Interactional Metalepsis and Unnatural Narratology

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Abstract: This article argues that interactional metalepsis is a device that is inherently built into ergodic digital fiction and thus that ergodic digital fiction is necessarily unnatural. Offering a definition and associated typology of interactional metalepsis as it occurs in digital fiction, it explores the ways in which these media-specific and unnatural forms of metalepsis manifest in that medium. It defines interactional metalepsis as a form of metalepsis which takes place across the actual to storyworld boundary and that exploits the interactive nature of digital technology via the hardware through which the reader accesses the text, such as the mouse, keyboard, or other navigational devices, and/or via media-specific interactive modes of expression such as hyperlinks or avatars. It argues that because interactional metalepses are inherently unnatural both in terms of physically and logical impossibility and also because interactional metalepsis is a device that is intrinsically built into ergodic digital fiction, digital fictions are inherently unnatural. Exploring the ways in which these media-specific and unnatural forms of metalepsis manifest in digital fiction, I offer a typology of interactional metalepsis which incorporates the following: metaleptic navigational devices, metaleptic hyperlinks, metaleptic webcams, and metaleptic breath. The article shows that digital fiction allows unnatural narrative to manifest in ways that must be analyzed media-specifically and therefore according to the affordances of a particular medium. I argue further that different forms of metalepsis are likely to be conventionalized by readers of digital fiction to varying degrees which depend upon the wider digital, cultural context to which they belong and also that, unlike most metalepses in print which are typically defamiliarizing, some forms of interactional metalepsis can have the opposite, immersive effect. This article shows that some of the theoretical underpinnings of unnatural narrative need to be reconsidered in light of the unnatural's manifestation in digital fiction. It thus contributes to the development of unnatural narratology as a transmedial approach.

Keywords: interactional metalepsis, unnatural narrative, digital fiction, electronic literature, immersion, interactive narrative, transmedial narratology

Introduction

This article argues that interactional metalepsis is a device that is inherently built into ergodic digital fiction and thus that ergodic digital fiction is necessarily unnatural. Offering a definition and associated typology of interactional metalepsis as it occurs in digital fiction, it explores the ways in which this unnatural narrative device manifests in that medium. I show

that while metalepsis is a transmedial narrative device, some forms of metalepsis manifest in "media-specific" ways and therefore require media-specific forms of analysis, "a mode of critical attention which recognizes that all texts are instantiated and that the nature of the medium in which they are instantiated matters" (Hayles 67). This means paying attention to the modes of representation that each medium affords and also the nature of the reading experience that the medium facilitates. I also shows that while metalepses in digital fiction can be defined as unnatural in terms of physical and logical impossibility (Alber 2009, Bell and Alber), defining them in terms of their ability to defamiliarize (Richardson) and/or their relative "conventionality" (Nielsen) across media is more problematic. I thus focus on the consequences of unnaturalness in digital fiction for unnatural narratology as a discipline and specifically on the way in which "unnatural narrative" can be defined, thus underlining the transmedial potential of unnatural narratology.

What is Metalepsis?

Metalepsis, as originally defined by Genette, is "any intrusion by the extradiegetic narrator or narratee into the diegetic universe (or by diegetic characters into a metadiegetic universe, etc.), or the inverse" (234-5). Metalepsis is thus a term that describes the movement of entities between what are, according to actual world logic, distinct ontological realms. Metalepses can be "descending" (Pier 304), in which a fictional entity moves from a diegetic level to a hierarchically lower one, or "ascending" (ibid.), in which they move in the opposite direction. Metalepses can also, as Herman notes—of particular relevance to this article— "dissolve the border not just between diegetic levels, but also between the actual and the non-actual—or rather between two different systems of actuality" (134). Thus "metalepsis" is also used to describe instances in which authors appear in their own works (see Chen) and also in instances of second-person address to the reader (see McHale, Fludernik). Crucially, in all

cases of metalepsis, an entity moves across an ontological boundary from one world to another.

Media-Specific and Interactional Metalepsis

Since Genette's original definition, narratologists have devised numerous typologies of metalepsis, which categorize the form and/or function of the device (see Pier). While much research on metalepsis focuses on examples from print fiction, more recent transmedial narratological approaches seek to understand how metalepsis operates across a range of media including graphic novels, painting, comics, film, television, role-playing games, videogames, and code poetry (e.g. Kukkonen and Klimek, Wolf 2005). In addition to being described textually, metalepses can be represented using visual modes in comics (see Thoss), animation film (see Limoges), and digital fiction (see Bell 2014). Thus while different modes of representation can be used to create metaleptic jumps, the same mode of representation can be used across different media. On the other hand, some forms of metalepsis are medium-specific because they are created using affordances that are available only to that medium.

Recognizing one such example of medium-specific metalepsis, Kukkonen posits that "narrative research into hypertext forms, digital media and videogames will certainly reveal a wealth of what I would call 'interactional metalepses,'" which, she hypothesizes, "might represent a special kind of metalepsis which is based on the actual interaction between the text and the reader" (18). I argue that, rather than interactional metalepsis being caused by an interaction between 'text' and reader and thus between the material object used to describe the storyworld and the reader, interactional metalepsis occurs when the ontological boundary between the reader (in the actual world) and the storyworld is crossed. Thus interactional metalepses, while facilitated by interactivity, are, like all forms of metalepses, ontological in nature.

While Kukkonen notes the metaleptic nature of videogames and other digital media, for the purpose of this article, I focus on digital fiction in particular. Digital fiction is "written for and read on a computer screen that pursues its verbal, discursive and/or conceptual complexity through the digital medium, and would lose something of its aesthetic and semiotic function if it were removed from that medium" (Bell et al. 2010). It is fiction whose structure, form, and meaning are dictated by, and in dialogue with, the digital context in which it is produced and received; and it includes hypertext fiction, Flash fiction (as well as fiction produced using other digital multimedia software and programming languages, such as QuickTime and JavaScript), Interactive Fiction (IF), App-fictions for mobile devices, and some videogames. In terms of modes of representation, digital fictions are text-based but also often incorporate additional modes such as sound, image, or film. Importantly, readers often make choices about their journey through the text either by clicking links, moving a mouse, pressing keys, or using other devices to advance the text onscreen, meaning that digital fictions also offer an interactive reading experience.

That readers are involved in the construction of the narrative via interactive interface elements means that digital fictions belong to a category of texts defined by Aarseth as "ergodic literature" in which "nontrivial effort is required to allow the reader to traverse the text" (1). Ergodic literature is different from nonergodic literature, which would include a linear and bound print text and also non-interactive digital texts such as so-called "paper-over-glass" documents (e.g. PDF documents), because, in nonergodic literature, "no extranoematic responsibilities [are] placed on the reader except (for example) eye movement and the periodic or arbitrary turning of pages" (1-2). Crucially, in ergodic literature, readers are involved in what Aarseth calls a "cybernetic feedback loop" (65) in which "information flow[s] from text to user" via the modes of representation the text deploys "and back again" (65) via the various interactive functions the reader can perform.

I argue that while the hardware through which readers access digital fiction does not necessitate metalepsis, the cybernetic feedback loop of which the reader is a part in ergodic digital fiction does. In ergodic digital fictions, readers are required to interact physically with the text—via a mouse, keyboard, or using their fingers on a touchscreen—to explore the screen and/or click interface elements (e.g. hyperlinks) to progress the narrative. The reader's movements are symbolized visually onscreen either by an interactive interface element such as a cursor or, in the case of touchscreen technology, a visual imprint of the reader's haptic engagement with the text. The technology which s/he uses to explore the text thus acts as a trace of the reader onscreen and an imprint of the reader in a separate ontological domain. Theorizing the cursor in digital fiction, Ryan suggests that some readers "will interpret the cursor on the screen as the representation of their virtual body in the virtual world" (2006, 122). Ensslin's concept of "double-situatedness" also implies that dual ontology is an inevitable part of exploring a digital storyworld. She argues "on the one hand, that user-readers are 'embodied' as direct receivers, whose bodies interact with the hardware and software of a computer. On the other, user-readers are considered to be 're-embodied' through feedback that they experience in represented form, e.g., through visible or invisible avatars (third-person or first-person graphic or typographic representations on screen)" (2009, 158). Both thus suggest that the interactive interface element is a version, copy, or digital counterpart (Bell 2014) of the reader in a digital space.

That navigation in ergodic digital fiction produces a visual and ontological manifestation of the reader in the storyworld means that this non-trivial form of reading necessitates interactional metalepsis because the reader, or rather a representation of her, crosses the ontological boundary between actual world and storyworld. As a form of descending interactional metalepsis, this ontological transgression relies on hardware—for example a mouse and a computer screen—but it also relies on interactive navigational

devices built into the software (e.g. cursors, avatars) because the reader is visually present on screen via his interaction with the hardware. Interactional metalepsis is thus a form of metalepsis that exploits the interactive nature of digital technology via the hardware through which the reader accesses the text, such as the mouse, keyboard, or other navigational devices, and/or via media-specific interactive modes of expression such as hyperlinks or avatars. Since interactional metalepses depend on the reader's non-trivial interaction with the ergodic text and associated storyworld as they are read/played, they are ontological transgressions that take place across the actual to storyworld boundary rather than transgressions across ontological levels within the storyworld[1]. Interactional metalepses are thus fundamentally built into and therefore an inevitable feature of ergodic digital fiction. Within this article, I focus on interactional metalepsis in ergodic digital fiction, but the definition above also defines interactional metalepsis as it occurs in videogames and other interactive forms of digital media (such as new media art installations).

Metalepsis, Digital Fiction, and Unnatural Narratology

Since interactional metalepses in digital fiction cause an ontological bleed between the actual world and the storyworld, they represent an impossible or what has recently been theorized as an "unnatural" narrative device (see Wolf 2013). Following Alber's definition of the unnatural as "physically impossible scenarios and events, that is, impossible by the known laws governing the physical world, as well as logically impossible ones" (2009, 80), Bell and Alber show that all metalepses as found in all media constitute a form of unnatural narrative because they are physically and sometimes logically impossible. They are physically impossible because in the actual world, entities from two different ontological domains cannot interact. Some ontological metalepses are also logically impossible because they violate the principle of non-contradiction whereby two contradictory states of affairs cannot

be true at the same time, which means, for example, that the same character cannot exist in two ontologically distinct domains simultaneously.

Since metalepses are an inevitable component of ergodic digital fiction and since metalepses are unnatural, it follows that ergodic digital fictions are fundamentally unnatural. Not only does this mean that digital fictions might represent the most ubiquitous form of unnatural narrative, the fact that unnaturalness is such a strong component of digital fiction may also influence unnatural narratology's current conception of the reception of the unnatural.

For example, Richardson (2011, 2015) argues that for something to qualify as unnatural, the techniques used have to be sufficiently un-actual-world-like for the reader to notice them. Richardson thus distinguishes between "mimetic narrative" that "seeks to reproduce in fiction typical characters and events from the actual world"; "non-mimetic" narrative including fantasy, fairy tales, and science fiction, which do not intrinsically qualify as unnatural because the "mimetic impulse remains constant"; and anti-mimetic narrative that does qualify as unnatural because it "points out its own constructedness, the artificiality of many of its techniques, and its inherent fictionality" (2011, 31). While non-mimetic narratives are impossible according to the physical inventory of the actual world and anti-mimetic texts are impossible according to the logical laws of the actual world, Richardson's distinction between non- and anti-mimetic is mostly based around the defamiliarizing effect that the respective narratives have on the reader. Yet, as I will show in the analyses below, unlike most metalepses in print, which are typically defamiliarizing, some forms of interactional metalepsis in digital fiction can also have the opposite, immersive effect. Richardson's distinction between mimetic, non-mimetic, and anti-mimetic devices is thus compromised by some forms of metalepsis as they occur in digital fiction.

Similarly, Nielsen's discussion of unnatural narrative also emphasises the reception of particular narrative techniques for the categorization of particular texts. He distinguishes between "natural" and "unnatural" narratives, the definition of which does not change relative to the reader's reception, and also between "conventional" and "unconventional" narratives, the definition of which does change relative to the reader. Thus a "conventional unnatural" narrative contains narrative devices such as "use of omniscient narration, homogenized thought and speech representation etc." which are impossible in the actual world but are found in "many traditional works of realism" and are therefore "conventionalized over time" (85). This differs from "unconventional unnatural" narratives, which include "experimental fiction [and] postmodernist narratives" (ibid.); these contain scenarios, events, or narrative styles that are impossible in the actual world and which have not yet been conventionalized, according to his assessment at least.

Nielsen's approach to the unnatural allows the analysis to focus on the relative conventionality of a particular narrative device. When relying on cultural shifts in terms of what is generally or widely perceived as conventional versus what is unconventional, there is always the question of who decides. Nielsen stresses, however, that "there is no doubt that new forms and techniques become conventionalized over time" (ibid.). While unnatural narratology has paid some attention to the conventionalization of particular narrative techniques over time (see Alber 2011), the field has not yet paid adequate attention to the way that narrative devices are received and therefore relatively conventionalized across media. The media-specific context is important for digital fiction because it is produced and received in a non-conventional format for fiction and has thus established its own conventional/unconventional methods outside of print publishing. Metalepses in digital fictions are a much more established and unmarked convention than they are in print fiction.

Metaleptic Navigational Devices

As discussed above, interactional metalepses are built into ergodic digital fiction because of the interactive and non-trivial role that the reader plays in the text via their navigational role. Thus while other forms of metalepsis may also be present within a particular digital fiction, metaleptic navigational devices always form part of the reading experience and work alongside any other metaleptic components.

Ontologically, interactional metalepses can draw the reader into the storyworld to a greater or lesser degree in different individual works. In text-based digital fictions such as Storyspace hypertext fictions, for instance Shelley Jackson's *Patchwork Girl*, the cursor represents the reader on-screen but the reader-as-cursor does not interact with components of the storyworld in the same way an avatar does in a gameworld. The same is true for multimodal Web-based fictions, such as Kate Pullinger's *Flight Paths*, in which the reader can click on visuals as well as text, but in which s/he does not interact with elements within the storyworld as though s/he were present within it. In digital fiction apps on tablets and smartphones, such as Steve Jackson's *Sorcery!*, readers must use a touchscreen to select links and traces that are shown via a change in screen color or by the visual impression when a button has been pressed. In these text-based and two-dimensional multimodal digital fictions, therefore, the reader-as-cursor is metaleptic; s/he is sometimes present in what we might call a mediating part or narrational level of the storyworld but less commonly at the same level of the characters and objects within the storyworld. Other more immersive, 3-D-style digital fictions, and/or literary games also use visual modes to create digital storyworlds but, in these texts, the digital counterpart of the reader has a more pronounced spatial presence which grants her metaleptic navigational agency within, and access to, a distinct and autonomous ontological domain.

Andi Campbell, Judi Alston, and Billy Johnson's *Clearance* is a first-person Web-based digital fiction that uses text, film, and sound effects to present an unnerving storyworld in which readers are unsure as to what is real, what are the protagonist Iggi's memories, and what is only imagined by Iggi. On the opening screen, readers see information being generated from a digital database about Iggi, his parents, and his wife; Iggi lives in Britain but the others are dead. The reader then sees a British countryside scene that is overlaid in parts with fragments of text and occasionally accompanied by sound. In what we are led to believe is the current storyworld, the landscape looks desolate. While the visuals show a rural setting, there are also objects such as a dumpster and piles of trash that make it appear deprived and neglected or else abandoned. Some visuals also appear to depict Iggy's memories; for example, an aesthetically grainy scene of young children playing on their retro-style bicycles is superimposed onto the current countryside scene and suggests a bygone era rather than the contemporary scene that the rest of the narrative depicts. Readers therefore share Iggy's current point of view with some of his memories.

In terms of navigation, when the reader moves the cursor from left to right, the screen pans around and the visual point of view—or what Ciccoricco, following Thon, calls "point of action"—shifts (262). This exploratory function means that the reader is given partial responsibility for the visual perspective. In the final scene, which takes place within a darkened shed, this is even more pronounced by using light as a signifier of perspective. Here, when the reader moves the mouse, in addition to controlling the spatial perspective, the parts of the shed on which the cursor rests become lighter. It is as though someone's eyes are adjusting to the darkness and then focusing once rested for a while. Thus the reader is able to influence her view of the world by moving the mouse in the actual world, but we also get a digital trace of the reader within the storyworld via the first-person perspective that her navigational function permits.

In *Clearance*, the digital counterpart of the reader does not have the same ontological status as the characters in the storyworld in the way that avatars do in many videogames; the reader's presence is via the cursor rather than an avatar. However, as Ciccoricco notes, in digital fiction, "the mouse pointer is in effect a literal, analog representation of the reader's movement in the text" (262) and the reader-as-cursor does have a presence and some influence within the storyworld of *Clearance*. In *Clearance*, the reader does not have the full range of navigational means at their disposal that they would have in a default desktop PC game (including cursor keys and mouse wheel for free movement and camera panning). Her or his agency, therefore, is somewhat limited. However, the capacity to move around a digital space with a cursor is still an established and therefore conventional practice on which the reader draws when moving through this digital fictional space.

While the reader-as-cursor is unnatural as a form of metalepsis, it is also ultimately a conventional form of digital interaction. Analyzing the role of the mouse in human-computer interaction in general, Bizzocchi and Woodbury suggest "we are so accustomed to this correlation [between hand movements and associated cursor movements] that it is perfectly transparent—we don't think about it, we don't question it, we don't even notice it" (558). Having a visual perspective controlled by a peripheral navigational device is also an established and conventional feature of videogames. Thus while ontologically transgressive, the reader-as-cursor can also be seen as a form of conventional unnaturalness in a digital context.

The effect of this kind of digitally mediated metaleptic device is also somewhat different from the alienating or defamiliarizing effect of metalepsis as identified by many theorists analyzing metalepsis in print media (e.g. Fludernik, McHale). In some forms of digital literary metalepsis, including those of immersive 3-D fictions such as *Clearance*, rather than causing alienation, metalepsis can be used to increase the reader's immersive

experience of the text. Wolf observes that "metalepsis may be compatible with immersion" "[in] special conditions, which . . . function as 'filter factors' that influence the recipient's reaction to the unnatural" (2013, 124-5) including the reader's emotional involvement with the storyworld.

In *Clearance*, emotional immersion, in which we invest emotionally "in the fate of imaginary characters" (Ryan 2001, 148), and temporal immersion, which is "the reader's desire for the knowledge that awaits her at the end of narrative time" (140), are achieved by the internal perspective that the interactional metalepsis grants to the reader, allowing her to see the storyworld through both the protagonist's and her own eyes. The reader is also spatially immersed while metaleptically navigating the physical space because the act of exploring a storyworld, while impossible, is relatively conventional in digital media. The text thus creates a digitally focalized visual (i.e. spatio-temporal) but also psychologically shared perspective, which links directly to the themes explored throughout the narrative. Many parts of this text deal with the idea of surveillance, conspiracy, and psychological distress. Some of Iggy's first person narrative, often directed at an intradiegetic addressee, appear to be paranoid: "I've been seeing new things since you disappeared." Audio recordings taken from news broadcasts and speeches, warning that "everything you have been told about . . . what was going on was a total lie," also add to an eerie atmosphere. We are unsure, however, whether the accounts given in the text represent the storyworld's reality or whether they are Iggy's delusions. Thus, while the reader has some control of the navigation, s/he is not always sure, as the narrator isn't, whether s/he is being given an authentic impression of the world to which s/he has access or whether s/he is seeing and believing Iggi's paranoid delusions.

The ontological ambiguity of Iggy's story is never completely resolved in *Clearance*. In fact, the end of the text adds more uncertainty than it solves. Throughout the text, large

stone carvings in the shape of human heads appear as though scattered throughout the storyworld on, for example, country fields or inside a garden shed that readers explore in the last scene of the fiction. The stones look incongruous and anachronous with the landscape because their ancient style conflicts with the fairly modern setting of the rest of the storyworld. Readers may therefore have assumed throughout the narrative that the stone heads are a product of Iggy's distorted view of the world; that they are hallucinations along with the other constructions of the world that we can categorize as his paranoid delusions. Offering a somewhat creepy dénouement, however, at the end of the text, the reader is automatically directed via an external hyperlink to an actual world Sky News webpage which exists beyond the boundaries of this fiction on the World Wide Web. The article reports that twelve "mystery stone sculptures have turned up outside a number of properties in Yorkshire—but no-one knows why or where they have come from" ("Heads"). This external webpage thus suggests that the storyworld that readers have been navigating is based on actual world events. The implication is that, if the stone heads are not a delusion, then perhaps the rest of Iggy's account also has some validity. This narrative does not resolve itself neatly, therefore, in terms of definitively determining the ontological status of Iggy's account, but the external hyperlink invites the reader to reappraise the entire narrative.

Subtype I: Metaleptic Breath

While metaleptic navigational devices such as cursors, avatars, or visual imprints on touchscreen technology are always present within ergodic digital fiction, other additional forms of metalepsis can work alongside them. The first subtype of interactional metalepsis that I analyze shows how non-visual forms of navigation can be used to create a similar descending interactional metalepsis, but relying on the reader's internal physiological mechanisms as opposed to their external, haptic (hand- and arm-controlled) engagement with

the text. While all digital fictions rely on a mouse, keyboard, or more recently touchscreen, for navigation, a relatively rare type of digital fiction, which Ensslin (2014, 2011b, 2009) has defined as "physio-cybertext," also utilizes additional forms of human-computer interaction that result in physio-cybertextual forms of metalepsis working alongside more established forms of navigation.

Physio-cybertexts, as defined by Ensslin, are digital texts "that both integrate, through cybernetic interaction, and thematize and/or problematize functions and limitations of the human body" (2014, 198). A physio-cybertext thus incorporates the reader's physiological functions both in terms of her interaction with the text and her hermeneutic engagement with the narrative. Pullinger, Schemat, and Joseph's murder mystery *The Breathing Wall* is, according to Ensslin, one of only two physio-cybertexts in existence. Using sound, text, and image, *The Breathing Wall* tells the story of Lana, who is dead and speaks unnaturally from beyond the grave, and of her boyfriend Michael who has been falsely convicted of Lana's murder and is in prison for the crime. In terms of navigation, the reader uses a mouse to select links but must also wear a headset with a microphone that sits under her nose. In some parts of *The Breathing Wall*, the text responds to and advances with the reader's breathing rate, but the narrative will only progress if the reader's breathing rate is slow and measured. Thus the reader's experience of the storyworld is dictated by the way in which her respiratory system interacts with the software in which the text is produced.

The sections of *The Breathing Wall* that utilize the reader's breath for navigation are called "Night Dreams," and, rather than a textual narrative as found in other parts of the fiction, video and sound are used as the modes of representation. The opening screen in this section of the text displays a dark evening sky with clouds moving quickly across the vista, but the visuals contribute to the eerie atmosphere as opposed to documenting events in the narrative. As the reader breathes into the microphone, s/he can hear her breath through the

headphones and also see a small meter at the bottom of the screen that measures the depth and pace at which s/he is breathing. If the reader manages to breathe at a particular rate the text releases segments of a first-person audio narrative in which Lana speaks to Michael and ultimately reveals to him (and us) the way in which she was killed and by whom. Thus, the reader's physio-cybernetic interaction with the text allows her to penetrate the ontological boundary of the storyworld to release information about the murder. More specifically, the fictional character, Lana, is prompted to speak by the reader's metaleptic physio-cybernetic interaction with the text and by her respiratory interaction in particular.

In the metaleptic "Night Dreams" of *The Breathing Wall*, the reader who breathes successfully learns that Lana was murdered by asphyxiation. As Ensslin concludes, "by co-experiencing (with Michael) Lana's phenomenological death narrative, which merges her physical metamorphosis into 'thin air' with the reader's breathing motor, the reader reaches a maximum level of psychosomatic 'union' with the text machine and the characters within it" (2012, 147). The interactional metalepsis in *The Breathing Wall* is thus used to connect the means of navigation with events within the text. That physio-cybertexts are so rare and unusual would suggest that this form of unnatural narrative has yet to be conventionalized. However, like some other instances of interactional metalepsis, the respiratory metalepsis in *The Breathing Wall* can function as an immersive rather than alienating device. As Picot attests, "where the technology works well [in *The Breathing Wall*], the feeling that the flow of images and sounds is controlled by our breathing makes the 'Dream' sequences authentically dreamlike and immersive." Thus while relying on an unconventional navigational device, this form of interactional metalepsis is not necessarily so strange that it prevents the meditative or hypnotic cybernetic feedback loop that the text aims to achieve. Rather this media-specific unnatural device, while relatively unconventional, can also result in an immersive experience for the reader. The audiovisual design of the narrative and the

hypnotic effects of the breathing-as-reading experience work in combination to produce a suspenseful narrative experience in which the relaxed and absorbed reader/breather does achieve narrative resolution.

Subtype II: Metaleptic Webcams

The second subtype of interactional metalepsis also relies on a peripheral computing device, but via a webcam and thus a more common piece of technology that is often used for non-literary communication. The web-based digital fiction *Loss of Grasp* by Serge Bouchardon and Vincent Volckaert (2010) is a first-person, multimodal narrative in which a contemplative protagonist considers the extent to which he is in control of his personal, professional, and spiritual life. He reveals that while he used to think, "I control my destiny," he now thinks, "I have lost control," and asks "how can I have grasp on what happens to me?". Within the short fiction, the narrator finds a note from his wife, who appears to be leaving him, and is asked by his son to read a homework assignment in which "I don't have a hero" is written, implying that the protagonist is not heroic to his son.

The text combines static and kinetic text, colorful images, speech, sound effects, and moving images. Readers are instructed to ensure their sound is on and to use a webcam. The reader must use pronounced physical movements to advance the narrative; s/he must click and hold the mouse button and/or make strong mouse strokes across the screen. Thus the reader's physical gestures are integral to the navigation of this text (see Bouchardon 2014). However, the narrator's lack of autonomy is also reflected navigationally via the reader's frequent lack of agency in the text. The reader is given an illusion of control by seemingly being given choices that are subsequently revoked. For example, a female voice asks the reader whether s/he wants a meeting now or later, but whichever the reader chooses, the same

outcome occurs; at numerous points, the reading pace is determined not by the reader but by the speed with which the computer reveals the text.

In the fifth of six chapters, the narrator becomes less and less confident about his circumstances and ultimately his existence. In terms of navigation, the reader must move the mouse over chunks of text to receive more of the narrative. The narrator asks: "Am I so little here?" with the locative adverb "here" deictically anchoring the reader to the narrator's spatial point of view and thus the world in which he exists. That he is asking such a question also signals a lack of confidence from the narrator. Readers then move the mouse to reveal: "My own image seems to escape me." His hesitancy is signified stylistically by the hedged copula "seems." Grammatically, also, the noun phrase "My own image" appears in the subject position with "me" as the object. The narrator's agency is therefore removed; something is done to "me" (him). Finally, his lack of control—or loss of grasp—is confirmed because the reader appears visually on the computer screen via the computer's webcam. Here the accompanying text reads "It fails me." Here "it" is an anaphoric reference to "my own image" with "me" in the object position again. Through these utterances, combined with the reader's image onscreen, *Loss of Grasp* implies that the reader has taken the narrator's place in the storyworld.

This is an example of a descending interactional metalepsis in which digital technology is utilized to place a digital counterpart of the reader in the text. It relies on the reader's interaction with the text via hardware—specifically the webcam—and it places the reader visually within the storyworld. In terms of unnatural narrative, this form of metalepsis remains unconventionalized. Not only are there very few texts which utilize webcam technology for storytelling, it is likely that the physical and logical impossibility of the reader being visually present in the text is too affective for it to be immersive or conventionalized. As a thematic device, however, it is used successfully in *Loss of Grasp*, to symbolize the

protagonist's lack of control. Working alongside a narrative which is not primarily driven by events, but instead by the insights into character, the reader's metaleptic insertion within the text offers a media-specific surprise ending to the text.

Subtype III: Metaleptic Hyperlinks

The previous analyses have shown three different ways in which interactional metalepsis places the reader within the storyworld and thus effects descending metaleptic jumps. The fourth and last analysis presented here shows how hyperlinks can be used in Web-based digital fiction as a form of ascending interactional metalepsis.

Since Nelson conceived of hypertext conceptually in the 1960s (see Nelson) and since the subsequent materialization of digital hypertext in the 1980s, theorists have emphasized the significance of the hyperlink in all forms of digital textuality, with Landow claiming that it is "the element that hypertext adds to writing" (13). While the hyperlink is a material entity in a hypertext system, it is the reader who chooses which links to follow within the cybernetic feedback loop and thus the hyperlink is primarily an interactive tool. Hypertext scholars have theorized the functions of hyperlinks in both informational (e.g. Landow) and literary (e.g. Parker) hypertext with most emphasizing their semantic, associative function in terms of the way they signal a "perceived relationship between two pieces of material" (Slatin 161). While the epistemological function of links is key to any analysis that seeks to understand the meaning of a hypertext, some Web-based digital fictions also deploy hyperlinks metaleptically, and thus the hyperlink can have both an epistemological and ontological function in that context.

Hyperlinks in any hypertext can be internal—leading to a destination within another part of the same document or site—or external—leading to an external website beyond the boundaries of the document or site. It is worth noting that, at the time of writing, while

external hyperlinks are a conventional feature of informational hypertext (e.g. on the Web) and internal hyperlinking is a conventional feature of hypertext fiction, external hyperlinking is not a common feature in digital fiction. That is, despite being housed on the Web, there are relatively few Web-based digital fictions that utilize external links (but see, for example, Prickitt). However, because Web-based digital fictions belong to the Web's network of digital texts, when external links are used in fiction, they break the ontological frame of the fiction and can thus be used as a form of interactional metalepsis.

For example, Lance Olsen and Tim Guthrie's Web-based hypertext fiction *10:01* is set in a movie theater in the Mall of America in Bloomington, Minnesota, and it documents the ten minutes running up to the beginning of the movie. It is narrated by an omniscient third-person narrator who has unnatural 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 theater audience members and ends, chronologically at least, when the movie begins. Towards the chronological end of the narrative, an explosion occurs. However, it is not clear as to whether the explosion happens within the movie theater, on the movie trailer, or only in the mind of one of the characters.

While primarily a textual narrative, *10:01* also uses music, sound effects, animation, and still images. In terms of navigation, like most hypertext fictions, it contains internal links which lead to a destination within another part of the same fiction, but it also uses external links that lead to websites that already exist on the Web—i.e. they have not been created for the fiction—and thus lie beyond the boundaries of the *10:01* site. These links are used for a variety of different functions, including establishing the setting of the narrative and giving the reader a sense of the different characters' personalities. For example, the text tells us that the character Lara "was born in Bloomington and will die there." The word "Bloomington" is hyperlinked and, if followed by the reader, leads to a Wikipedia page about Bloomington,

Minnesota. In another case, the character wonders about "this movie," with a link from this noun phrase leading to the actual world Mall of America movie theater website. The reader's knowledge of the storyworld is thus provided not only by the words on the screen but also via information that exists outside the physical boundaries of the text.

Yet while the external links in *10:01* have a primarily epistemological function insofar as they provide information about the setting, the characters, and the wider socio-political and economic context of the narrative, the external links are also ontologically significant because they are metaleptic. When the reader follows a link, s/he moves from the *10:01* text and the storyworld it describes to sources of information that materially exist in the actual world. The ontological boundary between the two domains is thus transgressed by what is ultimately an epistemological device: the hyperlink. Since the reader is meant to use information that s/he gathers from the external websites within the storyworld of *10:01*, s/he is asked to imagine either that the storyworld of *10:01* is the same ontological domain to which s/he belongs, or that the storyworld temporarily, but literally, reaches out to cannibalize information from the actual world. The first case is impossible because the storyworld and the actual world are two different ontological domains, and the second case is impossible because an ontological boundary between the storyworld and the actual world would be breached. While references to nonfictional entities in fiction, such as the Mall of America, are not metaleptic in themselves because they form part of the storyworld, references that are also hyperlinked and which are followed by readers to actual world websites are. As soon as the reader leaves the *10:01* website, s/he is reading an external website that belongs to the actual world. While we always access our knowledge of the actual world cognitively when we read fiction, this text also materially, or rather ontologically, accesses the actual world.

A number of hypertext theorists have noted the anti-immersive quality that hyperlinks can bring to literary reading (e.g. Ryan 2001, Bell 2010). The hypertextual reading experience of *10:01* is jarring because the links act self-reflexively and therefore defamiliarize the storyworld and the reading experience in which the reader is engaged. This is particularly pronounced in instances where the reader has to work harder—at a metafictional level—to understand what connection could be being made between the linked term and the destination website to which it leads. For example, the connection between the word "memories" and another Web-based digital fiction called Reagan Library by Stuart Moulthrop, to which the hyperlink leads, is less obvious than some of the more explicitly denotative associations mentioned above.

This example of unnatural narrative relies on the hyperlink, a media-specific device that has become a conventional tool of digital reading. However, because very few digital fictions utilize external linking, it is not yet a conventionalized feature of digital literary reading. In *10:01* in particular, hyperlinks are used thematically to show the reader that s/he belongs to the same late-capitalist, self-obsessed, damaged, and ultimately unhealthy society to which the characters belong. The interactional metaleptic device on which the text relies, however, allows this to be expressed in an uncannily and uncomfortably familiar way because of the way the text materially reaches out to the space to which the reader belongs.

Conclusion

I have shown how navigational devices, webcams, physio-cybernetic technology, and hyperlinks can be used to create metalepses in digital fiction in ways that are specific to the digital medium. These forms of interactional metalepsis show how entities can move across ontological levels in ways that may or may not be possible in other media. It is certainly not possible in print fiction, for example, for the reader to appear in the text either as in the digital

counterparts of the reader via webcams and cursors. However, metaleptic jumps in (non-literary) videogames may rely on similar digital affordances as digital fiction.

Yet while all four types of metalepsis are unnatural, they are conventional or non-conventional to varying degrees because the media-specific devices on which they rely have been established within digital reading practices to relative degrees. Moreover, contrary to many analyses of print fiction that argue for the defamiliarizing effect of metalepsis, the analyses in this article have shown that some interactional metalepses can have an immersive quality. Indeed while ergodic digital fiction is defined by its reliance on interactivity, it has also evolved from primarily utilizing "anti-narrative" devices such as fragmentation, multi-linearity, and lack of closure in the text-based Storyspace hypertext fiction of the 1980s and 1990s, to twenty-first-century multimodal devices in which interactivity is combined with narrativity. *Clearance*, *The Breathing Wall*, *Loss of Grasp,* and *10:01* each utilize a linear narrative structure. Conflict, complication, or suspense is resolved. They may incorporate conventionalized or unconventionalized unnatural devices, but use narrativity to tell their stories.

From a theoretical perspective, the account of interactional metalepsis offered here suggests that some unnatural narratology may need to be modified if it is to become a transmedial approach. Alber defines the unnatural in terms of logical and physical impossibility, which stays the same irrespective of the medium. Richardson's and Nielsen's accounts of the unnatural place more emphasis on the reader's role in the conception of the unnatural. While this has proved to be a fruitful approach, their theories are based on examples from print fiction. Digital fiction brings its own conventions to literary reading and thus their frameworks require some modification if they are to become transmedial approaches. In terms of further developing the field, this article has shown that ergodic digital fictions are fundamentally unnatural because of their reliance on metafictional interactivity,

but digital fictions also often utilize other unnatural devices (see Bell 2013). This kind of fiction could therefore provide unnatural narratology with a rich and varied test-bed for our theories and analyses.

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[1] In a somewhat similar account, Ensslin defines interactional metalepsis as "involv[ing] mostly digital and interactive media that require the user's physical interaction with its hardware and software: computer games, . . . digital fiction and poetry, and . . . non-ludic virtual worlds like *Second Life*, as well as the creative and participatory uses they are put to by contemporary artists and media audiences" (2011a, 11). However, Ensslin's definition focuses on what I see as two different kinds of metalepses: metalepses that, as I show, are created by the reader's interactive engagement with the digital text and associated storyworld, and metalepses that result from extra-textual engagements with the storyworlds that are created by those media, but which can also be created by non-ergodic and indeed non-digital fiction. In this latter category, Ensslin includes "participatory metalepsis in fan culture" (12), which can be forms of role-play or can result from a process of world-creation in which reality and fiction "converge" without an interactive engagement with the text as it is read/played.

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