HYPERTEXT, NARRATIVE, AND THE FUTURE OF NEWS WRITING

By

Holly Cowart

Approved:

Dr. Joe Wilferth
UC Foundation Associate Professor
(Director of Thesis)

Dr. Aaron Shaheen
UC Foundation Assistant Professor
(Committee Member)

Dr. Heather Palmer
Assistant Professor
(Committee Member)

Dr. Herbert Burhenn
Dean of the College of Arts and Sciences

Dr. Jerald Ainsworth
Dean of the Graduate School
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A Thesis
Submitted to the Faculty of the
University of Tennessee at Chattanooga
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts
in English

The University of Tennessee at Chattanooga
Chattanooga, Tennessee

May, 2011
ABSTRACT

This thesis considers how the narrative context in which hypertext has developed offers a solution for transforming print media into an online form. It defines the qualities of the hypertext narrative and looks specifically at how hyperfiction has utilized these qualities. It outlines the aspects of hypertext relevant to shaping an online narrative and then considers how those aspects of hypertext could be applied to one of the forms of narrative, the online news story, that up to this point has not effectively utilized screen-based text. The online news story is an example of words on a screen functioning in much the same way they have for hundreds of years on the newspaper page. This thesis focuses specifically on the application of hypertext theory to online newspaper because of the precarious place in which that media finds itself as it works to adapt to the age of the Internet. Yet even with the use of links and multimedia, online newspaper stories have not seen the type of drastically different presentation of narratives created by hyperfiction. The usefulness of considering what hyperfiction has to teach the online newspaper becomes even more apparent in light of the necessity for change within the industry (Cho, Martin, and Lacy).
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INTRODUCTION:
DEFINING HYPERTEXT AND ITS USES

The concept of hypertext is not limited to, but is most commonly associated with, the Internet. In fact, the linking structure of hypertext which is described as a system of text-based nodes, is the foundation upon which the Internet is based. Yet the pervasiveness of the Internet in everyday activity makes this structure of links appear unremarkable. If, for example, a reader encountered this thesis on a computer screen that reader would not be surprised to see a section of blue underlined text. That reader would know to click the text in order to follow a link. If another reader were holding the print version of this thesis and saw the same words underlined and in blue ink, it would be ridiculous to assume that that reader could touch the printed page and be transported to some other segment, an endnote perhaps. There is an expectation that screen-based text will function outside of the parameters of print-based text. There is not, however, any quality about screen-based text that forces this to be true. Words on a screen can function in the same way that printed words on a page have for more than half a millennium. A work of John Steinbeck’s is essentially the same whether published by the Viking Press or viewed on Amazon’s Kindle. *The Grapes of Wrath* is the same content in either form, but not exactly the same experience for the reader. This difference is where the structure of hypertext, the hyperlinks with which it is most readily associated, are shown not to be all the ways in which a “text” becomes “hyper.” The minor ways in which screen-based
text differ from print-based text add up to a set of characteristics that when used purposefully do create a new novel, and a new form of narrative.

This thesis defines the qualities of the hypertext narrative and looks specifically at how hyperfiction has utilized these qualities. It outlines the aspects of hypertext relevant to shaping an online narrative and then considers how those aspects of hypertext could be applied to one of the forms of narrative, the online news story, that up to this point has not effectively utilized screen-based text. The online news story is an example of words on a screen functioning in much the same way they have for hundreds of years on the newspaper page. Even with the use of links and multimedia, newspaper stories have not seen the type of drastically different presentation of narratives created by hyperfiction. The usefulness of considering what hyperfiction has to teach the online newspaper becomes even more apparent in light of the necessity for change within the failing industry (Cho, Martin, and Lacy).

In 1993, Stephen Bernhardt outlined a framework for considering the attributes of screen-based text in relation to print-based text. Since that time, a wealth of innovation in daily screen-based communication, including the regular use of e-mail and text messaging, occurred. Yet, Bernhardt’s characteristics of screen-based text remain a relevant starting point with which to begin a discussion of electronic communication in general and hypertext in particular. Bernhardt’s basic characteristics of screen-based text include interactivity, or the physical manipulation of text through actions such as typing or using a mouse. He also describes electronic text as navigable because readers can move in multiple directions through large amounts of information. Like text in a printed
magazine or newspaper, Bernhardt says that electronic text is *modular*. This aspect is important in the consideration of converting printed newspaper to screen-based content. He suggests that the *graphically rich* nature of electronic text allows it to be more dynamic. Screen-based text is also *spacious* because it is not physically constrained. The organization of information is *hierarchical*, *layered*, and *embedded*. This organization is why Bernhardt says hypertext is uniquely suited for *nonlinear* text.

With these distinctions between screen-based text and print-based text in mind, we can define hypertext more clearly. In the thesis that follows, I am using hypertext to mean an on-screen text containing nodes, which are linked together and which, in a multilinear way, construct a narrative. Hypertext is likewise multimodal by varying the ways in which information is presented and received, often engaging multiple senses through sight and sound. As such, hypertext requires that we re-think the old print paradigm and its conventions, that we re-imagine genre, that we write now for a different readership—a screen-focused and digitally literate audience. For every text, or thought, there are multiple potential associations. The hypertext reader realizes these potential associations and chooses which threads to follow and therefore has a different experience than someone reading text in print. The possibilities offered by this relatively new form of text have been described as existing outside our current paper-based frame of reference (Nelson and Smith). Theorists have likewise gone so far as to describe this new form of text as a paradigm shift on scale with Gutenberg’s invention of the printing press (Landow *Hypertext 3.0* 49-51). Given the significance of this shift, there is a clear need
for continued examination of not only the implications, but also the applications of hypertext.

In order to consider what fits the definition of hypertext as on-screen text containing nodes, which are linked together and which, in a multilinear way, construct a narrative, much of what can be found online must be ruled out. Retail websites, for example, do not usually contain a narrative. An academic article, except perhaps one found in *Kairos*¹, with hyperlinked footnotes does not create a narrative that a user navigates. In a similar way online news stories may have shorter paragraphs, or utilize subheadings, but because they are not written with hyperlinks as an integral part of the story structure, they do not constitute a hypertext. There are however, a number of online narratives that would meet this definition on hypertext. They include works of hyperfiction, which will be discussed in the following chapters, and they also include multilinear narratives that are not necessarily based on a literary model.

A good example of an unconventional narrative that meets the requirements for being considered a hypertext is San Francisco’s Exploratorium. The Exploratorium is a museum that explores science, art, and human perception. Its website utilizes multimedia in explaining everything from the origins of man (Figure 1) to the science behind baseball (Figure 2). In the latter example, the users tests their own reaction time, via mouseclick, to a baseball being thrown. They can also test how far they can hit a ball while learning

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¹ *Kairos* is an online-only journal that publishes articles created specifically for the Internet on topics related to rhetoric, technology, and pedagogy. The article “Writing and Publishing in the Boundaries: Academic Writing in/through the Virtual Age” by Patricia Boyd Webb is one example an article published in *Kairos* that meets the criteria for hypertext.
the role of bat weight and speed. They can read about professional female ball players through links in a roster and watch video clips that are interspersed throughout the pages, which are linked together using images of hotdogs. There is a large volume of material in both the science of baseball and evolution sections of the Exploratorium website and in both cases the users determine the order in which they interact with the content. The website meets the definition of hypertext. It is, in Bernhardt’s terms, interactive, navigable, spacious, hierarchical, layered, embedded, nonlinear, and graphically rich. The important distinction between the Exploratorium website and any other series of hyperlinked pages is the website’s use of connected content to construct a narrative. In addition to these hyper-narratives described as hypertext, this thesis will utilize the broader term screen-based text, which includes any on-screen text. It will examine the subcategories of hypertext: hyperfiction, which relates to literature, and hypernews, which relates to online news content.

Figure 1: Origins hypertext on the Exploratorium website
Figure 2: The Evolution of Baseball from the Exploratorium website
CHAPTER 1
LITERATURE REVIEW

Scholarly interest in hypertext appears to have reached a high point in the 1990s when articles about hyperfiction as a new way to compose narrative were prevalent (Coover 1993). Theory developed around what was being done by writers, such as Michael Joyce and Stuart Moulthrop, as well as what could be done with hyperfiction as a new literary form. As the scope of hypertext theory expanded into the twenty-first century a certain degree of its luster wore off. In their article “After Hypertext: Other Ideas” Johndan Johnson-Eilola and Amy Kimme Hea recount hypertext theorist Jay David Bolter’s comment during a conference in the late 1990s where he asked, with some levity, according to the authors, if anyone remembered hypertext (419). About the same time, 1999, Robert Coover delivered a keynote address to the Digital Arts and Culture Conference titled “Literary Hypertext: The Passing of a Golden Age.” In it the Brown University Professor describes working with hypertext prior to the Internet or even CD-ROM. He discusses the golden-age authors such as Moulthrop and Shelly Jackson:

These pioneer narrative hypertexts explored the tantalizing new possibility of laying a story out spatially instead of linearly, inviting the reader to explore it as one might explore one's memory or wander a many-pathed geographical terrain, and, being adventurous quests at the edge of a new literary frontier, they were often intensely self-reflective.

The literary movement that Coover describes is still alive, but has become more difficult to discern among the competing content on the Internet. The number of dead links on
hypertext and hyperfiction websites may be testament enough to the boom that occurred about fifteen years ago in this field. This thesis examines in its focus what everyone was so excited about then and what remains promising about hypertext today. In reviewing the literature there is a need to look not only at what occurred to create interest in this field but also what possibilities remain in applying hypertext to other fields.

Foundations of Hypertext Theory

With that openness to possibility in mind, consider Vannevar Bush’s Memex. This theoretical machine, which Bush envisions in his 1945 article “As We May Think,” would have been constructed like a desk. It would store information so that it was compressed yet easily accessible. A book, for example, would be stored using what Bush describes as a kind of improved microfilm, capable of storing large amounts of information in very little space, which is projected onto screens where the user could then link the text to another book in the collection, make notations on it, or attach other media that would then become part of the stored record. What Bush focuses on as the innovative aspect of the concept is the idea of linking documents to create a trail so that anytime that book were used in the future, a user could touch the linked code and the referenced book would appear. Among the professionals he describes using the device are physicians, patent attorneys, lawyers, chemists, and historians. That a linked text could create new compositions does not appear to have been a primary concern; however, he does describe the function of the machine in this way: “It is exactly as though the physical items had been gathered together from widely separate sources and bound together to form a new
book. It is more than this, for any item can be joined into numerous trails” (sec. 7). In addition to being the first to conceive of what would be called hypertext, he observed what would become a major aspect of hypertext theory—the reader’s involvement in creating the text. As a result of this seemingly simple observation, Bush was not only the first to write about hypertext, but he was also the first to describe this aspect of hypertext theory. He stressed that the important aspect of the device he described was its ability to tie two records together.

Even without the intervening years of history, it is easy to see how the Memex could be used for organizing information and how that information could become linked. After all, Bush describes its application in research fields where referencing and cross referencing are essential. He describes it as “a future device for individual use, which is a sort of mechanized private file and library” (sec. 6). The Internet, particularly the information gathering websites work in the same way. It is therefore reasonable to assume that if the linked information were kept current, the Memex could also have performed a news gathering function. The linking of files described by Bush is similar to the way news stories are linked online. If, for example, a story about the president’s State of the Union Address were accessed on a news website, the user would expect to find links to stories about the topics the president would address.

The associative nature of the Memex was based on the way a person’s mind works, thus the title of Bush’s article, which included a number of ideas for new inventions. The Memex was also a way of adapting to a growing volume of information in much the same way the Internet would do decades later. The Memex would have
created a network. This vision has been shared by a number of people as it evolved, but
the first person to call it hypertext, Ted Nelson, still contends that it has not reached its
potential in terms of use. A 1965 article in Vassar’s student newspaper describes a talk
Nelson gave entitled “Computers, Creativity and the Nature of the Written Word” in
which he describes a computer system he called Personalized Retrieval Indexing and
Documentary Evolution:

In this system passages of material would be translated into machine
language and filed in the machine in any sequence. With the proper
instructions the machine would print out any sequence the writer wished
to try, freeing him from the necessity of keeping the ideas in his head. Mr.
Nelson pointed out that we often do not think in linear sequences but
rather in ‘swirls’ and in footnotes. He introduced the concept of the hyper-
text, which would be a more flexible, more generalized, non-linear
presentation of material on a particular subject. (4)

What is interesting about Nelson’s remarks and the student reporter’s account of the
speech, is that even decades before the Internet existed, hypertext became a clear concept
with a clearly articulated purpose. The inclusion of footnotes in this article’s description
is important because hypertext is still said to have its closest print relative in the footnote.
A reader, prompted by a symbol or number, leaves the main body of the printed text to
obtain additional information. The major difference between the footnote and hypertext
as it was envisioned was that only a finite amount of text would be possible in a print
footnote.

The hypertext movement that Nelson helped to start in the 1960s, saw the creation
of a number of hypertext systems over the next twenty years. These included ENQUIRE,
invented by Tim Berners-Lee and the first commercial released program, Office
Workstation Limited, known as OWL. Hypertext systems entered the mass market in 1987 when Apple included the HyperCard program with every computer sold. By 1991, Berners-Lee introduced the World Wide Web based on the years of hypertext systems experience up to that point. Hypertext technology was also widely adopted in CD-ROMs. It was in this climate of increasing utilization of hypertext systems and recognition of postmodern theorists that George Landow began writing about the intersection between the two. In his first edition of *Hypertext: The Convergence of Critical Theory and Technology*, Landow writes that “over the past several decades literary theory and computer hypertext, apparently unconnected areas of inquiry, have increasingly converged” (2). He describes HyperCard, and other hypertext systems in use in the early 1990s, as a way to examine poststructuralist criticism at a time when these systems were more widely viewed as tools (*Hypertext* 11). Other theorists advancing hypertext theory were based in the literary tradition. Stuart Moulthrop and Michael Joyce added to both the academic discourse on hypertext and the body of hyperfiction work. In 1991, Moulthrop wrote in “You Say You Want a Revolution? Hypertext and the Laws of Media” that hypertext is characterized by connection: “At the kernel of the hypertext concept lie ideas of affiliation, correspondence, and resonance” (sec. 19). Like Jay David Bolter, who was writing at the same time, Moulthrop observed the reappropriation of attributes within hypertext mirrored the way in which literature reappropriated themes and characters.
Remediation

Discourses on technology focus on the new. This focus on looking forward fails to take into account the fact that the latest technology is another version of something that came before it. The iPod, for example is rarely compared to the Walkman, although the former would have had to make an even greater leap in how music is experienced without the later. Remediation is based on a similar concept. As Jay David Bolter defined the term, it is when a newer medium adapts the characteristics of an older medium, and claims to improve what came before. It involves recognizing what worked in the older medium while improving on what did not (23). Remediation is then essentially issuing a challenge to what came before. It requires the adaptation of previously valued qualities in order to make a convincing argument. In the case of portable music, the remediation of the Walkman proved to be significant in terms of the capacity to hold music. A two-dozen song mixtape does not begin to resemble a 200 song playlist. When iPods began taking on the characteristics of Personal Data Assistants through Internet access and increasing numbers of applications, the technology being remediated was more closely related to the part of the Walkman that enabled it to be a handheld device, which utilized headphones. As Bolter and Richard Grusin point out, “the very act of remediation, however, ensures that the older medium cannot be entirely effaced; the new medium remains dependant on the older one in acknowledged or unacknowledged ways” (47).

Another example from digital music demonstrates this relationship. Pandora allows users to listen to songs related to a specific artist online without paying for them while “sponsors” occasionally interrupt with a commercial. This format remediates
broadcast television and radio with its use of commercial interruptions. While some internet television and video has begun to utilize commercials, Pandora is dependent on the user’s acceptance of this format created by watching television and listening to radio, not the user’s experience with the Internet. However, Pandora does utilize the computer technology that allowed its creators to build the music database known as the Music Genome Project. Combined with the digital music industry, which remediated the way people buy music, the components of Pandora demonstrate the degree to which multiple media can be “improved” while still depending on the media that preceded it.

Writing and print production have also undergone aggressive remediation as a result of the Internet. As Bolter notes, “digital technology is turning out to be one of the more traumatic remediations in the history of Western writing” (24). He says that the printing press produced a product that more closely resembled a manuscript than today’s technology does. As Elizabeth Eisenstein observes, many early books were printed to look like manuscripts (32). The slow adaptation of new technology can be seen in moveable type, which was introduced with the printing press and remained a part of those machines through the twentieth century. Even the application of ink on paper by a typewriter was not a great leap forward. The characteristic that is being adapted from the printing press with digital print production and the use of electronic publishing is the dissemination of ideas to even greater numbers of people. As Eisenstein writes about early print culture: “The fact that identical images, maps and diagrams could be viewed simultaneously by scattered readers constituted a kind of communications revolution in itself” (53). The role of screen-based text and hypertext in remediating print is similar to
that of the first print publications. The information it contains is not, on its own, necessarily valuable. Produced in volume, across geographical boundaries, almost instantaneously, it effectively remediates print. The result is an online news site that more effectively and efficiently achieves the goal of print newspaper in the past century—to connect people and information across from great distances. Just as Eisenstein describes how radical a uniform map was for early print culture, the electronic transmission of pictures, text, and information revolutionized the industry of news media. As a result of this massive change, there is a need to reconsider how news is presented.

In chapter two, I will discuss hypertext as it relates to the author, considering narrative conventions and how Roland Barthes’s concept of the death of the author applies to hypertext in general and hyperfiction in particular. In chapter three, I will outline the characteristics of hypertext and hyperfiction as they relate to the reader. This section on readership will examine the connections between the work of theorists such as Walter Ong and Mikhail Bakhtin as well the screen-based characteristics of hyperfiction. These sections focusing on hyperfiction and narrative conventions will be followed by establishing the current state of online news and how it is utilized in chapter three. The last section, chapter five, will consider the possibilities for the future of online news based on the characteristics of hyperfiction.
CHAPTER 2

E-WRITING/AUTHORSHIP AND THE CONVENTIONS OF NARRATIVE

The concept of authorship is important to hyperfiction specifically, and to hypertext in general, because while the author is most closely associated with composing a narrative, all texts require an author. Our contemporary view of authorship has been deeply ingrained by print-based culture, and with it the conventions of the printed page. Bolter makes the observation that, “In the heyday of print, we came to regard the written text as an unchanging artifact, a monument to its author and its age” (4). The importance of authorship is constantly reinforced by the print-based form of a book. Consider the experience of someone reading a hyperfiction versus someone reading a bound book. The hyperfiction reader may encounter the author’s name on the home page, or splash page for the work, but the hyperfiction reader is not likely to see it again without returning to that page. The book-reader sees the author’s name every time that reader closes the book or looks at the spine on a shelf. Bolter writes that these rows of books contribute to this “monument” to the author and our sense of a shared literary culture. While hyperfiction does not immediately threaten the place of Shakespeare or Hemingway, Bolter observes that electronic writing’s publishing power lies not in its ability to reproduce copies of manuscripts as the printing press did, but instead in allowing fragmentation and differentiation of texts (11-12). This fragmentation occurs as the result of multiple points of view. It challenges the idea of authorship that is traditionally tied to print-based text.
As Laura Mandell writes, “Whenever we talk about ‘great literature’ using an author’s name, we confuse people and texts, subtly reinforcing the unconscious idea that authors are literature rather than they that wrote it” (208). The role of the author in creating narrative is deeply entrenched in our print-based culture. Like Walter Ong, who will be discussed in the following chapter, developed his theory on secondary orality before hypertext existed on the Internet. Roland Barthes declared the death of the author when the term hypertext had just been invented.

**Death of the Author**

Envision someone reading a computer screen or any other “smart” device on which the Internet is accessed and it almost seems Barthes’s statement that a “text’s unity lies not in its origin but in its destination” was written for that reader (148). Not only is authorship visibly less important on the Internet than in print-based text, as evidenced by how seldom content is attributed to a single person, but the reader is arguably less identifiable. Of course, Barthes was not thinking of the Internet when he wrote that “there is no other time than that of the enunciation and every text is written here and now” (145). Yet, the sense of impermanence created by screen-based text fits with the realization that a writer’s intention does not create meaning.

To use a less than literary example, Facebook is a hypertext in which people may attempt to document their own lives or monitor the lives of others. The content that accumulates on the site creates a narrative of an individual. That individual has approved of certain readers in the form of “friends.” The resulting use of that hypertext is a testament to the fact that there is no fixed meaning. Endless examples of the multiple
potential readings exist in the comments people leave, which further upsets any sense of a set definition. The simultaneous birth Barthes describes of the scriptor and the text can be seen, even in the status updates of hundreds of thousands of people multiple times a day. The status that reads “stuck in traffic” is not about the fact that author is stuck in traffic. It is not about anything. The status is evidence of a moment when the author wanted to exist not just in traffic, assuming that person was actually in traffic, but also within the narrative of Facebook. Barthes might not agree with the importance placed on the role of Facebook in that instance because of the power it ascribes to the website and the Internet in general. However, hyperfiction, as a form of hypertext that focuses on narrative, clearly offers the potential for plurality and can have many of the attributes of a writerly text. Hyperfiction is inarguably a reaction to the classic forms of literature and an effort to create a narrative that more closely reflects the view of authorship held by Barthes and his contemporaries.

One of the questions that emerges when considering the death of the author relates to the author as a marketable entity. After all, the image of the author developed alongside capitalism as someone who could not only make a living from writing, but also be the face of that work. Almost as quickly as the author emerged as a profession publishers discovered the need to make the author’s name into a brand. What followed was the development of the idea that authors are the authority on their work. As Mark Rose points out in his article “The Author as Proprietor: Donaldson v. Becket and the Geneology of Modern Authorship,” our present concept of the author is tied to the intellectual property laws outlined in Brittan during the 1700s, which granted authorial
copyright for a fixed period of time. Questions of ownership in the context of hypertext and hyperfiction take on different dimensions under consideration of the origins of authorial copyright. Rather than claiming ownership of words on a page, a hyperfiction author would also need ownership of all the potential ways in which that author’s narrative is viewed. So rather than owning a version of a story, the author would need to own either all potential versions of the story or the structure under which the story exists. This problem reintroduces ideas of authorship. Bolter compares hypertext to a book that an author took scissors to. He says, “The principle task of authors of hypertextual fiction on the Web or standalone form is to use links to define relationships among textual elements, and these links constitute the rhetoric of hypertext” (29). The definition of relationships that Bolter describes is only like the traditional concept of writing in that it takes words that already exist and arranges them in ways that represent something specific. The role of the narrative author is no longer that of a creator who builds and controls the worlds that author constructs. This shift that Barthes describes as the death of the author is therefore reflected in the reality of hypertext where authors acknowledge their inability to control the direction of their narratives and the inability to control the multiple meanings readers can take from those narratives.

**Meaning Making**

The multiple meanings within a work of hypertext reveal the limitations of the Internet as a hypertext system. The series of nodes that comprises the Internet can be linked to one another, but are not necessarily interconnected. In fact the person who coined the term hypertext has been quite vocal in his opposition to text that is not as
interconnected as possible being called hypertext. Ted Nelson has said that the Internet^2\footnote{In this case, the term World Wide Web was used, but for consistency Internet has been substituted.} does not utilize the possibilities of hypertext. In a 1997 article in *World Wide Web Journal*, Nelson points specifically to the numerous links that lead either only outward or, in many cases, nowhere at all. The solution he envisions is not a link, but a transclusive pathway. As one of the many footnotes on his website *Hyperland* explains, “A link connects two things which are different. A transclusion connects two things which are the same.” He advocates creating associations rather than terminal links. In a 2006 *New Scientist* article, Nelson goes so far as to publicly apologize for the role he played in the creation of HTML, which he says does not fulfill the promise of hypertext. His frustration with HTML is its reliance on predefined links, which can only point in one direction because they are embedded. According to Nelson, the links that begin in one location and end in another demonstrate the lack of interconnectivity by association in HTML that is being perpetuated by the success of the Internet. Nelson does offer a solution that he calls Project Xanadu. The project, which began in the 1960s and was released to the masses in the late 1990s, never found a wide audience. What is most relevant to this discussion of intertextuality and the following section on interactivity, is the underlying issue that Nelson says created a system of isolated content in HTML. In his view, the Internet was developed to mimic paper. In a 2007 lecture entitled “Transclusion: Fixing Electronic Literature,” he describes the troublesome acronym used at Xerox PARC: WYSIWYG. It stands for “What You See Is What You Get” or more accurately, “what you see on the screen is what you print out.” By trying to limit the capabilities of screen-based text to
the dimensions and dynamics of a piece of paper, Nelson says they were creating “simulations of paper under glass.” Nelson’s emphasis on unrealized potential of screen-based text may demonstrate a problem for hypertext today, but it also points to the essence of creating new narrative and systems of sharing information. His idea that “no quote should be separated from its source” was based on an intertextual view of the written word. The connections between the “Declaration of Independence,” the “Virginia Declaration of Rights,” the “English Bill of Rights” and John Locke’s “Two Treatises on Government,” which he uses to explain transculsion in his lecture, should be visible in a hypertext system.

While most theorists would agree that hypertext’s potential has not been met, there is a danger in Nelson’s contemptuous view of HTML. As Johnson-Eilola and Kimme Hea point out, “we need to be less concerned with searching for lost cities of hypertext like Ted Nelson’s Xanadu and search instead for hypertext and its impact in our daily lives” (418). The fact that hypertext exists in its current form, as the structure of many websites, does not mean that it has to be abandoned completely in order for new systems that look quite different from today’s Internet to be created. The meaning constructed by hypertext is constantly being remediated. In his book *Nostalgic Angels*, Johnson-Eilola describes this remediation in terms of the communities’ individual understandings of hypertext. For example, he says, technologists see the potential use of hypertext to personify efficiency, while database vendors think it will turn information into a “postcapitalist commodity,” and teachers will consider the inherent contradictions in the theoretical structures it represents (13). Johnson-Eilola argues that hypertext is a
social technology unlike simple devices such as the calculator or the typewriter. Appropriately, he connects this separation of simple and complex technology to the views of Walter Ong who articulated print as a culture rather than an invention. The facts of print technology’s cultural influence are clearly laid out in history, but the facts of hypertext’s influence will not be known for some time. For that reason, Johnson-Eilola calls for caution in granting hypertext mythical powers. He writes,

> hypertext is not some magical technology that transforms the information within it into a free, open space. In fact, the communities in which specific forms of hypertext are taken up, appropriated, and remade, typically act in a way consonant with their current structures of power, action, and knowledge. (26)

Instead, the transformative power of hypertext can only be demonstrated by history. Certainly the religious reformation of the 1500s would not have occurred without the printing press. The ability to read a Bible printed in the vernacular was central to the Protestant push for autonomy from the Catholic church. Of course, assuming that the Reformation was a forgone conclusion because the printing press existed is a lot like assuming hypertext is a “magical technology” as Johnson-Eilola cautioned against. In both cases, the printing press and hypertext, there is potential for cultural change like that described by Ong in *Orality and Literacy*. There is also the inability to see what will happen to the way we construct meaning as a result of a new technology.

In the “Hypernarratives and New(s) Writing” sections of this thesis, which will begin to introduce the role hypertext can play in reimagining online newspaper format, there is a need to remember, as Johnson-Eilola implies, that the events of history were never a foregone conclusion. Newspapers exists today almost entirely because the
technology was developed to print them. Asking someone today to describe how people will get information about the world around them 600 years from now would be very similar to asking someone in the 1400s the same question. The influence of the printing press on our culture and the role of the reader, as it relates to hyperfiction, are explored in the following chapter and have consequences for the future form of online news.
CHAPTER 3

E-READING/READERSHIP AND THE CONVENTIONS OF NARRATIVE

Hyperfiction

In a 1993 *New York Times* book review of the hyperfiction *Victory Garden*, Robert Coover asked: “Is it even possible to describe this nonlinear interactive art here in the implacably linear medium of printed text?” The validity of this question is apparent in any attempt to adequately describe hyperfiction in print-based form. I have defined hyperfiction in this thesis as a form of hypertext, which is an on-screen text containing nodes that are linked together and which, in a nonlinear way, construct a narrative. Yet how a hyperfiction constructs this narrative can be vastly different from one work to the next. One of the most immediate ways to identify the number of forms hyperfiction can take is in its navigation. Take, for example, Rick Pryll’s *Lies*, which tells the story of a couple finding out about each other’s infidelity through the journals they have written. There are two options for navigation throughout the story. Each section is a few sentences that end with the options “Truth” or “Lies.” Clicking on either word will take the reader to a different part of the narrative and to a number of possible endings. Each ending gives the reader the option to begin again.

Compare this relatively simple structure to the slightly more complex navigation of *Twelve Blue* by Michael Joyce (Figure 3). Joyce uses the short sections of text, like those found in *Lies* and many other works of hyperfiction, however in *Twelve Blue*, he
uses linked text within the narrative as well as an image containing links that functions like a map. Different points on the image link to different segments of the story. From the home page readers can use the “begin” link, the linked numbers one through eight, or portions of the image to reach eight different pages. From these pages, ninety six additional pages can be reached via the links in the image that reappears like a graphic representation of navigation.

![Figure 3: Image portion of the Twelve Blue homepage](image.png)

Considerably more complex navigation can be found in longer, more complex narratives such as Joyce’s *afternoon, a story* or Stuart Moulthrop’s *Victory Garden*, which utilizes links within the text, a map, or a mouseclick on the screen to move the story along. The number of potential combinations a reader could encounter in this hyperfiction are almost unimaginable given the 2,804 links in the full version and multiple ways the different episodes become available as a result of the reader’s actions. In fact, Coover’s review of the story contains several potential versions of the events.
Coover, who is also well known in the world of hyperfiction as the author of the article “The End of Books” in 1992, ultimately concludes that this work of hyperfiction is telling one story that occurs chronologically in a specific location, “the only difference being that the reader moves about in the story as though trying to remember it, the narrative having lost its temporality by slipping whole into the past, becoming there a kind of obscure geography to be explored.” This sense of exploration is central to the experience of the reader and ultimately the role of the author.

**Exploring the Medium**

Consider the experience of a reader who is familiar with the hyperfiction of the 1990s and who comes across Judd Morrissey’s *The Jew’s Daughter* (Figure 4). Morrissey’s hyperfiction contains a hidden navigation box and links in the text, but changes in narrative are unconventional. The text of the story appears on the screen much like the text of a printed book. As the reader scrolls over highlighted words, the text changes. This hyperfiction utilizes Flash so what the reader sees is animation within the same page rather than linking to separate pages. There is no sense of movement from one page to the next, as in a printed text or conventional HTML-based site would have. Instead, the page of text changes as the reader scrolls over highlighted words so that what previously looked like a stable printed paragraph suddenly changes in some way. Three sentences in the middle of the page are replaced with new ones, for example. The reader sees the text change, but may not be able to discern what exactly is different. The result is a hyperfiction that looks a lot like the printed page or conventional screen-based text, but behaves in an unexpected way.
When a reader scrolls over the word “returns” (highlighted on page A), the text below that word changes, as the page B screenshot shows.

Other hyperfiction, such as Marie Steele’s *Starry Pipe Book*, starts with a map made of text and images, which leads through hyperlinks to individual stories that the reader discovers are ultimately connected. The title itself is an allusion to the artists used in the navigation map, Vincent VanGough, and painter René Magritte, whose “Treachery of Images” calls attention to the fact that the image of a pipe is not the thing itself. Throughout the work, the changes in narrator coincide with the changing visual environment. When the character Roy the goldfish describes the events in Linda’s apartment, the text is accompanied by images of an aquarium. When Linda tells her story from Los Angeles, yellow backgrounds, palm tree skylines, and water are the visual themes. The visual map that leads the reader into different subsections of the story is

Figure 4: Successive pages from *The Jew’s Daughter*
connected to the characters contained in the story. The result is that a child named Daryl who witnesses domestic violence is represented by a pair of ruby slippers, while Eric Desnos, an 83-year-old man who cannot speak, is represented by a Vermeer painting of a milkmaid. The exploratory nature of hyperfiction is also well illustrated in Caitlin Fisher’s *These Waves of Girls* (Figures 5, and 6), which incorporates sounds in the narrative. The piece opens with a splash screen containing the publication information, a video of quickly moving clouds and audio of girls laughing. Only after hearing the audio loop for several seconds does the navigation appear, a single play button icon with the text “listen.” Within the multi-layered stories there are audio files, linked text and images, as well as images that change according to where the mouse moves. In some sections, the sound of a person jumping rope, or running, coincides with the action in the story. There are also voices and at one link, which is labeled the chorus, there are nine wav files playing on one page in what becomes a dramatic poetry reading.

![Image of navigation page for *These Waves of Girls*](image)

*Figure 5: Navigation page for *These Waves of Girls*
Figure 6: Overlapping audio files in These Waves of Girls

All of these components are relevant to a discussion of hypertext because they demonstrate that the exploration of a work of hyperfiction is not simply the reordering of parts of a printed text. As the varying forms of navigation, and utilization of sound and image convey, the experience is designed to be beyond that of simple text. The prefix hyper is appropriately applied regardless of the commercial success of hypertext. Its etymology, “over” in Greek and “super” in Latin, describes the expectation that hyperfiction is beyond and better than fiction itself. This is not to say that all hyperfiction succeeds in exceeding the potential of print. Hyperfiction represents varying degrees of accomplishment. Rather than focusing on the literary contribution of Twelve Blue versus The Jew’s Daughter, there is a need to acknowledge that hyperfiction introduces innately new characteristics to narrative.
Text as Dialogue

The fact that hyperfiction is explored, rather than simply read, is due in part to its dialogic nature. The structure of hypertext places words in a context that is dependant on what the reader has already seen of the narrative and what they will see by following links. By utilizing the potential for multiple meanings within the hypertext, this story form reflects Mikhail Bakhtin’s idea of dialogism because the story is in conversation with itself. Rather than the one-way communication of print-based text, hyperfiction strives to embody certain characteristics of a dialogue. In order for hyperfiction to be dialogic it must be, as the previous section established, beyond print-based text. It must also be more easily identified with a culture of speech than one of books. Ong’s distinction between the cultures of primary orality and literacy is useful for considering the ways in which hyperfiction fits into both categorizations. What may serve to explain the dialogic nature of a form of communication that relates to both orality and literacy is the fact that the age of computers and screen-based text followed the age of print. As the concept of remediation makes clear, the screen-based readers adapted, but did not discard what worked before it. The dialogic nature of hyperfiction can therefore be found in it the ways that it differs from print. In other words, the characteristics of hyperfiction that are least like their printed counterparts are most likely to be dialogic. Returning to Bernhardt’s variations between screen and print-based text, interactivity and embedding are two applicable differences.

Interactivity in hyperfiction creates multiple dialogues. There is the conversation that the reader has with the text, but there is also a potential for a conversation among
readers and between readers and authors. The reader can converse with the text in a way that closely resembles a spoken conversation, as is the case with *Joe’s Heartbeat in Budapest: A Hypertextual Conversation Piece*. This hyperfiction by Ruth Nestvold gives the reader four responses to each section of text: Yes, No, Maybe, or Bitch. The piece is written so each section ends in a question and the reader’s response results in an appropriate reaction. If, for example, the reader chooses “Bitch” twice in a row, the text will read “You’re repeating yourself.” Choosing it repeatedly results in a variety of response followed by: “Okay, that does it, I’m outta here. Don’t try calling me again, I won’t call you.” This conversation, which resembles the dialogue of a chat room, is at one point in the spectrum of interactive hyperfictions. The exploratory nature of hyperfiction reflects the fact that hypertext requires interaction, which, even if only in the form of mouse clicks, is a dialogue. What can be added by looking at hypertext as a whole is the type of dialogue that engages people with not only the text but also each other. The most common form for this type of dialogue is the comment.

Whether it is a written critique or an affirmation in the form of “liking” the content on *Facebook*, comments provide the reader with the ability to talk back to the text. Assuming those comments are visible to other users, it may be possible to consider this type of dialogue as altering the text. Bernhardt notes the changeable, dynamic nature of screen-based text. He observes that the modifications made to books: notes in the margin, sticky notes, or dog-eared pages, do not enhance that text for anyone except the person who is reading it. Screen-based text “benefits from being infinitely more fluid, expansive, and adaptable to individual users. Readers can annotate without the
boundaries of hard copy” (44). The Internet’s most common form of annotation is the comment. Hyperfiction has, to some extent, incorporated this idea of comment. One narrative that is composed of reader input is The Company Therapist. For three years this hyperfiction was open to users creating characters. The “producers” Christopher and Olga Werby, invented the framework for the narrative that follows the experience of a young psychiatrist in San Francisco and his clients. Readers then created characters with biographical background and notes or dialogue from the character’s therapy sessions. In the time that the site was open for collaboration, several dozen authors contributed multiple entries for the characters they created. Another example of reader interaction, called Shadow Unit, has a series of storylines and characters that have developed over time. Some of the characters have LiveJournal websites on which they interacted with readers. The site cautions users not to “break the fourth wall” and alert the characters to the fact that they live in a fictional world. There are also discussion boards and a Shadow Unit Wiki with biographical character information and user-edited articles. The serial-style narratives are presented in a linear form, but stories connect to others to create a much larger structure, which one of the writers, Elizabeth Bear, describes as a hyperfiction environment.

In addition to demonstrating the interactive nature of hyperfiction, Shadow Unit is an example of the fact that screen-based text is hierarchically embedded. Bernhardt’s other observation about screen-based text, which is relevant to the consideration of the dialogic nature of hyperfiction, is that screen-based text is hierarchical, layered, and embedded. Hypertext is often explained to people who are more familiar with print-based
text in terms of footnotes. The footnote, which provides additional details or an explanation, is a familiar device for providing information outside of the body of the printed text. If, for example, footnotes could be any length, in any amount, and include multiple levels of notes so that one reference might lead to dozens more, they would function like hypertext. Of course, the physical boundaries of the printed page make this impossible. The ability of screen-based text in general, and hypertext in particular, to cross reference information gives the medium its dialogic quality. Hyperfiction can fall under this description as well with its connection to both the future and past of narrative simultaneously.

Mikhail Bakhtin’s idea that a sign is not anchored in a single reality, but connected to past, present, and future describes the way a reader encounters a hyperfiction environment.

Any ideological product is not only itself a part of reality (natural or social), just as is any physical body, any instrument of production, or any product of consumption, it also, in contradistinction to these other phenomena, reflects and refracts another reality outside itself. (1210)

While Bakhtin was describing the construction of meaning and not simply meaning within a narrative, the hyperfiction does reflect the interconnected way in which people create their understanding of the world around them. In the same way that we associate words or ideas with our personal experience or shared social context, we experience the events of a hyperfiction based on what we have read up to that point. The reader is aware, in the same way someone familiar with Bakhtin’s ideas might be, that the rest of the narrative will contain the reader’s understanding of the event he has just encountered. The argument could be made that all narrative functions this way and that someone
reading a book is aware of the potentiality of future influence because there are pages left to read. The difference in hyperfiction is that not only are the conventions of time typically broken up, but also the conventions of a fixed narrator and setting. The result is that most hyperfictions drop the reader into a time, place, and perspective that the reader must then orient themselves to. Unlike a printed narrative, which does the same thing at least once in the beginning, a hypertext that is read in an order determined by the reader, repeats this disorientation over and over. The need for an awareness of context then creates a point of view that more closely resembles Bakhtin’s dialogism.

**Secondary Orality**

Working in conjunction with dialogism is the role that orality plays in communication and the creation of meaning. Hyperfiction shares some characteristics of primary orality. In *Orality and Literacy*, Ong writes that traditional narrative typically follows a sequential pattern, the story is relayed as a reader would have experienced it. However, unlike the print narrative,

Oral narrative is not greatly concerned with the exact sequential parallelism between the sequence in the narrative and the sequence in the extra-narrative referents. Such a parallelism becomes a major objective only when the mind interiorizes literacy. (144)

The fact that hyperfiction often follows the oral narrative structure, which is not sequential, as opposed to the print culture seems counterintuitive. After all, the hyperfiction narrative emerges from a print-based culture and as a result, also shares many characteristics with the post-Gutenberg culture described by Ong. The basic notion that words are things made of units, which can be seen, did not exist in scribal culture or
oral culture (116-117). Certainly screen-based text reinforces and may even embed this idea more deeply even with the use of sound and video for communication. Speech, as it exists online, developed as text and would have to evolve significantly before words were considered anything other than written characters. However Ong introduces the idea of a third option—secondary orality emerging from electronic technology. *Orality and Literacy* was first published in 1982, and utilizes references from at least a decade prior to that point, but in it Ong makes an argument that is still applicable about the nature of electronic text. Ong writes that secondary orality resembles primary orality in its use of community sense and participatory mystique, “But it is essentially a more deliberate and self-conscious orality, based permanently on the use of writing and print, which are essential for the manufacture and operation of the equipment and for its use as well” (134). While secondary orality is dialogic in nature, it is still a remediation of print-based culture. In fact, Bolter points out that in the transition from primary orality to literate culture there is evidence of this remediation. He says that the dialogues of Plato are the result of the time of transition in which he was writing: “Plato appeared to abdicate control of his text by reporting conversations between Socrates and his followers, yet this apparent abdication gave him subtler control over his reader” (103). As a result, the reader becomes so focused on the content of the dialogue between the two characters, Phaedrus and Socrates for example, that the reader can easily lose sight of the fact that the words are those of Plato, not Socrates. Another area in which Bolter makes this connection between screen-based text and dialogue is by describing the act of writing screen-based text as construction:
Electronic writing seems in some ways to be more like hieroglyphics than it is like pure alphabetic writing. The computer welcomes elements that we in the West have long come to regard as inappropriate to writing; it constitutes electronic writing as a continuum in which many systems of representation can happily coexist. (37)

The constructive aspect of hypertext involves creating new signs and symbols out of what already exists. The age of print, which fixed letters on a page, is therefore threatened by the impermanence of screen-based construction. Consider the difference between the letters C-L-I-C-K when they are designated as a hyperlink and when they are used as non-linked text. The plain text could describe the sound or the action, but would be less likely interpreted as a direction. So while in print-based text the reader may understand that the clock on the wall provided a steady “click” sound, the same five letters viewed on a screen demand action, as in “click here.” Context is created not only by the narrative in which the word is used, but also the form of the narrative. As a result, composing screen-based text necessitates an understanding of this changing contextual meaning.

One other aspect of the transition into a secondary orality that is pertinent to the use of hyperfiction is the way in which that transition is occurring. Marshall McLuhan describes a communication revolution that is not just about information and knowledge but also about being able to communicate on a basic level. The importance of communication is clear in the isolation that would occur in secondary orality for someone who is not part of the revolution because that person is not equipped for it. As a result, people who live in areas without high speed Internet, or those who do not have a home computer or smart phone, are left out of the conversation. A comparison could be made between those who are not connected to the Internet and people who were illiterate.
following the invention of the printing press. In reality, the separation of haves and have-nots in terms of literacy occurred over a much longer time period than it took for the digital divide to develop. If the so-called digital divide closes quickly, as it appears to be doing in the United States with the growing pervasiveness of cell phones that allow Internet access, the transition to secondary orality may occur much more quickly than the culture of literacy developed. The speed with which this transition is occurring affects how quickly forms of communication, and therefore narratives, change. Hyperfiction author and theorist Michael Joyce writes in “No One Tells You This: Secondary Orality and Hypertext” that the “near afterthought of Ong’s notion of secondary orality has lingered along the bounds of digital discourse like a virus, without, I think, ever completely taking hold” (326). Joyce sets out to show the usefulness of Ong’s ideas in the context of what he calls “post-hypertextuality.” He provides a catalogue of how Ong’s work is acknowledged or unacknowledged in other scholars’ writing. Joyce ultimately observers that Ong’s theories continue to be relevant to the developing forms of literacy including hypertext.

**Interactivity**

Had Bernhardt ranked his nine characteristics of screen-based writing versus print-based writing in order of importance, it seems likely that *interactivity* would be at the top of that list.³ Most of the attributes that are used to define hypertext including

³The term interactivity has been criticized for being too widely and imprecisely used. In this case, a broad definition relating to the need for user response to view various parts of the narrative is used with the acknowledgement that this type of interaction is often limited by the choices the readers is offered.
engagement with the text, relate to interactivity. It is present in most screen-based text when readers click their mouse to follow a link. This form of moving the story forward is unlike turning the page of a printed text in part because hypertext readers do not usually have as clear an indication of what will be next. For example, rather than seeing a page that is constricted by the physical parameters of a piece of paper and probably looks like the one they just left, hypertext readers may be confronted by images, sounds, and any amount of text. The fact that each page may look different means that readers may react to what they see before they react to what they read. In fact, as Landow notes, readers are aware of their own visual presence in the text because readers controls the cursor, arrow, or other icon that responds to their movement (Hypertext 3.0 85). All of these aspects of readers’ experiences influence their response to a narrative. In some cases hyperfiction has found ways to incorporate what is typical interaction in an unexpected way. In Christine Goldbeck’s hyperfiction Covalent Bonds, a character asks, “Learning: have you ever smelled ‘learning?’” Readers respond by selecting “yes” or “no” and each links to a different page asking the readers to share their definition of learning. Clicking on the text opens the readers’ e-mail client. Whether or not Goldbeck responds to readers’ e-mail is not clear. There is, however, a sense of potential interactivity, which sets a tone for the narrative.

Linearity

In A Final Dream of Clocks, Daniel Merlin Goodbrey creates a series of stories that utilize moving links in the form of images (Figure 7). On the homepage is a clock face that is rotating at an angle so that numbers are difficult, but not impossible to read.
Readers must catch and click the different numbers as they move in a lop-sided circle. Each number is connected to a piece of narrative or a piece of poetry that is presented differently than the other eleven pieces and requires varying degrees of interaction beyond the simple text link. The number nine, for example requires readers to hover over and click on a disappearing and reappearing figure in order to read the text. The moving components of the site, particularly those that require readers to be aware of and explore these pieces so as not to miss anything, inherently require more attentiveness from readers than a static page. Number Eight, (Figure 8), incorporates not only the circular movement of the diner plates around a table, but also two areas of text, one with text links inside of it indicated by underlining. Each plate represents a character and the readers select plates until they have read the narrative. The potential for selecting the same story twice is high because there is nothing to differentiate the plates. The way in which the hypertext author controls or does not control factors such as repetition affects the readers’ interpretation of the story.
Figure 7: *A Final Dream of Clocks* “Number 9” two screen captures

Your face on every channel, your channel on every face. This shall be the punishment for too much reality TV.

It's sound-bright prose. They haven't quite got the hang of the marketing speak yet. It's like the missing inch in their staircases. Just subtly wrong.
When describing the interactivity required in narratives such as *A Final Dream of Clocks*, where readers have multiple possible paths to follow, there is a natural tendency to talk in terms of linear and nonlinear narratives. The first term is associated with print-based text and the second term with hypertext. While I have spent some time separating the two types of text up to this point, where interactivity is concerned, binaries are not particularly useful. Hypertext is not the opposite of print when it comes to linearity. There are plenty of examples of print-based narratives that do not follow chronological conventions or offer multiple perspectives with changing narrators. There are even examples of the conventional notion of nonlinearity in print. Jacques Derrida’s *Glas* discusses two subjects, Genet and Hegel, on opposing sides of the page interspersed with quotes and what appear random choices in alignment and font. Mark Z. Danielewski’s *House of Leaves*’ nonlinear qualities include footnotes within footnotes. Calling print linear and hypertext nonlinear perpetuates the oversimplified idea that hypertext is a story...
out of order. Although a narrative which is viewed in an order determined by the reader is
different than one constrained by the limits of a page, it still has order. A truly nonlinear
narrative would make no sense at all. As Bloter observes: “The problem that hypertext
poses for the reader is the problem of understanding the multiple lines she must travel in
transversing the web of text—lines that may ignore or contradict one another” (128). The
multiple lines are more truly described as multilinear. There are multiple directions the
narrative may go, but the text itself is typically read in the conventional Western way
from left to right.

The difficulty in pinpointing the characteristics of hyperfiction has provided its
opponents both fuel for their fire and frustration in making their argument. Ultimately it
is not the multi-linear nature of hyperfiction that is upsetting to those who favor the book;
it is its form. As Bolter observes, accessibility of the physical object that is a book is most
often cited as its greatest advantage over screen-based text. In an online conference
report, Jakob Nielsen, author of Eyetracking the Internet, reported on one of the first
large-scale meetings about hypertext. The meeting, which was called “Hypertext’87,”
included Jef Raskin, who started the Macintosh Project at Apple. Nielsen describes
Raskin’s talk as raising questions about linking and usability: “According to Raskin, too
many people working on hypertext have concentrated on mechanisms instead of on the
user interface. It is necessary to look at the entire spectrum of interaction and to do
continuous user testing” (34). It seems an obvious point now, but the way interactivity
took the shape of mouse clicks and keyboard shortcuts was in no way predetermined. In
fact, the next statement attributed to Raskin, addresses his surprise that people were assuming the mouse would come to be favored over the keyboard.

**Closure**

What really differentiates the degree of linearity in hypertext from print-based text is the ability to reach an end. This is also the problem created by interactivity. If readers drive the narrative forward and have multiple potential pathways to follow, how can a hypertext have an end point? What happens if the readers reach the end of the narrative before they have read its most important parts? Jane Yellowless Douglas observes in “How Do I Stop This Thing: Closure and Indeterminacy in Interactive Narratives” that the awareness of an ending and anticipation of what that ending will be are essential to creating contexts during the reading process. She reviews the role of closure in several pieces of literature and well-known hypertext stories and concludes:

> Our sense of arriving at closure is satisfied when we manage to resolve narrative tensions and to minimize ambiguities, to explain puzzles, and to incorporate as many of the narrative elements as possible in a coherent pattern—preferably one for which we have a script gleaned from either life experience or from other narratives. (85)

The question of closure is relevant to hypertext, but it is particularly problematic when considering the way readers interact with hyperfiction. In fact, Bolter says that one of the reasons hyperfiction is not being adopted by mainstream writers is this lack of ending. He also notes with a certain amount of sarcasm that the greatest shortcoming of hyperfiction is said to be the physical characteristics of the machine on which it is read: “The great advantage of the first printed books was not that you could read them in bed” (9). The physical form of a book is relevant to a discussion of interaction because the problem of
closure is not simply one of ending a story, but also closing a book. In a study of high school students reading *afternoon: a story*, Ellen Evans and Jeanne Po found that students missed being able to close a work of hyperfiction once they had finished reading it (68-69). Just as hyperfiction has demonstrated the ability utilize the narrative qualities of hypertext, it has also shown a potential shortcoming.

Unlike hyperfiction, closure is not a characteristic of news writing. As is made clear in the next chapter, the structure of a news story does not typically include an ending. Therefore the characteristic of closure, which creates a problem in hypertext, is not present in traditional news format. In the following chapter, interaction with hypertext and screen-based news will be explored. The users’ experience will be quantified in the form of eyetracking research to demonstrate what is known about the reader of print versus online news.
CHAPTER 4
HYPERNARRATIVES AND NEW(S) WRITING: THE PRESENT

The User’s Experience

Consider what people do today when they have a question. Take for example something simple such as how to boil an egg. Ten years ago this question would probably be answered by speaking with someone via cell phone. Ten years prior to that a land line would have been used for the call. All of this might be unnecessary if a comprehensive cookbook happened to be present in the kitchen during either of these decades. Today a cookbook app⁴ could serve the same purpose. Along the same lines, a search engine would provide millions of answers to the question⁵. Unlike the phone calls, both the screen-based answers and the cookbook would ensure that no one would need to know the reader had to ask how to boil an egg. Of course anonymity is not the most important part of this example. What matters is that people look for information today in a way that more closely resembles consulting a book than picking up a phone. The reason people choose to pick up the cookbook, or go online, is that they have become accustomed to using these resources. Screen-based text is still fighting the battle for preference over print in the literary world. The world of information, and consequently the world of news, is moving in the other direction. The habit of looking up proper spelling in the dictionary

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⁴ An app is an application or self-contained software environment. In this thesis the term app is used to refer to a mobile device application.
⁵ A Google search of the phrase “how to boil an egg” on April 9, 2011, returned 8.8 million results.
has been replaced by online references, the most common being consulting a search engine, such as Google. The frustration of generations of children who were told to look up a word in an alphabetical index when they did not know how to spell it in the first place has been replaced by the phrase “did you mean.” Likewise, the practice of staying up to date on newsworthy events, particularly national and international news, is increasingly more likely to involve text on a screen than text on a page (Pew Research Center 2-4). This preference for finding information online may be connected to interactivity through its quality of immediacy.

**Immediacy**

In *Remediation*, Bolter and Grusin describe the increasing focus of new technology on making its user forget it exists. For example, they write that

> Virtual reality, three-dimensional graphics, and graphical interface design are all seeking to make digital technology ‘transparent.’ In this sense, a transparent interface would be one that erases itself, so that the user is no longer aware of confronting a medium, but instead stands in an immediate relationship to the contents of the medium. (23-24)

Bolter and Grusin point to the emphasis on creating the “interfaceless” interface, which is not based on a uniquely cyber set of rules, but conforms to what we already know about the world around us. It allows the user to work with screen-based text without understanding the rules that allow the program to run. It is part of the reason that a Microsoft Word or Adobe documents look like a piece of paper. The programs are simultaneously familiar, intuitive, and exceed our expectations of paper. They are not transparent, but they have evolved from early word processors into products that make the user less aware of the technology.
Immediacy combined with remediation results in enough familiarity of format in new products to make the format seem intuitive and accessible. The use of conventional terms for the computer “desktop,” or “notebook,” the “files” that go in “folders” or the “trash can” are all ways of lessening the divide between the person and the machine. Add to that the sense of immediacy created through interaction. Landow observes that the reader’s presence is made visible by indicators on screen. A cursor or arrow represents the reader. The ability to alter text takes this a step further, as Landow writes: “In a book one can always move one’s finger or pencil across the printed page, but one’s intrusion always remains physically separate from the text. One may make a mark on the page, but one’s intrusion does not affect the text itself” (Hypertext 3.0 85). This ability to be visually present within a text in the form of a blinking cursor or moving arrow creates immediacy. It lets users know that they are participating and are part of the program. These characteristics of interactivity and immediacy fall under the category of usability. The usability of screen-based text has been demonstrated in research that monitors the eye movements of users. The eyetracking research uses a series of cameras to record what people looks at and in the case of screen-based text, what interaction readers have with what they see.

Eyetracking Research

Studies of user behavior are useful in understanding how people actually behave. Take for example the amount of text people will read on a screen as opposed to a piece of newsprint. Common knowledge says the printed piece of newsprint is easier to hold, it’s more accessible, and therefore people will read more of its stories than they will read
screen-based text. After all, the Sunday morning paper, in its printed form, is often referred to as a ritual, something people make time for. While this view of newspaper use is certainly based on a portion of the population’s reality, it is not a good reason to believe that people naturally read more of a print-based news story. The stereotypical reader of screen-based news content, on the other hand, is someone who walks, eats, and talks while using a handheld device to access information online. It is a fair assumption that the screen-based reader in this environment is skimming headlines rather than reading full stories. So while the physical characteristics of the current devices for screen-based reading do lend themselves to the skimming stereotype, research shows that this is not necessarily accurate. In a 2007 study, the Poynter Institute found that the readers of screen-based texts will read more of the stories they select than readers of print-based newspapers (20).

Published as *Eyetracking the News: A Study of Print and Online Reading*, this eyetracking study measured the eye movements of participants as they read news websites and newspapers in the traditional broadsheet form and smaller tabloid format. Not only did researchers find that users read further into stories on the computer screen, but also that online news readers were more likely to read the entire story. Only 36% of the time did tabloid newspaper readers finish reading a story once they started and 40% of the broadsheet format readers finished reading a story once they started, compared to 63% of online news readers (21). Usability may explain the difference. A newspaper website, like a work of hyperfiction, isolates content so that readers can focus primarily on the narrative in front of them. As the study points out, after users click the link for a
story, they are no longer faced with the competing content present on the homepage. The static text on a printed page, particularly competing headlines, continue to distract users. The newspaper page functions like a landscape of information, offering multiple items on which to focus. The computer serves to focus on one area of this landscape like a pair of binoculars. It brings one aspect of the landscape closer to the viewer and isolates it from its surroundings. The way that online readers approach content can also be extended to this metaphor. The eyetracking study found that readers of news online “skim and dive,” meaning they spend more time surveying the content before they choose what to read. The ratio of items viewed to items clicked was 3:1 (74). So online newspaper readers were not investing time, in the form of a click, in every story headline they read. The need to click a link when reading online also affects the usability of the text.

The definition of hypertext used in this thesis is not restricted to words. As the section on interactivity demonstrates, the narrative often includes visual and audio components. This translates to the usability of online news in the form of charts, maps, sidebars, timelines, illustration and other forms of telling a news story that do not involve text or are restricted to short forms such as question and answer. The Poynter Research Study found that the ability to recall information was positively influenced by the use of these devices. According to the report, “this confirms the findings of earlier EyeTracking studies and other research that short text, especially with visual elements, is accessible and attractive to readers” (86). As a result, information recall increased with the frequency of these elements. The study used three versions of a print story on bird flu and three versions of an online news story on the same topic to test participants’ information
recall. One of the print stories and one of the online stories contained only elements that were not written in narrative form. On the print page this included question and answer, a detailed graphic, bulleted list, a pull quote from an expert, and statistical information. The online article utilized the same content over several pages. The first page included a picture and cutline with links to additional images, a short description of the issue, and links to the segments used in the print version. Readers were asked ten questions about their information recall. Those who read the print page or webpage with only a textual narrative had the lowest recall, while those who had no traditional news narrative, but who had other visual and text-based sources of information had the greatest recall of information (81). These findings and others from the eyetracking study do not paint a clear picture of the future of hypertext. If users are willing to read entire stories, why do they remember more when they are not reading stories at all, but instead looking at information in different formats? The answer may exist in the multilinear nature of hyperfiction. The simple fact that hypertext is not the form that has been used for telling news stories for hundreds of years make it a viable option for a remediated newspaper that can incorporate these additional media in the news story.

**Hypertext and Journalism**

The daily translation of a print news product to an electronic one is certainly evolving. Newspaper companies are no longer cutting and pasting stories online assuming readers will want their screen to mirror the page. The use of headlines and leadlines as links to stories, as opposed to stories published on a homepage, is now common. Multiple forms of media accompany most online news stories. Social media is
also a constant presence. Commenting on a story or even being able to e-mail a writer is as much a reader’s right as is clicking the “like” button for Facebook. Although each of these is proof of the evolving newspaper story, they are all examples of additions to the existing story form. The adaptation to newspaper online has not prompted a major revision in its story form (Johnson). In fact, the most significant change in newspaper writing in the age of the Internet may be the length of the paragraph. Already short by composition standards, the print newspaper story paragraph, once two to three sentences on average, is becoming more compact. This fact is accented by the blank line between paragraphs most news websites have adopted (Stovall). What the characteristics of hypertext offer is a way to not just add to the newspaper story but also change the form of the narrative. As a result, the content of a news story would likely change. Quotations that currently require transitions between speakers, for example, could become bulleted lists or embedded audio files.

**Incorporating Hypertext Characteristics**

The commonly accepted definition of linearity creates a problem for newspaper stories in the same way that it does for hyperfiction. Linearity is associated with telling a story from beginning to end, which a narrative of either type can do, but news reporting rarely does. A crime story would not begin by describing two men walking into a bank and proceed to tell the events of the crime in sequence. It would begin with the two men’s arrest, what they took, and who was hurt. A news story is always nonlinear in the sense that events are not relayed by the writer in the order they happened. It is therefore necessary to realize that the nonlinear news story being imagined by academics and
theorists, as it applies to print media, is actually a *multilinear* story. It relies on multiple strands to create a narrative. Given this definition, essentially anything that is not the text itself, but is added to the text to create a new strand, constitutes a multilinear news story online. Brain Massey identifies this problem noting, “A page-turning link by itself does not bring nonlinearity to a story because it merely is a high-tech duplicate of the physical act of turning a newsprint page by hand” (97). His study of 38 daily online newspapers in the U.S. in 2002 found that rarely did the story format meet the definition he used for nonlinear story telling. His definition, derived from journalism textbooks, was that the homepage story would be a headlined abstract directing a reader to different layers of the story contained within the site. While this definition could meet the requirements of a multilinear news story, Massey reported anecdotal evidence that it was only occasionally seen in special projects and high-profile breaking news. Unfortunately the websites he referenced as examples were media watchdog coverage of other media websites, which did not truly meet this requirement. Finding current online news content that diverges from its original form as much as hyperfiction does from the short story is difficult. There is, however, a characteristic of screen-based text that is currently incorporated in most news websites. The *modular* format that Bernhardt describes calls for grouping ideas into segments determined by screen-sized. A page of newsprint, and therefore most news sites, already utilize this segmentation of story content and photographs. As Bolter notes,

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6 The websites cited include Jonathan Dube’s “Online Space Shuttle Crash Coverage” on CyberJournalist.net; Staci D. Kramer’s “Shuttle Disaster Coverage Mixed, but Strong Overall” on Online Journalism Review; and Barb Palser’s “Not So Bad” on American Journalism Review.

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the layout of a webpage more closely resembles a newspaper or magazine page than a modern printed book. “Larger units of texts together with images can be isolated on the computer screen. The screen becomes a magazine page in which units rearrange themselves to meet various needs” (66). Examples of modular websites and how they are adapting to new handheld technology are in the remediation and content section of the following chapter.

Hypernews

One of the online newspapers that is moving in the direction of alternative narrative forms is The New York Times. That publication’s coverage of the 2010 Deepwater Horizon Gulf Oil spill (Figure 9) demonstrates the potential for multilinear forms. The spill began with an underwater oil rig explosion April 20, 2010 and captured media attention for eighty-six days as oil flowed into the Gulf of Mexico. It made history as the world’s largest accidental oil spill as well as an unprecedented environmental and economic disaster. A user researching the oil spill on The New York Times today is directed to a “Times Topic” page. An article summarizing the disaster is the focal point of the page. Within the article are text hyperlinks to other content. Surrounding the text are blog posts relevant to the topic and multimedia content that includes slideshows, photographs, a video, and an interactive feature. Below the text is a link to another interactive feature, all the articles related to the topic, and other “Times Topics” articles listed under subject headings. Finally there are links to coverage outside of The New York Times website and links to discussion boards led by outside contributors with comments from readers. All of this content adds up to a multimodal narrative about the Gulf Oil
Spill. While the traditional news story remains the starting point for content, the scope of coverage allows *The New York Times* to create a website that looks like a hyperfiction.
Figure 9: The New York Times "Times Topic" page coverage of the Gulf Oil Spill
The characteristic of *interactivity* is apparent in the web content an online news reader would expect to see such as the “Room for Debate” discussion features. The features labeled interactive, however, are where the news story takes on the features of a hypertext story (Figure 10). In “Where Oil is in the Gulf” the user can interact with a timeline of the Gulf oil spill, moving through time from April 2 to August 22, 2010. A map of the gulf reflects the changing position of the oil, its interaction with wetlands, the coastline, and the loop current. Part of the interactive feature is a comparison between the volume of oil involved in the Gulf Oil, Exxon Valdez, and Ixtoc spills. As the user moves a slider from one date to the next the map, and the comparisons change. Each date has a sentence of text that reflects the news of that day, a headline-like fact that is not apparent by looking at the map. For example, the May 20 text reads: “The E.P.A. orders BP to use a less toxic chemical dispersant.” The second half of that phrase is then linked to a *New York Times* article, “Agency Orders Use of a Less Toxic Chemical in Gulf.” Although this interactive content is a small portion of the overall narrative it does demonstrate the way interactivity in online newspaper stories can mirror hyperfiction.
A newspaper story is traditionally formatted using the inverted pyramid, which organizes information from the most important information to the least important information. This is why the crime story does not start with the robbers walking into the bank, but what happened as a result. The inverted pyramid works for readers who want to be able to quickly see the significance of a story and not feel they have missed something important if they do not read to the end of the story. It is useful to editors who need to be able to cut from the bottom of the story when space is at a premium. Online, of course, there is no bottom. The spacious quality of the Internet described by Berhardt makes it possible to include as much information as is needed. Mindy McAdams and Stephanie Berger address the logistics of writing online newspaper stories as hypertext in the *Journal of Electronic Publishing*. One of the benefits they describe in utilizing hypertext for print journalism is increased objectivity. They assert that reporters will no longer be making the value judgments necessary to order information in a story from most important to least important. Instead the reader will find the information that matters most to them. This is a valid selling point because it stresses the role of the reader over the role of the author as the characteristics of hypertext do. Objectivity is also connected to the spaciousness of the Internet Bernhardt describes. As McAdams and Berger point out: “The endless writing space online has created a profound new ethical obligation for writers of factual articles: more complete reporting.” Essentially they argue that because reporters have room for the entire story online they will be held more accountable for reporting the entire story online. This point could also be considered in context of supporting documentation. Whereas an autopsy report would not be published in the
newspaper, it could easily be attached to the crime story with which it was connected. *The New York Times* coverage of the Gulf Oil spill online also demonstrates this ability to take advantage of the *spaciousness* of the Internet by including all the paper’s related content. Prior to last decade, this volume of information would have been published in a book form. Instead, the content is not only available online but, according to the Associated Press, is also going to be made into a movie (“Film Rights Sold to NYT Article on Gulf Oil Spill”).

The Pew Research eyetracking study showed that readers of online news stories read more of the stories they click on than participants reading traditional print newspaper. One explanation for this was the isolation of the online story from the rest of the text. Unlike the print product, the online story was not competing with other headlines and story content for the reader’s attention. The idea of navigating within the body of an online news story, not just among related articles, does not currently have a working model. McAdams and Berger propose a hypertext news story written as components. An online newspaper story would not be disassembled from its traditional form only to be reassembled as hypertext. Instead, the reporter would write the components as hypertext: “Extracting components from a pre-existing unilinear text not only proves to be equally (or more) difficult but also appears to produce inferior components.” The result is a text that can be assembled either for print or published online as hypertext.

Writing in 1997, Eric S. Fredin envisioned the same type of online news story comprised of components and navigable to a much greater degree than the news websites available at the time. He observed that while hyperlinks existed they only connected the
reader to other articles. None of the content was unique to an online version. While that fact may have changed, the problem has not: “The links do provide readers with choices, but the choices are all external to the newspaper story itself because they lead to other articles, not other sections of the same article” (1). Fredin envisions a solution like that of McAdams and Berger, but adds that a requirement of his “hyperstory” is that the readers stay involved, moving the story along. In the same way that a hyperfiction forces readers to focus on a segment at a time, only allowing them to move ahead when they have taken the deliberate action of following a link, online news stories presented in smaller components would require interaction. What this interaction might look like will be considered in the following chapter where I will tie in the remaining characteristic of screen-based text, navigability. The future of hypertext news format, its accessibility, and remediation of existing news websites will be used to illustrate the possibilities for online news.
Eric Fredin’s proposal that the new online news story requires action by readers is an indicator of the direction online news content is heading. Fredin said that readers should be involved, not just in moving the story forward, blindly via a link labeled “next,” but by selecting what content will come actually next in a story (2). This type of interactive news story requires taking navigability in a new direction so that readers control what they see, making informed decisions about the direction in which the story goes. Landow made a relevant distinction between print and hypertext when he observed that hypertext does not privilege one piece of information over another (Hypertext 3.0 120). A link implies a relationship of equally important information, while a print annotation, which hypertext is often compared to, makes the primary printed text inherently more important than the footnote. While these characteristics of hypertext allow for the new approach to text discussed in this thesis, they also make navigating within text reliant on users’ action. When this sense of equality of information is applied to online content, the character of news changes. If a reader can navigate within the text and all the pieces of the text are presented as if they are of equal importance, the job of the reader becomes much more complicated than it was previously. As the chapter on e-reading and readership established, closure is a problem for hypertext readers, however, closure is not a problem for news readers because traditional news stories are written
without an ending. As the “Hypernarratives and News(s) Writing” chapter illustrates, interactivity is an essential characteristic of screen-based narratives. What that chapter did not explore is the potential that usability would create more work for the user and therefore be a less appealing medium in which to read news. This potential drawback of applying hyperfiction characteristics to online news content raises the question: do people want to work harder for their news?

Hypernews Is More Work

This question of what a reader will do for news is complicated by the fact that hyperfiction, which asked readers to work harder for fiction, has not seen the popularity forecast for it in the 1990s. Although it is impossible to know what could have happened if hypertext and hyperfiction had not had emerged around the same time, it is possible to see the form hyperfiction takes today. Strange Rain, for example, is an app that blurs the boundary between fiction and gaming. The app, which was developed by Opertoon, uses text in the form of individual words and phrases that are brought to the screen by the user’s touch. Tapping results in short seemingly unconnected thoughts from the main character, Alphonse, while dragging produces thoughts in, longer, connected phrases. Sound is incorporated and affected by the user tapping on the screen so that playing melody takes the user further into parts of the story. The background, which is falling rain, moves with the device using the accelerometer, the technology that allows the device to sense movement and adjust the screen accordingly (Figure 11).
Strange Rain is an example of a hyperfiction that engages a reader’s senses in ways similar to These Waves of Girls. What it adds is the tactile experience of tapping a device and turning it at different angles to influence the image on the screen. The fact that interactivity and navigability are affected by new technology is not surprising. What is interesting is the fact that hypertext-based technology is moving almost uniformly toward more, not less, interaction. Returning to the example of the person who did not know how to boil an egg, that person has five choices: using a cookbook, a landline, a cell phone, a desktop computer, or a handheld device such as an iPad. The most recent technology, the iPad, is by no means more efficient at locating an answer than a desktop computer. Even with a cookbook app already installed, the user still has to locate the content (Figure 11). Of course if efficiency were the goal, the two other options may still be faster. As was the case in the previous use of this example, the choice the user makes to find the
information on how to boil an egg is about convention. People who have trained themselves to use their iPad will use a cookbook app before they will pick up the hardbound copy regardless of efficiency. The mobile device user therefore demonstrates that having to work harder for information will not necessarily stop them from using that resource. Based on this idea, news that is delivered in a more complex format than the printed page will not be less appealing simply because viewing content involves a greater number of steps.

The changing conventions for locating information provide online news an opportunity to reevaluate the way content is presented. In fact, the convention has changed enough as a result of handheld devices to alter the way that *The New York Times* offers news online. The company that often sets the industry standard, recently established a system that requires users to pay for viewing more than 20 articles per month that are not

![Figure 12: Using *How to Cook Everything* app on an iPod to find out how to boil an egg](image)
connected to a main page. This is not the company’s first attempt at a paywall, but it is the first time iPhones and iPads are part of the pricing plan. Although it’s not clear how successful this payment system will be, it has prompted renewed speculation about what works for news consumers—print, online, or now mobile devices like the iPad and iPhone. Poynter Institute blogger Damon Kiesow wrote a detailed piece explaining how *The New York Times* is promoting the use of the Internet on mobile devices through the company’s pricing structure. He argued that the publication is making it more affordable for its readers to purchase an online subscription that can be accessed across multiple devices. The *Wall Street Journal* responded to the Times’s move by offering an option within its app to buy a single issue for $1.99. The effort to discover what works for consumers reaches beyond platforms and pricing plans into the presentation of the content.

**Newsgames**

Just as some hyperfiction is taking on the qualities of video games, as *Strange Rain* demonstrates, some aspects of online news stories are being reconceived as games. The Digital Media Program at the Georgia Institute of Technology has developed video games that bring complex current events into a new format. *Escape From Woomera* addresses abuse at a detention camp for illegal immigrants in Australia. *Burger Tycoon* puts the player in control of a fast food corporation and requires that the player manage all aspects from beef supply to marketing. *Burger Tycoon* is set up so the player cannot win and learns about sustainability issues in the process of playing. The game is an example of conveying a concept that is often larger than a single news story and it is
therefore open to the criticism that daily news could not be adapted in this way. Just as
the hypernews concept has been criticized as requiring content-heavy news stories
(Fredin), as was seen in the *New York Times* coverage of the Deepwater Horizon Gulf oil
spill, theses newsgames, as Ian Bogost refers to them, could not be easily adapted to
everyday events. What could be useful in developing hypernews is utilizing the overlap
between game, app, and hyperfiction. N. Katherine Hayles describes interactive fiction,
one of the types of hyperfiction she surveys in *Electronic Literature: What Is It?* as
having strong game elements. Hayles says, “The demarcation between electronic
literature and computer games is far from clear; many games have narrative components,
while many works of electronic literature have game elements.” Hyperfiction has once
again tested the waters for a new form of online news called hypernews.

**Remediation and Content**

By comparing what a reader sees in screen-based news content with what a
readers sees in a printed newspaper, there is clear evidence of remediation. The headline,
for example, is utilized in both, as is combination of pictures and cutlines. The screen-
based text, however, remediates the print design with features that utilize screen-based
characteristics such as the ability of the reader to comment on a story or share it through
social media. Figure 13 shows *The Washington Post* in print, online, and in the form of
an app, on a single day. Both the screen-based version are *interactive, navigable, and
spacious* where the print version is none of these. The app, which is extremely simple,
has an interface that is more like a game menu. It does not give the reader as many
options as the website, instead it forces the reader to work harder for the content and
make choices. Like a hyperfiction, the app does not offer much narrative without action from the reader. The website, although modeled with a similar combinations of headlines and leadlines, offers an array of content waiting for the reader on the homepage without necessitating interaction. If the formats are compared in the order which they came into use, they are progressively more interactive and therefore more work for the reader.
Figure 13: *The Washington Post* clockwise from left, in print, the app, and online

As the three examples from *The Washington Post* in Figure 13 demonstrate, changes in the presentation of a news story do not necessitate changes in that story’s copy. A hypernews story might be, as Jay David Bolter described hypertext, “like a
printed book that the author has attacked with a pair of scissors and cut into convenient verbal sizes” (35). Following the ideas of Mindy McAdams and Nancy Berger, these pieces would not be originally written for print and then divided for hypertext, but instead written as works of hypertext from the outset. With this type of hypertext composition in mind, the characteristics of screen-based text make it possible for the content to utilize these characteristics. One possibility already being utilized online is the use of multiple media on news websites. The conventional use of audio files, for example, could more closely take on the characteristics of hyperfiction by incorporating the audio into the story. Rather than presenting an audio file as additional content in a separate space than the text of the story, hypernews could present audio as part of the text so that the users might see a play arrow to click as they are reading, as happens in These Waves of Girls, or they could hear a sound file that sets the tone for the story automatically when they select a certain path for the hypertext. The sound might be something as simple as the sounds of dishes clanking together and diners talking as story told primarily with text uses an anecdotal lead about a local diner to introduce a story on the economy. By integrating audio into a story, the hypernews writers could also present quotations as they were spoken and avoid inserting their own point of view when attempting to convey the tone of the speaker.

Even without looking beyond the text, graphics, and audio currently in use there are many possibilities for the way in which hypernews can develop. Most likely, new ideas like audio quotations would be adopted to solve existing problems. Already the multi-part news stories such as the Deepwater Horizon Gulf oil spill have shown some of
the potential for giving news hyperfiction qualities. Yet there are still many everyday opportunities for journalists and editors to break outside of the print format mold. A typically city council meeting, for example, results in one or more stories related to the specific ordinances under consideration. The print versions of these stories would probably allow space for a summary of the council members’ positions and perhaps a quotation or two from a citizen. An online version of one of those news stories might have additional content, but a hypernews version, which would be modeled on hyperfiction, could include an introduction to the issue and headshots of each council member with a “no” or “yes” across the image indicating how that member voted. Those members who spoke might have accompanying audio the reader can click. If a member gave substantial comments on the ordinance, those comments could appear as text with highlighted links on the areas of their speech where citizens’ comments applied. In most cities and municipalities, some of the same people attend government meetings consistently. Those individual’s comments could link to previous statements, giving the reader some context of the speaker’s political views or knowledge. The copy of the ordinance, which would also be part of the hypernews story, would also link to related ordinances and other relevant documents such as maps in the case of rezoning. This is one possibility for the content of a hypernews story. The existing variety of hyperfiction created is a testament to the possibilities for hypernews that remain to be explored.

**The Death of the Newspaper**

Determining whether hypertext holds the key to making online news stories commercially viable may be the next logical step in exploring its potential use. The fact
that the newspaper industry is based on a print product, when the web is where new readers are, demonstrates the potential for online remediation of that print product (Pew Research Center 2-4). Consider the fact that during the recession of 2009, the United States Senate put forward the Newspaper Revitalization Act to offer newspapers nonprofit status. The bill never left the House Ways and Means Committee, but it did prove two things: newspapers are perceived to be on their last leg and there is a general consensus that it is in the public interest to keep them. To propose restructuring the news story so that its online form more closely resembles a work of hyperfiction than an inverted pyramid, is a radical change. It is equal to knocking authors off their place of prominence. It is, however, in keeping with the move from a purely print-based culture into secondary orality. If the magnitude of the current communication revolution is in fact on par with the introduction of the printing press, the presentation of news online will move further away from looking like print newspaper. There are many possibilities in terms of content that need to be explored. Hyperfiction offers a starting point for that exploration. The undeniable differences in the screen-based and print-based text should provide those working in the industry a guide for reconceptualizing news.
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