the notion of digital poetics to create a new space for experiencing and perceiving the texts not just reading or viewing them.

Blake as an Early Media Artist

Our starting point was Blake himself in that he was interested in both text and image and integrating the two artistic modes, rendering him an early multimedia artist. First of all, we focused on examining the interrelationship between the mediums with the faith that the digital media modeling of Blake's art should be considered within the theoretical approach of 'remediation' and 'intermediality'. Blake's engraving and printing methods, which he called the 'infernal method', were totally different from his contemporary printing methods and technologies. Blake rejected the conventional printing methods using the apparent dichotomy principles such as yin and yang, and he accomplished his own 'chaosthetics' through melting the surfaces away and displaying 'the infinite', which he really wanted to represent. For these reasons, Blake's art is very appropriate for the digital media model of embodying the materiality in virtual space which enables us to experience the multi-sensory cognition of Blake's art.

Animated Texts Adopting Media Technologies

The primary software tool for the animation rendering was *AfterEffects*®. In addition, we used various technologies for the animation, image rendering, image codec, and high-resolution of images, etc. The process for each page was as follows:

1. Methods for animation

- Adopting the Cut-Out animation method (paper animation)
- Using collage methods
- Morphing between images
- Morphing between images and texts

2. Texture maps and surfaces

- Creating good texture images suited for original texts

3. Coloring works for enhanced living color sense

4. High-quality Visualization for HD format

We had to cut out the icons or the characters from the background on each page and hand-draw the animation because Blake's texts are basically flat, which means 3D animation is impossible. However, our animated and expanded texts can be contextualized in the tradition of digital poetry or e-poetry whose languages involve programming, multimedia, animation, interactivity and whose forms are similar with HCI-based media arts.

Result and Significance: Three-dimensional Materiality in the Space of Animated Text

Applying the cut-out animation technology, we separated the icons and characters from the background and made them activated. In this process, we made them move according to the rhythms of the poems and zoom to certain parts of the images related to the poem. With the morphing technologies, images and letters could be made flexible and interchangeable with each other when poems and illustrations showed very close analogous relationships. After these processes, the animated text resulting multimedia art product, which means the flat text was placed in the three-dimensional space of human cognition and provided multi-sensory aesthetic experience of the text. As digital poetry or installed literature can acquire the materiality or the spatiality by launching literary, visual, and sonic arts simultaneously, our animated texts also provided other conceptual understandings of images which might be termed by Deleuze as the actual, the virtual, and the creation of the virtual space or the materiality. While a reader/viewer views the screen and the text is being placed in the three-dimensional space, he/she can react to the animated words and images and experience a sensory cognition. This kind of experience does not involve reading or viewing, but rather feeling the words and the

images; in other words, it can be considered an embodied reading. Moreover, this text can be represented on the screen in the immersive VR environment for more dynamic three-dimensional representation of 2D animation.

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Paper 3: A Multimedia Text of Modern Poetry

Yong-Mi Choi and Sungyul Yim

In *Poetics*, Aristotle classified the artistic imitation according to the medium of representation. For example, painters imitate and represent objects through the medium of 'color' and 'form,' but poets do so through the 'voice.' This traditional classification ruled over the world of art, and artists generally stuck to their own medium. However, the modernists in the early twentieth century attempted to cross the boundaries between genres and tried to take advantage of different media to create new art forms.

For example, William Carlos Williams, an American modernist poet, tried to free the poetic language from the conventional symbolism and present the "thing" itself in his poetry. He found the method in avant-garde painting instead of contemporary poetry and was willing to cross the boundary of his own medium and adopt the methodology

of painting. Williams even thought that he and the painters spoke the same language, and attempted to fuse poetry and painting to make it the same (Williams 1987, 2-3). As a result, the materiality of poetic language comes to the foreground and his poetry shows highly visual characteristics.

With the advent of new media in the electronic age, poetry has also entered the digital world. Again poets are making poetry with the same focus on method, visual dynamics, and materiality. Loss Glazier argues that we should be aware of the new conditions of texts, and recognize the relevance of the poetics of innovative poetry in the twentieth century to the digital works in twenty-first-century media. If writing is “activated” in the electronic medium, it can embody what William Carlos Williams argued for the print poem, “the poem as itself an instrument of thought” (1-3). Then digital text could become the field of possibility for the modernist poets in the twentieth century to practice innovative poetics.

With these contemporary conditions of texts in mind, a pilot project was set up to create a multimedia text of a poem and a painting through interdisciplinary collaboration. The material includes a poem by William Carlos Williams, “The Great Figure”(1921) and a

poster portrait based on the poem, "I Saw the Figure Five in Gold" (1927) by Charles Demuth.

In his *Autobiography*, Williams recollects that he heard a great clatter of bells and the roar of a fire engine passing the end of the street down the Ninth Avenue on his way to Marsden Hartley's studio. When he turned, he saw a golden figure 5 on a red fire truck flash by. Because the impression was so sudden and forceful, he took a piece of paper out of his pocket and wrote a short poem about it (172). In fact, it is evident that Williams revised the original draft many times to arrive at the final version. In that process, he tried to eliminate narrative sequence and symbolic language in order to preserve the immediacy of the flashed image and replicate the instantaneous perception that is possible in a painting or a snapshot. He achieved this effect by controlling the length of lines and the arrangement of words, especially by emphasizing each line as a separate "object" rather than as part of an enumerative succession.

Demuth's painting reversed this process by portraying the sequentiality inherent in the poem's subject. Using ray lines and receding images of the figure 5, he conveyed the insistent forward movement of the fire truck as it passed Williams on the street. By

means of densely overlaid images, fragmented forms, and the Futurist vocabulary of his earlier architectural work, Demuth successfully captured the multiplicity of experience inherent in a single moment. The structure of his painting not only reveals an analogy with that of the poetic text, but also effectively embodies the poetics of Williams. In a word, the painting distills Demuth's lifelong efforts to generate equivalencies between literary and visual art (Haskell 183-85).

In order to create a multimedia text of the poem and painting, various media technologies were employed. First, we analyzed the layer structure of the original image in the painting and obtained its iconic structure. Then collage and image morphing technique were used to generate the animation. In this process, we focused on how to represent the poem well by morphing between the key word in the poem and the central image of the painting and what can be desirable combinations of layers to represent "the cinematographic rush" of the original text (Aiken 179). As technical details, we also tried to enhance the color sense through digital editing and render high quality final images in HD format.

With the aid of the morphing technique, we succeeded in changing the poetic image into

the central image in the painting, No. 5. This process instantiates the dynamic transformation of an image into a sign and strongly implies the intimate intertextuality between the poem and painting. Moreover, intermediality enhanced by the multimedia technique makes reading a poem a multi-sensory experience. The poem is “activated” by the animated movement, flashes of images and accompanying sound. The reader, or user, within the digital interface, can actually experience the impressive moment the poet tried to embody through the print medium.

The static text activated by this multimedia version becomes a complex event. It contributes to the transformation of the text “from object to process” (Hayles 181). This digital text is expected to serve as a prime example for how new media technology and innovative poetry in the twentieth century can come together to form a new mode of writing and enhance the understanding of the innovative poetics of modernist poets.

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