

Southern New Hampshire University

Literary Evolution:

How Technology Can (and Will) Enhance Literary Scholarship

A Capstone Project Submitted to the College of Online and Continuing Education in Partial  
Fulfillment of the Master of Arts in English Literature

By

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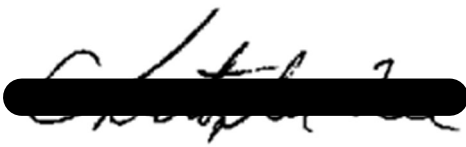
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## Abstract

The impact of computer technology on the creation of the written word is something apparent in the multitude of available e-books, blogs, and collaborative writing sites that populate the internet. Existing and emerging technologies are starting to change not only the format of what is written, but the content and context of modern literature as well. For the Literary scholar the opportunity to explore writings that would not have seen public release without the rise of electronic publishing is both exciting and terrifying. Contemporary and future scholars need to be cognizant of the role that software, format, and electracy played in the creation of a given text. This project examined the secondary skills necessary for the modern literary scholar to assess the increasingly populous textual landscape and make sense of the wealth of secondary and tertiary information available. Computer driven research methods like topic modeling and data mining were explored as they have been used by those in the humanities to study both current and historical works in new and exciting ways. In the case study for this project, Omar Robert Hamilton's *The City Always Wins* was examined in the context of the secondary media that applies to the primary text. Because Hamilton's novel is set during, and primarily focused on, the Arab Spring protests that took place in Cairo in 2011, this analysis incorporated information found in non-literary sources like YouTube videos, news articles, and social media artifacts of the period. By incorporating additional sources, this paper brought light to how Hamilton's novel reflects both the ever-present civil unrest in 2011 Egypt and the growing importance of digital literacy to the development of a well informed and ideologically aligned population.

## 1. Introduction: The Changing Literary Landscape

The advent of digital publishing forever changed the literary landscape as it gave voice to authors whose writing might otherwise have never made it past the publishing houses that once served as the gatekeepers of the literary landscape. The aftereffects of the digitization of the published word have reverberated through the economy as publishers big and small find themselves competing for a market that is becoming saturated by electronic publications and other outlets that significantly undercut their profits. For the unpublished author, seeing one's work in print is quickly becoming easier than ever to achieve. This changing textual paradigm brings with it the ability for authors and creators to refine the very concept of 'text' by merging traditional print-based constructions with various forms of new media to showcase the evolutionary potential of electronic publishing. The question facing contemporary literary scholars is not only how to study literature, but what to study. As Jan Holmevik states in her book *Inter/Vention: Free Play in the Age of Electracy*: "[scholars] must understand new media expressions and digital experiences not simply as more technologically advanced forms of 'writing' that can be understood and analyzed as 'texts' but as artifacts in their own right" (2). With millions of available works, how does the literary critic sift through the lexical flotsam and jetsam to identify the important works? How will future researchers filter out the noise and focus their efforts on locating items that may be contained in blogs, websites, print, digital, and other formats? If the text is no longer confined to the printed page, then literary scholars need to adapt their research methodology accordingly to better determine how to approach a critical analysis of the work. As literary scholar Helen Burgess has noted, the study of literature is changing as the amount of data surrounding all textual creations is increasing: "Like the works themselves, the process of e-lit publishing is often a kind of rhizomatic, rather than linear, practice: each work

may deploy a wide variety of software tools, authorial and artistic philosophies, and technical presentational conventions” (Burgess). Literature born in the digital age cannot and should not be studied in the same manner as the literature of the past.

Contemporary and future scholars need to be cognizant of the role that software, format, and electracy played in the creation of a given text. This project examines the secondary skills necessary for the modern literary scholar to assess the increasingly populous textual landscape and make sense of the wealth of secondary and tertiary information available. In the case study for this project, Omar Robert Hamilton’s *The City Always Wins* is examined in the context of the secondary media that applies to the primary text. Because Hamilton’s novel is set during, and primarily focused on, the Arab Spring protests that took place in Cairo in 2011, the analysis incorporates information found in non-literary sources like YouTube videos, news articles, and social media analysis of the period. By incorporating additional sources, this paper shows how Hamilton’s novel reflects both the ever-present civil unrest in 2011 Egypt and the growing importance of digital literacy to the development of a well informed and ideologically organized population.

Bridging concepts such as digital humanities, electracy, and literary theory, this project also examines how contemporary researchers are looking to make sense of the data and create a systematic approach that can be applied to multiple texts. Additionally, those in the position of teaching the study of literature must make efforts to engage contemporary and future students in the use of computational techniques like textual analysis, topic modeling, and stylography. Failure to incorporate the presence of Big Data and analytical tools in the modern literary classroom dooms the profession to a future of increasing irrelevance in the opinion of those fields that embrace the presence and importance of electronically available data. Incorporating

computational analysis and promoting electracy does not detract from traditional literary studies. On the contrary, the acknowledgement of new tools and techniques demonstrates how the field of literary study is positioned to take advantage of the social, cultural, and economic presence of data as it relates to the understanding of a given text. For literary historians, the wealth of accessible cultural data in the form of social media archives, blogs, websites, and other platforms offers an unprecedented access to the external factors that influenced the creation of a particular work. Placing a text in perspective requires an acceptance that “texts have acquired a new kind of malleability, and they are often encountered in large aggregations, allowing for a scale of research far different from those of the past” (Abblitt 104). This means that the study of modern literature must include acknowledgement of the digitally enhanced world that affected its development just as much as the physical. Cultural artifacts can now include blog posts from the author during the development of the text, general reader responses in the form of posts and data from reading sites like Goodreads, and even sales and site visit clicks to reinforce the popularity of a given work. Additionally, the internet, television, and social media have been instrumental in society-changing events like the Black Lives Matter movement that continues to shape cultural interactions in the United States, and the 2011 “Arab Spring” democratic protests and uprisings in several Middle Eastern countries that led to violent clashes between the civilian population, the military, and other forces of established autocratic regimes. The literature that developed out of these events are inextricably tied to the media that was used to record and coordinate them. A full understanding of works like Hamilton’s *The City Always Wins* or Ta-Nehisi Coates’ *Between the World and Me* can only be achieved by understanding and reviewing the tangential media that would have affected and influenced the creation of these texts. What’s

more, interviews, online criticism, and other ‘real-time data’ can inform the scholar on how material was received by the original audience.

Applying the tools of the data analyst to the study of literature does not negate the validity of current literary criticism, it creates opportunity: “Instead of focusing on a handful of materials, they invite scholars to engage with full sets of documents and archives, even if these are often unsung” (Galleron and Idmhand 58). The problem now facing the student of literature is the problem that the digital age has created for many industries: Big Data—a term borrowed from the business world used to describe the unimaginable amount of digital information created every day and housed online or in databases. Add to this the fact that most humanities curricula do not require the study of data analysis or computational analytics and it is easy to see that the traditional humanities are falling behind in their ability to remain apposite to the study of the human condition. Rather than continue to avoid dealing with computational approaches to literature, it is important to understand that, as scholar Natalie Houston states, “At the simplest level, computational text analysis and traditional literary criticism are predicated on the same theoretical assumption: that there is a relationship between the words occurring in a text and the meaning of that text” (Houston 508). Emerging fields like Digital Humanities attempt to fill the gap between data and theory-based analysis by forming a unique field that embraces the computational sciences and seeks to apply them to the study of literature. While the digital humanities are a good first step towards an integrated approach to literary analysis, it is a disservice to the field of literature not to take ownership of all aspects of literary analysis and recognize the opportunity that the digital world of the twenty-first century has to offer. Rather than rely solely upon a handful of critical analysis to support or refute criticism, tools like topic modeling and data mining now allow the scholar to review and assess entire corpus of works,

evaluating them *en masse* to identify trends and make observations that would otherwise be impossible for any single scholar to digest in a lifetime. The loss of the publishing house influence on the literary marketplace has created a situation where “the number of publications becomes such that reading everything, even in a narrow domain of study, becomes almost impossible, while the continuous specialization results in the fragmentation of disciplinary communities into smaller and smaller groups” (Galleron and Idmhand 58). Advances in machine learning techniques have revolutionized the way that nonstructured data like text is analyzed. Business helpdesks use analytical tools to digest thousands of daily customer queries to identify trends and themes that can be used to identify product weaknesses and opportunities. These same tools can be used by the informed literary researcher to find threads and trends within texts that might otherwise remain obscured. In their study of the presence of depressive and suicidal language within the written works of Edgar Allen Poe, Hannah Dean and Ryan Boyd were able to use text analysis software to look for instances and demonstrate the “ability [of such analysis] to identify underlying depressive affect in an individual's writings and suggests the software be used in clinical settings as an additional means of psychological evaluation, and well as an aid in suicide prevention” (Dean and Boyd 488). The review of Poe’s literature revealed that there were no specific markers of depression in his text that would suggest the author was suicidal or overly depressed—a finding supported by the data that runs counter to popular opinions about the author of the macabre. While Dean and Boyd’s findings seem counterintuitive and suggests that a deeper look at the work is required for full understanding, such examples demonstrate the potential, tangible, ability of the humanities (particularly literature) to enhance studies in other fields of research. Instead of viewing computational analysis as an infringement of the hard sciences upon the more esoteric territory of the humanities, those professing to be students of the



humanities must recognize that the presence of technology is part of the natural evolution of human communication in the same way that the printed word was an evolution and improvement on oral storytelling. The advent of electracy is inevitable and, as students of human storytelling, literary scholars can take full advantage of the changing paradigm and encourage continued development of a text that is plural in format but singular in vision.

## 2. The ever-evolving text

When oral stories were first codified into textual artifacts, performers worried that the act of writing them down would have a detrimental effect on human memory and creativity.

Socrates is reported to have said of those who rely on written works, “when it has been written down, every discourse roams about everywhere, reaching indiscriminately those understanding no less than those who have no business with it and it doesn’t know to whom it should speak and to whom it should not” (Plato 552). Some took this as a refutation of the written word, but further reading reveals that Socrates was more concerned that writing would limit the extent to which the knowledge contained in discourse could be understood by the audience. In the same way, there have been arguments against the freedom that technology, by allowing anyone to publish anything, has watered down the importance and presence of *literature*. In fact, the quantity of the books published since the advent of the digital age has increased the quantity of not only individual texts, but emerging voices, “It should be clear, then, that digitization, to the extent that it lowered the economic barriers to entry in book publishing, might have had positive results for readers. All else being equal, books produced in the digital era should be cheaper, more numerous, and more diverse than those published earlier” (Wilkins 872). Add to the number of digital texts the coinciding increases in the presence of digital authoring platforms like Facebook and Twitter, and the impact of electronic media on the lives of readers becomes

apparent. The digitization of text is not confined to the novel, or the short story, or to even what most literary scholars would consider *literature*; it affects all written communication including news, entertainment, and even interpersonal communications as texts steadily become preferred over voice calls. Indeed, as Mariusz Pisarski has noted, “today’s readers are also players, viewers, and users surrounded by self-broadcasting and instant messaging devices. They spend their time in augmented and virtual worlds delivered by home entertainment, and literature is just a fraction of the available spectrum” (Pisarski 41). In *The City Always Wins*, Hamilton shows how the presence of online media in the form of podcasts, videos, and websites augments the ability of the population to connect and form communities and share their concerns and thoughts with a greater global population, “People want to see the sources of their outrage. Khalil has always felt that there’s something more cerebral and less exploitative about sound, a conversation rather than an authoritative statement of fact” (144). The primary media conveyance for Hamilton’s protagonist is audio. Through a developed series of podcasts, the fictional Chaos Cairo news network shares the turmoil in Cairo during the protests to an Arabic speaking audience. In the passage above, Khalil is explaining that the use of audio recordings is important because it creates a form of dialogue with the reader in a way that is more explanative than a picture or video. In fact, the desire to create news media that engenders empathy, understanding, and connectedness is a theme that runs throughout Hamilton’s text. For Hamilton, technological advancements in communications have provided the storyteller with new ways to connect his subject with his audience.

While the sheer amount of literature that is available to readers has increased exponentially, so to has its scope and potential: “we are already bearing witness to the blurring of the borderline separating ‘print’ from ‘digital’ textualities and we must attend ‘both to the

specificity of the form...and to citations and limitations of one medium in another” (Kress qtd. in Abblitt 101). The printed text and the digital are more than just differentiations of format, they are unique in how they can present the material to the audience. Digital literature is more than just eBooks that recreate the printed page in a digital format, it is a new and separate structure with its own capabilities and limitations. It extends beyond the page and incorporates meta-textual elements like video, audio, and more to enhance the storytelling experience. The formats are not in opposition, they are each fulfilling a niche: “digital is not better than print, but rather ... the technologies are fundamentally different—not just superficially, but profoundly in terms of the material conditions of their production and consumption” (Abblitt 101). Separately they each inform an aspect of human experience; combined they offer the opportunity to create a whole new means for human storytelling and communication.

Just as literacy represented the ability of the audience to engage with the text, electracy is essential to understanding digital storytelling. Literacy requires a familiarity with the technology of the printed page: language, alphabets, and scripts. In the same way, electracy requires a familiarity with the technology of the digital format: computers, applications, the internet, and even a basic grasp of programming. The great news is that just as orality was the means of transferring the skills necessary for literacy, literature is the medium by which the tools of electracy are communicated. The formats are iterative and, at the early stage, dependent upon each other to reach their audience and fulfill their purpose. This is increasingly prevalent among younger populations where, “living, learning, and socializing are increasingly mediated by technological tools and more capable networked other” (Korobkova and Collins 388). More than any other generation, technology has steadily increased in the lives of generations X, Y, Z, and the current millennial populations that will likely never know a world without access to

computers, whether laptop, desktop, or smartphone. Because of their familiarity with technology, it is understandable that they would include developments like blogs, podcasts, social media, and online collaborative writing venues in their creation of *text*. Indeed, is text even the best term to classify literature in an environment where stories are told exclusively across digital media?

Without a physical book to hold, it is easy to see the fear and apprehension that many literary and humanities scholars face as they watch the entire writing and publishing paradigm shift into something no longer recognizable. Just as the telephone changed communication and the airplane changed international travel, emerging technologies are affecting the way that we communicate through, and about literature, “from quill pens to the digital, the catalyst for change seems to be the tools that make new modes of thought, of writing, possible” (Tomasula 56). It is easy to think of early attempts at writing novels using hypertext, or google maps, or any one of a number of examples of digital storytelling that have been more fad than foundational. While these are indeed examples of digital literature, it is a very narrow view of the impact of technology on literature. Modern formats like eBooks and websites allow for the linking and embedding of contextual media into writing. It encourages experimentation and invites authors to expand their stories beyond the printed page and include elements of video, audio, or linked text to create a more transmedia reading experience. As a representation of humanity, literature has always been about the recreation of the human experience on the page through symbols, the inclusion of images in early reporting like Jakob Riis *How the Other Half Lives* brought more than just context to the written work, it increased the impact of the writing by providing an illustration. Poetry is currently one form of literary writing that is making use of this technology. Yong-Hae Chang Heavy Industries, a U.S., and South Korean art collective, mixes the act of reading, listening, and watching into the audience consumption of work. In their work “AH,”

Yong-Hae Chang Heavy Industries takes a short poem and increases the impact through the manipulation of sound, font, size, and pace of the words as they move across the screen. Speed is used to increase tension, letting the reader feel some of the anxiety faced by minorities that are always thinking that the police or other officials will soon be singling them out based on how they look, the paranoia and suspicion is inflected on the reader who finds themselves anticipating the changing text, surprised by a font and pace that is unpredictable (“AH”). Other works are presented simultaneously in English and Korean alongside visual media created specifically for each audience. These electronic poems are just one example of how technology can enhance the connection between the author and the reader, in effect giving the author additional ways to present their work and impart their intent. In the same way, Hamilton’s use of text messages and posts from Facebook and Twitter in *The City Always Wins* increases the ability of the reader to connect with the text, to view and interpret the writing and witness the authors idea of how a scene or element transpired. Hamilton’s use of digital media in his storytelling “does more than ‘capture’ a historical moment: it attempts to materialize the abstract principle of ‘revolution’ through rhythm and form” (Moore 202). Hamilton punctuates the narrator’s story with messages and social media posts inspired by those used to coordinate the actual uprisings and actions that took place during the Egyptian Arab Spring.

If technology allows the author to interface directly with the reader through electronically enhanced text, then the concept of “the death of the author” following the publication of the text comes into question. Because a work exists as a purely digital artifact, there is nothing that prevents the author from creating a dynamic text that morphs and changes with the author’s intent. For the post-structuralist, the textual experience was unique to each reader and free of the author’s intent, “the unity of a text is not in its origin, it is in its destination; but this destination

can no longer be personal: The reader is a man without history, without biography, without psychology” (Barthes 521). Because of the depth that can be imparted alongside a text with digital enhancement, this no longer needs be the case. The author is now free to include elements that will convey elements of history, psychology, and the author’s own biography to the text. Because the work exists in the electronic ether and not in a permanently printed physical construct, the text can be given a degree of life; it can be annotated, updated, and revised by the author years after it has been released. Literary purists might argue that each iteration is a new version of the text, and that constant revision negates the legitimacy of the work, but there also exists the counter argument that the text, as the creation of the author, can be altered, updated, and revised at the sole discretion of the creator. What is more, there exist collaborative writing environments like The Church of the Subgenius’ satirical review of American evangelicalism, reddit communities, and constructs like the SCP archives that create fictional stories surrounding a common concept that is informally linked together with other community-created works to develop a more extensive corpus (Wittig 128). These groups are only a couple of examples where a community has been created to generate a rich and growing environment that encourages the reader to become part of the act of creation. The impact that these groups have on contemporary audiences is increasingly clear: “The experiences of young people immersed in app-mediated writing outline the affordances of dense media ecologies with multiple routes for legitimate participation and update of motivating tropes, such as social networking” (Korobkova 388). Thus, the writing and creative process is evolving into a community experience wherein the author and the audience become participants in the generation of text. By definition, the creation of literature involves the act of writing, but increasingly it is becoming clear that the idea of literature is evolving into more of an *electerature* that fulfills the same creative need, but

in a new and more malleable format wherein the identification of a single authorial voice becomes difficult to isolate. That said, the tools of the literary critic: theory, analysis, and criticism are still applicable to the study of these new works, but those applying these tools need to become more agile and aware that any observations; however well informed, must be recognized as having been applied to a potentially incomplete and unfinished work.

Postmodern and new historicism literary theories are natural fits for works of electerature that are composed of nontraditional textual elements. New historicism seeks to understand the text by recognizing the inherent subjectivity found in any study of history, “[new historicism] engages the idea that we inevitably read the past from the present” (Hickling 54). The addition of video, texts, and social media posts provide those practicing new historicism with the tools necessary to approach history through the application of literature and allows unprecedented access to the thoughts and perspectives of both primary and marginalized populations. With the multiple vantages points available, researchers can combine multiple subjective observations to create a more holistic understanding of an event by allowing the student of literature and the humanities to digest a significantly larger volume of narratives than they normally would have had their sources been confined to reading individual accounts. This does not negate the importance of traditional literary research, as has been noted earlier, it enhances the research and allows for a more robust investigation. This inclusion of non-traditional literature has led some to consider the field to be entering an era of post-literature, “pluralisms of discourse and preference for multiple points of view and the implied belief that new technology might bring literature—as a cognitive tool—closer to the complexity of contemporary life or even to the natural flow ‘of time’ or ‘of the way we think’” (Pisarski 42). While the ability of modern digital media to recreate the complexity of life is more than debatable, its ability to add depth to scholarly

research and criticism should not be denied. A lot of literary research is concerned with identifying the motivations and imagery that the author weaves into the textual narrative. Modern technology allows for the author, any author, to record and preserve the entirety of the creative process creating a secondary source of text and information that has the potential to enrich the interaction between author and reader.

### 3. Trends in Computational Literary Analysis

As literature continues to move from the printed page to digital, it begins to present challenges and opportunities for the scholar looking to take full advantage of the data available as a byproduct of digitization. For modern researchers, the quest for understanding and analysis has moved beyond the stacks of books and journals of libraries past. Online libraries and websites that host academic journals can recreate the traditional research methodology, but that is only scratching the surface of the information that is available. Articles, texts, videos, podcasts, everything found online is comprised of the artifact itself and a wealth of metadata that, if properly analyzed, can reveal new information in the form of stylistics, topic modeling, and more. The potential of computational analysis to enhance the study of literature is limited only by the researcher's understanding of the available data and their ability to access the information. The concept of electracy extends beyond being able to access and read electronic literature, it includes knowing how to structure data and work with various computer programs to locate, cross-reference, and make sense of nontraditional information. It behooves the modern scholar of the humanities, to include literature, to become electerate and be cognizant of the basic techniques of the data scientist.

In the past decades researchers have been slowly incorporating the practice of data mining and data analysis to enhance their understanding of literature. The concept is still in its



nascent phase and there are several techniques being used in experimental analysis. Topic modeling is one such technique that allows researchers to review large amounts of non-standard data to identify trends and patterns in the words and phrases that span text samples. Metadata can include citational information such as authors, titles, and publisher as well as the length of the work in pages, counts of illustrations, and other data. Combining these elements using data analytic tools can provide insights into the material that might otherwise have been overlooked. In a recent study of Victorian literature, scholar Natalie M. Houston used topic modeling and visualization techniques to examine publication data for various Victorian poets and reveal the relatively small percentage of work published by those traditionally considered to be cannon, “Library catalogs and enumerative bibliographies are good existing sources of this metadata, but they vary widely in what they record. The process of transforming this existing bibliographic metadata from the linear format of the list into the relational format of the database allows [Houston] to explore large-scale patterns in the production and distribution of poetry that traditional catalogs cannot currently address, such as: what patterns of growth or decline in the publishing of poetry are visible over time” (Houston 502). Houston’s approach sheds light on one of the chief concerns for those looking to apply digital analysis to literary criticism: the availability and formatting of data. To be searchable, Houston and her team first had to put the metadata into a format that was conducive to reading by computers. This ability to translate literature to electrature demonstrates the need for the humanities to include the study of data analysis in traditional coursework. By comparing available data on publishing in the Victorian era with the titles and editions of the poets, Houston was able to illustrate how little these poets represented the entire catalog of Victorian literature published. This data was then used as a starting point for investigating the extent to which poetry was available and how it was used and

received by the population of readers in the late nineteenth century. As Houston states, “Computational analysis is well suited to the study of poetry, given the mathematical elements of rhythm, sequence, and pattern already embedded in poetic form” (508). While current software can handle poetry via a mathematical relationship, more advanced data analysis software and advances in machine learning are paving the way for analysis of large volumes for style, linguistic richness, and other patterns viewable only when an entire corpus of work is assessed. Essentially, computational analysis allows researcher to expand the size of their net when designing their research. Using computational examination to enhance literary criticism does not negatively affect the typically subjective analysis done by most researchers, rather it offers a means of reinforcing the thesis through the application of irrefutable and reproducible data.

Another example of how statistical data can be used to reveal patterns within text can be found in studies that have used data mining to cross-reference text with psychoanalytic, economic, and historical databases to uncover deeper relationships. As mentioned earlier, Hannah Dean and Ryan Boyd conducted a deep analysis of the letters, poems, and short stories written by Edgar Allen Poe, using modern psychological text analysis in conjunction with the Linguistic Inquiry and Word Count’s 2015 edition (LIWC2015) software to look for evidence of psychological duress within the text. Dean and Boyd’s research was inspired by similar studies that used text analysis software to look for patterns of words and their ability to predict the depression in hospital patients. Interestingly, the findings regarding Poe’s psychological state, as revealed in his writing, showed that he was not overly depressed according to his own literature. Of course, the statistical data carries with it the potential for misinterpretation when applied to subjective works like literature and art; however, it can be used by researchers to identify logical starting points as they approach multiple works by the same author. This example of how

computational analysis can cross academic boundaries shows that academic fields need to start looking beyond their narrow specialties and learn from the successes of others. Data science is evolving as a field of study and has the potential to reach into all fields as more and more data is created and digitized. The potential connections that will be made between data collected from independent academic fields are rife with the potential to expand the understanding of how humanity is ultimately transdisciplinary in both thought and existence.

In the past, researchers needed to be selective about the works that they incorporated into their study of a text. By choosing the specific works to be considered, “[researcher’s] objects of study determined the kinds of histories [they] can write, and the histories that have already been written often determine the texts [they] choose” (Houston 499). The modern researcher begins the subjectivation of their study from the selection of the texts and criticism that will be reviewed and included in their project. Computational analysis offers the opportunity to use technology to perform analysis across large bodies of work to prolong an objective approach to the text. Freed of the constraint imposed by the physical limitations of reading large corpus of text, scholars can assess several works simultaneously in innovative ways. Already, there are numerous journals moving their archives online into readily searchable databases. These masses of unstructured data and metadata allow for a revolutionary new approach to literary studies that can expand awareness of statistically significant trends that cross genre, culture, and epochs of civilization. This allows for an unprecedented view of how humans have used literature as a record of their existence and to communicate and study what it means to be *human*. Possibilities are limited only by the researcher’s own creativity as the potential unseen connections between written works becomes as numerous as the audience.

#### 4. Case Study: *The City Always Wins*

To examine how transmedia and computational analysis can enhance traditional literary studies, this paper will look at Omar Robert Hamilton's *The City Always Wins*. This semi-autobiographical novel is loosely based on the author's experiences during the tumultuous Arab Spring uprisings of 2011. The Arab Spring was a "wave of protests, uprisings, and unrest that spread across Arabic-speaking countries in North Africa and the Middle East" (Blakemore). This series of transformational events spread rapidly through social media and resulted in the collapse of autocratic regimes in Tunisia, Egypt, Libya, and Yemen. Social media empowered the citizens of countries across the middle east who used emergent technology to organize and encourage demonstrations on sites like Facebook and Twitter that provided a freedom of communication otherwise impossible under restrictive rulers. Hamilton's text combines narratives with recreations of the actual texts and tweets that described and encouraged the uprising to him and his peers.

The impact of social media is found throughout *The City Always Wins* both through examples of tweets and text messages circulating through the novel and his accounts of how technology was used by both the main characters and the larger population of Cairo to plan and execute demonstrations across the city. Digital media was a primary source of news that was able to skirt the state-run media and disseminate videos, interviews, and podcasts that revealed the chaos and brutality of the clashes between citizens, police, and Egyptian armed forces. Just as the characters of Hamilton's novel use alternative media to spread a nonofficial side of the uprisings, "in the 18 days of the [January 25<sup>th</sup>] protest, shared photos and videos were shared as an integrated information system not only on social media but also through satellite and internet-connected cell phones" (Hamanaka 779). Because the satellite and internet-connected cell phones were able to operate outside the tightly controlled government legacy media systems of

television, newspapers, and radios, sites such as Facebook, Twitter, and YouTube formed a system of information distribution that, for many, was more valid than traditional sources. Indeed, the proliferation of cellphones and internet-connected devices have been identified as crucial to the successful organization of previously unrelated groups of demonstrators (Hamanaka 784). In Egypt as in other areas of the Middle East the entrenched political powers found themselves on the wrong side of the 21<sup>st</sup> century digital revolution. While control over traditional media proved effective at controlling the mature populations, it did nothing but drive the younger, post-digital population towards social networks that could not be controlled as easily. Indeed, following the January 25<sup>th</sup> protests in Cairo that launched the Arab Spring in Egypt, the regime of Hosni Mubarak tried shutting down internet communications to prevent future demonstrations only to see these actions backfire as the outage only served to encourage more violent pro-democracy rallies.

The events depicted in *The City Always Wins* is set in a post January 25<sup>th</sup>, 2011, Cairo that is still filled with political and economic uncertainty. The internet videos and news served as a vital link between the events of the protests and the citizenry regardless of their individual level of electracy. In an early scene, Hamilton describes the interaction that many citizens had with the internet and technology in general:

He puts his hand on the mouse and starts moving through the learned motions. Click two times on the orange-and-blue circle, move the arrow up to the whitespace at the top, click again and type: تيوب . Two words he learned months ago and never questioned their meaning. When the screen changes, press on the first of the large English words: YouTube. Next, he takes the folded paper from his wallet and types out the English characters one by one. (Hamilton 29)

This scene illustrates the way that technology was starting to become essential to the lives and shared memories of the Egyptian population. The father initially wants to show the video to foreign journalists covering the Arab Spring in Egypt to demonstrate the human side of his son who had become a symbol of the revolution. The foreign media is not interested in the human angle as much as they are interested in the violence and emotions associated with the killing. After they leave, the protagonist, Khalil, goes with the father to view the video, acknowledging that the son was more than a symbol, he was a person. For Hamilton, understanding the lives of the people involved in the Arab Spring was just as important as knowledge of the protests and violent clashes that were being broadcast around the world. Just as the scene of a father looking at a music video created by his slain son is used by Hamilton to humanize those living through the events of the novel, the public nature of the social network tools were used to humanize those participating in the actual event. For Khalil, the presence of technology offered a way for Egyptians to share their own stories, “For the first time in a hundred years we don’t need to sell our stories to France or England or America. We’ll win or lose it all here” (Hamilton 27). The Mosireen Collective, Omar Hamilton’s real-life counterpart to his novel’s Chaos Cairo news collective, is one such reservoir of knowledge that generated more than 250 online videos focusing on street politics, state violence and labor rights that generated more than six-million views, “they can’t keep up with us, an army of Samsungs, Twitters, HTC’s, emails, Facebook events, private groups, iPhones, phone calls, text messages all adjusting to one another’s movements millions of times each seconds” (Hamilton 20). Because Hamilton’s novel is focused on the spread of information during the Arab Spring of 2011, the availability of videos from the time of the event is important because of how these images and recordings can create a link between the text and the environment in which it was written. The hundreds of videos

maintained by The Mosireen Collective are visceral and raw in their portrayal of the protests that took place not just in Egypt, but across the Middle East. Even as these videos are created and uploaded in Arabic, they then become a part of the collective that exists beyond national boundaries as volunteers translate the videos into numerous languages allowing them to be shared and experienced on a global scale. It is this global access that interests Hamilton's protagonist. Khalil and the rest of the team at the novel's Chaos Cairo recognize how they are in a unique position to preserve the events of the uprising as it affected the people involved, their families, and the city; these ground-level interviews, videos, and recordings serve to humanize the event in a way that not even national news media can. Like the father in the internet café who uses the video of his son to create empathy in Khalil, Hamilton's text is focused on how the social connectedness afforded by technology can make the situations more personal. Hamilton argues that the existence of technology in the hands of the people can create an accurate representation of the events, "It's a movie! The twenty-eighth is a movie ... You can't write a thesis about it or a poem or a song or a book. It's too big. It's too cinematic ... It's not about one hero, it's not about feelings or inferiority, it's just too big" (Hamilton 81). Hamilton's protagonist, consumed with trying to create a lasting artifact that represents the events of the Arab Spring protests and violence in Egypt, and concludes that the vast number of perspectives and scenes found in the YouTube videos and podcasts combine to create an accurate picture (Hamilton 82). This notion that a single video, website, or text message cannot contain the entirety of a single event is profoundly postmodern and recognizes the inherent plurality of storytelling. A comparison of mainstream media, independent journalism, and Hamilton's novel demonstrates how viewing the same situation from multiple perspectives can add to one's understanding and ability to connect with the subject of the text. Some of the primary protests

referenced in *The City Always Wins* are those from November – December 2011 centered around Mohamed Mahmoud Street and Tahrir Square; looking at them from videos supplied by Al Jazeera News Network, The Mosireen Collective, and from the description offered by Hamilton gives the reader a better understanding of the chaos and uncertainty faced by those involved in the protests. Professional journalism organizations bring near cinematic quality to their work: Al Jazeera's videos ("Violence Ends Brief Truce at Egypt Protest") are clear, and their shots carefully selected according to the direction of the journalist or editor. Conversely those produced by the Mosireen collective are raw in nature and are not as tied to the editorial guidance of an organization focused on ratings and journalistic excellence. The raw imagery of the Mosireen Collective ("Daily Report from Tahrir") is disturbing and chaotic; filmed by amateurs using cellphones, home video cameras, and whatever else was available. The work of the collective is directed towards disseminating information in a raw and unedited way, ostensibly more focused on reaching an Egyptian audience than external observers. While the material created by the collective was not initially intended for a foreign viewership, what it is able to communicate, even to non-Arabic speakers, is the overwhelming sense of chaos and confusion as protesters were enshrouded in clouds of tear gas, trapped in a cacophony of constant alarms, shouts, and gunfire, and barraged by conflicting accounts of the events from a scared and enraged population looking for both an enemy to attack and a way out of the danger zone. The video also shows the way that community was united in their stance as walls of volunteers rise and form blockades to create safe aisles for motorcycles and scooters that were rushing the injured from the front lines of the standoff to makeshift field hospitals and beyond. Reviewing these videos and others prior to, and while engaging with Hamilton's text brings a deeper connection with the events he describes:



A hundred people make up the front line at any one-time, informal ranks of stone throwers and shit talkers hurling everything they have at the cops. Behind them a middle section stretches down the street, the immediate backup, people taking a break from the rocks or gearing up the nerve for those final few steps into the firing line, people pushing up for a better view, the fire starters and gas catchers hurling the smoking canisters back where they came from. Behind them, where Mohamed Mahmoud Street flows out into Tahrir, are the spectators, the chanters, the drummers, doctors, quarriers, and hawkers.

(41)

This scene, combined with the video created for foreign audiences by Al Jazeera and the Egyptian population by the collective, add more to the understanding of the event. Reading just Hamilton's description of the protest it would be easy for a reader unfamiliar with the events to imagine an ordered resistance that is focused and in sync as it stands before the Egyptian army. Adding the video content to the experience allows for the outsider to see how the truth was more chaotic and moment-driven than planned and executed. Hamilton writes from the street as one of the protesters and so recognizes and accepts the patterns of actions that arise during riots and demonstrations, the pressing wall of bodies, the falling back of wounded, and the actions of the crowd are relatable to him, he understands them and anticipates them. The videos take the first-person perspective offered by Hamilton and adds the informed observation of a third person perspective that can move beyond the immediate and see the totality of the demonstration be it in scenes shot from the street or from the rooftop. This combination of viewpoints is something only possible because advances in technology have made each piece available, the video, the podcast, the novel, all combine to create a more holistic picture than would otherwise be

possible. This removes some of the barrier between the author and the audience to create a shared vision of the events captured within the text.

## 5. Conclusion

As the technology used for communication continues to advance, the artifacts it leaves behind in the form of text messages, online postings, news feeds, and videos will play an increasing role in academic research to include the study of literature. Terabytes of metadata related to the social, political, and economic environment will be made available to researchers looking to place a text within the context in which it was written. Further, technology continues to move away from the printed page familiar to most literary scholars and towards a future format that is connected to and comprised of secondary media. Literary scholars that wish to examine contemporary and future literature are best served by an increased level of electracry that includes knowledge of data analytic, topic modeling, and other media creation software if they wish to increase their level of understanding of a text. For the postmodern literary scholar, the idea that the author's intent is no longer applicable to the reader's understanding of a work is increasingly brought into question as online media makes the preservation of the author's creative process both simple and easily disseminated. What's more, as technology continues to enhance the capability for social communication through online literature, there is nothing stopping future authors from continuing the creation of the text long after the initial publication as new chapters, revisions, and updates can be pushed out to the reader for instantaneous updates. The questions surrounding the study of contemporary and electronic literature continue to increase with the pace of technology. To survive and advance the field of literature, researchers will need to become familiar with the tools of electronic literature and seek new

applications for analytic software that will increase the effectiveness of literary criticism by making the research process more inclusive and repeatable.

There are several hurdles that must be overcome if researchers are to take full advantage of the wealth of information that is available. Chief amongst these issues is the availability and access to historical data from social media sites in a way that is approachable to researchers and readily formatted so as to be reviewed with applicable software applications. In addition, there needs to be a standardized way for such information to be catalogued. While some of the standardization will need to be addressed by the publishing industry (both print and digital), there is still work that the modern literary academic can do to prepare themselves and future generations for success. Current literature curriculums should encourage students to expand their field of study to include at least an introduction to computational analysis to provide a working knowledge of the databases and systems that will continue to figure prominently into advanced literary research. Just as computers became indispensable to traditional library research in the form of online card catalogs and the prevalence of online digital journals, databases that house and format information into a searchable format will become necessary for successful research.

The Arab Spring series of pro-democracy protests is a prime candidate for future research into the application of computational literary analysis. Novels, news articles, videos, and other media were able to capture the protests not only in Egypt but across the Middle East and North Africa. Collecting and reviewing the hundreds, if not thousands, of tweets, published text messages, video transcripts, short stories, and novelizations is a daunting, if not impossible task for a researcher confined to traditional methodologies. Identifying the applicable literature, arranging the metadata, and preparing it for analysis is a much more manageable prospect. This is not to suggest that software applications can produce significant or even quality research but

using them to sift through the masses of unstructured text to identify patterns and trends can provide a solid entry point for more focused analysis by a researcher using traditional literary theories and practices to link the literature to the events of the uprisings. Like how Dean and Boyd were able to cross reference the corpus of text created by Edgar Allen Poe with psychological databases to look for markers that could indicate depression, the significant amounts of material generated by those participating in the Arab Spring events could be reviewed for signs and indicators that led to both the violent and peaceful protests. Such research could potentially be combined with work surrounding other incidents of public revolt or protest against a government or other power to provide even more detail into the way that literature reflects the effect of complex power shifts within disparate communities and cultures.

The work of this project seeks to demonstrate both the need and potential for computational analysis to be applied to literature. Ongoing projects to digitize existing catalogs of literature and make them available online are providing the raw material for investigations like those discussed in this study. It is the responsibility of the literary scholar to prepare themselves to incorporate this new information into their ongoing research into the way that literature reflects the culture in which it was created. The opportunity to be found in the application of data analytics to the study of literature is one that promises to bring new insights and applications to works beyond what is currently studied. With the ability to search through the contents of multiple texts and secondary source materials, the scope of future research is exciting and near limitless in what can be uncovered.

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