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A Machine Made of Words by a Machine Made of Numbers: Marko Niemi's *Stud Poetry*

Résumé

Cet article propose une ré-évaluation de l'œuvre *Stud Poetry* de Marko Niemi en attachant une grande importance au fonctionnement du programme et en montrant que l'interprétation du code qui a généralement prévalu est mauvaise. Nous pensons que Niemi utilise le poker sur Internet en tant que forme, comme un poète de l'imprimé utiliserait un sonnet. Mais cette utilisation est plus radicale puisqu'elle crée un challenge sur ce qui peut être conçu en littérature, et sur la localisation du « texte » dans un tel travail. Son poème/jeu incarne le challenge qu'une littérature numérique pose à une littérature imprimée et ne devrait pas être rejeté comme production insignifiante.

Mots clés : poétique numérique, culture numérique, JavaScript, Des études de code, Niemi Marko, *Stud Poetry*.

Abstract

This paper proposes a re-evaluation of Niemi's *Stud Poetry*, grounded in a close attention to how the program functions and how the code has previously been misunderstood. We find that Niemi uses internet poker as a form, as a print poet might use a sonnet, but it is a more radical utilisation as it challenges what can be conceived of as literature, and where the text may be in a work of this kind. His poem/game embodies the challenge which electronic literature poses to print literature and should not be merely dismissed as a triviality.

1. An Introduction to *Stud Poetry*

Marko Niemi's *Stud Poetry* has been underrated, overlooked and misunderstood; somewhat surprisingly considering that it has been linked from its publication in 2006, with the Electronic Literature Organisation's Electronic Literature Collections which act as a basis for many college courses on digital literature. Described as a « playful word toy » and « poetry game » on its launch page,[1] *Stud Poetry* mimics a game of internet poker but replaces the value of each card with a word. There is no key provided, so the user must use their knowledge of poker to win chips but also build up an idea of which words are more valuable. By applying this knowledge, and making the correct decisions, the user can outlast the computer generated players and win the game.

In the « Author's Description »,[2] Niemi references the two main uses for playing cards in the Twenty-First Century. On one hand, the user is alerted to a competition; « a poker game played with words instead of cards ». On the other hand, is his reference to « magic », significant as playing cards form a major part of an illusionist's toolkit. While the game is pushed to the forefront of the user's consciousness as they consider whether to check, bet, raise, or fold, it is the critic's function to see beyond the rules and analyse the sleight of hand which switched numbers for words and a game for a poem.

Poetry is closer to a card trick than a card game. A poker player can never escape the rules which they play to, the tradition which they enter by laying a stake. No player will ever win a game of Stud Poker with « 6 of a kind », but an illusionist might — conjuring the sixth card from between their fingers while the other players look elsewhere. A poet can present fourteen lines of flawless iambic pentameter, with a volta and a Petrarchan rhyme scheme — but the technical exercise can fail to become anything more than that. Art which follows the rules becomes paint by numbers; a masterpiece transcends its appearance as if by magic.

Searching for the text in a work like *Stud Poetry* offers similar difficulty to defining which parts of the « 6 of a kind » trick that I have just described make up the illusion. There is nothing illusory about the six cards laid out on the table, they are all there. The trick occurs before anyone realises, and is never seen by

the other players. Luckily, for the purposes of the critic, the mechanism of *Stud Poetry* is available even to those without a membership to the Magic Circle. It can be found in the program's code ô and while not answering all of the questions which are posed by a search for the text ô it is certainly the place to start in this particular enquiry.

2. Placing my Critical Approach in a Historical Context

Another poet masquerading as a conjuror comes to mind when we consider how *Stud Poetry* functions. Tristan Tzara, who drew cut-up sonnets out of his hat like white rabbits, is an easy go-to analogy for how the program randomly selects thirteen words from a vocabulary of forty or so, and uses these to furnish each number and face card with a new value. To invest heavily in this analogy would be to follow a number of critics who equate digital experimentation with the formal experimentation of the early Twentieth Century, often to the detriment of the more modern work.
Where Alan Liu had previously recognised that

[í] so much of contemporary art and literature has a similar look and feel descended distantly from the collages and cut-ups of the modernist avant-garde- for example, assemblage, pastiche, sampling, hypertext, appropriation, mixing, creolization...[3]

Sandy Baldwin goes one step further, « So-called digital literature only underlines the point, since it automates processes defined by and identified with modernist innovation: instant surrealism or Burroughsian cut-ups via text generators »[4]. In « A Poem is a Machine to Think With... » Baldwin claims that Loss Pequeño Glazier's innovation in poetry and criticism is completely linked to the Modernist aesthetic which Glazier himself describes as non-innovative:

The innovative lines up very clearly with the poetic, and with a very particular line of poetic tradition... A ‗Modernist aesthetic‖ would describe many of the writers Glazier valorizes as precursors to electronic poetry: Pound, Williams, Stein; who could be more Modernist?[5]

Hayles would agree with this reading of Glazier, who « argues that electronic literature is best understood as a continuation of experimental print literature ».[6]

Jessica Pressman, author of « Modern Modernisms: Young-hae Chang Heavy Industries and Digital Modernism » is also of this critical school; which sees value in equating modernism and electronic literature. Similarly, Roberto Simanowski notes that « Narrative machines are the contemporary form of experiments in automated writing that go back to the Dadaists and surrealists of the 1920s and that were later taken up by William Burroughs ».[8]

3. An Account of the Text

The drawback of an overreliance on this relationship with regard to *Stud Poetry*, is that it tells less than half of the story that can be gleaned from the code. As I have said, there are initial parallels between Niemi's poem and Tzara cutting up a Shakespearean sonnet, throwing the words into a hat, and then drawing them out at random to create a new poem. Niemi treats words as single units rather than using phrases and his use of an existing poem to create the program's vocabulary is also similar to Tzara. However, in *Stud Poetry* the words are not always generated one at a time, and although Niemi has chosen the forty or so words which make up the program's vocabulary, there are only thirteen slots to be filled each time the game starts. This drastically reduces the chance of the same thirteen words « going into the hat » twice; the probability is expressed in a fraction where the first eighteen decimal places are zero. Niemi loses control as soon as the game starts, and it is likely that every single game created will be different until the technology to view *Stud Poetry* becomes outdated.

Niemi cannot be said to fully control either what goes into each game, or at what point the text is generated; this is determined by the program, which generates « bet », « fold », « check » or « raise » decisions based on random numbers:

The program uses these arrays to determine each computer-controlled player's playing style; at line 302, in the function WantToFold, if the player's tightness is greater than a random number, then the player folds; otherwise, he stays in. These two arrays are filled with random numbers in the Initialize function.[9]

The user also expresses their decisions with buttons at the bottom of the screen, independent of the author and not necessarily in a predictable way.

While Niemi has authored the generic game of *Stud Poetry,* the template to which any game must fit; each iteration is out of his hands as the user interacts and the program randomly generates. There is no perfect game of *Stud Poetry*, and it is inadvisable for critics to place great value on the individual instances of text generation which are experienced in a particular game as they are statistically unimportant and represent an extremely small fraction of possible outcomes.

4. The Poet and the Machine

If one wanted to reintroduce the Tzara analogy at this point a description of *Stud Poetry* spirals towards the absurd. Niemi cuts up the translation of a Baudelaire poem and puts it into a mechanical hat of his own design, which self-selects words based on random numbers. At this point, Niemi walks away. The mechanical hat places thirteen words into a second mechanical hat designed by Niemi, which randomly places the words into a template hidden inside it. A third machine, not a hat but a poker dealer which is completely controlled by the rules of Stud Poker and the contents of the second hat, uses the template to make a pack of cards, and deals them to five other machines who understand the rules of poker but do not know the template, or have any kind of logic which would allow them to learn it, and whose decisions are controlled by random numbers anyway. There is also one user, who may or may not know the rules of poker, and may or may not have the logical capacity or inclination to learn how the template has been filled. This user may also view the order in which the words are generated as poetic, as they appear, disappear and form lines. We are far from magic tricks now, perhaps closer to a steam-punk milliner, but what this illustration hopefully indicates is how far *Stud Poetry* is from the experimentation of Tristan Tzara.

The machines involved are neither mechanical nor magical, but are actually powered by numbers. On a basic level, these are the 0øs and 1øs of binary, but even in JavaScript it is randomly generated numbers which allow *Stud Poetry* to function. If a poem is, as William Carlos Williams claimed, a ʻmachine made of wordsø, or as Aarseth writes in *Cybertext*; « the text is seen as a machine ô not metaphorically but as a mechanical device for the production and consumption of verbal signs »[10] then *Stud Poetry* is the « Machine Made of Words by a Machine Made of Numbers » from my title.

The relationship between code and coded media is described more elegantly

by Peter Gendolla and Jörgen Schäfer, paraphrasing Phillipe Bootz: « The author creates a *texte-auteur* (author-text) to which everything belongs which he has encoded in a significant form ».[11] Jean-Pierre Balpe's paper « Principles and Processes of Generative Literature » is also relevant, especially when he writes, « In generative literature, there certainly is an author but one who has not really written the text which is being presented to a reader; his function is not the one we usually assign to an author ».[12] Friedrich Block recognises Florian Cramer's contribution to this area: Cramer « aptly notes » that even if

> [í] a clever artist makes the machine do the work, it still implies that the artist makes it work in the first place. Poiesis, making, becomes a second-order poiesis of making something that makes something else. So poetry, making, turns into poetics, the making of making.[13]

When applied to *Stud Poetry*, Niemi's JavaScript code becomes a poetics itself, dictating how the poem is created.

Should it be as easy as that to substitute the code for the poet, and say that it is in fact the machine made of numbers which does the work? It may solve the mystery which Aarseth confronts: « [í] the struggle for power fundamental to any medium: if the difference between author and reader has vanished or diminished, then the real author must be hiding somewhere else »,[14] but if « der Autor konnte fast verschwinden », a phrase taken from Oskar Pastoir's 1985 *Anagrammgedichte* and translated by Jörgen Schäfer as « the author was virtually to disappear »,[15] then we must ask whether the text has disappeared too.

The issue with labelling code as a kind of ars poetica, is that it implies a separation of it from the text which is generated, ultimately leading to the question: « Does the artwork reside in the machine or in what the machine generates? »[16] In ‒Language as Gameplay' Brian Kim Stefans writes « that all *successful* works of ‒electronic literature' are *sui generis,* in that they invent new genres unto themselves ».[17] Perhaps then, in the case of *Stud Poetry*, the ‒artwork' resides in generating the genre, or generating the machine.

When William Carlos Williams declared that a poem was a « machine made of words » he styled the poet as an industrialist ô challenging the dichotomy between reason and emotion which had developed through the Enlightenment. Charles Hartman uses this famous quotation as an epigraph to his memoir, *Virtual Muse: Experiments in Computer Poetry*, and is certainly not the only critic who has recognised that it could be applied to computer-based literature.[18]

To render an elegant expression obvious, the machine was created by the poet so that when the reader came to operate it, it produced the desired effect. The critic then, to understand the poem, could take it apart on the kitchen table and have a look at it piece by piece ô knowing that a machine had no red herrings; everything was there for a reason. This perspective on literature was evident in art;

> [í] good form required the exposure of the variations and counter-pressures, even the stark contradictions, that composed it, and in a manner that was not just decorative or historicist (Victorian, some modernists called it) but aggressively functional, like the strutwork of a steel bridge,[19]

but also in criticism:

> Formalism, above all other twentieth-century artistic and critical movements, suborned the technological rationality of modernity by remoulding its functionalist assumptions so profoundly as to imprint them with the distinctive style of ⹂modernism⹆ That imprint came from inscribing the idea of form so deeply into function that it could no longer be discarded like packaging from the product. Form instead became the new belief system called design.[20]

An excellent example of this in print is Dan Grahamøs « Poem Schema », a self-referential list of its own properties which takes the form « [Number of] adjectives/ [Number of] adverbs »[21] and continues in alphabetical order of features. The editor or publisher is meant to fill in the actual values and publish the list with actual figures, but the square bracketed text works much in the same way as code does in *Stud Poetry*, in that it invisibly defines the text through initialising an action- in this case counting.

Published above the schema, is a paragraph explaining that this particular list varies from others published elsewhere and ostensibly encouraging an interpretation of it; « The work defines itself in place only as information with simply the external support of the facts of its external appearance or presence in print in place of the object ».[22] It is typical for a conceptual work to include an explanatory account, giving context to the work, or for the title to give a clue to interpretation in the literary equivalent of a knowing wink.

5. Reading *Stud Poetry* as Literature

By naming the work *Stud Poetry*, Niemi stakes a two-pronged claim for its reception as a work of literature. It is stating the obvious that a work with ‑Poetryø in the title claims to be poetic, but when it includes word-play, poetry echoing poker in this case, the title becomes slightly more sophisticated than just a sign declaring « this is a poem ». Niemi is also blatant in his staging of the contest between old and new poets; this is the basis of the game after all, but in choosing a translation from Baudelaireøs « Correspondances » to provide his word array, he also enters into a tradition which alludes not just to the French poet, but also Tzaraøs Dada experiments which I have already mentioned. It is not the figurative use of language which makes *Stud Poetry* a poem, but the conscious allusions to, appropriations and crucially drastic manipulations of « literature » and « the literary » which are dramatized in this work.

Like Grahamøs « Poem Schema », *Stud Poetry* offers descriptive and explanatory texts which the user encounters before each game. These offer multiple clues with which to guide interpretation, but also complicate the work with statements which mimic and contradict traditional conceptions of literature. Niemi claims *Stud Poetry* as « a poetry game with some greats from the past »,[23] and this places it in the realm of the the ludoliterary, Noah Wardrip-Fruinøs phrase which describes « textual and literary structures in which elements of play are used as a means of interaction ».[24] It is also not clear if Niemi is ironic in his use of ‑greatsø when applied as an adjective, « great » is doubtlessly complimentary, when as a noun, it could be tongue-in-cheek. Although he does not use this terminology, David Aarseth goes further when discussing playable literary texts, arguing that the play is not just an element, but the message:

> [í] just as the game becomes a text for the user at the time of playing, so, it can be argued, does the user become a text for the game, since they exchange and react to each otherøs messages according to a set of codes. The game plays the user just as the user plays the game, and there is no message apart from the play.[25]

While there is doubtlessly a narrative which develops as the poker hands play out, a work which is so heavily invested in language cannot be reduced back to the game which it mimics ô the words are still words even when turned into cards. Rather, I believe that there is always a dual aspect; the user configures

and interprets, to reference Hayles' paraphrase of « Markku Eskelinnen's elegant formation, we may say that with games the user interprets in order to configure, whereas in works whose primary interest is narrative, the user configures in order to interpret ».[26] Marie-Laure Ryan recognises that different readers have different approaches, that while one reader may try and win at all costs, there is also « a reader who engages with the text out of narrative interest, and is more interested in paidia – free play – than in ludus – playing by the strict rules for the sake of winning and losing ».[27] *Stud Poetry* offers both the paidia of interpreting the poetic lines which appear as the cards fall and the ludus of taking on ‒the greats' – an aspect also recognised by R. T. Funkhouser, when he self-consciously admits « In one game I had a showdown with Valéry »[28] in his article « Marko Niemi Stud Poetry ». Alan Liu considers the aesthetics of gaming to be a « playful blend of narrative, interactivity and simulation »[29] and each of these can be seen in Funkhouser's showdown. Although randomly determined to a great extent, the inclusion of numerical values relating to an imagined chip count gives the game a narrative quality, as the simulated chips wax and wane in front of the user's eyes.

6. Existing Misconceptions

While Funkhouser offers a useful account of the experience of playing *Stud Poetry*, the conclusions which he draws about the work are marred by factual inaccuracy and a misdirected approach: his misreading of the code and the ‒Instructions' lead him to draw the wrong conclusions about how the program functions. An example of this is his interpretation of « started » in the « Instructions »: « ‒The relative value of the words is randomly assigned each time *Stud Poetry* is started' (Stud). Such randomness makes it impossible for players to develop expertise, or skills enabling them to succeed consistently in the competition; logic and rules of poker do not apply ».[30] For Funkhouser, « started » means each time a new hand is dealt, and this would obviously make it impossible for a user to apply the rules of poker and logic. « Started » actually refers to when the poker game starts; this is clear both from the repetition of the verb in « Instructions », « All players start with 100 chips »,[31] and from the code:

```
words= new Array();
for (i=0; i<13; i++) {
    ChooseWord = Math.floor(Math.random()*AllWords.length);
    words[i] = AllWords[ChooseWord];
  NewWords = new Array();
  for (k=0; k<ChooseWord; k++)
        NewWords[k] = AllWords[k];
    for (k=ChooseWord+1; k<AllWords.length; k++)
      NewWords[k-1] = AllWords[k];
  AllWords = NewWords;32
```

where the line which assigns value to each word appears only once, and not after each hand is completed, « The word-cards are selected randomly from the AllWords array, which is filled before the game begins, and their value is determined by their position in the deck ».[33] This allows readers to learn from hands as they are completed, and if they can stay in the game long enough, gain an advantage over the computer players who act randomly. If a game ends with Stéphane Mallarmé winning because he holds the highest card, « color », and no other player holds a pair, then the user knows that « color » is more valuable than all the other cards on show. Success can be as consistent as the rules of poker dictate, more so because the other computer players only partially know the rules. This discredits Funkhouserøs claim that « Winning a game of *Stud Poetry* involves totally random principles »,[34] and seriously undermines the conclusions which he draws from this position.

It is not just Funkhouserøs misreading of the code or « Instructions » which restricts his argument, but also his critical approach. When, after one hand of randomly selected words beats another, he asks « In this example, does the richness of seeing infinite color trump singing for escape? Is observation (i.e., glancing) valued more than escape? »[35] he pays too much attention to the semantics of the lines and doesnøt recognise that their meaning, or value, has changed. Funkhouser makes the same mistake that Stuart Moulthrop, in « Lift this End: Electronic Literature in a Blue Light », accuses Marjorie Perloff of when she critiques Kenneth Goldsmithøs *Traffic*, namely reading « a contingent assembly of borrowed language as if it had the supposed inevitability of a traditional, intentional structure ».[36] In his critique of *Stud Poetry,* Funkhouser cannot get beyond the Modernist concept of « poet as designer », an author who has paid great care and attention to the final, static artwork.

This is an underlying assumption in his entire concept of literature and aesthetic, as is demonstrated here; « in a literary sense, assigning values to the words presents difficulty because ô especially in poetry ô their importance depends on where, and in what context, the author places them. »[37] Niemi does not « place » any of the words which appear as the game progresses, apart from those which describe the playersø actions, « Mallarmé folds ».[38]

Towards the end of the essay, Funkhouserøs conservative position becomes even more apparent

> [í] poets accustomed to traditional verse will not detect any type of logical poem from the words given and will reject the game-as-poem on aesthetic grounds. Niemi practices a liberal (not literal) interpretation of poetry: arranging words (some containing pathos) together in a manner that, while poetic in its own way, ignores basic devices like rhythm or meter.[39]

This sentence is littered with assumptions. First; as discussed, I do not believe that Niemi can be accurately described as arranging words. Second; « basic » implies that rhythm or meter is an essential attribute to poetry, a statement which I believe to be outdated by at least a hundred years. Funkhouserøs patronising use of « while poetic in its own way » pre-empts Stefansø « sui generis », but while Funkhouser dismisses the « liberal (not literal) » approach, Stefans embraces the novelty. That *Stud Poetry* defines the poetic in its own way makes it an avant-garde piece of literature worth critical exploration.

7. Calculating Value

Funkhouser recognition that « Niemi employs a technique of including words that can serve both as nouns and verbs (a role played by « echo » and « sound » above, and by « light », « glance », « color », « incense », « perfume », and « escape » elsewhere), which maximize versatility within a limited vocabulary »[40] is useful, as it provides a grounding for analysis of the particular text without unnecessary assumptions. This is primarily because « maximise » can relate to the probability of words occurring, and accounts for the fact that after inputting the vocabulary, Niemi has no control of what order the text appears on the screen. The rules of probability govern the text as much as the rules of poker do, and in probability we find another machine made of numbers

which determines the user's experience.

Can a critical assessment of *Stud Poetry* be reduced to a list of numeric values which describe the text? The probability of the same game occurring twice, the random number which determines how often Mallarmé folds, the chip count of all players at any given time; are these what a critic should be concerned with when considering the work. Can we count up its value? An over reliance on them would seem to follow Niemi's lead without calling his bluff. To determine value with random numbers is exactly what *Stud Poetry* does, but this attempt to obscure significance runs against the critic's task to elucidate it. A user must combine statistics with context to determine which action is best in the game just as a critic must combine an appreciation of the mechanics and context of a work to determine its value. The critique cannot be wholly made of numbers, but it must recognise their importance and accurately describe their function or any critical account will only be superficial.

NOTES

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² *Ibid*.

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⁷ Pressman, Jessica. ÿÿModern Modernisms: Young-hae Chang Heavy Industries and Digital Modernism ıı *Pacific Rim Modernisms,* Steve Yao, Mary Ann Gillies, and Helen Sword eds., Toronto: Toronto University Press, 2009: 316-334.

⁸ Simanowski, Roberto. ÿÿHolopoetry, Biopoetry and Digital Literatureıı *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007, 56.

⁹ Shepard, David. ÿÿFinding and Evaluating the Codeıı [online] <http://newhorizons.eliterature.org/essay.php@id=12.html> (ELO. n.d. Web. 8 May 2012.)

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¹¹ Gendolla, Peter and Schäfer, Jörgen. ÿÿPrefaceıı *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007. *Ibid*., 11.

¹² Balpe, Jean-Pierre. ÿÿPrinciples and Processes of Generative Literature ıı, *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007. *Ibid*., 309

¹³ Block, Friedrich W., ÿÿHumour- Technology- Genderıı, *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter

Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007. *Ibid*., 169

[14] Aarseth, 165.

[15] Schäfer, Jörgen, ÿÿGutenburg Galaxy Revis(it)edıı *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007. *Ibid*., 126

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[18] Aarseth, Hayles and Montfort, Nick. *Twisty Little Passages: An Approach to Interactive Fiction,* Cambridge: MIT Press, 2003.

[19] Liu, Alan. *The Laws of Cool: Knowledge Work and the Culture of Information*, Chicago: Chicago University Press, 2004. *Ibid*., 196.

[20] *Ibid*., 196.

[21] Graham, Dan. ÿÿPoem Schemaıı *Against Expression : an Anthology of Conceptual Writing,* Craig Dworkin and Kenneth Goldsmith Eds. Evanston, Illinois: Northwestern University Press, 2011, 209

[22] *Ibid*., 209.

[23] *Stud Poetry*

[24] *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media,* Peter Gendola and Jörgen Schäfer eds., New Jersey: Transaction Publishers, 2007. *Ibid*., 12.

[25] Aarseth, Hayles and Montfort, Nick. *Twisty Little Passages: An Approach to Interactive Fiction,* Cambridge: MIT Press, 2003. *Ibid*., 162.

[26] *Ibid*., 8.

[27] Ryan, Marie-Laure. ÿÿNarrative and the Split Condition of Digital Textualityıı *The Aesthetics of Net Literature: Writing, Reading and Playing in Programmable Media*, Peter Gendola and Jörgen Schäfer Eds., New Jersey: Transaction Publishers, 2007, 257.

[28] Funkhouser, C.T. ÿÿMarko Niemi *Stud Poetry*ıı [online] <http://www.newdirectionsindigitalpoetry.net/Niemi.pdf> (Continuum Books. n.d. 1 April 2012.)

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[31] *Stud Poetry*

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[38] *Stud Poetry*

[39] Funkhouser, C.T. ÿÿMarko Niemi *Stud Poetry*ıı [online] <http://www.newdirectionsindigitalpoetry.net/Niemi.pdf> (Continuum Books. n.d. 1 April 2012.). *Ibid*., 9.

[40] *Ibid*., 5.