The Poet's Other Self:

Studying Machine Writing through the Humanities

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ABSTRACT

As social discourse moves further and further into online spaces, the creation of fractured, fluid online identities increases. These online identities, known as "hyperidentities", do not produce the traditional cultural artefacts of the non-digital past. Memoirs and novels are replaced by tweets and forum posts, seemingly incompatible with traditional forms of literary and media analysis.

This article explores the use of "Machine Writing" – the creation of texts via computational methods – as a methodology for understanding online cultures. By using code to wrangle the textual artefacts created by online communities, such as tweets or forum posts, online identities can be unified into long-form pieces of prose or poetry that are ripe for analysis and critique. This article will introduce the concept of Machine Writing as a creative practice that intersects with the Digital Humanity's "Distant Reading" methodology, through a transformation of Edgar Allan Poe's *The Raven* using the Machine Writing technique *Mathews' Algorithm.* The article will then interrogate the concept of hyperidentities by analysing three Machine Written texts born from them: Ranjit Bhatnagar's *I got an alligator for a pet!* and *You Can't Write If You Can't Relate*, and Studio Moniker's *All The Minutes.*

Intersections between literary/media studies and computer science have often existed in the periphery of both fields. Understandings of computing or cybernetics are commonly deployed by humanities scholars to better understand the changing nature of one's identity, such as Haraway's (2016) landmark analysis of the feminist "cyborg", originally published in 1985. The analysis of literary works that deal with AI (artificial intelligence) and cyborgs, such as *True Names* (Vinge 2016) from 1981, inevitably invoke an understanding of computing concepts. Like much of the humanities, these intersections have been driven by a desire to better understand the evolving nature of the human condition and society. As our connection to the digital world through social media and other online platforms increases, the relationship between the humanities (specifically the fields of creative writing, literary studies and media studies) and computer science has grown, leading to the development of studies in Digital Humanities such as Franco Moretti's "Distant Reading" (2013) methodology.

For Moretti, digital methods of literary analysis provide an avenue for studying large corpuses of literary work that would be otherwise impenetrable due to sheer size. Moretti states that to understand literary history on a grand scale, one must consume such a large amount of works that close reading is an impossibility. Moretti states that "a larger literary history requires other skills: sampling; statistics; work with series, titles, concordances, incipits…" (2013, p.67). Moretti achieves this through several practices, including tracing the evolution of novel titles on a word-by-word basis (2013 pp. 179-210) and drawing on network theory to build "maps" of character interactions in plays (pp. 211-240).

Moretti's focus is primarily on more traditional literature. However, an expansive corpus of texts he is yet to broach has bloomed online: the slew of text, imagery and other media that has spawned from online discourse. Through social media and other online interactions, the postmodern concept of the "hyperidentity" (Filiciak 2003) has been realised. The role of territories and nationalities in defining one's identity has been reduced by an

increase in the role the internet plays in day-to-day life. Our identities are no longer governed by where we were born or raised; our locations have become social media platforms, online games and forums. Our personal history and with it our identity has become fragmented across blog posts, images and videos. One can alter their personality, revealing different aspects of themselves through what they choose to present, writing and re-writing their multi-faceted identity through the creation and deletion of content. As a result, the online communities comprised of these hyperidentities fluctuate and change at a faster rate than traditional societies (Filiciak 2003, pp. 87-102).

Like Moretti's massive literary corpuses, hyperidentities are impenetrable by traditional cultural or ethnographic analysis due to the speed of production and fluctuation. This poses a problem for scholars: online culture is the nucleus of contemporary cultural discourse, yet methodologies for adequate analysis have yet to crystallise. This article will explore how the creation and analysis of Machine Written texts can be understood as a Distant Reading methodology useful in breaching the surface of hyperidentities and internet cultures, allowing scholars within and on the periphery of the Digital Humanities to study them.

Through Machine Writing and Distant Reading, this article will map a constellation of creative writing, literary/media studies, and computer science. To achieve this (and articulate the interplay between Machine Writing and Distant Reading), the Machine Written text *Mathews' Raven* will be created, generated using Harry Mathews' (1996) Machine Writing technique *Mathews' Algorithm* and Edgar Allan Poe's *The Raven* (2010). *Mathews' Raven* will reveal the utility of Machine Writing as a form of Distant Reading. [1]

[1] It must be noted that the author of this article is not a computer scientist. Rather, they have interdisciplinary interest and experience within the field. As such, the code in this article's appendix serves a function of transparency rather than an example of "good" code.

Analysis will then move to an interrogation of hyperidentities and internet culture, followed by showcasing Machine Writing as a technique for generating cultural artefacts from the vast corpus of online media. Bhatnagar's Pentametron bot and resulting novels *I got an alligator for a pet!* (2013) and *You Can't Write If You Can't Relate* (2014), and Studio Moniker's *All The Minutes* (2014a)[2] use Twitter data to construct pieces of fiction, which are more accessible to literary and traditional media theorists than the corpuses they draw upon. These texts offer a gateway into the analysis of online communities and hyperidentities. The systems and texts analysed in this article serve as an introductory attempt at mapping the Machine Writing "constellation" of creative writing, literary/media studies, and computer science.

A history of Machine Writing

Texts have been created and analysed via algorithms and systems for over a century. Alex Christie (2014) cites Stéphane Mallarmé's symbolist poetry from the late 1800s as an early example of systemic or algorithmic reading. Recent years have seen an increase in the creation of texts through computational methods, but attempts to canonise them within a single literary tradition have failed (Rodger 2013), preventing scholars within both the humanities and computer science from utilising these texts and their creation in scholarly discourse. This article adopts Alessandro Ludovico's (2016) terminology of "Machine Writing" to refer to both the creation of texts via computational methods and the texts themselves.

The use of Machine Writing techniques to create, edit or analyse literature and other texts is viewed as an array of overlapping traditions, rather than a unified field of study

[2] The initial project, which included the bot, website and resulting text, is accredited to Studio Puckey. However, the project's components are currently credited to Studio Moniker.

(Rodgers 2013 p. 1). These traditions are poetry, computing, research and "Oulipan", referring to the French collective of poets and mathematicians known as OULIPO ("Ouvroir de littérature potentielle" / "Workshop of potential literature"). These separate traditions have prevented Machine Writing from building up a significant, united corpus of works or objectives (Rodgers 2013, p. 1). Machine Writing poets such as Jackson Mac Low (1986), who used Machine Writing techniques to either modify or create his poems, has little in common with computer science researcher Sarah Harmon, who created the *FIGURE8* system for analysing and generating figurative language, attempting to train a computer into crafting metaphors and similes (Harmon 2015).

Christopher Funkhouser provides analysis of Machine Writing systems and texts, but with a broader focus. Funkhouser (2007) contextualises Machine Writing methods and texts as part of a broader tradition of digital poetry, which encompasses all artistic ventures that utilise both digital technology and poetics. While Funkhouser's use of Machine Writing is valid, it does not unify the multiple traditions of Machine Writing under a single banner, instead incorporating the concept into another framework (namely, digital poetry).

To understand Machine Writing as a unique movement in and of itself, this study must adopt a single definition. "Machine Writing" has been taken from Ludovico (2016), and is used to encompass all forms of literary creation through the explicit use of an algorithm or machine, be it a mental system or an actual computer program. This definition is broad enough to encompass machinic production that pre-dates or otherwise avoids the use of digital computing, while avoiding the inclusion of implicit systems of writing such as grammar or plot conventions. The definition also separates digital Machine Writing from Funkhouser's broader concept of digital poetry.[5]

[5] The use of this definition in this manner originates from the author's in-progress thesis.

A notable movement in the tradition of Machine Writing is the founding of the OULIPO collective in 1960 (Kurt 2015, p. 889). The group adopted the practice of applying scaffoldings and systems that would place limits on the kind of texts they could produce. The group followed the ethos that a writer observing familiar rules writes with greater freedom than one who writes under the belief they are free of constraints and conventions (Motte 1998, p. 18). OULIPO believed that, by creating a rule or "constraint" then attempting a handful of experiments with it, they explored the "potential" literature of the world, conjuring the non-existent body of texts these systems could potentially create (Motte 1998, p. 12). OULIPO's constraints explicitly gave over a participating writer's human agency to the confines of a system to achieve a specific aesthetic or discursive goal. Through limitations, the anxieties of human cognition are alleviated from the work, allowing these writers to explore avenues of objectivity and structure they would otherwise resist.

Computer scientists were also experimenting with the automation of literary creation at the same time as OULIPO. In 1959, computer scientist Theo Lutz used the Zuse Z22 (a second-generation computer) to create *Stochastic Texte.* Lutz gave the computer a database of sixteen 'subjects' and sixteen 'titles' derived from Kafka's *The Castle.* The computer used random numbers to order these subjects and titles, connecting them using constants such as gender and conjunction (Funkhouser 2007, p. 37). William Chamberlin and Thomas Etter's RACTER program, created in 1984, would give more clout to the Machine Writing tradition. Chamberlin used the program to generate *The Policeman's Beard Is Half Constructed*, a psychedelic, postmodern novel that shifts between poetry and prose (Chamberlin 1984).

In 1991, Australian poet John Tranter engaged with Machine Writing via the use of programmer Neil J. Rubenking's *Brekdown* text generator. Tranter fed *Brekdown* the works of Matthew Arnold and John Ashbery. *Brekdown* then generated new lines of poetry in Arnold and Ashbery's styles, with Tranter editing the output (Tranter 1997). Tranter's work signifies

a shift in Machine Writing composition, with poet and programmer being separate authorial forces (Tranter and Rubenking respectively).

Recent years have seen Machine Writing move further into the mainstream. Between 2013 and 2016, the NaNoGenMo (National Novel Generation Month) challenge encouraged individuals to create novels using code, sharing both results and source code for others to reuse and edit (Kazemi 2013; 2014; 2015; 2016). Entries ranged in method and scope. Fullwood's *Twide And Twejudice* (2014) replaced dialogue in *Pride and Prejudice* with words from various tweets[6] that had been used in the same vein. Fullwood's work often resulted in the same word as the original text but with alternative spellings/misspellings and slang. While Fullwood's piece projected tweets onto Austen's narrative-scaffolding, other NaNoGenMo submissions would use tweets exclusively to construct their work. This included Bhatnagar's *I got an alligator for a pet!* and *You Can't Write If You Can't Relate*, and Studio Moniker's *All The Minutes.* Bhatnagar's work searched Twitter for tweets with the hashtag[7] "#NaNoWriMo", referring to the National Novel Writing Month challenge. The hashtags are then removed and the tweets are arranged together in paragraphs, resulting in a stream of consciousness-like piece of writing. Studio Moniker's work searched[8] for tweets that contain the phrase "its [hour:minute am/pm] and" and compiled these tweets in chronological order. The resulting piece details the entirety of a day, shifting dramatically from minute-to-minute as the authorial voices – now anonymised – jump into different scenarios (Moniker 2014).

Beyond NaNoGenMo, 2016 saw the short film *Sunspring* (Sharp 2016) entered in the *London SciFi* short film contest. The film was written using a predictive text algorithm like that found on most smartphones, trained on a corpus of film scripts and then supplied with a

[6] Posts to the social media platform Twitter.
[7] A label/tag applied to posts to make it easier for others to find content related to a particular topic.
[8] The project is still active, continually updating at alltheminutes.com.

set of stimuli. The film was then made by humans (Sharp 2016). Finally, *The Day A Computer Writes A Novel*, a novel written by a computer program and a human team led by Hitoshi Matsubara, made it through the first round of Japans' Nikkei Hoshi Shinichi Literary Award in 2016. It was the first AI-penned novel to do so (Olewitz 2016).These recent developments offer a glimpse into how computer science methods, which range from re-ordering and cataloguing data to gathering it, are being utilised to enhance and change creative writing practices. The NaNoGenMo texts are bizarre and abstract, but act as pastiches of online culture, recapturing the hyperidentities that have sprawled out across Twitter in a similar vein to Moretti's graphing and mapping of textual information. The texts are cross-cultural in nature, drawing indiscriminately from various nations and social groups.

Mathews' Raven

The use of Machine Writing texts in analysing or decoding cultural concepts remains in question. To answer this query, the Machine Writing method, *Mathews' Algorithm,* will be used on an excerpt from *The Raven*. The resulting text, *"Mathews' Raven*" will then be analysed. *Mathews' Algorithm* has been chosen due to the ease of demonstrating it.

Mathews' Algorithm was devised by OULIPO member Harry Mathews. Mathews created the algorithm in 1982, and did so to generate new texts from pre-existing ones (Mathews 1998, pp. 126-139). The algorithm's core steps[9] are as follows:

1. Take several "sets", or lines of text. These sets may be individual letters, sentences of prose, lines of poetry or any other combination. All that is required is that these sets contain an equal number of "elements", such as words or

[9] Additional steps exist to further modulate the text. These have not been incorporated into this version as they are deemed superfluous to the purpose of the demonstration.

phrases. This must be, in some way, quantifiable. Divide these sets by their elements:

Set 1	1a	1b	1c	1d
Set 2	2a	2b	2c	2d
Set 3	3a	3b	3c	3d
Set 4	4a	4b	4c	4d

2. These sets are then shifted over by the formula of *n -1, n* being the set number. Set **1**'s formula is: **1**-1=0, so there is no shift. Set **2**'s formula is **2**-1=1, so it is shifted 1 space. Elements that have moved beyond the last element are "rolled" back to the first:

Set 1	1a	1b	1c	1d
Set 2	2d	2a	2b	2c
Set 3	3c	3d	3a	3b
Set 4	4b	4c	4d	4a

3. The columns are then read downward to create new sets, each starting with the "a" of the original set (Set 1 would be read 1a, 2d, 3c, 4b and set 2 would be read 2a, 3d, 4c, 1b):

Set 1	**Set 2**	**Set 3**	**Set 4**

1a	1b	1c	1d
2d	**2a**	2b	2c
3c	3d	**3a**	3b
4b	4c	4d	**4a**

Using the first line of each of the first four stanzas of *The Raven* (Poe 2010, p. 3) and applying *Mathews' Algorithm,* a new text will be produced. The steps are as follows:

4. Each line/set is divided into four elements. The first element of each set is boldened for clarity:

Once upon	a midnight dreary,	while I pondered,	weak and weary,
Ah, distinctly	I remember	it was in	the bleak December;
And the silken,	sad, uncertain	rustling of each	purple curtain
Presently my soul	grew stronger;	hesitating then	no longer

5. The first step of *n – 1* is applied:

Once upon	a midnight dreary,	while I pondered,	weak and weary,
the bleak December;	**Ah, distinctly**	I remember	it was in

rustling of each	purple curtain	**And the silken,**	sad, uncertain
grew stronger;	hesitating then	no longer	**Presently my soul**

6. The columns are read downwards, producing:

Once upon the bleak December; Rustling of each grew stronger
Ah, distinctly purple curtain hesitating then a midnight dreary
And the silken, no longer while I pondered, I remember
Presently my soul weak and weary it was in sad, uncertain

A bizarre and abstract poem is produced, born from the manipulation of Poe's own words. This example (and further permutations using *Mathews's Algorithm*), is a re-organisation of Poe's work. The poem is a discovery found within Poe's writings: its words are sombre and otherworldly. Poe's ability to transpose the intangibilities of humanity onto the objects around him has been augmented. In addition to Poe's original imagery of a "bleak December", the personification of a "hesitating" curtain is introduced, as well as the jarring imagery of a "silken" forgetful mind. The narrator's soul is now given the properties of uncertainty and sadness. The collapsing mind of the narrator in the original poem is, from a syntactical level, brought to the fore: their statements are fragmented. Their house and furniture bear down on them in a terrifying and fantastical manner as they fall into despair. The lines themselves tumble grammatically, unmooring from reality until they are escaping blips of cognition.

This process was carried out manually. A small program, however, has been written by the author in the programming language Python 3[10] to carry out the same process, further

[10] More information on the Python language available from python.org.

removing the human element and any prejudice that this may contain. This script identifies where the spaces (“ ”) appear in the entered sets, and divides each set into four semi-even elements. The script is detailed in Appendix A. When the same lines from *The Raven* are entered into the digital version of *Mathews' Algorithm*, it produces the following result:

Once upon purple curtain stronger; hesitating then no

Ah, distinctly I remember longer a midnight

And the silken, sad, dreary, while it was in the

Presently my soul grew I pondered, weak and weary, bleak December; uncertain rustling of each

The program's interpretation of the original lines is stricter, and relies on quantifying each set by word count (or more accurately, the amount of spaces in each set). As opposed to the author's manual process, which involved separating each set into elements that remained aesthetically and linguistically “correct”, the program has moved without human prejudice, resulting in jarring statements such as “while it was in the”. By focusing on the spaces, rather than the syllables, even Poe's most basic intentions of rhythm or structure are removed.

While the manually written version of *Mathews' Raven* preserves some of Poe's phrasing and imagery, the programmed version removes them almost completely. By removing human prejudice, the text's components are presented in their rawest form. Phrases and themes become “sets” and “elements” exclusively, transformed into the gears of the text's machine.

Despite the differences in the two versions of *Mathews' Raven*, Poe's themes, word-choice and in some cases expressions remain the core building blocks. Although they have been manipulated and decontextualized, no additional information has been introduced. As such, *Mathews' Raven* remains a construct of Poe's own mind in similar fashion to the original poem. Poe's thoughts and expressions have been distorted, allowing the reader to step outside

Poe's self-imposed linguistic boundaries, made evident in the dissonance between the manual *Mathews' Raven* and the completely computerised version.

The reader now moves into a space that Poe's consciousness did not allow him to freely inhabit, creating a new piece of writing with which to understand him and analyse his literary choices more purely. *Mathews' Raven*, theoretically, allows scholars of Poe or gothic literature to explore elements of the text they would otherwise not uncover. By reshaping and interrogating the text, scholars plunge into a new space of analysis previously unreachable.

Analysis of Poe's work through machinic or digital methods has precedent in Jerome McGann's recent work. McGann investigates Poe's work in his analysis of literary studies in digital contexts (McGann 2014, pp. 147-167). McGann comments on the performative nature of interpretation, drawing parallels between digital analysis and linguistic translation. The performance of a text through translation, digitisation or a re-structured reading (akin to *Mathews' Raven*) all allow for the emergence of new meanings (McGann 2014, p. 79).

However, the advantages of analysing Machine Written versions of Poe's work is negligible. Although some new revelations may occur, Poe's work and history is well-documented, with paperback editions of his work chronicling his life (Rapatzikou 2010, pp. vii-xi). Neither Poe's identity nor work needs to be re-constructed before it can be analysed. Instead, Machine Writing techniques can be used to aid scholarly analysis of less thoroughly-examined individuals and communities, such as hyperidentities. Like *Mathews' Raven*, Machine Written texts that explore the culture artefacts of the hyperidentities that have developed online can then be analysed through the lens of literary or media studies. This type of analysis both offers a method for effectively exploring hyperidentities and online cultures, as well as creating a space in academia for analysing Machine Written texts.

Machine Writing and hyperidentities

To better articulate the usefulness of Machine Writing (and broadly Distant Reading) in studying hyperidentities, it is necessary to interrogate why traditional methodologies are not suited. Filiciak (2003, p. 93) identifies a shift in the concept of self, beginning with the Industrial Revolution and the proliferation of mass media. Over time, the continual spread of cross-cultural media, as well as freedoms of movement afforded by new modes of transportation, has resulted in pre-defined concepts of "self" (regarding societal roles or castes) eroding. A more free-form concept of self has taken the place of the pre-defined self, allowing the individual to play a greater role in defining their own identity. The shift from identity to hyperidentity has been bolstered by an increase in online interactions and discourse. Filiciak (2003, p. 87) echoes Sherry Turkle's statement that "computers embody postmodern theory and bring it down to earth".

Now that the individual may define themselves, they are more self-aware. The boundaries and attitudes one attaches to themselves alternates depending on their social circumstance (Filiciak 2003, p. 93). When internet identities via social media and other online spaces are introduced into the already-fragmented postmodern self, the hyperidentity is born. With individuals present on multiple online platforms at once, there is a greater onus to constantly generate new narratives of self across different platforms, thereby compounding the issue of the splintering self.

The unwieldly form of hyperidentities resembles Moretti's concerns regarding large corpuses of literature, in that they are too unwieldy for close reading. . In contrast, Poe's various texts follow a linear progression throughout his life, making his identity and its modulations more easily analysed. Poe's texts, as well as those of his contemporaries, act as progressive cultural markers, easily analysed by literary and media studies. The cohesion of self that these

texts facilitate, and which most literary and media theory traditionally relies upon, is disintegrated by online culture and hyperidentities. Filiciak states:

> Ego is some sort of hollow tube through which, under different circumstances, different parts of our personality – each time a single one – find their expression. We are existing in a state of continuous construction and reconstruction, and any attempts to provide for cohesion are only a defect of the human mind; some sort of side effect of having memory … or a work of language (2003, p. 98).

Hyperidentities dismantle the illusion of a cohesive self. As demonstrated in the recreation of Poe through *Mathews' Raven*, the self as constructed by writing poetry or prose is an intentional attempt to generate a cohesive identity. Following Filiciak's reasoning, the fluctuating self of the hyperidentity is a raw and pure expression of an individual. As such, it exists in a space that many humanities scholars are still creating frameworks to analyse. The magnitude of texts developed online can be leveraged through Machine Writing to analyse this new state of being.

Large swathes of texts are generated by hyperidentities across multiple platforms. Twitter reported 319 million active users in the fourth quarter of 2016 (Statista 2017). On average, 6,000 tweets are created every second, corresponding to over 500 million tweets per day (Internet Live Stats 2017). Each tweet can be viewed as a textual artefact that contributes to the broader milieu of hyperidentities online. The large mass of tweets being produced means ad-hoc communities may sprout up around a single idea, and quickly unfold into a broader, global narrative. Yang (2016, pp. 13-15) cites the hashtag "#BlackLivesMatter" as evidence of a hashtag's ability to co-ordinate and generate movements online. As more individuals shared their thoughts and experience through the hashtag, a much wider, communal narrative (composed of an expanse of hyperidentities) unfolded online (Yang 2016, pp. 13-15). Soon after conception, these communities become too expansive to be traditionally analysed.

Although these artefacts resemble prose or poetry, they evolve and scatter at tremendous speed. On their own, these tweets, posts or other artefacts do not give scholars a broad view of the hyperidentity-driven culture that bore them, but instead a small, fleeting insight. Analysis of single contributions will not adequately unpack these communities. Although other methodologies developed for plunging these digital spaces have been developed, they are often more laborious, manual tasks. Machine Writing provides an avenue for these artefacts to be systematically organised and transformed into a single text.

Machine Writing algorithms that accumulate and manipulate online texts can be used to transform these textual artefacts (such as tweets) into poetry or prose. By algorithmically finding commonalities or themes and crafting texts from the results, Machine Writing programs can make sense of the hyperidentities that sprawl endlessly online. While academic literature that demonstrates this methodology is sparse, the creation of these texts continues to grow. The usefulness of these texts to scholarly analysis ranges in scope, dependent on focus and structure. This is evident in the differences between Bhatnagar's *I got an alligator for a pet!* and *You Can't Write If You Can't Relate,* and Studio Moniker's *All The Minutes.*

I got an alligator for a pet! was generated by Bhatnagar using Pentametron, a Twitter bot initially programmed to generate an endless stream of poetry via re-tweets.[11] The Pentametron twitter page states: "With algorithms subtle and discrete / I seek iambic writings to retweet". (Bhatnagar 2016a). Pentametron searches through Twitter, finding tweets that form rhyming couplets and re-tweeting them one after another. This provides a unique insight into the overall culture of Twitter, packaged through the familiar lens of poetry. Pentametron's endless poem includes fragments of conversation, revealing hyperidentities at their most vulnerable.

[11] The process of re-publishing another user's tweet on your own profile, tethered to the original tweet. Re-tweeting is the bedrock to discourse on Twitter.

I got an alligator for a pet! is comprised of 504 chapters, each featuring a "title", followed by three four-line verses and one two-line verse. The titles appear to be from a separate stream of Pentametron re-tweets. Chapter CDXXVIII, entitled "Looks really cold in western super mare." reads:

hello? (hello?) ((hello?)) (((hello?))) ((((hello?))))
I didn't even read the story so
I want another baller girlfriend doe
I got a stylish ass professor yo
We try and get the high without the low.
who's going to the colorado show?
De venezuela para mexico
Age doesn't really bother me uno
Delay delay delay delay delay
but "bitches come a dime a dozen", right?
That promise didn't even last a day.
I wanna have a movie night tonight !!
Another day another dollar right?
I think the lakefront is the move tonight
(Bhatnagar 2013, pp. 214-215)

Although interesting, Pentametron's erraticism and lack of discretion other than form makes its output a very broad overview of Twitter's culture, without offering deeper insight into a focused group, theme or topic. Bhatnagar remedied this the following year, turning the Pentametron program towards a more focused output in *You Can't Write If You Can't Relate.* Bhatnagar tasked Pentametron with finding tweets that included the hashtag "#NaNoWriMo", (National Novel Writing Month challenge). Unlike Pentametron's other pieces, it reads as a stream of conscious piece of prose, broken into paragraphs and chapters. Chapter 2 opens with:

> Word sprints are in my future! I've dragged myself up to 10,500 words which isn't great but beginning to warm to it now. Wanted to to [sic] 2.5K again but am losing my temper. I just wrote 6,000 words today, and I'm still not caught up! I hit just over 30,000 words on the new novel today.
>
> " How fast do I have to run? still behind but I'm catching up. But I'm writing. Sooo [sic], 292 on THAT sprint, but I finished a scene and didn't know how to start the next… After 7.7k I caught up!
>
> (Bhatnagar 2014, p. 21)

Unlike Bhatnagar's earlier pieces, *You Can't Write If You Can't Relate* focused on a single event, capturing the many hyperidentities that gravitate around the NaNoWriMo competition. This generates a universal, collective memoir and presents the information with little editing, thereby avoiding Bhatnagar's own bias from influencing the work's integrity. By un-prejudicially removing these tweets from Twitter and placing them in a narrative format, Bhatnagar has generated a text that can be better analysed as a more complete cultural artefact, capturing the freeing, sprawling elements of hyperidentities within a literary-focused aesthetic.

In similar fashion, Studio Moniker's *All The Minutes* attempts to capture a holistic view of Twitter users, but does so through tweets that make explicit reference to the time of the day. The resulting text is a long piece of prose involving repetition of the phrase "It's [time] and…". The chapter "Seventeenth Hour" begins with:

> It's 5.00pm and it's dark. Does this depress anybody else as well? Its 5:01pm and i haven't [sic] had breakfast. Why. It's 5:02pm and I'm free!!!!! Its 5:03pm and I can't see anything through all this fog! its 5:04pm and TSU Crushes is still lame. It's 5:05pm and still super sunny out. I heart summer. It's 5:06pm and I haven't had breakfast yet. It's 5:07pm and the freaks are out. It's 5.08pm and I'm falling asleep. It's 5:09pm and I haven't eaten since 4am...what [sic] is wrong with me... (p. 23)

Rather than choosing a particular event, Studio Moniker focuses on collecting moments when Twitter users have felt it necessary to document their day via an explicit mention of the time. Users choosing to begin their tweets by mentioning the time are attempting to draw attention to a peculiarity regarding their state of being at that time. As shown in the above quote, these

are usually juxtapositions, such as it being past 5pm and not having had breakfast yet, or being overly tired given the time of day. *All The Minutes* provides literary theorists with a loose narrative structure in the form of a chronological charting of the day. Other than what is contained within the tweet's body itself, context and the governance of Twitter's structure is removed.

In theory, the resulting Machine Written texts could then be broached by close reading or other traditional forms of analysis, without more explicit cultural markers clouding the judgement of a scholar's analytical process. Additionally, while Bhatnagar's hashtag-oriented pieces may be able to be constructed manually, Studio Moniker's work relies heavily on the system being automated.

Conclusion

The creation of *Mathews' Raven* and analysis of texts in this article demonstrate the use of Machine Writing as a creative practice form of Distant Reading that allows for the analysis of the sprawling cultural artefacts generated by hyperidentities online. By combining these artefacts into singular texts as Bhatangar and Studio Moniker have done, the dense world of online communities can be penetrated for analysis. Many of the texts demonstrated in this article showcase primarily superficial functions of these communities. However, these same techniques could be leveraged by those within or on the periphery of the Digital Humanities to generate cultural artefacts/texts that are focused on other topics, ranging from political movements to subcultures. The sprawling worlds that exist online can be encapsulated, with critical theory then employed to uncover meaning and knowledge. As social and cultural discourse online continues to grow, understanding how to create Machine Written texts and

systems via computer science and creative writing methods and the ability to analyse them via literary and media theory becomes an important facet of academic discourse. Although these disciplines appear disparate, Machine Writing binds them together within the context of Digital Humanities and the Distant Reading methodology.

This article has laid the groundwork for a better understanding of Machine Writing's place in academic discourse. For literary and media theorists, the texts created by Machine Writing techniques are thick tomes of knowledge, erratically and humorously structured, but embedded with layers of truth and contemporary culture. The internet is full of fluctuating constellations of hyperidentities; Machine Writing is one way to connect the dots.

References

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Appendix A: *Mathews' Algorithm* code

```
import re
joiner = ' ';

#Setting up the user
print("I need you to write a four line poem. You ready?")

#The user inputs the lines of poetry
print("===The first line===")
line1 = input("Enter the first line\n")
count1 = len(re.findall(' ', line1))
divider1 = int(count1/4)
e11 = line1.split(' ')[:divider1]
e12 = line1.split(' ')[divider1:divider1*2]
e13 = line1.split(' ')[divider1*2:divider1*3]
e14 = line1.split(' ')[divider1*3:]
seq11 = (e11)
seq12 = (e12)
seq13 = (e13)
seq14 = (e14)
print("===The second line===")
line2 = input("Enter the second line\n")
count2 = len(re.findall(r'\w+', line2))
divider2 = count2/4
e21 = line2.split(' ')[:4]
e22 = line2.split(' ')[4:8]
e23 = line2.split(' ')[8:12]
e24 = line2.split(' ')[12:]
seq21 = (e21)
seq22 = (e22)
seq23 = (e23)
```

```
seq24 = (e24)

print("===The third line===")
line3 = input("Enter the third line\n")
count3 = len(re.findall(r'\w+', line3))
divider3 = count3/4
e31 = line3.split(' ')[:4]
e32 = line3.split(' ')[4:8]
e33 = line3.split(' ')[8:12]
e34 = line3.split(' ')[12:]
seq31 = (e31)
seq32 = (e32)
seq33 = (e33)
seq34 = (e34)

print("===The fourth line===")
line4 = input("Enter the fourth line\n")
count4 = len(re.findall(r'\w+', line4))
divider4 = count4/4
e41 = line4.split(' ')[:4]
e42 = line4.split(' ')[4:8]
e43 = line4.split(' ')[8:12]
e44 = line4.split(' ')[12:]
seq41 = (e41)
seq42 = (e42)
seq43 = (e43)
seq44 = (e44)

#Making the poem
print("This is my rewrite:")
print ("========================")
```

```
print
        ('\n',joiner.join(seq11),joiner.join(seq24),joiner.join(seq33),joiner.join(seq42),'\n',join
        er.join(seq21),joiner.join(seq34),joiner.join(seq43),joiner.join(seq12),'\n',joiner.join(s
        eq31),joiner.join(seq44),joiner.join(seq13),joiner.join(seq22),'\n',joiner.join(seq41),joi
        ner.join(seq14),joiner.join(seq23),joiner.join(seq32),'\n')

print ("==========================")
```