



The Adaptive Process of Multimodal Composition: How Developing Tacit Knowledge of Digital Tools Affects Creative Writing

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Abstract

Many creative writers are turning to digital media and multimodal composition as an emerging genre of storytelling; many, however, do not have sufficient familiarity with digital tools to compose digital texts. Digital literacy is still an emerging area of pedagogy; online literacy and multimedia composition are becoming more prominent in classrooms, and deeper understanding of the effects of these tools on individual students and their work is crucial to development of teaching practice. Tacit knowledge of written narrative alone does not permit the creative writer to fully realize the narrative possibilities inherent in the multimodal form. This paper communicates the results of a practice-based research project, *Færwhile*, conducted expressly to examine the changes wrought in the creative writer's process and understanding of narrative by shifting to a multimodal, digital composition process. In this paper, I analyze my creative works prior, during, and after development of explicit knowledge of digital fiction and digital composition tool, and discuss how internalizing this explicit knowledge alters the creative composition process. These conclusions, drawn from an in-depth experimentation for the express purposes of research, have implications not only for individual creative writers, but for students and teachers moving into multimodal forms of digital communication. Crown Copyright © 2016 Published by Elsevier Inc. All rights reserved.

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1. Introduction

For the current generation of students, engagement in digital media is an everyday practice, from reading and viewing content to writing and disseminating content. A significant pedagogical digital divide remains, however, between these students' digital practices, and the approaches to communication taught in classrooms (Hundley & Holbrook, 2013). It is important not only that educators and teachers develop pedagogical tools and approaches to address communications in these new media, but also that we understand the fundamental, cognitive differences between writing for the page and writing for digital media; little research has been done to date to help us understand how writers and students negotiate multimodal/digital composition (DePalma & Alexander, 2015). This paper examines a practice-based case study comparing the creative writing process as it evolves for digital composition, specifically addressing how greater tacit knowledge and experience with digital tools affects the writer at work, using digital fiction composition as a model. As such, this research serves as a foundation for expanded studies in classrooms, for both academic and creative composition practices.

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Digital fiction, by definition, is multimodal, capable of incorporating the written word, images (both still and moving), audio, and elements of interactivity between the text and the reader (Bell et al., 2010; Kress & van Leeuwen, 2006). Not every writer who is intrigued by the narrative possibilities of digital media has the explicit knowledge of digital platforms necessary to compose digital texts. Similarly, students learning to communicate ideas and stories are far more likely to be taught conventional print writing: “much of what counts as good writing in schools does not reflect evolving notions of texts” (Hundley & Holbrook, 2013, p. 500). While most students and writers have a tacit knowledge (Nonaka & Takeuchi, 1995) of written narrative developed through the reading and writing elements of formal education and their reading and writing practices, they must develop explicit knowledge of their new media and internalize this explicit knowledge into tacit knowledge¹ in order to fully realize the narrative possibilities inherent in multimodal forms.

This paper is primarily concerned with how changes in the writer’s knowledge affect the foundational aspects of the composition of texts for digital media: understanding the rhetorical problem; responding to the rhetorical problem with relevant information, organization, and interpretation; and translating that knowledge into the actualized text. The rhetorical problem of this project’s creative texts was to convey a narrative that functioned effectively in two parallel forms: analogue (print, or monomodal) and digital (multimodal). Inherent in that rhetorical problem were the questions of character, plot, setting, tone, language, and structure that inform any attempt to write a fictional story. Adding multimodality into the mix, however, added difficulty in “trying to articulate how the transduction works, recognizing the variety of individual and social and cultural factors that contribute to its working as it does” (Fortune, 2005, p. 53).

Ron Fortune noted that the few instructional texts that exist on multimodal creativity are largely concerned with how to use verbal and visual modes to illustrate or explain one another, rather than on developing Kress’s mental “process of synaesthesia” (cited in Fortune, 2005, p. 53) in texts engaging multiple semiotic modes. Similarly, Melanie Hundley and Teri Holbrook report that teachers are often reluctant to instruct students to compose multimodally (2013). In the current scarcity of such pedagogical resources, digital writers often develop this synesthesia individually, through reading and writing digital fiction as an exploratory action, in order to better engage with the rhetorical problem inherent in such multimodal texts. Multimodal composition engages more naturally and fluidly with the planning process of composition, according to Linda Flower & John Hayes’s 1984 Multiple Representation Theory, which posited that the initial mental model of a text is multimodal, then subsequently translated to written language. This process also deepens the “intertextual landscape of the composing space” (Ranker, 2008, p. 229).

This intertextual landscape is an area of interest to this paper. As that landscape shifted over the three years of the multimodal composition activities described in the following sections, the author’s explicit knowledge of digital fiction changed and began to internalize; its changes became apparent even in analogue writing. “Our reading and writing are in dialogue with each other as we write in direct and indirect response to what we have read before, and we read in relation to the ideas we have articulated in our own writing” (Bazerman, 2004, p. 53). Specifically, growing knowledge and familiarity with digital fiction led to increased instances of Gérard Genette’s hypertextuality (playing the texts off familiarity with other texts in the genre) and architextuality (exploring generic expectations in relation to other similar texts) (Genette, 1997, pp. 2–5; cf. Bazerman, 2004, p. 58), as well as the intratextuality formed by references to elements of the text-in-progress (Bazerman, 2004, p. 62).

Deborah Brandt noted that “. . . writing — like any other language act — is a profoundly social enterprise, and. . . what a writer does during composing is best understood in relationship to the social event that he or she is in the process of accomplishing” (1989, p. 152). This paper examines the composition of the first drafts of the parallel analogue novella, composed during the “social event” of the author’s introduction to digital fiction, as I learned to write in multiple media. The creative pieces discussed here were composed over the course of approximately 3.5 years (September 2008–January 2012), from the point of minimal awareness of the digital fiction genre, to a point of development that permitted me to create digital texts in several different platforms. The first creative piece analyzed, “Last Stop Bar & Grill” (Skains, 2010), illustrates the zero state: this analogue short story was written prior to developing knowledge of and engaging in the intertextual landscape of digital fiction, and shows the writing process in monomodal

¹ Ikujiro Nonaka & Hirotaka Takeuchi defined explicit knowledge as that which is easily codified and transmitted, and tacit knowledge as “personal knowledge embedded in individual experience and involves intangible factors such as personal belief, perspective, and the value system” (1995, p. viii). They defined the process of internalization as translating explicit knowledge to tacit knowledge.

(written) composition. The second, “FuturePics LoveSounds” (Skains, 2009), illustrates the effects of developing tacit knowledge on choice of narrative perspective and structure. The third, “Puerta Cerrada de Unman” (Skains, 2013), shows the influence of medium in the composition process itself. The final section uses two other chapters to explore effects on the generative processes of building narrative structure and storyworld, as the narrative began to take on more interactive aspects.

2. Method

The texts analysed provided here were composed as part of a practice-based research project, *Færwhile*, designed to examine how changing from a conventional prose-writing practice to a multimedia digital fiction practice would affect the author, the composition process, and the narratives that resulted. As practice-based research is a newly developing method in creative writing and composition studies, this section provides a brief overview of the research approach; further details of my particular method are more thoroughly outlined in Skains (2016).

Practice-based research is primarily used to provide insight into a creative act; despite more than a century of study, “creativity scholars are still struggling to understand the *nature* of this complex phenomenon” (Glaveanu et al., 2013, p. 1). Composition studies employ various ethnographical methods to attempt to examine the cognitive mechanisms at work during creative composition; practice-based research is an alternative approach, offering a different perspective that may shed light on the practitioner’s process from within the practitioner and their act, as opposed to observing from without. This approach “involves the identification of research questions and problems, but the research methods, contexts and outputs then involve a significant focus on creative practice” (Sullivan, 2009, p. 48).

The practice-based method implemented in this project is built upon several established methods of observation and analysis. The primary method of observation is auto-ethnomethodological (Garfinkel, 1967): the writer engages in composition, and records observations. Deborah Brandt argued for this practice of ethnomethodology for writers (1992), building upon Linda Flower & John R. Hayes’s Cognitive Process Model of composition (1981), wherein the cognitive activity of planning and executing the composition activity is mapped as “a way of sustaining the social contexts that account for or display emerging understanding” (Brandt, 1992, p. 329). Brandt noted that “[s]ense-making in writing entails more than producing a coherent and appropriate text; fundamentally, writers must also make continual sense to themselves of what they are doing” (1992, 324). The process of this continual sense-making is expressed in notes, journal entries, and comments on revised drafts: observable paratexts to the composition that can be analysed in some depth through post-textual, media-specific analysis (Hayles, 2002). In this manner, the practitioner-researcher can make the creative composition process visible for analysis; these insights can provide the foundation for further studies into creative composition, whether practice-based, or ethnographic.

Creative projects rarely work themselves out in a predictable, methodological fashion. Frank Smith noted that writers have “specifications” formed by our intentions for the writing, much as an architect is presented with specifications for a building s/he must design (1982). There will be more than one design possible for given specifications, and the details work themselves out through the design/writing (ibid., pp. 113–115), a process eloquently encapsulated by Flower & Hayes’s 1981 Cognitive Process Model. Peter M. Senge, et al., described the distance between personal vision or intention and the current reality as “creative tension”, which can only be resolved through strategic and/or exploratory attempts to decrease that distance (1994, p. 195). We set out to explore a question of creativity, and the experiment is one of discovery and serendipity (Makri & Blandford, 2012a, 2012b), rather than one of specifically proving or disproving a set of circumstances. The results, therefore, are largely unpredictable.

The original protocol for this project was to write a series of complete print short stories (i.e., the analogue *Færwhile*) with the intent of remediating (Bolter & Grusin, 1999, pp. 44–45) their final drafts into digital form (the digital *Færwhile*). As I wrote the stories, however, becoming immersed in digital media, technologies, software, and the digital fiction community, my writing process began to evolve, according to the intent for the story, and how it was informed by my non-writing activities. What emerged was a continuum of practice, ranging from my typical, established creative practice to a completely and necessarily hybrid and truly multimodal creative practice, depending on the stories; I discovered that stories intended for remediation into other media at their inception are fundamentally altered in their creation by this intent, in terms of character, structure, narrative, and process.

3. Evolution of the digital writing process

In his exploration of the interaction of writing and ideas, [Mark A. Runco](#) noted that:

[w]riting is best described as a process rather than a product, and it may be that very process that benefits the writer. The benefit may result from the self-discovery allowed by writing or the fact that writers must consider different options, find words, and think of various perspectives while writing (2009, p. 188).

The following sections analyze the results of these discoveries, primarily focusing on the effects of composing multimodal and multimedia stories on the writer's process itself, and analyzing the texts for evidence of the internalization of this knowledge from explicit to tacit.

3.1. "Last Stop Bar & Grill": The prose composition process

The short story "Last Stop Bar & Grill" ([Skains, 2010](#)) was completed in December 2008, very early in the *Færwhile* project research (which began in late September 2008), not intended to be part of the project, and indeed not included. This story was the most recent of my prose fiction, and thus composed in the same personal context (location, socio-economic environment, etc.) as the other creative pieces examined in this paper, thus limiting the possible confounds. This section uses "Last Stop" as an illustrative example of my composition process prior to developing theoretical, contextual, and practical explicit knowledge of digital fiction.

3.1.1. Pre-writing

The typical rhetorical problem for my short fiction is to explore a specific character dilemma in a storyworld that enhances and supports that dilemma. Engaging the long-term memory ([Flower & Hayes, 1981](#)), or knowledge base (both explicit and tacit), begins with character: observations and awareness of how people interact with one another, how people with a defined set of characteristics react to certain situations, and how people display emotions and inner thoughts. World-building is also largely derived from this knowledge base, as my stories are generally set in environments with which I am intimately familiar (i.e., places in which I have lived), among cultures I have experienced or have researched.

3.1.2. Planning

Idea generation for "Last Stop" emerged from the combination of these two elements of long-term memory (character and setting). A curiosity about the people who maintain road-side memorials led to the idea of the main character: a woman so arrested by the event represented by such a memorial that she could neither physically nor emotionally move away from it. The rest of the world-building was completed by a scene I had recently cut from a novel-in-progress, in which several mythological figures engage in a heated discussion in a Route 66 diner.

The initial goals set for "Last Stop," reflecting my typical pre-writing goals for short stories, were to begin with the given character in the given situation, then to add a catalyst that makes the current situation untenable, which creates the fundamental dilemma of the story. For short stories, these dilemmas are based on the main character's fundamental conflict; in "Last Stop," the character's fundamental conflict is that she cannot move past grieving over her daughter and so cannot move on, either physically or emotionally, from the location of her daughter's death. The catalyst, or inciting incident, comes in the form of a would-be bandit who intends to rob the diner. All of these basic elements coalesce from the pre-writing stages as preinventive structures ([Finke, 1996](#); [Ward, Smith, & Finke, 1999](#)), with the initial goals no more defined than to discover through the process of writing where they will lead; they also form the extent of organization for short pieces.

3.1.3. Writing

Once the writing, or translating ([Flower & Hayes, 1981](#)) has begun, I write as a swooper: "Swoopers write a story quickly, higgledy-piggledy, crinkum-crankum, any which way. Then they go over it again painstakingly, fixing everything that is just plain awful or doesn't work" ([Vonnegut, 1997, p. 137](#)). Goal-setting is in constant evolution during the translating process: the act of writing is not only a translation process for swoopers; it is also engagement in idea generation and exploration, and preinventive structures are generated and explored through interaction with the text-produced-so-far ([Finke, 1996](#); [Ward et al., 1999](#)). It is worth noting that, as described in [Flower & Hayes's 1984 Multiple Representation Thesis](#), the act of translating this story was arguably a transcription or remediation process:

“Last Stop” unfolded in my imagination on a visual reel, which then needed translating into written language. Through translation of multimodal preinventive structures and interaction with the text-produced-so-far, the textual landscape both becomes more defined and offers more avenues than previously imagined.

3.1.4. Reviewing

Redrafting begins with a cooling off period, allowing the story to sit for at least a week, but preferably two weeks or more; “Last Stop” rested for ten weeks between the first and second drafts. This allows me to evaluate and revise the piece from a more distanced perspective, as a critic and editor. The reviewing process takes on a cyclical structure: A) the story is evaluated in terms of how well it is addressing the established rhetorical situation; B) goals are refined according to that analysis; C) the story is revised according to these re-defined goals. The cycle repeats until the story meets the goals. Most stories go through about four drafts; “Last Stop” did not, as the second draft seemed to meet the rhetorical situation and defined goals quite well, and was accepted for publication.

While I was certainly developing explicit knowledge of digital fiction by August of 2010, when “Last Stop” underwent its final revision, I did not consider remediating this work into digital form. At most, with its conventionally linear structure, consisting of one continuous scene, its use of third person limited perspective, and its focus on imagery and dialogue, “Last Stop” could arguably be remediated into a conventional short film. The piece has no natural breaks for lexias, and the action is bound in a series of causes and effects, which would be lost with a hyperlinked or rhizomatic structure. The main character avoids introspection and connections at all costs; she does not lend herself to the sort of intimacy via the first- or second-person perspective that digital fictions frequently utilize. A digital remediation thus would not make use of the more unique aspects of digital media in terms of networked structure or reader interaction.

This composition process, exemplified by “Last Stop Bar & Grill,” formed my initial mental model of storytelling at the beginning of this project. As Senge, et al. discussed, however, mental models evolve through reflection and inquiry (such as my research into digital fiction), as new additions to short-term memory gradually change the long-term memory (1994, p. 237), and explicit knowledge is internalized. Considering additional avenues for story, however, in the form of multiple media, multiple modes, and structures released from the conformity and linearity (as I had perceived them to be) of prose introduced new narrative possibilities and tools that were slowly assimilated into my long-term memory. The following section analyses the process of writing several different stories/chapters, each demonstrating various effects of my growing explicit knowledge — and internalization thereof — of digital fiction from theoretical, contextual, and practical perspectives.

3.2. “FuturePics LoveSounds”: Shift in perspective

“FuturePics LoveSounds” (Skains, 2009), written from August–October 2009, is an analogue short story grounded in the same rhetorical situation and following a similar composition process as “Last Stop Bar & Grill”. My research into digital fiction at this point had begun in earnest, primarily focused in literature reviews, readings in digital fiction, and exploration of software systems. I was immersed in exploration of the theory and practice of digital fiction, but had not yet composed a multimodal text; “FuturePics” demonstrates the first evidence of the internalization of explicit knowledge about digital fiction.

“FuturePics” began with a situational dilemma: a character receives photographs of themselves in the future. In the planning process, the preinventive structures for the inciting incident were hard copy photographs; in the first draft of the story, they shifted from hard copy 4x6s in a Kodak envelope to a shared digital photo album on FaceBook, demonstrating one effect of my developing tacit knowledge and immersion in digital media.

The most significant writerly choice in “FuturePics”, however, came as the translation process began: with the line “Your friend Syd has a FaceBook strategy. . .” (Skains, 2009, p. 1), the choice of second-person perspective was set. Other than creative exercises, this was the first story in which I had used the second-person perspective.² Astrid Ensslin & Alice Bell noted that the “[t]extual *you* features widely across digital, interactive texts, which allow *you* to bring about a species of ontological violation that is not possible in printed texts” (2012, p. 5, emphasis original). My reading of digital texts, including exploration of online games, such as the ludic fiction Ensslin & Bell presented as a case study (*The Princess Murderer* [geniwate & Larson, 2003]) and massively multiplayer online role-playing games

² For further analysis of the effects of multimodal composition on narrative perspective, see Skains (2015).

(MMORPG), among others, introduced me to narratives in which the reader has a contributing role. This knowledge of reader agency, consisting primarily as a tacit awareness of the perspectives and interactivity made possible by digital interfaces, led to an exploration of these narrative variables in prose, the medium with which I was still most comfortable working.

In addition to this intertextual (Genette, 1997) effect of my research upon writerly choices in the composition of prose, “FuturePics” demonstrates intratextual effects as well. During the period in which “FuturePics” was composed, I was concurrently generating ideas and researching background materials for the creative element of this project. *Færwhile*’s narrative foundation is laid in parallel mythologies, particularly in the Trickster figure that occurs in many cultures (Bierlein, 1994; Hyde, 1998). *Færwhile*’s preinventive structures consisted of several interlinked stories taking place in various cultures and locations around the world, structurally pulled together primarily by this trickster element of parallel mythology. Though “FuturePics” was not intended to be included in *Færwhile*, this immortal trickster appeared in the story anyway, as the “futographer” sending the mysterious photos to the protagonist.

The choice of perspective, the opportunity for reader agency in the story, and the intratextual narrative elements in “FuturePics” give it candidacy as a story in the world of *Færwhile*. Though the story was written to completion without the intent to remediate it, its use of social media references, second-person perspective, and incorporation of a Trickster figure are evidence that my efforts to deepen my explicit knowledge on my research topic were already becoming internalized to Nonaka & Takeuchi’s tacit knowledge (1995).

3.3. “Lost, Seeking Found”: According to plan

The first *Færwhile* story, “Lost, Seeking Found”, was composed between 3 November 2009 and 12 March 2010. The composition process for this story did not deviate drastically from my established prose-writing process, though my goals for the story’s remediation were in place from the first line: the digital version would be in Adobe Flash, incorporating imagery and movement while maintaining a linear structure advanced by reader clicks. The choice of Flash, mimicking other Flash fictions such as “Consensus Trance, Part 1” (Campbell, 2009) and *Inanimate Alice* (Pullinger & Joseph, 2005), made for a relatively straightforward remediation, involving minimal effects on the third-person perspective, the story structure, and reader interaction. The goals for the analogue version of “Lost” were to introduce the story’s major character, the driving conflict, and the overarching theme. The goals for the digital version of “Lost” were the same; in addition, the digital chapter serves as an entry into digital fiction for uninitiated readers, as its traditional, linear structure and minimal level of interactivity do not present a significant barrier in terms of familiarity and accessibility, similar to *Inanimate Alice*. As such, the finished digital artifact did not introduce a significant deviation from my established writing process; the composition process of the analogue version of “Lost” was quite similar to “Last Stop Bar & Grill”.

3.4. “Puerta Cerrada de Unman”: A story in search of a medium

“Puerta Cerrada de Unman”, the second story in the *Færwhile* sequence, was planned in much the same way as “Lost, Seeking Found”. The first draft, written in first-person perspective narrating another character’s introduction, was composed from 12 December 2009 to 15 December 2009. Unlike “Lost”, however, I did not have clearly set goals about the form the digital version might take. My revision notes for Draft 1, dated 9 April 2010, indicate that while the narrative voice was working quite well, the story was rushed, lacking in story development: the narrative was not sufficiently communicating its character’s conflict. The chronological sequence moved too quickly, focused on plot rather than character development. The result was that the character’s motivation, and thus her conflict, was not made clear in the narrative; the purpose of her actions was not apparent, and therefore her story seemed arbitrary and forced.

The second draft of “Puerta”, completed shortly after these revision notes were made, added elements of character backstory and environment, but continued to implement a chronological structure. A fallow period of four months followed this draft; the text was not meeting its rhetorical goals, but I could not yet outline a new plan. Marilyn Cooper noted that materials of composition hold “specific potentials irrespective of the interests of a culture or a designer” (2005, p. 36); this character’s material translation was thus far certainly not meeting my interests or goals. Frank Smith described this particular disconnect: “The intentions are not a model of what the text will be like; many aspects of the text may be different from the original intentions, and intentions for what the text will be like may often be lacking until particular parts of the text are actually produced” (1982, p. 111).

In July 2010, I conceived a way forward, which was to produce a new part of the text: the digital version. Planning notes on 22 July 2010 firmly cast the digital text of “Puerta” as “an amalgamation of blog entries, twitter feeds, and chats.” The revision notes at this time offer a window into the cognitive shift in planning that occurred:

Why is it so linear? Play with time. It’s boring. It’s a very short segment, and it’s mimicking ‘Lost, Seeking Found’ structure too closely. So, new structure. Think about her, about how she wants her world to work. I.e., she’s a digital-philiac [sic] - she loves the digital world, communicates in the digital world as much as she possibly can. To me, this seems to indicate her story might want to be a hypertext. Thus, the print story itself needs to mimic that thinking.

This evaluation of the current text reshaped the goals for the text in a concrete fashion by finally considering the digital aspect of the character, and what form her digital text would take, a demonstration of the importance of writerly interactions with the fictional world and text-produced-so-far during the composition process. By considering the character and the narrative perspective, I was able to re-evaluate the rhetorical goals for this story, specifically with regard to how this particular character would shape and communicate her story. The digital version (the “Puerta Cerrada de Unman” blog) was completed in July 2010; the final major draft (3) of the analogue was completed in August 2010. In composing the digital version, I had addressed the source of the dissonance between my intentions for the print text and its translation: the narrative failed to structurally or linguistically reflect the character of its narrator. The chronological structure failed to deepen the character and her conflict; as a character whose favored social interactions came in the form of web chats, text messages, and discussion forums, the character’s interaction with her world, both real and virtual, was hyperlinked. Her story, however, was stuck in sequential page turns.

Further, the language of the first and second drafts offered little in the way of digital parallels; the only representations of digital interactions came in the form of the text message exchanges between characters. Otherwise, the story was written exclusively through prose text. [John R. Hayes & Linda Flower](#) noted that revision “can be triggered not only by dissonance between intention and text but also by the discovery of better things to say, by the negative evaluation of a plan, and by failure to comprehend the text” (1986, p. 1111). In the case of “Puerta,” the dissonance between intention and text was ameliorated by the negative evaluation that the text was certainly not meeting its rhetorical goals; the “discovery of better things to say” occurred only when the digital elements of the text as a whole entered into consideration. In short, “Puerta” needed to be told through the digital before the prose story could take its true form.

This laborious and frustrating sequence of composition exposed a fallacy in my overall composition plan for the *Faerwhile* multimodal project: as a prose writer, I had planned to write all the analogue texts first, then remediate into digital form. [Thomas B. Ward & E. Thomas Lawson](#), in their breakdown of how speculative fiction writers create new worlds, described this as the “path-of-least-resistance” method, referring to “the tendency of individuals to retrieve and use highly specific, *basic-level* instances of stored concepts when they create novel ideas within conceptual domains” (2009, p. 198, emphasis original). I based my new fictional “world” — the digital composition — in a basic-level instance of an analogue text, my tacit knowledge of the latter driving the composition; my tacit knowledge of digital fiction had not yet expanded sufficiently for the multimodal composition necessary in this project. I believed the prose story needed to work on its own before it could be remediated into digital format; I had imposed an inflexibility on my creative practice, generating such a “creative tension” ([Senge et al., 1994, p. 195](#)) that it took a significant effort to rectify the distance between the reality of the text-so-far with my personal vision of the character and her story. [Ward and Lawson](#) noted that the path-of-least-resistance method can result in unoriginal ideas, limited to the properties of that basic-level instance (2009). By limiting myself to a conventional mental model of prose composition for a multimodal story, the composition process broke down quite quickly. My knowledge of digital fiction had expanded, and I had engaged more with digital-oriented characters and narratives, but I had not yet constructed a mental model that afforded a fully multimodal composition process.

3.5. *The Final Chapters: Multimodal Composition at Work*

In monitoring the text produced to this point, the rhetorical problem had restructured itself in response to the months-long creative tension that occurred in the composition of “Puerta Cerrada de Unman”. Both my goals for the text and my knowledge of the media had evolved, until I understood that the composition process for multimodal works must necessarily be multimodal, rather than progressing in a linear fashion as a prose-then-digital remediation. The task environment had changed — no longer was the rhetorical problem merely to shape a narrative, given a character and

a particular conflict. The rhetorical problem now incorporated the need for a narrative that could be built in both print and digital media. The final four stories in *Færwhile* (“Awake the Mighty Dread”, “Threading the ‘While”, “Streams Slipping in the Dark”, and “Swallowing the Tale’s Tail”) demonstrate an evolved composition practice, with a more integrated, multimodal planning and revision process.

3.5.1. “Awake the Mighty Dread”

“Awake” is the first piece written with this fully realized rhetorical problem: the story required elements that would function in both analogue and digital works, so I incorporated digital platform selection into the planning process. It was in this story, fruitfully, that my explicit knowledge of digital platforms and their affordances became established enough to influence and shape the generation and translation activities. Jenny Weight, based on her own digital composition practice, described this as an effect of the text-as-apparatus: “As author mutates into programmer, texts transform into a range of possibilities and circumstances — it may be better to conceive of texts in the text-as-apparatus as environments rather than as traditional narratives” (2006, p. 434). My knowledge of these digital platforms and their affordances — the “text-as-apparatus” — had developed much more fully by the time I began drafting “Awake”; multimodal composition entered the process early in this piece, as I immersed the story in the digital environment in the generation activities, though translation remained delineated.

“Awake” took digital form in interactive fiction (IF), a distinct genre of digital fiction that developed from the text-adventure games of the 1970s and 80s such as *Infocom’s Zork series* (1977). IF is almost entirely text-based, displaying story segments in response to the reader-player’s input in a command line. From a composition perspective, constructing IF involves a great deal of programming, to the extent that the text-as-composed (i.e., the source code) does not resemble the text-as-read/played (i.e., the transcript of the game played). Given this programming aspect, the generation of the digital version of “Awake” centered on additional priorities to character and conflict. Nick Montfort noted that world-building takes on a much larger significance in interactive fiction: “It is a simulated world, which in practice is represented computationally in some sort of data structure or collection of objects” (2003, p. viii). Aaron Reed echoed this, stressing that “interactive fiction’s strongest storytelling tools are objects and settings” (2011, loc. 904). The manner in which interactive fiction is coded — with “rooms” forming the storyworld and “objects” with which the player-character can interact, and the ability for the player to experience the storyworld outside of the author-created order — affected the prose translation process. The early draft was focused on building a detailed, rich story setting that encouraged the player-character to move around — to get on and off a train, to open doors, fly in balloons, explore castles, and talk to nonplayer-characters.

Writing with a plan for interactivity also opens up possible paths the character could take; although the analogue text would necessarily restrict itself to the path chosen by the author, the digital version could allow several or all of them to exist for the reader/player, forming multiple “potential narratives” (Montfort, 2003, p. 14) from one character and a given environment. These potential narrative paths then fed back into the revisions of the analogue text: the story’s central character mentally wanders into alternative “what if” storylines at various points in the text. In this manner, the possibilities for multiple pathways that are inherent in an interactive fiction find parallels in the analogue text, which restricts itself to the narrative pathway defined by the writer while still incorporating glimpses of the multiple potential narratives.

3.5.2. “Swallowing the Tale’s Tail”

“Swallowing the Tale’s Tail” was partially drafted in November 2010, but was not completed until January 2012. The rhetorical problem for this piece was specifically to offer a clear denouement. In terms of narrative perspective, *Færwhile* progresses through mimetic third-person perspective to a layered multiple perspective narration; in this final chapter, the perspective (apparently) cycles back to a mimetic first-person narration. This is the only piece in which the central catalyst for the entire tale narrates her own story. What is communicated through this section, however, is that in actuality, this character is the *only* narrator. The other apparent narrators throughout the novella are both voices of the fractured character whose conflict drives the entire story.

In the analogue text, this intention expresses itself in the changing visual style of the font, which changes throughout the novella according to the (apparent) narrator of each section or chapter. The expression of this intention in the digital version begins in a note made at the end of Draft 1, 28 November 2010: “I see [the main character’s] dream world as a bit of a maze, arbitrarily connected as it might be in a child’s mind.” The digital version of this chapter is a website; each page presents an animated GIF representing the scene’s setting, a musical soundtrack, and an overlay of story

text. The multiple narration of the chapter is represented visually, as the lexias are presented from various characters' points of view, and thus the font and color of the written language matches the covert narrator. An animated button at the bottom of each page (which, when clicked, advances the text to each new lexia) morphs into an image each of the characters every few seconds, representing the covert narrators visually. This iconic symbol asks the reader to question who the narrator is, who has power in the text. The visuals shift with each click, merging the narrators into one; the message here is delivered visually in addition to verbally.

3.6. *Print as Visual Text*

The use of different fonts for different narrators in each of these analogue stories was a change made late in the revision process. The revision process was also informed by my growing knowledge of digital fiction, as well as my growing awareness of Gunther Kress and Theo van Leeuwen's visual literacy (2006), as I began to "account for how visual cues with varying degrees of detail can supplement verbal cues to serve participant-indexing functions" (Herman, 2010, p. 87). As I worked on each of these pieces, various aspects of each medium fed back into other modes: my tacit knowledge of digital affordances and advantages influenced the composition process, but also later revisions of the analogue text. After drafting both the analogue and digital versions of a chapter, I frequently found that the unique affordances of digital media had altered my mental model of the narrative so that the analogue draft no longer matched my refined goals for the piece. Found images, created images, alterations made in adapting the text, all reshaped the story I had originally planned.

A prime example of this is perhaps the most simple: the various fonts representing different narrators appear quite late in the composition process — only in the January 2012 revisions. While the analogue novella remains in Kress's author-dictated order (Kress, 2005, pp. 7, 16), a convention of the book or printed text, multimodal elements that also engage the reader on a visual level begin to emerge. While these effects are certainly not restricted to digital environments, and have been used extensively by other writers,³ this is the first instance in which I have used them in my prose writing — a clear effect of expanding digital fiction knowledge and visual literacy on the part of the composer.

4. Conclusion

Jim Porter, in his description of his evolution from pencil-and-paper writer to self-described "cyberwriter," stated that:

The technological past matters. It shapes the writer and writes the body in significant ways — etching itself on the writer's consciousness and body, influencing how the writer learns to compose and how the writer communicates in a social milieu. Our ideologies about writing, about composing, about rhetorical situation are formed in these various technological pasts, etched by various technologies (2003, p. 390).

Technology etched itself into my composition process, evolving it from monomodal to multimodal practice. Flower and Hayes' Cognitive Process Model (1981), as well as my own practice-based methodology (Skains, 2016) has provided a solid framework from which to analyze the effects of this shift in my composition process. The technology of digital media, or the "text-as-apparatus" (Weight, 2006), altered the rhetorical situation in creating these fictional texts; in addition to the familiar rhetorical problem of creating a compelling character-driven narrative, digital media added additional considerations, such as multiple modes, reader interaction, and non-traditional story structures. The difficulties I discovered in transitioning to a digital composition practice parallel those of students attempting to draw upon their print-based composition knowledge in multimodal composition tasks (DePalma & Alexander, 2015).

As my long-term memory, or explicit knowledge, of digital fiction and its affordances developed, my composition practice adapted to these additional dimensions. "[W]hile technology-afforded multimedia tools make it comparatively easy for an author to realize a vivid text, they also make it a multiplicatively more complicated matter to vividly realize an authorial intention" (Nelson, Hull, & Roche-Smith, 2008, p. 416). In creating a digital text, the writer is no longer constrained to making meaning solely through written language. The new digital media are exciting, allowing writers to create meaning through whatever mode is most suitable, but at the same time this multiplicity of narrative

³ For more on the use of visual mode in written language texts, see Drucker (1994), and more recently, Wurth, Espi, and van de Ven (2013).

modes significantly increases the creative decisions that have to be made. The digital writer's "composing process is a collaborative process of mediating between the prose she writes for the reader, the programs and systems she anticipates underlying that prose. . . In this anticipation, the text endlessly recedes from her control" (Sloane, 2000, p. 40). As I have seen in my own practice, this complexity can lead to changes in narrative structure, narrative perspective, multiplicity in narrative voice, and in the actual world-building for the story. These changes can be both positive in that they present new and under-explored potentials in a writer's fiction, and negative in that the writer is plunged into unfamiliar territory with many possible paths and very little navigation.

What helps to guide the writer in this unfamiliar territory is to make it as familiar as possible. "Involving and marshaling background knowledge. . . is part of the work of accomplishing the social event of reading or writing that is underway, a way of sustaining the social contexts that account for or display emerging understanding" (Brandt, 1992, p. 329); the writer must actively seek to expand his/her explicit knowledge, in order to internalize it into the tacit knowledge that is so important to composing a coherent narrative with depth and meaning. As my explicit knowledge of digital fiction and multimodal texts developed, my tacit understanding of narrative expanded, my process adjusted to the affordances of the new media, and the texts that emerged became more appropriately suited for their multimodal forms. Without coding an interactive fiction, my tacit knowledge would not have been sufficient to design a setting and character that would be successful within that medium. Without exploring what other digital writers have created, I would not have the literacy required to engage fully with the various semiotic systems of meaning-making that digital media offers. In this stage of learning, of developing knowledge, I did not shape the media to suit my purposes; rather, I rearranged my practice to suit the media, and in doing so discovered entirely new (to me) avenues for creating story. "In writing, meaning is made at the moment when 'that which is to be meant' is fused with 'that which can mean it', that is, when a meaning is matched with a form/signifiers by the writer, in the most apt fashion possible" (Kress, 2003, p. 39). By changing my explicit knowledge, widening it to include new methods for creating meaning, I was able to chart the previously unknown territory of digital fiction, at least on a rudimentary level, so that "that which I meant" could connect much better within "that which meant it".

These conclusions have significant implications for writers at work, as well as students learning methods of composition. Students in the digital age are increasingly immersed in digital media, their cognition and communication styles as affected by their digital immersion as my creative writing came to be throughout this project. While current pedagogy recognizes the importance of building digital literacy and composition skills in classrooms, nonetheless there remain disconnects between the goals of the composition classroom, and the approaches to digital composition applied. While "students' extensive exposure to new media technologies has allowed them to develop particular capacities for navigating new technologies, the extent to which these literacies have prepared students to *produce* rhetorically sophisticated texts is a different question altogether" (DePalma & Alexander, 2015, p. 184). Educators face a gap between their own experience and the conventional teaching of composition (Hundley & Holbrook, 2013), as well as the gap between students' rhetorical comprehension of the various new media they engage in on a daily basis.

The practice-based research here indicates that immersion in digital media communication environments, particularly in composition activities as opposed to reading activities alone, enables the writer/student to develop tacit knowledge about digital composition. The process of developing this knowledge can be frustrating, as learning anything new often is, but a supportive and immersive pedagogical environment can mitigate these frustrations and enable the learner to progress to a full capability with digital composition tools. Based upon the foundation of this research, the author is currently building a pedagogical model for teaching digital writing, conducting ethnographical studies of creative writing students as they immerse themselves in the composition of digital composition. These studies are still in progress; it is expected that they will further develop the insights gained from this initial practice-based study.

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