

FROM CONCRETE TO DIGITAL: THE RECONCEPTUALISATION OF POETIC SPACE

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INTRODUCTION

It has almost become self-evident in the critical discourse on digital poetry to assess digital poetry as a continuation of an experimental tradition with its origins in the historical and the neo-avant-garde.¹ Critics such as Friedrich W. Block² and Roberto Simanowski³ in particular read contemporary digital poetry explicitly as extension and continuation of concerns of the avant-garde and concrete poets.

Block points out that almost all vital concerns of digital poetry can be traced back to its historical predecessors. He names the reflection upon the concrete language material, the transgression of genre boundaries, multilinearity and the exploration of spatial structures, movement and interactivity as key strategies which are vital concepts in historical avant-garde, concrete and digital poetry. Digital poetry is frequently, and I believe correctly, assigned to the wider trajectory of experimental/avant-garde poetry in many other studies as well. It is often considered as a third stage, contemporary continuation and further development of earlier experiments.

In this essay, however, I will explore the relationship between concrete and digital poetry more closely. In particular, I am going to focus on one of the main concerns of the concrete poets: the poetics of space. How did concrete poetry redefine poetic space and how are space and its parameters reconfigured once more in digital poetry in a second step? And what happens to the notion of 'concrete' in the web?

¹ Cf. for instance Friedrich W. Block's essays at: www.netzliteratur.de/block. Or Christiane Heibach's chapter "Vorläufer der Literatur im elektronischen Raum: Kleine Geschichte künstlerische Konzepte". In: Christiane Heibach, *Literatur im elektronischen Raum*. Frankfurt am Main: Suhrkamp, 2004, pp. 68-143. Many others emphasise the indebtedness of digital literature to the avant-gardes, amongst them Loss Pequeño Glaziers, Robert Kendall, Peter Gendolla and Jürgen Schäfer.

² Block writes: "A 'new' avant-garde consciousness, igniting with current technical achievements and with the connected artistic experiments, is undeniable in the digital poetry discussion: along with the new media, newness according to modern progress and as a value of economic exchange returns with a vengeance." Friedrich W. Block, "Digital poetics or On the evolution of experimental media poetry" (2002). At: <http://www.netzliteratur.net/block/p0et1cs.html>.

In "Innovation oder Trivialität?" Block elaborates further: "Um den empirischen Befund kommen wir nicht herum: Es gibt offenbar wieder ein Avantgarde-Bewußtsein im Einzugsbereich digitaler Ästhetik, ein Avantgarde-Bewußtsein, das in Stil, Gestus und auch Aussage nicht selten an historische Manifeste erinnert, etwa an das 'futuristische Manifest zur mechanischen Kunst' aus dem Jahre 1922." Friedrich W. Block, "Innovation oder Trivialität? Zur hypermedialen 'Übersetzung' der Moderne am Beispiel des Elektronischen Lexikon-Romans" (2000). At: <http://www.netzliteratur.net/block/innovation.html>.

³ Roberto Simanowski, "Concrete Poetry in Digital Media. Its Predecessors, its Presence and its Future" (2004). At: www.dichtung-digital.org/2004/3-Simanowski.htm

For my analysis I will focus on digital works which are similar to concrete poetry on the following levels: those works that operate conceptually with space, those that explore the “verbivocovisual” qualities of the letter material, and those that work with very few concentrated words or letters, that focus on reduced, minimalist and structural relationships between the linguistic elements and suppress or reduce syntactic links in favour of an exploration of multiple dynamic structures. Finally, I will look at works that represent digital signs and symbols in a concrete, self-sufficient and non-representative fashion.

The concern with space and the parameters of surface is arguably one of the major poetic features of concrete poetry. Values such as positions of the signifier material, relationships between the linguistic elements and their spatial interaction, and distance, density and exact arrangement of the letter material gain structural and semantic significance.

The German concrete poet Franz Mon, one of the most vocal prophets of the importance of surface, advocates the creative exploitation of the spatial values of the page in various essays. In concrete poetry, the functions of surface, he argues, replace the functions of grammar and open up new possibilities, both for poetry and thought. The relationships between spatially arranged words are not fixed and unambiguously predetermined like the relations of words firmly arranged in syntactical hierarchies, but are open and flexible and subject to continual redefinition during the process of reception. The position of the textual elements on the page, the distance between them and the density of the textual field all acquire potential semantic significance, and serve as extensions of the conventional means of structuring a poem.⁴ They become an integral part of the semiotic set up, and introduce additional particles and tools of expression.⁵ The conceptual deployment of surface values thus constitutes a novel way of charging language with meaning, and allows for the expression of what cannot be expressed within the boundaries of existing grammatical frameworks.

The poets of the Brazilian *Noigandres* group explicitly propagate new ways of exploring poetic space as well: “Concrete poetry begins by being aware of graphic

⁴ Franz Mon, “zur poesie der fläche”. In: Eugen Gomringer (ed.), *konkrete poesie deutschsprachiger autoren. anthologie*. Stuttgart: Philipp Reclam jun., 1972, p. 170.

Siegfried J. Schmidt also points out that the activation of surface values is one of the most important novelties in concrete poetry, and that the position of letter elements are charged with semantic values. He writes: “Die Verteilung der Schriftzeichen auf der Fläche ermöglicht die Kombination von optisch-graphischen Valeurs (Verteilung, Distanz, Verhältnis von Flächenpositionen – wie Zentrum, Rand, oben, unten, außen, innen, rechts, links – zueinander und zum Flächenganzen) mit semantischen Bedeutungswerten. Der Raum wird [...] als bislang vernachlässigte Dimension dichterischer Sprachgestaltung entdeckt und zum Teil begeistert proklamiert [...]” Siegfried J. Schmidt, “Zur Poetik der konkreten Dichtung”. In: Thomas Kopfermann (ed.), *Theoretische Positionen zur Konkreten Poesie*. Tübingen: Max Niemeyer Verlag, 1974, pp. 80-81.

⁵ Franz Mon, “zur poesie der fläche”, pp. 168-169. Mon elaborates further: “die fläche wird dabei selbst zur textkonstituante; sie bringt ihre bedeutungsmomente, wie zentrum, rand, oben, unten, rechts, links, mit in den lesezusammenhang, und die textpartikel gewinnt in diesem koordinatensystem stellenwert und spezifische reichweite.”

space as structural agent”, the group writes in the “Pilot Plan” from 1958.⁶ Moreover, concrete poetry, Augusto de Campos states, not only represents space, but acts upon it, “proportioning new spatio-temporal modes of apprehension of the text by the reader.”⁷

The concrete poets already revolutionised spatial conventions, and the way we think about and perceive poetic space, by means of turning it into an integral component of the poem with semantic significance. The flat, two-dimensional surface of the page, however, is fundamentally redefined on the computer screen. It challenges old modes of perception, and requires new strategies of reception from the recipients.

The poetic space of the screen is radically different from that of the page on numerous levels. Firstly, it is kinetic and interactive: letters can move and migrate, positions of letters and words are no longer fixed and static, but in flux and transient, they are no longer predetermined but potentially open for creative interventions.

Miekal And’s work “after emmett. a voyage in ninetiles”⁸ from 1998 is an homage to Emmett Williams and a reflection upon the ancestry of the concrete poets and the position of digital poets in this lineage. It evokes William’s poem “The Voy Age” from 1975 which consists of 100 word squares decreasing in size as the poem advances, until only a minuscule residue remains. And’s digital poem displays fifty-three consecutive screens featuring a three-by-three grid of nine letters or punctuation marks each. Each single character in those word squares changes typeface continually, switching through a sequence of five to eight different fonts. As a result, the letters seem to dance: they swell and shrink, shimmer and flicker, bloat and shrivel, twitch and shake. They seem to move, to pulsate, palpitate, and a sense of motion and dynamics is evoked. “Eyevoyage”, the first trio of syllables, emphasises that this piece is appealing to the sense of vision. Here, the concern of concrete poetry with visual gestalt, typography, geometrical word patterns and movement is transferred into another medium and enriched by a new feature: actual movement, characters in flux, changing size and typeface – dynamic signs in constant metamorphosis.

Ana Maria Uribe’s series of “anipoems”⁹ (1997-2003) are examples of the change of the conventional function of signs: letters fulfil the tasks of images. The phenotypes of letters, their shapes and forms and the visual associations they trigger, are the crucial constituents of meaning here. The dominant function of letters, to be building-blocks of words and thus particles carrying semantic meaning, is undermined: they are deployed for their visual dimension only, in an iconic fashion. The shapes are in direct correlation with their meaning. They are thus comparable to iconic concrete works, such as Ladislav Novák’s “individualista” (1959-1963), or Ronaldo Azeredo’s “velocidade” (1957), or Mon’s “fallen” (1966) for example. The

⁶ Augusto de Campos, Decio Pignatari, Haroldo de Campos, “Pilot Plan for Concrete Poetry”. In: Mary Ellen Solt, *Concrete Poetry: A World View*. Bloomington, London: Indiana University Press, 1970, p. 71.

⁷ Augusto de Campos and Roland Greene, “From Dante to the Post-Concrete: An Interview With Augusto de Campos” (1992). From *The Harvard Library Bulletin*, Summer 1992, Vol. 3, No. 2. Online at: <http://www.ubu.com/papers/greene02.html>

⁸ Miekal And, “after emmett” (1998). At: <http://www.cla.umn.edu/joglars/afteremmett/bonvoyage.html>

⁹ Ana Maria Uribe, “Anipoems” (1997-2003). At: <http://www.vispo.com/uribe/anipoems.html>.

letters perform, and act, and stretch and twitch and flicker. They mimic the shape of animals; a “P” exercises and stretches its leg and thus transforms into an “R”; an “i” has a headache which makes its dot rotate furiously. Uribe’s letters are animated linguistic signs which do something: programme code is used to inscribe behaviour into the textual system, which is thus transformed from static to performative and kinetic. Neil Hennessey’s “paddle”¹⁰ is similarly an example of a playful exploration of the iconic dimension of letters, and his piece “vowheels 2”¹¹ is a rotating, circular concrete poem, its shape reminiscent of Ferdinand Kriwet’s “Rundscheiben”.

The French poet Julien d’Abrigeon equips concrete poetry with an interactive dimension: his “horde d’ordre et de horreur”¹² (2002) is a mobile, rearrangeable poem, which allows the user to move and to reorganize the verbal stock on screen, to alter the position of words by means of clicking and dragging. Below the poem, d’Abrigeon writes “Do what you want with this, it no longer concerns me”, thus explicitly designating this poem as a do-it-yourself piece. The user can create new spatial and also semantic relationships between the given linguistic elements in each new set up – the poem is not only a mobile concrete poem, in which the possible relationships between words can be made explicit by actual movement of the linguistic elements, but seems, at the same time, to be a tongue-in-cheek digital version of classic magnetic fridge poetry.

In the Argentinean poet/artist Giselle Beiguelman’s “recycled”¹³ from 2001, a concern with multilinearity, movement and interactivity becomes manifest: the letters contained in the title word float over the yellow screen, and can be deleted by pointing the arrow symbol at them. This is a responsive work, it is the user who can determine the movement of the migrating letter material with the movement of her or his mouse. Moreover, Beiguelman recuperates an other avant-garde concern here: she only uses existing pages and junks of code, nothing here is original. The title is programmatic here: “recycled” is a digital ready-made, old junks of code are equipped with new functions and parameters.

In Jim Andrews’ “Arteroids” (2001-2004),¹⁴ the boundaries between poem and game are collapsed: the user can navigate an id-entity word over the screen by using the keyboard, and has to shoot fragmented poetic sequences which float randomly into the field of vision. These word fragments descend upon the user’s id-entity like asteroids, and, when hit, they explode in circular sprays of atomised letter material underlined by a distorted soundtrack. If it gets hit by the green and blue antagonistic text elements, the id-entity word explodes itself (in “game mode”, this means death, in “play mode”, the player has infinite lives and can keep on playing). The text that glides into the screen can be edited and changed, its speed and colour can be altered and it can be shot and destroyed or allowed to keep on floating across the screen.

¹⁰ Neil Hennessey, “paddle”. At: <http://wings.buffalo.edu/epc/ezines/deluxe/two/paddle.html>

¹¹ Neil Hennessey, “vowheels 2”. At: <http://www.ubu.com/contemp/hennessey/hennessey2.html>

¹² Julien d’Abrigeon, “Horde d’ordre et de horreur” (2002). At: <http://tapin.free.fr/ordre.htm>

¹³ Giselle Beiguelman, “Recycled” (2001). At: <http://www.desvirtual.com/recycled/index.htm>

¹⁴ Jim Andrews, “Arteroids” (2001-2004). At: <http://www.vispo.com/arteroids/indexenglish.htm>

“Arteroids” appropriates and mocks the rhetoric of “shoot-em-up” games, and fuses “written, visual, and sound poetry, visual art, computer game conventions”¹⁵ and generative audio forms into a new hybrid synthesis.

“Arteroids is about cracking language open,” Andrews writes.¹⁶ He emphasises the material, object-like dimension of written and audio signs – they are all objects of information and can be edited and manipulated just like other objects too. Andrews thus places himself firmly into the tradition of the avant-garde poets, who have always worked under the aegis of venturing forth into the very heart of language, aiming to uncover the arbitrary and material nature of signs and the codes that govern their usage by means of taking language apart on different levels of linguistic organisation.¹⁷

“Arteroids shifts the focus between game and play, between text as readable literary object that gets its primary meaning from the meaning of the words to text as meaning via sound, motion, and destructive intent”, Andrews states. In addition to the emphasis on the materiality of language, this hybrid between poem and game forces the recipient into activity, and evokes the oft-cited game activity that Eugen Gomringer has defined as another important feature of concrete poetry. The constellation, Gomringer writes, is an offer of a fixed set of parameters, within which the reader is asked to take up the ball that the poet threw and to playfully create meaning by combining and relating the given elements in a creative fashion.

The second way in which the signs on screen differ from those in print is that they can be present in all their physical aggregates simultaneously, with a visual, an acoustic and a semantic dimension. The advantages of spoken and of written language can thus be combined, subtleties that can only be conveyed visually can be explored and at the same time, nuances of tone, pitch, rhythm, volume etc, can be put to use as well.

In Takaumi Furuhashi’s “Kotoba Asobi”¹⁸ for instance, which means “wordplays” in Japanese, the “verbivocovisual” aspects of language constitute a conceptual triad and engage the user with all senses. In Furuhashi’s shockwave application, the words of eight different German sentences or proverbs, rather trivial in content and without much poetic potential, migrate over the screen independently from their position in the hierarchy of the sentence. They come in different colours, sometimes alone, sometimes all at once, sometimes overlapping, sometimes fast and sometimes slow, from different directions. To a certain degree, the user can determine the speed and direction of the verbal material with the help of the mouse. Two balls drift across the screen as well. Whenever a word and a ball collide, the word changes size and colour and is audibly distorted from either a male or a female voice.

¹⁵ Jim Andrews, “The Battle of Poetry against itself and the forces of dullness” (2002 – updated 2005). At: <http://www.vispo.com/arteroids/indexenglish.htm>

¹⁶ Ibid.

¹⁷ Cf. Anna Katharina Schaffner, *Language Dissection in Avant-Garde Poetry: Textual Politics from Cubist and Futurist to Concrete and Digital Poetics*. PhD Thesis. The University of Edinburgh, 2006. [to be published in German by Aisthesis in 2007].

¹⁸ Takaumi Furuhashi, “Kotoba Asobi”. At: http://www.p0es1s.net/p0es1s/bio_e/furu.htm.

The effect of the floating is to render the relation between the component parts fluid: through a change of position, semantic confusion arises. However, in contrast to many conceptually open concrete works, Furuhashi did not abandon syntactical links and markers – his words are still equipped with gender, case and number of the subjects, adjectives, prepositions and adverbs, and are thus not freely combinable, the correct sequence is predetermined and can be figured out eventually.

Thirdly, the signs on screen have an additional technical dimension attached to them. One of the major concerns of avant-garde and concrete poetry alike is the exploration of the medium of usage, the language material, its physically perceptible qualities, its visual and acoustic dimension. In extreme cases, signs are deprived entirely of their representative function and pragmatic use value, referring to themselves and their concrete materiality alone.

In these works, like Hansjoerg Mayer's "i" from his "alphabet" series from 1963, or Raoul Hausmann's poster poems, such as "fmsbw", language itself is thematised and staged and its codes and structures and the rules that govern their usage, as well as its aesthetic, social, epistemological and cognitive dimensions, become the center of poetic attention.

In digital poetry too, attention is frequently directed to the material and the medium and its conventions – one of the reasons why many consider it a continuation of the avant-garde tradition in the first place.¹⁹ However, on the screen, the material is no longer just language, but language with a whole new cosmos of technical meaning attached to it.²⁰ As Florian Cramer has pointed out, language in its specific manifestation in the computer is marked by a paradoxical double function as both message and code: language is not only transmitted as message on the screen, but also controls and generates this transmission behind the screen in the form of codes and programming languages.²¹ Self-reflexive digital texts frequently include or reference the processes by which they were generated, they reflect upon the technologies that have produced them.²² While self-reflexivity in print is limited to an implicit thematisation of poetic, linguistic, communicative and epistemological conventions, self-reflexivity on the screen can include all of the above, plus a reflection upon the technological processes involved. This dimension is most obviously thematised in so-called 'code poetry', which draws all the processes which usually happen behind the screen to the fore, and explores digital codes ranging from

¹⁹ Cf. Block, Heibach and Wenz: "Correspondingly," they point out, "digital poetry is concerned especially with the observation of specific digital or hypermedial structures and processes by and with language." Friedrich W. Block, Christiane Heibach, Karin Wenz, "The Aesthetics of Digital Poetry: An Introduction." In: Block, Heibach, Wenz (eds.), *PoesIs. Ästhetik digitaler Poesie/The Aesthetics of Digital Poetry*. Ostfildern-Ruit: Hatje Cantz Verlag, 2004, p. 25.

²⁰ Cf. Friedrich W. Block, "Digital poetics or On the evolution of experimental media poetry" (2002). At: <http://www.netzliteratur.net/block/p0et1cs.html>

²¹ Florian Cramer writes: "Dieses Beispiel verdeutlicht, daß Schrift im Internet eine neue technische Qualität gewinnt. Sie wird nicht nur, wie in einem klassischen Medium als Botschaft übertragen, sondern steuert in Form von Befehlen und Protokollen auch selbst diese Übertragung. Computerviren sind das beste Beispiel für die technische Virulenz jeder Schrift im Internet." Florian Cramer, "Netzkunst und konkrete Poesie" (2001). At:

http://www.netzliteratur.net/cramer/netzkunst_konkrete_poesie.htm

²² Cf. N. Katherine Hayles, *How we became Posthuman. Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago; London: The University of Chicago Press, 1999, p. 46.

basic binary to hexadecimal and ASCII to complex programming languages. Machine and programme code thus turns into the new poetic material.

The title of Giselle Beiguelman's "Reversion"²³ (2001) is programmatic and illustrates the issue very well. Beiguelman reverses the surface/background relations here: what is usually in the back, namely code, is drawn to the fore and is presented as the actual work itself.

Another example of code poetry is "%Location".²⁴ This piece is by JODI, a Belgian-Dutch duo consisting of Joan Heemskerk and Dirk Paesman, and features a long continuous string of unintelligible ciphers which look like code, white/green on black ground. The key to "%Location" is in the source code window, which, when opened, features a graphic representation of an H-Bomb, made up of spatially arranged ASCII signs. This piece of 'ASCII art' is subsequently interpreted as HTML code and represented on the screen. Here, the actual code itself, usually hidden 'behind' the surface, is the viable art-work with a figurative dimension, while the surface screen representation is just the random outcome of this shaped algorithm. "%Location" seems to suggest that an H-bomb, when unleashed, or literally, in this case, when it is executed as code, turns orderly structures into chaos. Moreover, by equating code with a bomb, it reflects on the potentially destructive force of code and its latent power to annihilate and cause destruction.

Fourthly, language is frequently presented visually on the monitor, as image. The critic N. Katherine Hayles has coined the influential notion of the "flickering signifier" in her study *How we became Posthuman*. Text is treated graphically on screen, she argues, and morphs into a flickering image, an instable visual display, and it is no longer a material object.²⁵

Beiguelman too emphasises the imagetic condition of the screen text, and at the same time the essentially textual condition of the web: on the screen, images perform texts, and behind the screen, texts generate these images. This thesis is explored both visually and textually in her work "the book after the book" (1997),²⁶ where the idea of the flickering signifiers, of the dissolution of the boundaries between text and image and the graphic treatment of text on the screen are explored. The internet, Beiguelman writes, "is no more than a big text. On the front, at the screen, text reveals itself as image."²⁷

The fifth way in which text on screen differs from text in print is that it is transient and changeable. Textual fluidity is one of the main new characteristics of the new

²³ Giselle Beiguelman, "Reversion" (2001). At: <http://www.desvirtual.com/giselle/english/reversion.htm>

²⁴ JODI, "% Location". At: <http://www.jodi.org/>

For a longer discussion of JODI's work see also an essay by Andrew Roberts and Anna Katharina Schaffner, called "Rhetorics of Surface and Depth in Digital Poetry" (2006). At: http://www.rilune.org/mono5/roberts_and_schaffner.pdf

²⁵ N. Katherine Hayles, *How we became Posthuman*.

²⁶ Giselle Beiguelman, "The Book after the Book" (1997). At: <http://www.desvirtual.com/giselle/english/p0.htm>

²⁷ Beiguelman, "The Book after the Book" (1997). At: <http://www.desvirtual.com/thebook/english/project.htm>.

signifiers. Flickering signifiers, as Hayles argues, are characterised by “their tendency toward unexpected metamorphoses, attenuations, and dispersions.”²⁸

“When a text presents itself as a constantly refreshed image rather than as a durable inscription, transformations can occur that would be unthinkable if matter or energy, rather than informational pattern, formed the primary basis for the systemic exchanges.”²⁹

The sixth and final way in which the poetic space of the screen is redefined is the addition of two further dimensions which the page lacks: a temporal one, and the third dimension, the simulation of depth. New spatio-temporal parameters thus become possible.

On the screen, space is no longer flat, but multiple layers of textual organisation become possible. The dimension of depth is added, foreground and background relations can be constructed, letters can be superimposed upon others, distance and proximity can be simulated. Writing becomes volumetric: letters can suddenly be viewed from all sides, from behind, below, above, they can be rotated and turned around their own axis like real objects in space, as in Mary Flanagan’s “[theHouse]” (2006)³⁰ for example, or in Dan Waber’s, Jason Pimble’s and Aya Kapinska’s works (discussed below).

To sum up, the signs that the digital poets use are substantially different from the signs that concrete poets used: firstly, they can move across the screen, they can be animated and programmed to perform a predetermined routine, and thus also gain a temporal dimension. Secondly, they can explore all dimensions of the sign at the same time simultaneously. Thirdly, they are equipped with a halo of technical meaning, and are, in some cases, both message and code at the same time. Fourthly and fifthly, signs are changeable “flickering” images rather than fixedly inscribed marks. And lastly, digital signs gain an additional volumetric dimension: relationships of depth, foreground and background, proximity and distance can be simulated.

1. MAX BENSE, AUGUSTO DE CAMPOS AND THE BEGINNINGS

Not only do many definitions of concrete poetry by the protagonists of the movement seem to describe and anticipate very accurately some of the major characteristics of contemporary digital poetry, but, moreover, digital poetry actually emerged from the orbit of concrete poetry in the late 1950s in Stuttgart. In fact, the deployment of computers for the artificial generation of poetry was nothing but the logical consequence of the theoretical reflections of an important figure of the concrete poetry movement. One could even say that it was the product of certain aspects of

²⁸ N. Katherine Hayles, *How we became Posthuman*, p. 30.

²⁹ Ibid.

³⁰ Mary Flanagan, “[theHouse]” (2006). At: http://collection.eliterature.org/1/works/flanagan_thehouse.html

concrete poetry driven to their utmost extremes – which closes the circle rather nicely.

The German scholar, philosopher and poet Max Bense was one of the leading figures of the concrete poets of the *Stuttgarter Gruppe*, and an important international mediator between various different national groups and factions. He was preoccupied with the study of philosophy, mathematics, technology and theory of science as well as with information theory, semiotics and cybernetics. In fact he was one of the earliest pioneers of semiotics in Germany, before they were popularized by Umberto Eco. In a truly interdisciplinary manner, Bense tried to establish an exact, scientific and objective branch of aesthetics, by means of applying mathematical and information theoretical premises to the study of aesthetic texts. Essentially, his objective was to shift the assessment, discussion and ultimately also the production of literature from an emotional basis towards a purely rational one. He considered his poetic work as an objective, methodological, theory-based inquiry into the nature of language, signs and communication, and vigorously rejected the notion of the emotionally driven, romantic, instinctive and intuitive creator.

The preoccupation with objectivity seems to be a general concern of concrete poets, though its significance varies in different poetic frameworks. Bense is certainly the most radical pursuer of objectivity and scientific exactitude, but Eugen Gomringer too emphasised the importance of method, system and structure, and experiments with stochastic, permutational and combinatorial structures can also be observed in many other concrete oeuvres, such as Franz Mon's and those of the *Wiener Gruppe*.³¹

This rigorous quest for objectivity can be considered as a consequence of the notion of literature as experiment, as research, as semi-scientific investigation into the nature of communication, language and signs. There is an epistemological dimension to the quest of the concrete poets, an interest in cognitive results. Furthermore, the emphasis on objectivity is congruent with the focus on the material, autonomous linguistic world and the notion of language as a concrete object with physically perceptible dimensions. This conception implies that, as an object, language should be measurable and classifiable with exact, mathematical and scientific parameters, and that it can be subjected to experiments and tests just like other material or numerical signs too.

In his *Einführung in die informationstheoretische Ästhetik. Grundlegung und Anwendung in der Texttheorie* from 1969, Bense describes “aesthetic states” of texts as defined by their degree of unexpected, surprising and non-trivial occurrence of words.³² This notion is a direct transfer of Claude E. Shannon's definition of information as “unexpected, unpredictable news” into the realms of the aesthetic.

³¹ See for instance Gomringer's poems “fisch” and his “baum-wind” series, as well as Freidrich Achleitner's “veränderung. eine studie”.

³² “Was aber schließlich den *ästhetischen Zustand* des Textes anbetrifft, so muß man davon ausgehen, daß es sich, wie aus den Theoremen der statistischen Informationsästhetik folgt, bei ihm um einen Zustand *unwahrscheinlicher, stark selektierter, nichttrivialer* Wortfolgen handelt.” Max Bense, *Einführung in die informationstheoretische Ästhetik. Grundlegung und Anwendung in der Texttheorie*. Reinbek bei Hamburg: Rowohlt, 1969, p. 110.

Bense worked with frequency dictionaries and stochastic and statistical devices to determine the extend of unexpectedness of a word in a textual set-up.³³

The step, then, from the purely formal and mathematical description of aesthetic states to the automatic generation of aesthetic texts, is not a big one: once the formal description of aesthetic texts is accurate and complete, it can be turned into a set of rules for their production; mechanical analysis can be converted into mechanical production. The methods of dissection and analysis of textual structures can be converted into methods of synthetic generation.³⁴ Bense considers the experiments with computer poetry both as the consequence and as the effectuation of his aesthetic ideas.

To my knowledge, Bense and his students were the very first ever to deploy computers for purely aesthetic purposes in order to produce stochastic, machine-generated poetry. They deployed the random function of computers for the generation of “unlikely, highly selective and non-trivial” sequences – which is Bense’s definition of what makes a text aesthetic rather than functional. In 1959, in the computer lab of the ‘Technische Hochschule’, Theo Lutz fed vocabulary taken from Franz Kafka’s *Das Schloss* into a Zuse Z 22, and wrote a program determining several rules of combination, and thus generated the first artificial, chance determined literary text.³⁵

Due to the programming, the sentences were syntactically compatible, but of course semantically incompatible. One of the first sentences of the experiment read: “NICHT JEDER BLICK IST NAH UND KEIN DORF IST SPÄT.”³⁶ The resulting text grossly violates pragmatic selection restrictions. However, it is precisely this incompatibility, the surprise moment and the unusual imagery that are conjured up, which constitute the text’s poetic appeal.

Essentially, the artificial generation of aesthetic texts can be considered as the ultimate attempt to eliminate the subjective and to convey aesthetics detached from semantic meaning, to shift the aesthetic interest entirely into the purely material

³³ Mostly, the first 100 words of a frequency dictionary make up 60% of a text, the first 1000 words make up 85% and the first 4000 97%. Hence it appears that almost 97% of the words we choose in a text are predetermined by frequency. Cf. Max Bense, *Einführung in die informationstheoretische Ästhetik*, p. 84.

³⁴ Bense writes: “Die analytische Beschreibung von Texten mit mathematischen Mitteln statistischer und topologischer Art legte von Anfang an den Gedanken nahe, die exakten Verfahren der Zerlegung in technische Verfahren eines synthetischen Aufbaus der Texte umzukehren. Verstärkt wurde der Gedanke, als es möglich wurde, datenverarbeitende Rechenanlagen mit ihrer Fähigkeit zur programmierbaren Speicherung, Selektierung, Sortierung, Repetierung und Verknüpfung von eingegebenen Daten heranzuziehen. [...] Damit drang die Idee einer *künstlichen* Poesie in die experimentelle Literatur der Avantgarde ein, die zugleich als *synthetische* oder sogar als *technologische* Poesie definiert werden konnte.” Max Bense, *Einführung in die informationstheoretische Ästhetik*, p. 109.

³⁵ Lutz writes: “Unser Programm hatte die Aufgabe, das im allgemeinen recht mühsame Herstellen von stochastischen Texten zu übernehmen. Früher hatte man solche Texte bestimmt, indem man durch Würfeln oder einen sonstigen Zufallsprozeß Sätze oder Satzteile auswählte und diese aneinandersetzte.” Theo Lutz, “Stochastische Texte” (1959). At: <http://www.reinhard-doehl.de/poetscorner/lutz1.htm>. (English version at: http://www.stuttgarter-schule.de/lutz_schule_en.htm)

³⁶ Ibid.

realm. “Material anstelle von Bedeutung” (“Material instead of meaning”), Bense proclaims in “Manifest einer neuen Prosa und Poesie”, the very first computer poetry manifesto, written in 1960.³⁷ “Die Strategie des Sprachspiels digitaler Texte beabsichtigt, der Außenwelt semantische Verluste beizubringen, um ästhetische Gewinne zu erzielen. [...]”³⁸, he writes. (“The strategy of the linguistic games of digital texts intends to inflict semantic losses upon the exterior world, so as to gain aesthetic surplus.”)

Perhaps the most important aspect of combinatorial and chance-determined works is the surprise moment: the results of chance productions are unpredictable, they display features which astound even the artists themselves. Chance is effectively deployed as a tool to transgress the subjective powers of imagination, to go beyond the producer’s limits of comprehension in an attempt to arrive at results which transcend both cultural, psychological and intellectual boundaries.

Many concerns both of the poets of the historical avant-garde and the concrete poets converge in Bense’s framework, and are carried to their most radical extremes. The obsession with the autonomous linguistic material and the neglect of the semantic dimension, the fascination with technology, and the preoccupation with objectivity, method and chance are all driven to their most drastic consequences. The result is a mechanical, purely rational approach, the elimination of the subjective dimension of literature, the ultimate objectification of language as well as the treatment of language as material in the full sense of the word.

There are still many digital poets who work along the lines of permutational poetry. Digital poetry, however, has developed into many other directions since these early experiments, into hypertext and multimedia works, interactive writing projects and Flash animations.

Other concrete poets too have explored the possibilities of computers for their purposes, amongst them Reinhard Doehl, Emmett Williams and Augusto de Campos. Augusto de Campos uses the web primarily as a transmission medium for his poems, and exhibits static representations of concrete poems, some of them equipped with a soundtrack, usually recordings of a reading, such as “tensao” (1956) and “cidade/city/cité” (1975).³⁹ In these pieces, the visual and the acoustic dimension do not enter into an innovative dialogue, as in more complex digital works, but remain separate entities. However, Augusto de Campos also animated some of his poems by adding a kinetic dimension and sound, such as “poema bomba” (1983-97), and “hearthead”, without sound (1980).

In an interview with Roland Greene from 1992, Augusto expressed the hope that the new media experiments which are being conducted by the new generation will present the third stage of the avant-garde quest:

³⁷ Max Bense, “Manifest einer neuen Prosa und Poesie” (1960). Reprinted in *Stuttgarter Zeitung*, 30 June 1990.

³⁸ Ibid.

³⁹ Augusto de Campos’ web site is at: <http://www2.uol.com.br/augustodecampos/poemas.htm>.

“It is perhaps [...] the exploration of new technological media, and in their interaction with the spectacular arts or multidisciplinary events that we will find “what remains to be done [...]”³⁷

Moreover, Augusto, like many digital poets and critics, argues that computers finally allow for the realisation, the literal or rather virtual putting into effect of conceptual ideas of the previous avant-gardes: conceptual movement becomes actual movement, static becomes animated, and the “verbivocovisual” structures explored by concrete poetry can now be technologically enhanced with the help of graphic and audio software:

“The virtual movement of the printed word, the typogram, is giving way to the real movement of the computerized word, the videogram, and to the typography of the electronic era. [...] cinematic poetry, which, combined with computerized sound resources, can raise the verbivocovisual structures preconceived by [concrete poetry] to their most complete materialization. In this moment of transition [...] poetry can [...] depart on a broad inter- or multi-media voyage.”³⁹

“The ‘wishful thinking’ of the 50s” thus came about with the digital turn and the move of experimental poetry into the sphere of computers.⁴⁰ In fact the vast field of new possibilities opened up by computer technologies, Augusto de Campos argues, represents the “ideal space for “verbivocovisual” adventures.”⁴¹

2. NOTIONS OF CONCRETE AND THE RECONCEPTUALISATION OF POETIC SPACE

2.1. THE GEOGRAPHY OF SPACE

And it is Augusto de Campos too who called for “new spatio-temporal modes of apprehension of the text by the reader”, arguing that concrete poetry has drastically redefined poetic space and poetic temporality and our perception of it. Strikingly, this is an appeal which one can hear frequently in the discourse on digital poetry as well.

³⁷ Augusto de Campos and Roland Greene, “From Dante to the Post-Concrete: An Interview With Augusto de Campos”. At: <http://www.ubu.com/papers/greene02.html>

³⁹ Augusto de Campos and Roland Greene, “From Dante to the Post-Concrete: An Interview With Augusto de Campos”.

⁴⁰ Augusto de Campos, “The Yale Symposposium on contemporary poetics and concretism: a world view from the 1990s”. In: K. David Jackson, Eric Vos, Johanna Drucker (eds.), *Experimental – Visual – Concrete. Avant-garde Poetry since the 1960s*. Amsterdam; Atlanta: Rodopi, 1996, p. 388.

⁴¹ Ibid.

Rita Raley, the editor of September 2006 issue of the *Iowa Review*, has dedicated a whole edition to what she calls the “spatial turn” of digital writing. In her introductory essay “Writing 3D”, Raley calls for a new type of reading, “deep reading”, a new type of analysis similar to the Jamesonian “archisemiotics” which acknowledges the semantic significance of spatial design and takes into account the new dimension of writing, the extension of poetic space into the third dimension.⁴⁰

Raley argues that those multi-dimensional works that integrate the z-axis into their repertoire require a fundamental reorientation of spatial perspective and new critical frameworks for their analysis. A fourth type of reading becomes necessary, volumetric reading along the z-axis, “reading surface to depth and back again.”⁴¹ “The unit of poetic analysis has shrunk from line to word to letter and now we have need of another unit”, she writes: “the three-dimensional projecting plane.”⁴²

Maybe the best example for such writing is Dan Waber’s and Jason Pimble’s “five by five” (2006).⁴³ The cubic poem can be spun, turned, twirled around, it is a poem that can be revolved around its own centre. At the heart of the poem is a fixed thematic word, and this is the only stale point of orientation of the viewer. This word does not move. One can rotate the cube into all imaginable angles, one can do that very precisely with the help of the directive buttons below. One can also add a grid and lines to the words, which make it seem even more three-dimensional. Three dimensionality is suggested by scale here: what is conceptually closest is biggest, and what is conceptually furthest away is smaller.

The American digital poet Aya Karpinska is in search of a grammar of the three-dimensional space, and systematically investigates the dynamic relationships between space and meaning, the “effect of spatial arrangement on the meaning and experience of text”⁴⁴ in works such as “the arrival of the beeBox”⁴⁵ (2003) and “open ended” (2004).⁴⁶ She hopes that the extension of poetry into the third dimension will lead to “novel ways of representing relationships between words, as well as the evolution of new patterns of reading and rhythm.”⁴⁷ In “the arrival of the beeBox” for example, she focuses on concepts such as “surface versus depth, the use of regions to organize space, the direction of reading, as well as perceptual distance and motion of verses.”⁴⁸ Karpinska programmatically states: “We suddenly have access to the backs of words – let’s make use of it.”⁴⁹

⁴⁰ Rita Raley, “Editor’s Introduction: Writing 3D”. *Iowa Review*, September 2006, Volume 8, no 3. At: <http://www.uiowa.edu/~iareview/mainpages/new/september06/raleys/intro.html>.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Dan Waber and Jason Pimble, “five by five” (2006). At:

<http://www.uiowa.edu/~iareview/mainpages/new/september06/waber/fivebyfive.html>

⁴⁴ Aya Karpinska, “the arrival of the beeBox” (2003). At: <http://technekai.com/box/theory.html>

⁴⁵ Aya Karpinska, “the arrival of the beeBox” (2003). At: <http://technekai.com/box/index.html>

⁴⁶ Aya Karpinska, “open ended” (2004). At: <http://technekai.com/open/index.html>

⁴⁷ Aya Karpinska, “the arrival of the beeBox” (2003). At: <http://technekai.com/box/index.html>

⁴⁸ Aya Karpinska, “the arrival of the beeBox” (2003). At: <http://technekai.com/box/theory.html>

⁴⁹ Ibid.

Karpinska also suggests geographic metaphors and its core concepts, “such as location, direction, distance, distribution, spatial interaction, scale, and regions”, as pillars for a grammar of three dimensions, as new parameters and concepts for dealing with spatial structures – an idea which is very reminiscent of Franz Mon’s reflections on surface.⁵⁰ In Karpinska’s work, just as in concrete poetry, the constructivist dimension, the importance of structure and conceptual arrangement of the letter material, is one of the most crucial features. The “Pilot-Plan” axiom of the *Noigandres* poets seems very fitting here indeed: “Concrete poem communicates its own structure: structure-content.” The poetic problems that are explored in both concrete and Karpinska’s and Waber’s poetry are problems of functions-relations of the linguistic material.

The spatial coordinates of the page and the fixed orientation of a stable point of view, the certainty of reading from left to right and from top to bottom, are destabilized in these 3D works, which is another point in common with concrete poetry. Karpinska’s and Waber’s multidirectional, dynamic textual structures substantially akin to those found in concrete poetry, in works such as Gomringer’s “wind” for example.

2.2. NOTIONS OF CONCRETE IN THE WEB

In the following section I am going to look at what happens to the notion of “concrete” in the web. In philosophy, concrete is the opposite of abstract, a concrete thing can be perceived by the senses, it is particular and thus occupies both space and time. In digital poetry, words are very “concrete” in this sense indeed – they occupy their own spatial and temporal position and can be turned around like real objects, viewed from behind and from below. This development represents a further twist to the *Noigandres* group’s notion of “Concrete poetry: tension of things-words in space-time.”

However, somewhat ironically, even though digital works seem more “concrete” than many concrete works in certain respects, they are immaterial, merely an array of pixels on the screen, a representation of binary data constituted of a string of zeros and ones with no physical, material body whatsoever. Paradoxically, the simulation of concreteness is the result of very advanced abstract processes.

Referring to another topic, Jim Andrews even talks of “langwidgets” – language as a thing, as an object in the full sense of the word. In Andrew’s and many other works, words come with their own special performativity inscribed, they are programmed to do something.⁵¹ Code turns flat, motionless, static script into little animated programmes. Behaviour can be inscribed into letters, and letters are put on scene like actors, words end up doing something, like floating around, exploding, drifting off

⁵⁰ Ibid.

⁵¹ Jim Andrews, “DIGITAL LANGU(IM)AGE. language and image as objects in a field” (1998). At: <http://www.vispo.com/writings/essays/jimarticle.htm>.

Andrews writes: “My piece [Seattle Drift](#) is an example of such a text. When you click the text that says “Do the text”, the words in the poem eventually drift independently off the screen. Each word has its own behavior, its own partially random path of drifting off the screen. Each word is a kind of little language widget, langwidget.”

the scene, dancing, exercising, changing their size or colour etc. Operative, effective program codes, as John Cayley points out, “instantiate a genuinely ‘performative’ textuality, a textuality which ‘does’ something, which alters the behaviour of a system.”⁵² This brings up the issue of time: speed and duration of reception can now be programmed, temporal structures can be inscribed into the work and the reception process can thus be carefully staged-managed in advance.

Many digital poems also illustrate the concept of the autonomous linguistic “Eigenwelt” that Gomringer emphasises in his writings. More than ever before, text is represented for its graphic qualities, or, less frequently, for its acoustic ones, and its representative function is just one amongst three possible textual roles. Concrete poems, Gomringer writes, are not poems “about something but concrete realities in themselves” – this also holds true for the abstract linguistic constellation “Untitled”⁵³ by Squid Soup (2000) for instance.⁵⁴

Squid soup generate a seemingly three-dimensional orange space defined by walls made of letters, through which the user navigates accompanied by a jazzy sound track and a murmur of space-age voices, single letters can be clicked to generate images and sounds which float into the constellation. It is one of the numerous examples which literally “fall between the media” – is this still poetry or already art? The simultaneous presence of sounds, letters and shapes, which are represented both aurally and typographically, immerse the user completely in the tension between the different sign systems.

Squid Soup also created a textual tool called the “Scruncher”⁵⁵ that allows people to send email messages to friends. These messages unfold their meaning only gradually, and are virtual, interactive textual sculptures, kinetic 3D animations which can be turned around their own axis and which can be “scrunched” by the recipient, like an unwanted piece of paper which one has finished reading – they are thus ironically reinstating a material dimension to the net by means of graphically imitating qualities of paper.

Another very concrete piece is “NeEn”⁵⁶ by Rat, which explores both sound and visuals, in a concentrated, minimalist and constructivist manner. The white on black syllables ‘ne’ and ‘en’ are combined both visually and acoustically in this work. In one version ‘en’ is written in mirror writing, emphasizing the fact that it is the inversion of ‘ne’. The sound, like the visuals, remains entirely self-referential. The two male voices seem to act out what the letters on screen are performing – a tentative and careful examination of the signs ‘n’ and ‘e’ and their possible combinations. The meaning of this piece is really to be found on the graphic level – the letters lose their character as linguistic signs the longer one looks at it, they start

⁵² John Cayley, “The Code is Not the Text (unless it is the Text)”. In: Friedrich W. Block, Christiane Heibach, Karin Wenz (eds.), *pOesIs. Ästhetik digitaler Poesie/The Aesthetics of Digital Poetry*. Ostfildern-Ruit: Hatje Cantz Verlag, 2004, p. 293.

⁵³ Squid Soup, “Untitled” (2000). At: <http://www.themediaproject.com/projects/issue7/squidsoupuntitled/index.html>

⁵⁴ Cf. Roberto Simanowski’s essay “Concrete Poetry in Digital Media. Its Predecessors, its Presence and its Future” (2004), who discusses this example as well.

⁵⁵ Squid Soup, “Scrunch” (2006). At: <http://www.squidsoup.org/scrunch/>

⁵⁶ Rat, “NeEn”. At: <http://tapin.free.fr/animations/NeEn-tapin.html>

to appear as geometrical constructs, as lines that signify only themselves and which gain an aesthetic dimension.

Indeed, most digital poets deal graphically with text. Texts are treated as visual objects, no different from other graphic objects, and can be manipulated in a similar fashion, as Jim Andrews points out: “You can move both around, size them, color them, program them, etc.”⁵⁷ This is a very concrete approach to the letter material, and Simanowski rightly designates Andrews’ works as extension of concrete poetry, arguing that Andrews explores “the new possibilities of concrete poetry under the conditions of their being digital” in pieces such as “Seattle Drift” and “Enigma”.⁵⁸

“Enigma”⁵⁹ is an animated anagrammatic poetic game with the words ‘enigma’ and ‘meaning’. The user can prod, tame, stir and spell the word, and she or he can change the speed of the letter movement, and the colour of the letters, and their size. In “Seattle Drift”⁶⁰, the user can “do”, “stop” and “discipline” the text – the words of the poem start to drift around anarchically on screen, and ask to be disciplined. Temporality, interactivity, motion and changeability are the attributes Simanowski identifies as new here, whereas the concern with anagrammatical structures and permutation are identified as shared common denominator of concrete and digital poetry.⁶¹

Permutation is also the major poetic device of Marko Niemi’s “stir-fry-texts”⁶² – however, it is not letters or words which are permuted here, but rather parts of letters. Niemi’s poems are interactive concrete dissection tools: the user can, by means of moving the mouse over sections of different letters, cut these letters up into pieces and recombine them with fragments from other letters. When one part of a letter is rearranged, the other parts randomly adjust to that change as well.⁶³

One can thus both draw and delete letters, by means of following the letter shapes with the movement of the mouse. The mouse is simultaneously a rubber and a pen. Letters here are cut into pieces and recombined with alien letter material, and thus

⁵⁷ Jim Andrews, “DIGITAL LANGU(IM)AGE. language and image as objects in a field” (1998). At: <http://www.vispo.com/writings/essays/jimarticle.htm>

⁵⁸ Roberto Simanowski, “Fighting/Dancing Words. Jim Andrews’ Kinetic, Concrete Audiovisual Poetry” (2001). At: <http://www.brown.edu/Research/dichtung-digital/2002/01/10-Simanowski/cramer.htm>

⁵⁹ Jim Andrews, “Enigma” (1998). At: <http://www.vispo.com/animisms/enigman/enigman.htm>

⁶⁰ Jim Andrews, “Seattle Drift” (1997). At: <http://www.vispo.com/animisms/SeattleDriftEnglish.html>

⁶¹ Roberto Simanowski, “Fighting/Dancing Words. Jim Andrews’ Kinetic, Concrete Audiovisual Poetry” (2001).

Simanowski writes: “Anagrammatical games traditionally belong to the tools of experimental / concrete poetry. In the digital medium, it is helped by the temporality of the performance: through the perpetual motion of letters—which concrete poetry couldn’t achieve on paper—the relation between them continually changes, so that the formal ‘meaning is an enigma’ is modified with the attribute ‘unsolvable’. The letters have not only ended up in an arbitrary combination—which one could follow—they also change it perpetually, so that even the anagrammatically useless letter ‘n’ acquires a more profound meaning: as the unknown variable.”

⁶² Marko Niemi, “Concrete Stir Fry Poems” (1999-2006). At: <http://www.vispo.com/StirFryTexts/marko/index.htm>

⁶³ Andrews writes: “[...]the body of the new text moves as an entity to adjust itself to the change, providing the pleasant illusion that it has some sort of unified character or personality even in its transformations.” Jim Andrews, “Stir Frys and Cut Ups” (1999). At: <http://www.vispo.com/StirFryTexts/text.html>

perpetually loose and regain their character as linguistic signs. Frequently, the resulting shapes and lines look like abstract constructivist constellations. Niemi's works illustrate the thin threshold between linguistic and graphic signs, and between letter and image: they are reminiscent of works by Hansjoerg Mayer, or by Franz Mon – but are equipped with an interactive and a changeable dimension.

CONCLUSION

Interestingly, it is not the concrete poets who were the first to have aimed conceptually for the effects which could be fully realised in digital poetry, but the Italian Futurists. In 1916 already, F.T. Marinetti and his comrades in arms foretold the downfall of the book in their manifesto “The Futurist Cinema” from 1916.⁶⁴ Moreover, they also envisaged the following:

“Filmed Words-In-Freedom in Movement (synoptic tables of lyric values – dramas of humanized or animated letters – orthographic dramas – typographical dramas – geometric dramas – numeric sensibility, etc.).”⁶⁵

This prophetic vision of the Futurists seems to corroborate very clearly one of Walter Benjamin's theses. In “The Work of Art in the Age of Mechanical Reproduction” Benjamin declared that artists tend to aim for effects which can be realised and effectuated only with the help of new technologies:

“One of the foremost tasks of art has always been the creation of a demand which could be fully satisfied only later. The history of every art form shows critical epochs in which a certain art form aspires to effects which could be fully obtained only with a changed technical standard, that is to say, in a new art form.”⁶⁶

Concrete poetry seems to have anticipated the new digital medium, where many of its conceptual premises can be literally effectuated and realised. The visual, kinetic, interactive, changeable and potentially three-dimensional space of the web allows for many new ways of arranging and manipulating the signifier material, and seems to be the perfect environment for creating spatially orientated linguistic constellations. However, digital poetry is often criticised for its dependence on impressive effects, it is denigrated as surface spectacle, as a manifestation of the Jamesonian “culture of the depthless image”, as an example of a superficial postmodern culture which lacks profundity and hermeneutical depth. In “Concrete Poetry in Digital Media. Its Predecessors, its Presence and its Future”, Simanowski talks about the conflict between his “meaning driven soul” and his “spectacle driven soul”, and thematises

⁶⁴ F.T. Marinetti, Bruno Corra, Emilio Settemielli, Arnaldo Ginna, Giacomo Balla and Remo Chiti, “The Futurist Cinema” (1916). In: Umbro Apollonio (ed.), *Futurist Manifestos*. New York: The Viking Press, 1973.

⁶⁵ F.T. Marinetti et al., “The Futurist Cinema” (1916), p. 218.

⁶⁶ Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction”. In: *Illuminations*. Edited by Hannah Arendt. London: Fontana Press, 1992, p. 230.

the predicament of the “technological ornament” in digital poetry.⁶⁷ He points out the existence of digital mannerism, of technology for technology’s sake, of effects which are merely decorative, and works in which language, and its technical dimension, “celebrate” themselves. Simanowski then goes on to draw a parallel between the avant-garde notion of the self-sufficient sign, which is valuable for its own sake, and the self-centred technological effect in digital poems, which only represents itself, as an image for images’ sake so to speak. “Thus,” Simanowski concludes, “one can say that concrete poetry at least partly carries out the same shift from symbolic concerns to sensual stimulation” which one can find in visual digital aesthetics.⁶⁸

He asks: “Is the autonomous self-centered technical effect – the code as a self-sufficient presentation on the screen – the contemporary equivalent of the *pure visual*?”⁶⁹ What he seems to suggest here is that the representation of self-referential code and technological effects are in fact the digital interpretation of concreteness – concrete in the sense that they are only representing themselves and do no longer have to point to any external signifieds.

The most concrete digital poets in this sense are the so-called ‘codeworkers’, most notably JODI. JODI notoriously confront the user with raw, unformatted jumbles of signs, codes, symbols and graphics – the concrete, entirely non- and thus self-referential graphic and textual building blocks of digital works.

When opening their work which is programmatically called “TEXT”⁷⁰, the user is confronted with a jumble of instructions and commands, executable code, scripts, variables and statements, machine language instructions and text strings consisting of representable signs (ASCII) and non-representable signs (binary ones), as well as basic graphic symbols in the form of colourful blocks. “TEXT” consists of an endless sea of ciphers and colours with no discernible meaning – they are not unlike the empty self-referential signifiers in Hansjoerg Mayer’s works for instance. The user clicks her or his way from one page scattered with these symbols to the next, in a hopeless and ultimately frustrated quest for meaning.

“TEXT” conjures up the disturbing visual symptoms of system crashes, malfunctions, a graphic program causing havoc, and yet it is still at the same time strangely aesthetically appealing. What we are witnessing in “TEXT” is actually the simulated result of a memory dump, where raw and unformatted data, often in unreadable form, are copied from the main memory to the screen.⁷¹

This work is in many ways as concrete as it gets in the digital domain. Here, the signs and languages of the computer in all their manifestations – as raw binary data, as machine language, as graphic symbols, as coloured pixel blocks, as human language and as code – are represented for their own sake alone, referring to nothing but themselves and their aesthetic qualities.

⁶⁷ Roberto Simanowski, “Concrete Poetry in Digital Media. Its Predecessors, its Presence and its Future” (2004). At: www.dichtung-digital.org/2004/3-Simanowski.htm

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ JODI, “TEXT”. At: <http://text.jodi.org/>

⁷¹ See essay by Roberts and Schaffner for a more explicit discussion of this work. Andrew Roberts, Anna Katharina Schaffner, “Rhetorics of Surface and Depth in Digital Poetry” (2006). At: http://www.rilune.org/mono5/roberts_and_schaffner.pdf

JODI very clearly work in the tradition of the concrete poets, who frequently thematise the means, the signs, the tools and channels of communication and the conventions governing their usage, rather than generating readily interpretable messages. They too privilege the signifiers over the signifieds, and programmatically create rupture, subverting our habitual expectations and frustrating our usual responses and strategies in the web. Signifiers become their own referents. They neglect the level of content for the exposure of processes and materials. By implication, they question the ideologies latent in representational conventions. These works are interventionist, for they dissect the symbolic order of representation, and expose and deconstruct software conventions, which filter, mediate, organise and structure information in a certain way. Again there are parallels to the concrete poets, who transgressed linguistic boundaries in order to liberate themselves from conceptual, epistemological and social frameworks and preconceptions.

JODI put a new spin on the politics of space in the web: the smooth, glossy, animated multimedia screen spectacle is deliberately shunned and broken into pieces, dissolved into its constituents. It is unmasked as convention-based optical illusion, and the material generative processes behind it are reinstated in an ironic yet at the same time transgressive gesture. They return to and expose the most basic material building blocks of the screen event, just as the concrete poets dismantled and presented the minuscule particles of language.

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