Literary Aspects in New Media Art Works

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Abstract: In her article "Literary Aspects in New Media Art Works" Narvika Bovcon discusses examples of new media literature in the works of new media artists Jaka Železnikar and Srečo Dragan. While Železnikar is primarily a net artist who authors new media poetry and online linguistic interventions, the literary segments in Dragan's work are based in conceptual art and video art and he uses them to initiate a happening. Bovcon argues that studies of new media literature — of those works which require a readerly perception — should take time and attempt to capture the general flavor of such works which can later offer a foundation for the theory of hybrid new media and literary works of art.

Narvika BOVCON

Literary Aspects in New Media Art Works

Different forms of computer-based literature have been around since the first computers were invented and yet theoretical speculations often tend to mystify the working of, for example, online poetry: where are the words coming from when they are gathered from the internet and what do they mean in the poem? The question can be dealt with from the technological or from the literary-aesthetic perspective. In the study at hand I discuss how some concrete artistic projects of new media literature are constructed and how they function as new media forms of communication.

The term "new media" was defined in 2001 by Lev Manovich in his *The Language of New Media* as a cultural artefact typically made and presented on the computer and characterized by five principles: 1) numerical representation of content, 2) modular structure of data and algorithms, 3) automation of processes, 4) variability of the object's existence, and 5) transcoding of cultural data and practices which are digitized and transferred to the computer, which, in turn, modifies the operations of society and concepts in media theory. Manovich suggested that theoreticians of new media art and culture should turn to the practitioners of new media who write software and borrow from them the vocabulary to describe new media objects adequately, for example describing the new media object as one composed of a database and multiple interfaces which enable the queries and the ordering and visualization of the database. Software studies would thus combine the understanding of software with the functioning of old media that are being transcoded.

New media poetry, too, is composed of a database of words and an interface that retrieves and arranges the words in certain ways depending also on the user's input. Vilém Flusser's concept of the split authorial agency in any technologically based artistic practice can be used to describe how new media poems are written. Flusser's "double authorship" of the photographic image is an archetypical example: the image is a product of two authors, namely by the constructor of the apparatus and by the user of the apparatus, that is, the photographer in the usual sense of the word. The author — for example, Jaka Železnikar or Srečo Dragan — constructs the apparatus, that is, a new media object or a new media poem which the user fills with her/his own content or uses in a certain way. Alternatively, computer technology can be understood as the apparatus in the background and the author as the one who constructs a specific new media communication with the use of this apparatus. It is not possible to define the point of origin of technology, but this is also not necessary because the split in the final use of the apparatus is the key issue for Flusser.

New media literature typically appears on the rectangular surface of the computer screen as an image of two-dimensional or three-dimensional letters and words. These can be animated and equipped with sound or they can be used as hyperlinks. Thus literature becomes a hybrid form on the computer as described, for example, by Janez Strehovec who defines the new entity that appears in place of words as a word-image-body-movement. At the same time, as we read words on the computer screen we also see and hear them or follow the rhythm and direction of their movement. Visual poetry in avant-garde and neo-avant-garde movements followed this path connecting the verbal content with its appearance on the page of a book. The second concept that Strehovec develops (following Espen J. Aarseth) to describe new media literature is the algorithmic approach to reading. The reader has to follow the steps that lead through the literary work, since there are only parts of it present at once on the screen. To accomplish this, the reader has to solve more or less complicated tasks which can be both mental (making the connections) and physical (using the interface skilfully). Last but not least, the basis for reading and interacting is the ability to use the computer, install the software, browse the internet, and so on.

To return to the initial question — what do the words from the internet mean in an online poem — the contents of the database used for construction of textual material on the screen should also be studied with care. The selection of some particular database to be shown through new media objects' interfaces is contributing to the final meaning of the text as much as the algorithms which rule cybernetic or animated textual presentations. These characteristics of new media communication are in the background of the following analysis of Jaka Železnikar's literary projects. Železnikar started as a poet. However, already his second collection of poems was not a printed book but an interactive 3.5"

disc and a web page. Since *Interactivalia* in 1997, he has authored a number of new media literary works in which he reflects on the contemporary state of information technology and uses in combination with literary and humanist aspects to build new forms of communication. The continuity of his practice enables a researcher to gain insight into the development of a certain literary genre, namely new media poetry through time from the pioneering era of net.art of the 1990s to present. All the above-mentioned theoretical aspects can be recognized in how Železnikar's new media poems are made. However, they are a crucial element also from the point of view of the reader, who understands this kind of poetry only if he/she is equipped with knowledge and experience in the use of new media technologies.

Srečo Dragan approaches art practice from a different angle as a media artist par excellence. He construes video as the medium that integrates all old media and inaugurates new media communication. Although video is an analogue medium, unlike cinema it involves an interactive aspect that requires explicit and active user participation. Video is interactive since it always, at least potentially, operates in a closed-circuit video installation because of the possibility of the immediate playback. The happening is recorded by the video camera and played back simultaneously in the situation, so that participants can react to it and thus integrate the video image into their group communication. This is the concept realized in 1969 with Srečo Dragan and Nuša Dragan's first video *Belo mleko belih prsi* (The White Milk of White Breasts). Peter Weibel is a theoretician (and artist) who grounds his understanding of new media in video. Manovich, on the other hand, talks about film and the language of film montage as the sources for new media communication, which is, in my view, unconvincing, since film is a fixed product that does not involve the viewer in the manipulation of its database. For Weibel, video is the first new medium, whereas photography and film are classed as old technical media. In *The Postmedia Condition* Weibel describes how new media have changed the old art practices and established them as media: in the second and final stage of postmedia the mixing of media comes to the fore, and painting, architecture, music, and literature mix in *ad hoc* media hybrids.

The title of Jaka Železnikar's 2007 retrospective exhibition *Literarni Algoritmi: Vizualna Poezija (1996-2006)* (Literary Algorithms: Visual Poetry 1996-2006) emphasizes that his works are written, on the one hand, as algorithms, which ensures that they function on the computer, and on the other hand, as literature; however, both aspects participate in the creation of the new — similar, but different — literary experience. Železnikar's works can be construed through Aarseth's terms cybertext and ergodic literature. The word cybertext points to aspects in literature which are determined by the feedback loop in the computer, as well as in precomputer cybernetic systems. Ergodic refers to an active and conscious structuring of one's path through the work by choosing from multiple possibilities and following the work's internal rules. It has to be stressed that the reader on her way through the interactive work changes the actual external appearance of the work as she modifies the text, and that this process intertwines with the reader's literary-aesthetic experiencing of the work. In *Interactivalia* <<http://www.jaka.org/1997/int/int.htm>> — his first compilation of seven interactive poems published in 1997 — Železnikar explored the changed user's experience of reading interactive poetry in comparison to reading conventional printed books of poems.

Železnikar's poem "19 Četrtek ob 19h Renata, klicat!" ("Thursday the 19th, 7 p.m., Renata, Call!") first appeared in his 1994 book *54.000 Besed* (54.000 Words). The digital version of the poem is found in *Interactivalia* and set in motion in contrast with the static character of printed texts. On the computer screen, the poem in prose scrolls upwards in front of the reader's eyes fast enough to prevent reading the long lines from beginning to end. The reader struggles to understand the meaning of the narrative, which resembles a diary, from the parts read: not finishing the line the reader jumps a few lines downwards to gain some time to read horizontally before the word just read disappears under the upper edge of the screen. The reading of merely a few words in each line reminds us of the so-called skimming or diagonal reading of printed texts. On the other hand, if we inspect the (static) text of the poem carefully, we discover that not all the words in the sentences are written and that some are omitted. While reading the text printed on paper, the words which form meaningful units of the narrative invite the literary immersion of the reader, whereas the words which are missing — and these are usually important words such as verbs and nouns — interrupt the experience and return the reader to the point in the real space and time and make him/her conscious to fill in the missing parts

prompted by the desire to get immersed in the story. When looking at the moving text on screen, the reader does not really notice the omitted parts or she/he attributes the gaps in the text to the fact that not everything is being read. However, it has to be stressed that the reading experience of this interactive poem is changed nowadays when it is being read on much larger computer screens than in 1997. All new media art works depend on the technology for which they have been conceived. To view Železnikar's works the reader/user has to downgrade the contemporary computer system to the state of computers and internet browsers from the past as specified for each poem.

In *Interactivalia* there are three interactive poems in which Železnikar invites the reader to become a co-creator of the poem. In "Izgubljenja pomenska vozlišča" ("Sense Nodes Lost") the user has to fill in the dialog boxes with words of her/his choice and with her/his name and then press the button "write a poem!" The next page shows the result: a poem written by Železnikar combined with words proposed by the reader at predetermined spaces. This type of joint authorship produces texts which are unpredictable and sometimes funny. Internet users are included in the poem's communication system as temporarily connected nodes of meaning. In *Interaktivna pesem 2* (Interactive Poem 2) Železnikar constructs an apparatus that writes poems by combining the structure derived from Tomaž Šalamun's poem "A naj predahnem, plamen?" on page 66 in his *Knjiga za mojega brata* (The Book for My Brother) with the user's words. The poem "Zdiš se mi tako lep/a" ("She/he Looks So Beautiful") is different: for each blank space in the poem displayed on the right hand side of the screen, there is a choice of two or three words:

Figure 1. Jaka Železnikar, "Zdiš se mi tako lep/a" <<http://www.jaka.org/1997/int/int-a/b/zdis.htm>>. Copyright release to the author.

Choose a word to fill the blank space.

☒ She ☐ He	_____ looks so beautiful.
☒ hair ☐ hands	I slide my hands into your _____.
☒ lips are red ☐ thoughts are red ☐ lips are next to mine	You look so beautiful, the mildness in your eyes stares into my face, your _____.
☒ hair ☐ hands	My hands in your _____, the naked body, the skin. Behind the window,
☒ fire ☐ rain	a _____ of autumn leaves falling from the trees
☒ quiet ☐ blue	into the _____ of the city streets.
☒ red ☐ blue	Your hair is _____.
☒ dreams ☐ our dreams	Our room trembles

Železnikar thus determines all possible outcomes of the interaction, whereas the user can read the outcomes for different choices while choosing.

The fifth and the sixth poem from the *Interactivalia* menu — *Matematika* and *Matematika 2* — combine two texts from the printed collection "Zdiš se mi tako lep/a" and "Trenutek v tvojih očeh" ("A Moment in Your Eyes"). The first version of *Matematika* requires the user to solve the problem and to find the relationships between pairs of symbols (circle/sphere, square/cube, triangle/pyramid) by clicking on them and following logical connections. Thus, after a few trials, the user discovers the quasi-mathematical rules behind Železnikar's interface and the operations of addition and subtraction between the two poems can be achieved systematically. In the second version, *Matematika 2*, the logic behind the mathematical operations between the verses of the two poems is indiscernible.

Therefore the user can only touch the symbols intuitively and read the successive verses which appear under the clicked symbols without being able to predict the next verse.

The text of the poem "Zdiš se mi tako lep/a" appears in three interactive poems, which indicates that Železnikar's text is only one of the building blocks of interactive poetry and may be used for completely different interactions which determine different interactive poems. However, in new media literature the literary and poetic dimensions of the text are not destroyed; rather, verbal meanings and the act of reading are combined with other aspects of the interactive experience. "Interaktivna že narejena pesem" ("Interactive Ready-Made Poem") is realized in versions 1, 1.1, 2.1, and 2.2. Versions 1 and 1.1 generate poems which are already written, while the user can determine how they appear on the computer screen: written in small letters or capitalized, with punctuation marks or without them, in one or two stanzas, at the upper or lower edge of the screen, aligned left or right. In this way Železnikar echoes the strategies of concrete poetry with effects analogous to those of text editing software and web page design. In the 2.1 version Železnikar refers to the concept of the ready-made, which was developed within the framework of conceptual art and invites the user to write her/his name under the existing poem. In the 2.2 version the reader can appropriate the poem according to her/his geographical profile and add a link to the web pages of her/his hometown. Thus, "Interactive Ready-Made Poem 2.2" becomes a sort of online service that connects the social context of real users with the virtual space of the algorithmic poem spreading indefinitely through the internet. Further, with the 1998 projects *Bela 0.1* (White 0.1) <http://www.jaka.org/1998/bela_01/bela-a/okvir.htm> and *Bela 0.2* (White 0.2) <http://www.jaka.org/1998/bela_02/b2/index.html> Železnikar introduced even more graphical elements into the interactive visual poem. The web page functions as an image-map: a tactile surface with its segments connecting different meanings and other web pages. The initial state of *Bela* shows a black screen with twelve white rectangles similar to empty search lines which, when touched by the cursor, fill with different data streams such as counters and verses from the poems already used in *Interactivalia*.

After *Interactivalia*, Železnikar proceeded to explore the connection of ASCII art and poetry with a series of visual poem generators and typing machines that focused on the interface layer of the new media object and on the gesture of typing. ASCII art that uses linguistic characters to produce images is an adequate new medium for generative visual poetry. *Aberration* (1998)

<<http://www.jaka.org/1998/aberration/index.html>> is a compilation of several new media literary works (*Aberration 0.1*, *0.2*, *0.3.1*, *0.3.2*) which foreground the possibility of aberration, that is, a minor change in the meaning or in the visual appearance of the work. *Aberration 0.1: In a Street by the River* changes the text and the visual appearance of the poem by changing the number and the length of the verses, while using similar syntagms. *Aberration 0.2: Interactive Visual Poem Generator* refers to the generative use of ASCII signs which fill the formal structures — the graphical layouts — of the poems. The "6-8" verse structure (derived from Luc-bat, a Vietnamese folk poetry form with interchangeably 6 and 8 syllable verses) is combined with an interface with which the user can attribute one sign from the keyboard to the numbers from 0 to 9:

Figure 2. Jaka Železnikar, *Interactive Audio-Visual Poem Generator* <<http://www.jaka.org/1998/generator/6-7/index.html>>. Copyright release to the author.

A click on the button "write a poem" fills the structure with these signs at the places determined by the numbers. The user may also change the alignment of the structure (left, right, centre), or press the button "Random" that will randomly change the signs used, or press the button "Aberration!" that will change one of the signs in the structure. The *Data file* structure contains columns of numbers, or more precisely, of ASCII quasi-characters (on the relation between numerical and material inscription of the difference in computing machines see Vaupotič, "Who Chooses"). The user can use the same interface to change the numbers in the structure as mentioned above. *Quotation* is the empty structure of Šalamun's poem "A naj predahnem, plamen?" (already used in *Interactivalia*) written with signs XYZQITAC which represent words to each of the letters the user can attribute a series of keyboard signs.

Aberration 0.3.1 and *0.3.2* are tributes to the neo-avant-garde movement. *Aberration 0.3.1* subtitled *Tribute: Individual(ag)* is a recreation of the first visual poem Železnikar encountered (with the initials *ag* Železnikar dedicates the poem to Aleksandra Globokar). *Aberration 0.3.1 Tribute: Individual(ag)* is a square written with five black letters *a* in five lines, where one of the *a*-s is rotated to become a (red) *g*, which travels in the structure randomly as the button for aberration is pressed. The "Emotional Concept" button next to the square of letters *a* links to the personal data, where the reader can find information about the author's girlfriend and how they met, whereas the link to the "Intellectual Concept" reveals some information about the original poem that was written in one of the communist countries in the 1960s or 1970s (Železnikar claims he does not remember the author). Finally, there is a link to the personal data pertaining to the "Intellectual Concept": Železnikar poses the question of whether there is a difference between an individual from a communist country and an individual from a democratic country; next he reveals that he was born in a communist country. The poem "Aberration 0.3.1 Tribute: Individual(ag)" is a love poem, and at the same time it entails a politically charged meaning.

"Aberration 0.3.2 Tribute: Portrait" is dedicated to Emmett Williams, a US-American author of concrete poetry, who was the Fluxus coordinator in Europe in the 1960s. Williams's *Series of Portraits* from 1992 has a grid structure in which every column corresponds to one of the letters from the alphabet, whereas the vertical axes (going from top to bottom) denote the succession of letters in a word. The person is portrayed by placing one object for each letter of the person's name at its proper spot in the grid. In Železnikar's reconstruction of the project, the user is invited to type in a name and press the button "Portrait": there are only five columns and each contains five consecutive letters. The grid is filled with digital objects of simple rectangles with two types of shading which indicate the presence or absence of a letter at that spot and that change as the "Aberration!" button is pressed. Williams created portraits of his close friends who were members of the art community by selecting the objects for the portraits carefully. Železnikar, on the other hand, abandons a personal expression of the relation between the author of the portrait and the person on the portrait: any user on the internet can portray anyone.

In *Type! Interactive Audio-Visual Typing Machine for Love Letters (first version)* (1999) <<http://www.jaka.org/1999/type/index.html>> and *Typescape! Interactive Audio-visual Typing Machine for ASCII Art m@ils!* (2000) <<http://www.jaka.org/2000/typescape/typescape.html>> Železnikar encoded the artistic strategies for writing love letters and ASCII art e-mails by focusing the arbitrary relation between the process of typing and the text displayed on the computer screen. In the project *Type! Interactive Audio-Visual Typing Machine for Love Letters (first version)* the letters the user types using the keyboard appear on the computer screen arranged in a square of five lines with five letters of the alphabet in each line. The letters in the mode "Normal" appear as they are typed and disappear as the keys are released. We see the typing in real time; however, the meaning cannot be read since no trace of the typed words remains. In other modes of the project — Železnikar calls them "styles" — the letters once typed remain on the screen. The typing thus fills the square of the alphabet as all the letters are eventually used. Again, there is no trace of the words written. The only content the user is able to fix with the *Type! Interactive Audio-Visual Typing Machine for Love Letters (first version)* is the structure and the concept of the visual poem. Železnikar thus programs the machine to transform any written statement by the user into a poem of the alphabet arranged in a square; however, on the other hand, with this machine Železnikar also constructs the experience of expressing oneself without externalizing or fixing the message. After all, this is a typing machine for

love letters, and love is difficult to express in words (love letters are a recurring theme in computer-based literature: one of the earliest examples is the chance recombination of text elements in *Love-Letters* by Christopher Strachey, running at Manchester University between August 1953 and May 1954).

In *Typescape! Interactive Audio-visual Typing Machine for ASCII Art m@ils!* Železnikar intertwines the concepts and motives found in previous interactive audio-visual typing machines and audio-visual poem generators. The text the user types on the keyboard appears arranged in the layouts Normal, Ornament, and Public Telephone (the shape of the Chinese sign for public telephone) which contain approximately fifty signs in each line and as many lines. Another layer is imposed over the structures: the alphabet square, the same one as in the project *Type! Interactive Audio-Visual Typing Machine for Love Letters (first version)*. This time the letters are three-dimensional rotating objects. The user's typing has an effect on both layers: it fills out the structure in the background and turns on or off the rotating letters in the alphabet square. The textual machine is used subsequently for creating ASCII art e-mails which ossify the three layout structures in combination with the three modes of typing.

Typescape Quick (2000) <<http://www.jaka.org/2000/t-quick/typescape-quick.html>> is an accelerated version of the *Typescape! Interactive Audio-visual Typing Machine for ASCII Art m@ils!* In 2000 the rotating three-dimensional letters were a challenge for internet-based projects, so Železnikar conceptualized a way of color coding the letters arranged in the structures to strengthen the perception-action of typing:

Figure 3. Jaka Železnikar, *Typescape Quick* <<http://www.jaka.org/2000/t-quick/typescape-quick.html>>. Copyright release to the author.

The first mode of typing colors the last pressed letter red throughout the white textual structure. In the second mode the seven letters pressed last are colored in tints of red fading towards white. The third "Way" combines the previous two: the last pressed letter is red in the whole structure and the last seven letters fade towards white gradually. In this way, a dispersed coloring in the structure is achieved when a user types faster than the color fades.

With these projects Železnikar explored ASCII art in connection with the audio-visual poetry automatons and emphasized the mechanical and algorithmic component that writes poems, love letters and ASCII art e-mails. However, behind the machine, there is the author who constructed the apparatus and who therefore asserts himself both on the level of the interface that communicates with the user and on the level of the outcome, that is, both the formal structure and the meaning of the product that dwells in the domain of new media literature.

In *Ascii Kosovel: Kosovel vzorčen, Natipkaj portret, Biografski portret* (Ascii Kosovel: Kosovel Sampled, Type a Portret, Biography Portret) (2004) <<http://www.jaka.org/2007/asciikosovel/>> Železnikar explicated the relationship between the avant-garde visual poetry of Srečko Kosovel (written around 1926), the neo-avant-garde constructivist graphic design of Kosovel's book *Integrali '26* by Jože Brumen (1967) and the ASCII art as used by the net.art subculture. Computer languages have in part realized the potential of the avant-garde explorations of algorithmic language permutations and can be therefore viewed as the final result of the futurist glorification of machines and of the avant-garde tendency to integrate art into the everyday functioning of society. In the late 1990s the net.art movement was widespread in Slovenia and Vuk Ćosić may be considered the best-known net.artist. A segment of Železnikar's works follows this trend self-critically made explicit in the 2000 project *Am I Net Artist?* <<http://www.jaka.org/2000/sem/index.html>>. In the context of an

international attempt to establish the institution that would determine the field of net.art and recognize the net.artists, Železnikar envisioned a net.art project, which was also a way of researching of the problem: he queried several web browsers to find out whether he is listed or referred to as net.artist. In another humorous project, *The Smell of Net Art* (1999)

<<http://www.jaka.org/1999/smell/index.html>>, he reflected on the tactile aspect of the interaction with web pages and with graphical user interfaces in general. With the cursor the user orients himself/herself in the virtual landscape projected onto the computer screen and reveals the sensitive parts of the page and activates the interactive content. But the scratching of the surface with the cursor, although similar to the gesture of scratching the small rectangle of a perfume tester enclosed in a fashion magazine, still does not reveal the smell of net.art.

In a collaborative project of 1999, *Drama.Body.Machine* (in Slovene, coauthored with Igor Štromajer) <<http://expunction.wordpress.com/2011/06/06/27-dbm/>> Železnikar wrote an interactive play with two participants: the user and the digital avatar Interaktivalij. The descriptions of the place and time of the encounter provide just enough detail and atmosphere for the user to be able to imagine herself/himself participating in the situation. Interaktivalij is introduced as "having the symptoms of an early state of aphasia," a brain disorder that causes incorrect syntax and occasional meaningless answers and sometimes it seems that the old man does not really follow what is happening around him. The digital avatar with whom the user converses is built on the basis of Eliza (programmed by Joseph Weizenbaum in 1966), a software which, following the model of psychoanalysis by Carl Rogers, returns the user's utterances in the form of questions. *Manta* (in Slovene and English, 2000-2001, with co-author Aleksandra Globokar)

<<http://www.jaka.org/2000/manta/index.html>> is another project that immerses the user in a virtual situation built out of verbal descriptions, which are contained in an online database of texts and graphics. The elements of the archive are not made explicit in the form of a list of items; instead, the user has to find them by typing into the search line a word that relates to an island. The search engine finds and lists all the texts from the archive that contain this word. The user then reads the texts and finds inspiration for new keywords. To explore the textual territory of the virtual island by reading and solving riddles, the user has to combine logical and associative thinking in an experience full of suspense and anticipation.

Several of Železnikar's net.art projects address political problems. For example, *Peace* (2003) <<http://www.jaka.org/2003/peace/index.html>> refers to the futile protests against the invasion of Iraq by the US-American army. The user has no influence on the outcome of her/his typing: as he/she types "Peace" the word "War!" appears on the screen. Železnikar also wrote a *Poem for Echelon* (2001) <<http://www.jaka.org/2001/echelon/index.html>> that contained various suspicious words included in the generative ASCII art poetry and invited users to contribute to the amount of traffic of e-mails processed by Echelon by sending these e-mails, which resulted potentially in an online version of a sit-in action. With *Pretipkovalec* (Retypescape)

<<http://www.jaka.org/2003/retypescape/index.html>> from 2003 the user can retype the texts on any web page she/he chooses. Železnikar relates the project to "the digital graffiti, the culture of hacktivism, net.art, the questioning of power relations, contextual semantics, rewriting of history, the authenticity of electronic archives". The literary and broader linguistic aspects of the project are linked to the traditions of conceptual art, which explore the agents and the issues of agency in communication and construe the models of communication as discursive formations which govern society.

The last project that Železnikar characterizes as net.art is the 2004-2005 project *Evropregovor* (Europroverb) <<http://www.evrokultura.org/evropregovor.php>> and it anticipates the projects of networked poetry as it generates — with each refreshing of the web page — a new combination of a randomly selected Slovene proverb and a randomly selected "Euroword" (a regular word with the prefix "euro-" as coined and published in various media of Slovenia). Železnikar programmed a number of Firefox browser extensions. *Spreminjevalec* (Changer, 改变机) <<http://www.jaka.org/2005/spreminjevalec/en.php>> from 2005 adds dysfunctionalities to the web pages seen locally on the user's computer. The content of the web page is thus returned to the chaotic state of undesigned information. With *Changer* the user can manipulate textual and graphical elements of web pages, perform unwanted searches on the web, delete session cookies, or let the

program perform all of these autonomously. Črke (Letters, 字母) <<http://www.jaka.org/2006/crke/>> created in 2006 display the letters of the alphabet arranged in a square (echoing previous projects such as *Type! Interactive Audio-Visual Typing Machine for Love Letters*) as a new layer that hovers over any web page that exists on a server. The user can move the letters-objects and play with them independently of the web page; however, the letters are contextualized by the choice of the web page beneath them. *Poem for 莫海倫* (2007-2008) <<http://www.jaka.org/2007/pzhm/index.php?j=en>> is an online visual poem that makes the contents of any web page fade slowly to white and disappear: Železnikar thus reflects on the transience of things in life. The project, simple as it is, makes a profound impression on the user.

Železnikar groups some of his works under the category of networked narrative. These works integrate social network websites to construct texts. *And Your Hair Is in a Mess* (2008) <<http://www.jaka.org/2008/skustrana/en-index.php>> is a web poem that connects to the BBC Weather Centre website for the English version, whereas for the Slovenian version it connects to the Environmental Agency of the Republic of Slovenia in order to get the verbalized information on current weather in Ljubljana, which is subsequently used to complete the sentence from the title: "It is [the current weather condition] and your hair is in a mess." The 2008 *And your hair / Twitt* <<http://www.jaka.org/2008/and-your-hair/>> project displays, in addition to the sentence, posts from different Twitter users who relate to the same weather condition. The 2009 *Talks* <<http://www.jaka.org/2009/talk/>> creates a text from recent tweets and then uses Zemanta, a semantic-web service in Slovenia, to extract a title from web articles which relate to the keywords from the text. The keywords are also used as tags for finding additional related tweets that are displayed after the title. Each time the page of the project is reloaded, a new networked narrative, derived from the social network Twitter, is constructed. A similar project, *Sara's Giggle* (2009) <<http://www.jaka.org/2009/sara/>>, connects to Twitter and each time it is reloaded displays a post that contains the word "Kiss" and with it the sound of a girl's giggle.

The work of the second new media artist I discuss and whose work touches the domain of literature is Srečo Dragan. His background is in fine arts, conceptual art practices, video art, and new media installations. Since 1995 he has been collaborating with scientists from the Jožef Stefan Institute and the Faculty of Computer and Information Science at the University of Ljubljana to realize a number of new media projects exploring topics of the techno-modified gaze and inventing new communication models based on information technologies. He addressed the literary aspects of new media art in a series of techno-performances in his works from 2005 to 2010. These projects involve verbal articulation of what is seen or otherwise perceived and are intended to integrate and change the mental archive of the visitor (previous experience, psychological condition, social, and cultural background) within the frameworks of a happening. Fragments of new media literature can be found in his 2010 *Techno-Performance E-Book Nomad* in which he explores the new condition of reading digital images and electronic books.

Archives of museums are becoming too vast and people do not have enough time to access the collections properly — this motivated Dragan to develop two interactive installations that enhance the visitor's experience: *Metaforične razširitve* (Metaphoric Expansions) in 2005 and *Metaforične preslikave* (Metaphoric Facsimile) in 2006, the two installations were presented at the exhibition *Tehnoperformans 06* (Technoperformance 06). *Metaphoric Expansions* invites the visitor to select one segment from each of the two tapestries on display, and to articulate, with spoken words that are recorded by the system, the connections between the two images. *Metaphoric Facsimile* installation requires the user to describe verbally the selected colors from an impressionistic painting (*Green Desert 20*). The visitor has to see, feel, interpret, connect, and find the right words to express the experience. The structure of the enunciation is coordinated by the interfaces of the projects, which gives the visitor a regulated form for thinking and for the selection of words. In the *Metaphoric Expansions* installation, the visitor has to verbalize the action and the iconography recognized on the two selected segments from the two tapestries that are contemplated simultaneously, either in a state of conflict or in a state of reconciliation. In the *Metaphoric Facsimile* installation, the visitor must choose two colors from the painting: the software automatically mixes them together to display a new color and the visitor has to describe this hue exactly — the effort here is to find the words to discern millions of hues. We could say that the two projects are not literary projects, since the primary

experience is visual: the recognition of form and color. However, the effort invested in the verbalization of the visual experience requires a careful choice of words and in *Metaphoric Expansions* also a precise construction of sentences rather like the process of writing literature. The happening *Metonimija zaznave* (Perceptions Metonymy) from 2010 (took place in SVC Gallery as part of the *Techno-performance E-Book Nomad*) functions in a similar way: the user interacts with a smart serving table and verbalizes the experience of tasting different food by interacting with a custom-made software.

Dragan's 2006-2007 installation *Metamorfoza lingvistika* (Metamorphosis of Language) consists only of words: the user has to fill in a pair of conflicting words, the position and the opposition, and press the "Retrieve" button. The system connects to the online corpus of Slovene language *Nova beseda* or to the Lextutor database for the English version of the project and displays words from the sentences and syntagms that contain the initial two words. The text moves on the screen as the user struggles to read the words as a narrative: the sequences of words are not sentences; nevertheless, they can be read word by word and also associatively by connecting the words spatially and finding new meanings in their planar constellations (see Figure 4). This reading is an intermediary phase: the reader has to compose a sentence by clicking on the words in the stream of text. Thus, by choosing the words from the text field the user collects pieces of her/his meaningful reading and possibly builds a sentence, which is then, after she/he presses the button "End Sentence," saved in the archive of the project. In *Metamorphosis of Language* Dragan thematizes the reading of meaning in incomplete texts where the linguistic rules of composing the words function as a structural matrix into which the meanings of the individual words are inscribed. The project is a platform for a happening in which the reader participates with her/his mental horizon to project meaning into a field of words, derived from the initial conceptual opposition of the two words that evoke the contexts of words from the database of the linguistic corpus. "The result, the sentence, is not a fragment of a potential future literary work intended for future reading, but is a fossil of the happening, a trace of the dialog between the reader and the project in the past" (Vaupotič, *Aktualnost* 226). Dragan's interactive platforms for happenings, as described above, are based on the closed-circuit video installation, in which the viewer-user is faced with her/his own utterance recorded by the system (a video camera in the video installation or a webcam in the computer installation).

Figure 4. Srečo Dragan, *Metamorphosis of Language* <<http://black.fri.uni-lj.si/2007/mol/>>. Copyright release to the author.

Dragan's 2010 project *Mobile E-Book Flaneur* connects the spatial dispersion of literature in urban space with the reading of literature on networked mobile devices and the spatialization of words on the virtual map. The user walks the streets of Ljubljana and passes by the houses where poets and writers lived. With her/his cell phone — and a custom Java application — he/she takes a photo of the QR code attached to the house connected to a literary work that is then displayed on the phone. He/she reads the text and chooses keywords from the excerpt which are then entered into the database of the city and displayed on an interactive map of the city in the gallery space. In the

performance the static reading of a database is transformed into the digital reading which functions as a sequential social space of events. The keywords are the intersections of memory and oblivion. The project spatializes literature in the city on an additional level, which has a performative character, too: Dragan decided on the concept of this project on a walk from Ljubljana train station — where James Joyce spent a night in 1904 — to the now demolished Šumi building, on which Vojin Kovač, a neo-avant-garde poet, inscribed his presence in a graffiti that said "Chubby was here" and to the house of Volbenko Posch-Grm on the Fish Market where Primož Trubar lived in 1562. Dragan's performances and happenings since 2005 reference the digital reading as a nomadic practice: at one time the reader strolls through the database of the linguistic corpus streaming from the internet, on another occasion the reader is an urban nomad, where the city is layered with databases containing cultural artefacts. The city can thus be read on the level of the spatialization of the text on the map and on the level of memory and oblivion of past cultural events, and, finally, on the level of reading the literary texts displayed on mobile screen devices.

In conclusion, Železnikar and Dragan approach literary aspects of new media literature from various perspectives, but their works converge in the sensibility for human existence in language. The recognition of individual words and their sequences are the means by which one can understand the works that are presented above. Through detailed descriptions this text has implicitly argued that literary scholarship must first thoroughly describe concrete works and capture those aspects that in fact communicate with the reader-viewer-user. It seems clear that traditional literary festivals still continue to favor literature printed in books even if they are later sold for Kindle or the iPad copyrighted and locked to perfection. This image of literature will not change soon, but more importantly, it cannot be the starting point for the studies of literary new media art. Studies of new media literature — of those works which require a readerly perception — should take time and attempt to capture the general flavor of such works which can later offer a foundation for the theory of hybrid new media and literary works of art.

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