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Introduction

Digital technologies now offer authors a whole array of tools with which they can build narratives, many of which are unavailable to authors who write in print. Hypertext provides a linking structure within which text can be connected in both linear and multilinear configurations; the Web, as an ever expanding hypertext system, allows digital texts to be linked to other digital texts; software allows sound, image, film, animation, and code to be incorporated into digital fiction works. Whether in terms of structure and navigation or in terms of modes and media therefore, digital technologies can add something new to fiction.

It is because of the differences between different types of fiction that analysts must produce "media-specific" (Halyes) readings. In the context of digital fiction, the effectiveness of print-based methods must be evaluated and, where these tools fail, modifications, amendments or alternatives must be made. Yet while media-specifty is certainly important, analytical approaches to literature, which have been developed predominantly in relation to print, can often provide tools that can be used in the analysis of digital texts. Accordingly, in recent years the academic study of digital fiction has undergone a significant paradigm shift. Research has moved from a "first wave" of pure theoretical debate about the fundamentals of digital textuality to a "second wave" of narratological, stylistic, and semiotic analyses in which the intricacies of individual works are explored. The theoretical intricacies of second-wave digital fiction theory have been well debated (see Ciccoricco; Ensslin; Ensslin and Bell; Bell, Possible Worlds) and most studies conclude that the discipline and practice of analyzing digital fiction require a more systematic engagement and understanding than offered by much previous scholarship. With this critical need in mind, the Digital Fiction International Network (DFIN) has been exploring new avenues of defining and implementing approaches to analyzing digital fiction in order to develop a range of tools and associated terminology for digital fiction analysis and, in a related step, provide a body of analyses based on the systematic analyses of texts, which are substantiated by robust theoretical and terminological conclusions.

In line with that commitment this article provides a means of analyzing hyperlinks in Web-based hypertext fiction. It begins by showing that hyperlinks in hypertext work associatively. It then argues that schema theory, a cognitive stylistic approach to literature, can be used to analyze the ways in which readers approach hypertext reading as well as how links function in hypertext fiction. The approach is profiled via an analysis of external links in a Web-based fiction, 10:01 by Lance Olsen and Tim Guthrie. It shows in particular that links are used to provide an ideological context to the narrative as well as forging a relationship between the fictional and actual world. The article ends by suggesting that schema theory could be used to analyze links in other hypertext fictions as well as informational hypertexts.

Hypertext, Association and Cognition

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Hypertext is a form of electronic text in which documents are linked together using an associative system. The World Wide Web is the most extensive and renowned example of a hypertext in which individual electronic files are linked to form a vast network of textual documents, visual media, executable programs and software applications. Hypertext can also be used for a range of different purposes ranging from informational web pages and wikis to literary forms of writing such as hypertext fiction and hypertext poetry. Since the emergence of hypertext in the 1980s, theorists have stressed the significance of the hyperlink in both informational and literary hypertext. Landow claims that it is "the element that hypertext adds to writing" (13); Ryan suggests it functions as the "primary mode of moving though hypertext" ("Cyberspace"); and Ensslin views it as "the crucial structural and aesthetic component of hypertext" (31) (cf. Harpold). While some hypertext theory stresses the hyperlink's structural function, others as will be discussed below, return to the associative properties of which its founders conceived.

The origins of hypertext can be traced to Vannevar Bush's article "As We May Think" in which he conceived of the "memex" machine, an information storage system, built using microform technology, in which items would be catalogued according to "associative indexing" (45). The user of the memex would instruct the machine to create links between documents so as to "build a trail" (45). At a later juncture while one item was being consulted, the user could quickly recall the associated items by simply clicking a button. The aim of the memex was therefore to allow users to retrieve information quickly and easily via a system that relied on associative linking rather than a more arbitrary alphabetical or numerical system. As the title of Bush's article suggests, the rationale behind the memex was ultimately cognitive. Bush argued that while most information storage systems, including libraries, employ numerical or alphabetic indexing systems, "the human mind does not work that way. It operates by association. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate web of trails carried by the cells of the brain" (44). His memex machine was thus conceived of as a way of storing and recalling information efficiently and intelligently by modeling the epistemological associations that Bush conceived as taking place in the human brain.

While Bush's memex machine was not materially realized and thus remains a hypothetical mechanical storage system, the associative linking system of which Bush conceived was later brought to electronic realization via Theodor Nelson's conception of "hypertext". In a series of articles Nelson outlines a new computer file storage system called the Evolutionary File List in which information is linked according to the continually changing and embryonic associations that he claims people perceive between entities. The conduit for Nelson's file store is "hypertext" which he introduced in 1965 as a "body of written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper" ("A File Structure" 144) and later defined as the "nonsequential writing, text that branches and allows choices to the reader, best read at an interactive screen. As popularly conceived, this is a series of text chunks connected by links which offer the reader different pathways" (Literary 0/2). Hypertext came to refer to an electronic system of information storage and retrieval in which, taking influence from Bush, documents are linked associatively as opposed to being structured according to what are conceived as more arbitrary cataloguing systems which are not necessarily linear in structure.

The associative function of hyperlinks is well documented in first-wave hypertext theory (e.g. Harpold, Landow, Bolter, Conner). Slatin asserts, for example, that "a hypertext link is the electronic

representation of a perceived relationship between two pieces of material" (161). Tabbi identifies a more explicit cognitive alignment arguing that "hypertext is 'mindlike'. ... A successful hypertext construction will ... have cognitive meaning to the extent that … structures are brought out, sequentially and associatively, in the process of linking" (127) (cf. Jonassen). In line with Nelson's concept of hypertext then, links are defined both in terms of their structural function as well as the semantic relationships and cognitive associations that they assert within a hypertext. Some research contests the assertion that the hypertext structure is mindlike. Dillon, for example, dismisses the claim that "associative linking of information mimics the workings of the human mind" (28) as a "myth" (28). Others (e.g. White, Rettberg, Harpold) note that the design and reception of hypertext is affected by the users' expectation that links will work associatively. Foltz, for example, argues that "it may not be possible for a writer to anticipate all the possible places to which a reader may jump and therefore it may also not be possible to maintain good macrocoherence" (116). Irrespective of whether a hypertext structure really does imitate the structure of human memory and/or knowledge processing, readers of hypertext have learned to expect that hyperlinks are used associatively and designers of hypertext systems and writers of hypertext documents construct their projects with that protocol in mind (e.g. Jonassen, Johnson-Sheehan & Baehr).

Understanding Hypertext Reading

While the hyperlink is considered to be crucial to hypertext and its reading, very few studies analyze hyperlinks within individual hypertexts. Within the digital humanities, some research (e.g. Rouet et al., Dillon et al.) has drawn on cognitive psychology as a means of understanding how readers approach and process hypertexts because as a relatively new type of text with an associative structure, new literacy skills are required for readers to navigate the text. That is, readers have to learn both how to make their way through a hypertext from a practical point of view (e.g. how to move the cursor and click links) and how a hypertext is structured from a cognitive perspective (i.e. that link terms are designed to point the reader clearly to their destination by drawing on perceived associations between entities). In particular, several studies (e.g. Foltz, Dillon et al., Jonassen) draw on schema theory as a model for understanding the ways in which readers engage with hypertext as a new type of text. Emerging from work in cognitive psychology (e.g. Minsky) and artificial intelligence (e.g. Schank, Schank and Abelson), schema theory provides a means of explaining the ways in which individuals make sense of familiar and/or new situations. Different theorists conceptualize this knowledge slightly differently; Schank and Abelson, for example, use the concept of a "script" – terminology that emphasizes the sequential nature of knowledge - whereas Minsky and also Goffman deploy the concept of a "frame" - terminology that highlights the situational aspect of knowledge as opposed to any narrative that individuals might have experienced within a particular context. However, all derivations of schema theory rest on the premise that when faced with any situation, individuals activate a knowledge store – a schema - which is based on previous experience and culturally learned[2]. As Rumelhart explains, "schemata can represent knowledge at all levels-from ideologies and cultural

[2] Originally used by Schank and Abelson, the most popular illustrative example is the restaurant "schema" (see for example Stockwell Cognitive, Allington). When we enter a restaurant, we access our "restaurant schema" which tells us what to expect. In England this might include waiting to be seated, having our food order taken and delivered by wait staff at the table, asking for the bill and paying before leaving the table. Our "restaurant schema" is similar but different to a "café schema" because while in the former we normally order at the table, in the latter we would usually order at a counter. However, my use of conditional adverbs also shows that our schemata are always based on a standard expectation that can and frequently is altered or challenged in light of new experiences.

truths to knowledge about the meaning of a particular word, to knowledge about what patterns of excitations are associated with what letters of the alphabet. We have schemata to represent all levels of our experience, at all levels of abstraction. Finally, our schemata are our knowledge. All of our generic knowledge is embedded in schemata" ("Schemata", 41). Schemata are thus packets of knowledge which are associated with particular objects, situations or events and which teach us what to expect when we encounter the same or similar scenario or scene in another context.

As a means of explaining hypertext reading, Foltz, proposes that a "narrative schema" can explain how readers approach hypertexts as a particular type of text. "[A] narrative schema" he explains, "is primarily dependent on a familiar organization of the presentation of the information. A knowledgeable reader can use the narrative schema to provide a structure used in which to organize the text" (118). Foltz argues that readers who are familiar with hypertexts and their link-text structure will draw on their experience of this kind of reading experience – their narrative schema – and thus expect to navigate all hypertexts using this kind of reading strategy. Foltz further conjectures that "as hypertexts become more accepted and widespread, writers of hypertext may develop standard rhetorical styles. Readers who are then familiar with those rhetorical styles can use that knowledge to help in their structuring of the information in an effective manner" (118). At the time of writing, it is fair to assume that most regular users of the Web are familiar with the hypertext organization structure of text-link-text. Thus readers have learned to expect that a hypertext document will contain links which when clicked will take them to another source of information that is somehow epistemologically relevant to the previous piece of information. This is because their hypertext "narrative schema" tells them to expect this kind of associative organization.

Links in Hypertext Fiction

While hypertexts are usually organized associatively and work in the digital humanities shows that readers have learned to expect this kind of organization in most hypertext systems, including most Websites, literary forms of hypertext do not always adhere to the hypertext "narrative schema". Hypertext fiction is fiction that is written in hypertext and can be published on CD-ROM (e.g. Storyspace hypertext[3]) or on the Web. It is read from a computer and comprised of fragments of text, known as lexias or nodes, which are connected by hyperlinks. When reading a hypertext fiction, as in all other hypertext systems, the reader has to select links as a means of navigating through the text either by following a default path through the text or by choosing from a selection of links which lead him or her to different parts of the same text.

Although hypertext fiction does contain text and links and does behave to a certain extent like a hypertext, links are sometimes used quite differently in literary hypertexts. As Landow notes, "in contrast to informational hypertext, which must employ rhetorics of orientation, navigation, and departure to orientate the reader, successful fictional hypertext and poetry does not always do so with the result that its readers cannot make particularly informed or empowered choices" (222) (cf. Bolter, Landow, Snyder). In an informational hypertext, as explained above, associative clarity is usually part of the design, but in a literary hypertext the same principles do not always apply. Of course, readers of informational hypertext might make erroneous predictions or the hypertext's linking strategy might not be conducive to easy navigation (cf. Harpold). However, in an informational hypertext, the linked

[3] The term 'Storyspace' refers to the software in which some hypertext fictions are produced. Storyspace hypertexts are published on CD-ROMs and distributed by Eastgate Systems.

term is more often than not suggestive of what the reader will find at the destination screen. It is chosen because of its capacity for indicating, in advance of the destination screen, what the reader will find if he or she follows it. In a hypertext fiction, however, the linked term or icon might not always directly indicate what will be found at the destination lexia. While readers might surmise where the link will lead, in hypertext fiction they must often decipher connections between link and lexia content after the link has been followed. As Ciccoricco suggests, "the process of linking itself implies a rhetoric of repeated disorientation and reorientation. That is, a reader departs from a familiar node and arrives, in an instant, at an unfamiliar one without any immediate understanding of its relationship to what came before or its bearing on what comes next" (80). Thus while readers might have developed a "narrative schema" for reading hypertext, hypertext fiction, which sometimes subverts the linking principles of non-fiction hypertext, might not always adhere to the readers' expectations.

Using schema theory, hypertext fiction can be seen to "tune" (Rumelhart and Norman) a reader's existing hypertext narrative schema. Tuning, according to Rumelhart and Norman, is a process in which "existing schemata … serve as the base for the development of new ones" (47). When reading a hypertext fiction, readers will utilize their "hypertext schema" because hypertext fictions, like all hypertexts, contain text which is connected by hyperlinks. However, unlike informational hypertext the linked term may not always be used denotatively but are often used more creatively so that readers have to work out in retrospect what the association is between the link term and the destination lexia. Thus while a reader's hypertext schema might be useful for understanding how to navigate the structure of hypertext fiction, he or she may also have to "tune" his or her hypertext schema to accommodate the sometimes opaque connections that they might find between link and destination lexia in hypertext fiction.

Hypertext Fiction and Schema Poetics

While schema theory can be used to explain how readers might respond to links in literary hypertext, without indicative examples of how individual links operate within specific texts, any conclusions about the way in which readers process links rely on generalization or are merely speculative. Some theorists have developed taxonomies of links (e.g. Parker; Ryan, Avatars; Bernstein) but few have developed them from or applied them to particular works. Offering a systematic method for analyzing links, Tosca ("A Pragmatics") is one of the few exceptions (cf. Tosca "The Lyrical"). Arguing that "a pragmatic approach can help us understand the hypertext readers' behavior", Tosca applies relevance theory to links in Edward Falco's hypertext fiction "A Dream with Demons". In particular, she suggests that a reader makes inferences in advance of following a link in order to predict what she or he will find, subsequently searching for relevance once they reach the destination lexia. She concludes that a link has "a sort of 'suspended meaning' that ... [isn't] confirmed until we have seen where it takes us" so that "from the point of view of pragmatics, links force us to make meaning before and after travelling them". According to Tosca, then, links require readers to engage in an oscillation between inference and subsequent retrospective interpretation.

While readers of all kinds of literature – and this of course includes print fiction – will inevitably make predictions about what is going to happen in a text, hyperlinks provide an additional and more explicit means of stimulating that process because, replying on a readers' hypertext schema, links imply that a relationship exists between the link term and the destination. Thus readers' hypertext schema will instruct them that following a link will lead to an associated or somehow relevant piece of information and, as Tosca suggests, readers are likely to predict what that might be. Given that

individuals use schemata as a means of anticipating what will happen in a similar or new context, readers will also utilize their existing schemata as a means of predicting what they are likely to find when following a link. Moreover, once a link is followed, readers will reconcile what they do find with what they thought they were going to find – that is, their schemata may need to be adjusted accordingly.

Schema theory can thus be used alongside Tosca's conclusions about the anticipatory and retrospective nature of hypertext reading to show how individual links work with or against readers' existing schemata so as to either confirm or revise their predictions about what they will find when following a link. As Semino notes "schema theory provides a remarkably flexible and powerful framework for the explanation of inferences, expectations, default assumptions and the perception of coherence in comprehension" (148). The discussion of links has shown that the contrast between what a reader expects when she or he follows a link and what she or he does find is particularly pertinent because links assert a relationship between two parts of a hypertext and readers inevitably make predictions about what they will find when following a link. Thus, reading links involves inference, expectation, assumptions and perceptions of coherence and a systematic approach that focuses on how these processes work with existing knowledge is able to show how links contribute to a reader's interpretation of a hypertext fiction.

Situated within the context of cognitive poetics in which "linguistic analysis is systematically based on theories that relate linguistic choices to cognitive structures and processes ... provid[ing] more systematic and explicit accounts of the relationship between texts on the one hand and responses and interpretations on the other" (Semino and Culpepper ix; cf. Stockwell Cognitive, Gavins and Steen), "schema poetics" (e.g. Cook, Stockwell Cognitive, "Schema Poetics", Semino, Hidalgo Downing, Jeffries) is the application of schema theory to literary texts. Schema poetics, which so far has largely been applied to print literature, shows how readers utilize real world schemata when reading literature as well as how their schemata are enhanced or changed by fictional worlds. Cook's framework is particularly useful for analyzing the interactions between schemata. His approach is based on the premise that "literary" texts can be characterized by their ability to "refresh" readers' schemata. The process of schema refreshment is similar to Rumelhart and Norman's concept of "tuning" insofar as existing schemata are challenged and/or modified. Yet unlike Rumelhart and Norman's approach, Cook's model incorporates the linguistic and structural composition of a text, as well as the reader's previous knowledge in the analysis resulting in a tripartite analysis which incorporates linguistic schemata, text schemata and world schemata. Cook's "linguistic schemata" contain knowledge about language and influence our expectations of what particular words mean both denotatively and connotatively. Cook's "text schemata" (comparable to Foltz's "narrative schema" above), contain knowledge about "certain text types" (15) and influence our expectations of genre, voice, structure, etc. Finally "world schemata" contain "knowledge of the world" (15) and therefore influence our expectations of what we expect to find in our world as well as those built in texts.

Cook's focus on linguistic schemata is particularly relevant to hypertext fiction because hyperlinks are often located on strings of text. An approach that focuses on the linguistic items that stimulate existing schemata is therefore useful for modeling the relationship between a link, what the reader predicts she or he will find based on their previous experience of the linguistic term, what she or he does find, and the conformation of or changes in world schematic knowledge that following the hyperlink brings. More specifically, using schema theory, hyperlinks can be seen to act as "headers" (Schank and

Abelson), which are the cues that tell us "which schema to draw on in a particular circumstance" (Stockwell "Schema Theory", 10; cf. Semino, 136). Analyzing links as headers will reveal how they stimulate linguistic schemata and therefore raise expectations of what the reader might find when following the link. This can then be compared with what is found at the destination to see how the destination interacts with the reader's existing schemata. The link may of course confirm or confound what they were expecting so that, according to Cook, texts can either refresh or reinforce our existing schemata. Cook suggests that "schema refreshment" is enacted either by undermining and therefore challenging existing schemata ("schema destroying"), by the construction of new schemata ("schema constructing") or by establishing new connections between schemata ("schema connecting"). Cook argues, somewhat controversially (see Jeffries), that literary texts can be distinguished from non-literary texts because while the former refresh our exiting schemata, the latter tend to strengthen, confirm or supplement a reader's existing schema – what Cook defines as "schema reinforcement", "schema preservation" and "schema adding" respectively (191-2).

Cook and others (e.g. Semino 154, Stockwell Cognitive 79) note that the Russian formalists' concept of defamiliarization makes similar claims about literature's ability to challenge a reader's expectations. However, Cook argues that schema theory is more accurate than the text-centered formalist and post-formalist approaches because it incorporates the linguistic and structural composition of a text, as well as the reader's previous knowledge – or schema – in the analysis (181-2). Analyzing hyperlinks using schema poetics allows the discussion to move away from generalizations about the relationship between the reader and hypertext, and more specifically the relationship between reader and link, to a more systematic, precise and replicable method of analysis which can be linked to the interpretation of a specific work. This article expands the scope of schema poetics by applying schema theory to a digital literary text and also responds to the call for more systematic and replicable analytical approaches within digital fiction research (e.g. Higgason, Ensslin & Bell, Bell, Bell et al., Page & Thomas) by providing a stylistic reading of a particular work.

10:01 and Hyperlinks

Published in the Iowa Review Web in 2005, Lance Olsen and Tim Guthrie's Web-based hypertext fiction 10:01 remediates Lance Olsen's print novel, 10:01, which was published in the same year. The narrative, which aside from a few omissions in the digital version is the same in both texts, is set in a movie theatre in the Mall of America in Bloomington, Minnesota, and documents the ten minutes running up to the beginning of the main feature. 10:01 is narrated by an omniscient third-person narrator who has access to the thoughts and feelings of the characters. Accordingly, the narrative is primarily concerned with the internal musings, memories and speculations of the movie theatre audience members and ends, chronologically at least, when the movie begins. During the ten minute build up, the characters muse over their personal circumstances and/or watch and speculate about the other movie-goers as they take their seats. Towards the chronological end of the narrative, an explosion occurs. However, it is not clear as to whether the explosion happens within the movie theatre, on the movie trailer or only in the mind of one of the characters.

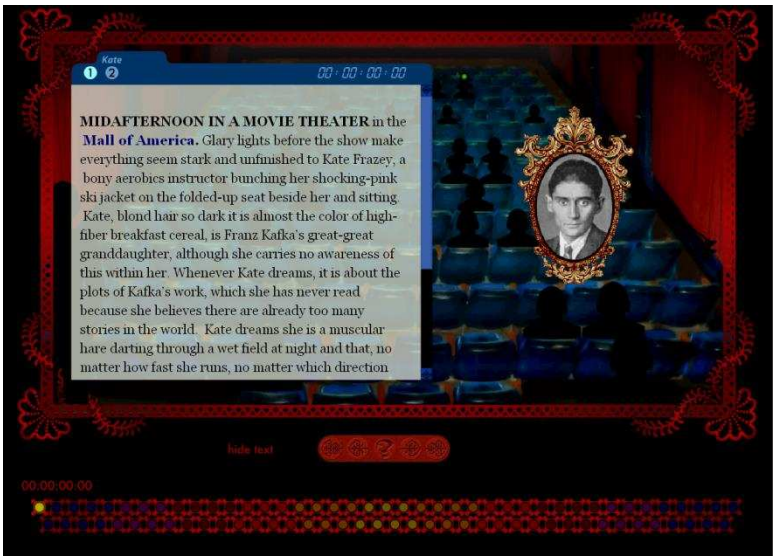

Figure 1: screenshot of lexia 00:00:00:00 in 10:01

While the print version uses only text, the digital 10:01 contains a number of non-verbal modes including music and/or sound effects as well as animation and still images; the lexia shown in Figure 1, for example, contains a photographic image which is surrounded by a gilded picture frame. As a hypertext fiction it also contains various kinds of link. Hyperlinks in Web-based hypertext fiction can be internal - leading to a destination within another part of the same fiction - or external - leading to an external website beyond the boundaries of the hypertext fiction[4] - and 10:01 utilizes both kinds. While the print 10:01 is structured linearly with chapters progressing chronologically, the internal links in the digital 10:01 allow readers to navigate the text in three ways. They can read the narrative by following the internal links on the timeline at the bottom of the screen (see Figure 1) in chronological sequence or else in a more sporadic manner. Alternatively, the reader can click on the silhouettes of the characters in the movie-theatre to reveal a lexia about that particular character. Related to this character-based navigational method, readers can click on further, numbered lexias relating to a particular character. The latter two navigational methods prioritize the characters' thoughts, feelings and actions as opposed to their place in the overall chronological sequence and the lexia titles reflect the different navigational strategies by containing the temporal point in the narrative (in Figure 1 this is "00: 00: 00: 00"), the character's name (in Figure 1 this is "Kate") and the number of lexias associated with that character (in Figure 1 there are two). Notably, while all of the internal links in 10:01 are either located on a character or a temporal marker on the timeline and thus on a visual anchor, all of the external links are located on words or phrases in the text. In Figure 1, the external link is located on the blue and bolded "Mall of America" text.

As a piece of Web-based hypertext fiction, the external links are significant because they provide access to information which lies beyond the boundaries of the 10:01 website. There is an inevitable authorial risk in using external hyperlinks in any hypertext because they can become defunct at any time. At the time of writing, numerous external links in 10:01 are broken. If followed, however, the reader is, potentially at least, left to explore an entire chain of extra-textual sources of information. On the one hand, the implementation of external links might signal a surrendering of authorial control;

[4] CD-ROM based hypertext fictions are self-contained and only contain internal links.

once readers leave the 10:01 website by following an external link, they enter the labyrinth of the Web within which they can link to yet more websites as they pursue their interests. Yet, while external links do take the reader beyond the material boundaries of the 10:01 site, the destinations to which they lead are very much part of the fiction. As this analysis will show, rather than signaling a lack of authorial control, the links actually signal authorial intention because they are used in 10:01 to endow the reader with particular types of contextual information. More specifically, the external links identify and securely appropriate "schemata" through which the reader is asked to view the fictional world.

Retail, Links and Schemata

The digital 10:01 (hence 10:01) begins, chronologically at least, as follows: "Midafternoon in a movie theatre in the Mall of America. Glary lights before the show make everything seem stark and unfinished to Kate Frazey, a bony aerobics instructor" (00:00:00:00)[5]. In the opening to this lexia then, we learn that the narrative takes place in a movie theatre, that a character called Kate is at a matinee performance, and that the movie has yet to begin. As soon as the text begins, readers will draw on their existing schemata (e.g. their "movie theatre" schema) in order comprehend the fictional world. Thus schemata are stimulated and possibly reinforced or refreshed throughout the text. Within this lexia, we also learn that Kate is struggling to stay awake, consumed by fatigue. Her weariness is in many ways an appropriate metaphor for the way in which individuals are represented in the text because like many of the other movie goers in 10:01, Kate lacks autonomy. As Martin notes in his review of the print version of 10:01 "many of Olsen's characters are controlled by outside influences that assault, inhabit or consume them" so that "their freedom to dream, to construct their own temporal realities, is restricted and shaped in ways they are powerless to resist and often not even aware of". As Martin suggests, in 10:01 the characters' lives are shown as complex and in many instances unfulfilling.

According to schema theory, readers of both versions of 10:01 will continually access existing schemata as they read the text. However, hyperlinks are used in the hypertext version as an additional means of importing information and further illustrating the characters' frustrating circumstances. Comparing print and digital writing, Tabbi notes that "whereas a book can refer to the texts and images that it cites ... a Web page can … actually present its electronic citations directly, through the clickable link" (Tabbi 126). This analysis will show how the digital 10:01 utilizes this hypertextual affordance as a means of offering a medium-specific representation of the characters' spatial and ideological surroundings.

In the first sentence quoted above, a hyperlink on "Mall of America" takes readers to the official Mall of America website[6]. Thus while a reader's "mall" schema will be activated as soon as she reads the proper noun, she is also given a very specific impression of this kind of establishment via the website to which the link leads. The greeting reads: "Welcome to the Mall of America" and is accompanied by a series of images depicting the latest fashion trends and stores from where they can be purchased. From the homepage internal links provide access to individual stores' websites as well as information about opening times, events that are scheduled to take place, a map of the mall and a list of other

[5] The lexia titles track the narrative chronologically in terms of hours, minutes, seconds and milliseconds. Thus 00: 00: 00: 00 represents the beginning of the narrative with the last lexia in the chronological sequence being 00: 09: 58: 15.
[6] Last accessed 20 August 2012.

guest services that are intended to make the shopping experience more "convenient" including information about lockers, hotels, and wheelchair, trolley and stroller rentals. The Mall of America is not described anywhere else in 10:01 so that readers are given all of the information about this location by following this link to its website. In what Parker defines as a "blatant link" that "tells the reader exactly what information will be revealed when activated" (cf. Ryan Avatars, 110-1), the Mall of America link provides a denotative connection between the proper noun and the object to which it refers and preserves the linguistic schema relation between signifier and signified. In terms of linguistic schemata, therefore, the Mall of America link and destination website are schema preserving.

In terms of text schema – knowledge about different types of text – the reader's hypertext schema will also be preserved because by this "blatant link" because the link behaves as we expect links to in an informational hypertext; there is an obvious association between the locative noun phrase "Mall of America" and the Mall of America website to which the link leads. A reader's "fiction" schema might be refreshed by the link - that is, their expectations challenged - by the incorporation of a non-fiction source within the narrative (cf. Bell "Media-Specific"). More specifically, this would represent a case of schema connecting - a process that creates connections between two previously separate schemata - because it instructs the reader that, in the context of 10:01, non-fictional entities from the actual world can be incorporated into and provide the reader with information about the fictional world.

In terms of world schema, a short stylistic analysis of the Mall of America website can reveal how an idealized image of the Mall of America is constructed. The mall, in which we are asked to imagine the characters sitting, is described with emotive and often hyperbolic language. The strap-line, "more ways to be you", invokes the reader via the second-person pronoun and the copula, "to be", implies that the mall has the potential to transform. The website claims that the "Mall of America® has revolutionized the shopping experience" with an inanimate, trademarked object given agency by being placed in the subject position and also allotted responsibility for the revolutionary action process. A further claim that the mall is "celebrating 40 years of fun" posits shopping as a leisure activity which brings immense enjoyment and pleasure to the mall visitors. The website is colorful and vibrant with moving and still images creating a clean and bright environment. Advertisements with images of luxury goods from the mall's stores and food from on-site catering outlets further instantiate this location as transformative, luxurious and fun.

Inevitably the background of a reader plays a role in the construction of schemata. As Semino notes "the content of schema will vary from individual to individual, and, more dramatically, from culture to culture" (124) and that "what is schema refreshing for one reader, or one culture, may not be schema refreshing for another reader, or another culture" (155) (cf. Stockwell "Schema Poetics"). The cultural dimension of schemata is important to this analysis, particularly in the context of a Web-based narrative, because 10:01's audience is not limited by print-based distribution methods. It is available for anyone to read online and thus is targeted at an international audience which is limited only by access rights. As a North American fiction, some parts of the text will inevitably challenge some readers' schemata but will affirm the schemata of others so that, like any narrative, the cultural background of the reader will invariably influence their experience and comprehension of 10:01.

At a world schema level, for North American readers, the link to Mall of America is likely to reinforce or preserve their existing "Mall of America" schema by corroborating their experience of

either that particular shopping centre or one very much like it. For readers who have never experienced a mall before, this link is schema refreshing and in particular schema constructing because it provides a prototype of mall on which a new schema can be established. In between those two types of reader is a reader who may have experienced a mall before but outside of the US. In this case, the website would preserve their schema by adding to it - "schema adding".

In terms of its narrative function, the Mall of America website is, like many of the external links, used to build a very particular version of a fictional world. Other blatant links to eateries such as "Malaysian Madness" (00: 02: 53: 01), "America's Original Sports Bar" (00: 03: 52: 22) and "The Magic Pan Crepe Stand" (00: 04: 54: 15) lead to authentic company websites[7]. Like the Mall of America website, these links will reinforce, preserve or construct readers' schema depending on their experience of shopping mall catering outlets. However, while the websites are designed to advertise and create a positive impression of these retail outlets in the actual world, when accompanied by the characters' personal circumstances in the fictional world, the commercial ventures that they represent are shown as being at least partially responsible for the characters' malaise. Elmore Norman "is up before seven every morning" to work at Malaysian Madness but "on his days off, he robs banks"; Fred, a "pudgy pilot for Northwest Airlines … will meet Pablo Tati a flight attendant twelve years his junior" at America's Original Sports Bar; The Magic Pan Crepe Stand is the last place that Arnold Frankenheimer eats before he smashes his car into the Mall of America after quitting his "McJob". The characters' circumstances contrast with the positive, life affirming image that these commercial websites attempt to promote. As the reader is introduced to more of the characters and as more and more of the associated commercial links are accessed, the Mall of America becomes an increasingly soulless environment that houses generic chain-stores at which down-trodden or dissatisfied people work, shop and eat. In this respect, while the websites might initially preserve existing "shopping" or "advertising" schemata by presenting positive images of the businesses that they represent, they also collectively defamiliarize the fictional world, and by implication, the actual world in which it is based so that these blatant links are ultimately schema refreshing.

The frequency with which readers visit commercial websites in 10:01 gives an impression of a commoditized fictional world, dominated by commerce and consumerism. As one character, Trudi, reflects, "the more you look, the more you see. The more you see, the more you want. The more you want, the more you look" (00: 02: 58: 27). Alongside the laments of miserable characters, the links epitomize this philosophy. However the links also comment on capitalism and consumerism in the actual world by paralleling the way that individuals are bombarded with advertisements and endorsements of people, places, services and entertainment. That 10:01 is linked to websites from the actual world in which the reader resides makes their resonance all the more stark by showing her or him that this is an environment to which she or he also belongs. The reinforcement of the shopping schema coupled with the satirical challenge to consumerism offered by the narrative makes it clear to readers that this is a cultural practice in which they, too, participate but of which they should be critical.

Religion, Links and Schemata

As the preceding analysis has shown, some links in 10:01 are used to present a consumer-focused fictional world in which characters are dominated by commerce whether they like it or not. Other links show how characters are controlled by less obvious and more subversive forms of manipulation.

[7] When last accessed on 20 August 2012, these links were broken or defunct.

For example, the narrator of 10:01 reports that "big-boned cosmetologist Betsi Bliss" (00: 03: 46: 08) is troubled by the sci-fi trailer that plays before the main feature and turns away so as not to have to view it. Readers learn that Betsi "loves only two things in life: applying just the right amount of rouge on a woman's cheekbones, and praising Jesus Christ our Lord and Savior". Readers also learn that Betsi believes that the "stitch-like legions" on her shoulder "spell out the chief transgressions she has committed by being alive in a World of Shame" and further that "her disease is a blessing in disguise: it's always nice to find out what your sins are without having to think too hard".

Within this description, the narrator presents Betsi as frivolous (make up being disproportionately important to her), strongly influenced by her religion (she prays regularly and believes her wounds are caused by a supernatural force) and lacking in intelligence (she accepts that she has sinned uncritically and doesn't like to think deeply). The pliability of Betsi is also shown via the free indirect style of the narration. The description of "Jesus Christ" as "our Lord and Savior" and the use of the term "World of Shame" to describe the world both provide subjective evaluations and thus suggests that the narration is focalized. However, the use of these rather clichéd terms also confirm Betsi doesn't like to "think too hard" and perhaps also that she has accepted this dogma uncritically. The use of high register items such as "chief transgressions" and "committed" contrast with the rest of Betsi's characterization and thus suggest that the narrative has been infiltrated by an additional authoritative source. Thus while the sardonic tone of the narration can be seen to mock Betsi, the free indirect style also shows how she is easily influenced by the religious institution to which she belongs.

The narrative in this lexia thus provides the reader with information about the character, Betsi, but it also invokes a "Christianity" schema by commenting on acts and events associated with that religion and also deploying an associated register. Christianity is presented in this description of Betsi as exploitative because of the negative views that it espouses (e.g. that all individuals are sinners and live in shame) and the way that vulnerable individuals, such as Betsi, accept its teachings. The effect on a reader's schemata will depend on their religious disposition and experience of Christianity and will cause "schema preservation" for those readers who believe some factions of Christianity to be predatory and manipulative or "schema refreshing" for those that do not.

Irrespective of the reader's response, the negative connotations that are given via the free indirect description of Betsi are further enhanced by the hyperlink which is placed on the "World of Shame" string. From this link readers are taken to a webpage, called "gotQuestions.org", which is headed with the question: "Will we be able to see and know our friends and family members in Heaven?". Subsequent text provides an answer to this question by using quotations from the Bible, concluding that "we will be far more occupied with worshipping God and enjoying the wonders of heaven" so that "our reunions with loved ones are more likely to be filled with recounting the grace and glory of God in our lives". Resources that will further answer this question can also be purchased online.

In this link, the movement from "World of Shame" to the concepts explored on the gotQuestions.org website is less predictable than that shown in the blatant links above. While readers will inevitably predict what "World of Shame" will lead to, it is unlikely that they will anticipate reaching a discussion about the relevance of friends and family in Heaven. In terms of linguistic schema, therefore, this link is likely to cause schema refreshment and in particular be "schema connecting" because it proposes a new connection between the proper noun "World of Shame" and the notion of going to Heaven.

In terms of world schemata, the content of the website is also used to reinforce the idea, instigated by the description of Betsi in 10:01, that religion can be manipulative. The website uses: quotations from the Bible to substantiate its claims, first-person plural narration to suggest if not enforce a shared world view and links to further authoritative sources that validate its teachings. As with the narrative description of Betsi, the effect on a reader's Christianity schemata will be either "schema preserving" for those readers who believe some factions of Christianity to be predatory and manipulative or "schema refreshing" for those that do not. For readers who accept this new, refreshed Christianity schema, any additional supporting evidence of the manipulability of Christianity will reinforce this new schema. Some readers will also completely reject this characterization of Christianity so that their "Christianity schema" remains unchanged. However, that the religious website's visitors can also pay for more information, by buying religious texts, also implies that even the most pious organizations are commercially driven. In this respect the link will, like the more obviously commercial sites, refresh readers' world schemata because highlighting that the fictional world and the actual world on which it is based are dominated by consumption. The message here is that everything, including religious guidance, is for sale in the twenty-first century.

Conclusion

The analysis of 10:01 has shown that, alongside the textual narrative itself, links and the websites to which they lead provide an ideological backdrop to 10:01 by offering insight into the heavily consumerist world that the characters (and readers) inhabit. More specifically, both the retail and the religious websites show how it is possible for individuals to be manipulated by discourses that construct unattainable lifestyles or unachievable values and helps to explain why so many of the characters are, as Martin observes, "restricted and shaped in ways they are powerless to resist and often not even aware of". That so many of the links in 10:01 lead to sites which aim to sell either a lifestyle or a product is significant because it shows the pervasiveness of commerce in the lives of characters and readers alike. As well as providing information about the fictional world of 10:01, therefore, the links also encourage the reader to reflect on the world in which they live because all of the websites to which the links lead are authentic – that is, they exist on the Web rather than being constructed for the purposes of the fiction. That some of the links in 10:01 are broken, taking the reader to the eponymous Error 404 page, reinforces their actual world relevancy and authenticity and reminds them that these intertexts are not simply used for poetic effect but in fact originate in the reader's world.

More broadly, the analysis has shown that links assert a semantic relationship between concepts. This association can be denotative, as is typical in informational hypertext, or it might be connotative and require more considered interpretation, as is often found in hypertext fiction. The article has demonstrated how schema theory can be used to explain how readers learn to read hypertext fiction based on their previous experience of reading informational hypertext. According to schema theory, readers' schemata will be activated throughout any reading experience, but the application of schema theory in this analysis of 10:01 has also shown that hyperlinks can play a key and indeed media-specific role in hypertext fiction. They can confirm or refresh linguistic schemata by using denotative or connotative terms as links and they can confirm or refresh world schemata by importing information from and to the fictional and actual worlds. While this analysis has focused on the role of external links in 10:01, the schema theory approach profiled here could also be used to analyze links in other hypertext fictions as well as informational hypertexts. Empirical work would help to establish

whether readers do in fact predict where links are going to go before following them as well as what any predictions reveals about their existing schemata.

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