

Salve Regina University

**The Digital Incunabula:  
The Future of Storytelling in the Digital Age**

A dissertation submitted to  
the faculty of the Humanities program  
in candidacy for the degree of  
Doctor of Philosophy

By  
Michael Scully

Newport, Rhode Island  
March 2, 2018

ProQuest Number: 10749063

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10749063

Published by ProQuest LLC (2018). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code  
Microform Edition © ProQuest LLC.

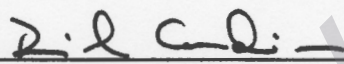
ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 – 1346




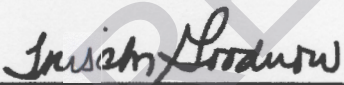
## SALVE REGINA UNIVERSITY

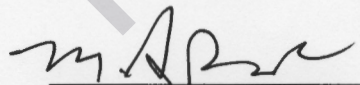
### GRADUATE STUDIES

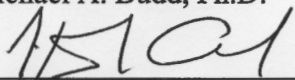
This dissertation of Michael Scully entitled *The Digital Incunabula: The Future of Storytelling in the Digital Age* submitted to the Ph.D. Program in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Salve Regina University has been read and approved by the following individuals:

Reader:                       Date  
Daniel Cowdin, Ph.D.

Reader:                       Date  
Matthew Ramsey, Ph.D.

Mentor:                       Date  
Trischa Goodnow, Ph.D. 04/12/18

Director,  
Ph.D. Program:                       Date  
Michael A. Budd, Ph.D. April 12, 2018

Provost:                       Date  
J. David Arnold, Ph.D. April 12, 2018

**For Alison**

PREVIEW

PREVIEW

**Michael Scully**©2018

Salve Regina University

A dissertation submitted in partial fulfillment of  
the requirements for the degree of  
Doctor of Philosophy

The Digital Incunabula: The Future of Storytelling in the Digital Age

Michael Scully

Approved:

---

Daniel Cowdin, Ph.D.

---

Matthew Ramsey, Ph.D.

---

Trischa Goodnow, Ph.D.

---

Michael Budd, Ph.D.

## TABLE OF CONTENTS

INTRODUCTION .....	ix
--------------------	----

<b>Part I:</b>	<b>Literal Landscape .....</b>	<b>1</b>
----------------	--------------------------------	----------

<b>Chapter 1:</b>	Publishing Revolution
	Moveable Type
	The 42-line Bible
	Incunabula
	Mechanical Reproduction
	Burned in Anger
	The Commodity of Thought
	The English Author
	The Pamphlet
	‘Hack’ Writers of Grub Street
	Newspapers
	The Birth of Narrative
	Nonfiction Narrative Structure
	Literary Journalism
	Literacy
	The Sacred Space
	Writing and Daydreaming
	Five Centuries of Silence
	Summary of Literary Media

<b>Part II:</b>	<b>Return to Orality .....</b>	<b>89</b>
-----------------	--------------------------------	-----------

<b>Chapter 2:</b>	The Return of ‘Hot’ Media
	Photochemical
	The Moving Image
	Capturing Sound
	Radio Fills the Air
	Pocket Radio
	Television Takes Over
	Farnsworth’s Gift
	Narrative in Oral Media
	Summary of Oral Media

<b>Chapter 3:</b>	The Digital Revolution
	The Computer + the Internet
	Telephony
	The Telephone

The Internet  
 Web Browsers and Search Engines  
 Social media  
 The Rise of Amateur Video  
 Digital Content  
 Are We Ready?  
 The Digital Orality  
 Narrative in the Digital Age  
 Summary of the Digital Revolution

**Chapter 4:** The Perfect Thing  
 Sony TR-63  
 Birth of Apple  
 Beyond the Paradigm  
 iPod Culture  
 Future of Digital Commerce  
 The iPhone Revolution  
 The iPad Arrives  
 The Third Screen  
 Multimedia Experiments for the Third Screen  
 iTunes App Store  
 iBook Author  
 Augmented Reality/Virtual Reality  
 Summary of Multimedia

**Part III: Multimedia ..... 219**

**Chapter 5:** ‘Total Work of Art’  
*Gesamtkunstwerk*  
 Experiments with Content  
 ‘The Crossing’  
 ‘Snow Fall’  
 ‘The Jockey’  
 ‘Firestorm’  
 Review of Experimental Multimedia  
 The Internet is ‘Disappearing’  
 The List

**Chapter 6:** Media Observations  
 Digital Economies  
 Public Media  
 Amateurism  
 The Digital Disruption  
 Summary of Digital Economies  
 The Digital Age



<b>Chapter 7:</b>	Dystopia Digital News Anchors The Treacherous Turn Crumbling Capitalism	
<b>Part IV:</b>	<b>Conclusions .....</b>	<b>320</b>
<b>Chapter 8:</b>	The Digital Incunabula Content Creation Packaging: the Next ‘Black Box’ The Future of Storytelling The Digital ‘Master Printer’ The Recipe for Digital Storytelling	
<b>Bibliography .....</b>		<b>352</b>

## Abstract

The term “incunabula” refers to the transition period that took place 50 years after Johannes Gutenberg introduced his printing press to the publishing world (1455 to 1505). In this thesis, I compare the first incunabula to the current “Digital Incunabula,” which I believe is the 50-year transition underway as we assimilate traditional storytelling practices to digital platforms (1996 to 2046). To illustrate this, I review the histories of the literal age, the secondary orality and the digital orality before making some observations about our transition into multimedia storytelling. The paper reviews several key experiments in multimedia storytelling produced by *The New York Times*, *The Rocky Mountain News* and *The Guardian* among others. The paper reviews the influences of consumer electronic devices including tablet computers, augmented reality, virtual reality and artificial intelligence. It also reflects upon nonfiction narrative forms for written and oral communication media. The paper also considers aspects of copyright policy, public media policy and the influences of the “digital disruption.” The paper concludes with some observations about the future of long-form, nonfiction storytelling as we move through the 21st century.

## **Introduction**

### **The Great Hall**

In Washington, D.C., the Library of Congress remains a popular spot for tourists. The library is actually a series of three buildings linked by underground pathways but the most popular of these—the Thomas Jefferson Building—is the museum and the destination most vacationers frequent. Like many of the other buildings on Capitol Hill, this building has a stone façade and the Beaux-Arts style structure itself covers an entire city block; atop the building, there is a copper cupola dome, which is the signature flourish defining the exterior of this structure. Inside, the Jefferson Building has to be one of the most ornate buildings in America: the hallways and gathering spaces are tiled and the walls and ceilings host murals, mosaics and paintings; statues abound.<sup>1</sup> After all, this is the world's largest library.

There are many entrances into the library complex, but the main one faces west towards the Capitol Building; visitors must walk up a sweeping series of stone staircases to approach the main doors. Once through security, tourists enter The Great Hall, which is a gorgeous two-story expanse and the showplace of the building. The entrance to the Main Reading Room is located at the back of the space and to get there, visitors will often walk between two seemingly identical and innocuous wooden showcases. The cases themselves are roughly each two meters long, a meter in depth and roughly a half-meter at its highest point; and the interiors are meticulously climate controlled. The Library of Congress hosts an impressive collection: there are nearly 32

---

<sup>1</sup> Cole, John Young, Henry Hope. Reed, and Herbert Small. *The Library of Congress: The Art and Architecture of the Thomas Jefferson Building*. New York: Norton, 1997.

million books in the LOC system but the books housed inside each of these showcases must be two of the most valuable.<sup>2</sup>

On the south side of the hall is the *Giant Bible of Mainz*; opposite, and just 20 steps away, is the *Gutenberg Bible*. To the laymen, these books appear similar; in fact, they look nearly identical. They are made of roughly the same materials, the texts are similar, the page designs mirror each other and both are “Illuminated,” or ornamented with gold leaf lettering and painted illustrations. Also, as it happens, both Bibles were produced in the same region of Germany, possibly in the same city, at roughly the same time: each dates to about 1455, give or take 18 months.<sup>3</sup>

Here is the remarkable difference: The *Giant Bible of Mainz* is a manuscript—or a book written by hand—and it took one scribe 18 months to produce; while the *Gutenberg Bible* was manufactured on a printing press and is one of the original 180 copies Johannes Gutenberg ran off during his year-and-a-half-long fledgling experiment with his new invention.<sup>4</sup>

So, on the south side of the hall is the manmade instrument; on the north side, the machine made. This transition marks the wholesale introduction of industrialization setting in motion the 600-year-long struggle between man and machine; then as now, the struggle continues, the machine is winning; and of late, there is a new paradigm shift underway in world of publishing: with the

---

<sup>2</sup> Cole, John Young, Henry Hope. Reed, and Herbert Small. *The Library of Congress: The Art and Architecture of the Thomas Jefferson Building*. New York: Norton, 1997.

<sup>3</sup> Eisenstein, Elizabeth L. *The Printing Revolution in Early Modern Europe*. Cambridge: Cambridge University Press, 1983.

<sup>4</sup> Ibid.

commercialization of the Internet, printed materials have been moving (slowly) from the industrialized printing press system and into the realm of the electronic, the digital.

Today, we are living at the dawn of the age of digital storytelling. Books and associated media are now being digitized, published online and delivered to our computers and cellphones and tablets via the Internet.

Since the commercialization of the Internet in 1996, we have seen a lot of major changes in the way we do things. The Internet has transformed the way we communicate, bank, shop, travel and consume media. It is this last relationship that interests me most. We are certainly consuming media much differently but I suspect there are many more changes ahead and I'd like to explore that future looking at what may be up ahead of us.

In this treatise, my purpose is to write about the two major transitions in the history of publishing: the first began in the middle of the 15<sup>th</sup> century—from manuscript to print—and the second—the movement from print to digital publishing—is underway now. In an effort to better understand what lay ahead in storytelling in the digital age, I would like to look at the first period of transition—known as the “Incunabula”—from handwritten works to the printed word, and then attempt to project an idea of the future of storytelling as we move forward exploring its application in a digital world.

### **About the Author**

As you read through this, please understand that I am a seasoned, associate professor of communication teaching digital journalism at a small, liberal arts college

in New England. I am also a graduate student working on a PhD in Humanities at Salve Regina University. My path to this moment in time has been long and winding. I started out on an obituary desk in upstate New York, moved to Washington DC to write about technology issues on Capitol Hill and I earned a masters degree at the Columbia University Graduate School of Journalism. In 2004, after two decades practicing journalism, an “informational interview” earned me a teaching position at a state school in New York and my life changed substantially. The craft of journalism is an internal one (or literal), it’s an exercise in information gathering and writing that is done intuitively; the art of teaching journalism is the opposite: it is an external exercise (or oral). During my opening days in the classroom, I realized that the things I took for granted as a journalist—how to speak to people, how to shape a story, when to start writing—suddenly had to be explained to young aspiring journalists and that set me down a path of reflection. As this was going on, elements of the Digital Age began making themselves apparent: It was my students who introduced me to Facebook and later YouTube and Wikipedia. When I was at Columbia University in the late 1990s, we were aware of the Internet but the latest innovation at that time was email. So much more was yet to come.

In 2007, after three years in the classroom, I accepted a new position teaching “New Media” at a small, private university in Rhode Island. When I interviewed for the job, I told the committee that if anyone claimed to understand the future of journalism in the pending Digital Age chances are they were lying. And then I told them that, while I didn’t have any firm solutions, I did have some advantages.

In 1993, I became a technology reporter and was assigned to Capitol Hill just as the Congress was taking up the idea of privatizing the Internet. During the next two years, I met all the legislative players and lobbyists and struggled, as everyone did, to grasp the uncertain future of the emerging Digital Age. At the time, the chatter was about “convergence,” which was one of the first of many modern terms for multimedia, but it was clear, after months of hearing people use the word, no one actually knew what “convergence” meant. Finally, during a conversation with a lobbyist, I asked the following desperate question: “What does it all mean?” And, after a pause, she looked at me and said something very lucid: “Right now, everyone is fighting like mad to build the plumbing but no one seems to be concerned about what will actually be in the system.” For the next 20 years, no one knew, and during that time, I explored the various news enterprises. I wrote for newspapers and trade journals; I spent four years writing for cable news; and I spent three more years working for a division of *Fortune* magazine. On paper, my resume was an agglomeration of media enterprises but, in actual fact, I had a sampling of most of the media: newspapers, television, magazines... and for a time, I even worked at a digital startup called New Century Networks. These were my advantages.

By the time I’d reached the classroom, I was ready to reflect and contemplate. I realized the following things: First, if journalism was going to survive, it needed to respect the traditions that had come before; next, there needed to be an appreciation for all the individual forms of media because each has strengths and weaknesses; and finally, there needed to be a new way to share information in the Digital Age. This became the foundation for the academic program I was building and I began teaching

with these ideas in mind. As students moved through my classes, I taught them how to report, write and edit; I also taught them how to shoot and edit video; further, I explained that there are rhythms and patterns to storytelling and feature stories offer the best avenues for the aesthetic—or artfulness—of the craft. Armed with these ideas, my students and I began experimenting with digital tools and story models: we launched blogs, we created Twitter accounts, we “friended” each other on Facebook and other social media sites and we produced video. After 14 years of this, it was clear to me that all the pieces were there but there lacked a cohesive theory that unified these various media forms and I began struggling for production models. After years of perfecting the digital tools, I retreated backward into the theory and that path led me to graduate school.

When I arrived at Salve Regina University in 2014, I thought I knew journalism and communication theory. I was absolutely wrong to think that. During my first semester, I took a research theory class that included reading an extensive amount of Martin Heidegger’s philosophy. At first I thought I’d signed up for a foreign language course as I struggled to understand some of the circuitous reasoning I found in the translations of Heidegger’s work. But I soldiered forth and when the class moved into some of the more modern philosophy, my understanding grew. Then the program began introducing us to communication theorists including Walter Benjamin, Terry Eagleton, Marshall McLuhan, and Walter Ong. Suddenly, I realized that I was not alone in my confusion over media theory; in fact, I realized that I was catching up with decades of fertile research and theory.



I also identified the building blocks of modern communication theory, which are these: oral/aural communication is natural; literal communication is learned. After the invention of printing and the global trend towards literacy, our approach to oral/aural communication changed. Just as we were beginning to understand this new age, this “secondary orality,” a new digital form of communication was introduced called the “Digital Orality.” It didn’t take long for “Digital Orality” to become a point of interest for this dissertation but then I realized that this was just the first step in a development towards something more. That is what this book is about.

### **Writing the Dissertation**

To produce this work, I came at it from three directions: I applied my knowledge as a practicing journalist, I considered the technologies I learned as a professor, and I shaped my understanding with the theory I learned as a graduate student. My purpose here began as an exploration of journalism in the Digital Age but after much research realized that all forms of story are being affected by digital innovations.

I also realized that this isn’t the first time humankind has shifted the way it communicates: in the 15<sup>th</sup> century, we moved from the oral to the literal during a 50-year period stretching from 1455 to 1505 in an age we now call the “Incunabula;” today, we’re moving from the literal to the digital in a period I expect will stretch from 1996 to 2046 and I’d like to call it the “Digital Incunabula.” Our journey has been (and will be): **Oral → Literal → Digital**. Given that the first Incunabula took five decades, I expect that the current Digital Incunabula will likely take as long and I’ve

decided to reflect upon the first transition Oral to Literal searching for clues hinting at what's to come during the current Literal to Digital change. That idea sent me rummaging through old archives to look at rare book collections and considering the changes that transpired after the invention of the printing press in 1455. I was surprised to find how sweeping those changes were and, oddly, how similar the former and current transitions have become.

What you're going to find as you move through this treatise is a sense of that exploration. As you can see from the beginning of this introduction, I begin with Johannes Gutenberg and move forward through the Protestant Reformation and the Age of Literacy. From there, I review the return of oral communication and look at innovations in photography, film, sound and so forth. Then I looked at the influences of the Digital Age.

Because it was impressed upon me during my thesis proposal to consider augmented reality and virtual reality, I looked at these technologies; and then I considered how these devices may be influencing storytelling. Along the way, I looked at the economic and social factors preying upon the development of digital storytelling and I discussed the history of multimedia storytelling before finally arriving at a final resting place.

I found the journey to be fascinating and I hope that the writing in this thesis reflects this understanding. Finally, please understand that this work is a culmination of three long journeys, which included 20 years of practice in the newsroom, 14 years teaching in the classroom, and three years of theoretical study in graduate school. My hope is to find a middle ground, a resting place, which summarizes a final core theory.

As you move through the essay, you will notice that my writing style dwells heavily in a magazine form. I've written academic papers, and I've found some success writing in that medium, but I find academic writing to be cumbersome and dull and, frankly, didn't want me or anyone else to have to suffer through 400 pages of academic drudgery. Instead, I applied my knowledge as a magazine writer, believing that the narrative would be clearer, fresher and more engaging. Again, I hope that is the case.

### **The Form of the Dissertation**

The thesis is broken up into four sections, which move from "Literacy" to "Oral" and into "Multimedia" before moving into the "Conclusion." The method here was to start by defining the age of literacy moving from the 15<sup>th</sup> century to the present; after that, I reviewed the age of (secondary and tertiary) orality; from there, I moved into multimedia to review its history and theory; before making some conclusions about the future. Along the way, I wrote about some important moments in the development of story narrative, technologies that advanced the communication media, and techniques that have influenced the direction of future narrative.

In the first section entitled "Literal Landscape," I open with Johannes Gutenberg and the printing press, which will move us forward into the reign of King Henry VIII and the Protestant Reformation. Armed with the history, I move into the theory to explain the birth of English literature and the influences literacy had over the future development of mankind. I review the birth of journalism and move through its evolution to the modern practice of "literary journalism," and so forth. I also address

the issues of narrative form and the influence “emplotment” has over story design and the aesthetic of nonfiction literary storytelling.

The second section, entitled “Return of Orality,” follows the historical and technological developments of photography, motion picture, audio recordings and so forth. Walter Benjamin’s ideas about “mechanical reproduction” become instrumental in my argument as I move through the theory. I look at Walter Ong’s ideas about “secondary orality,” which are definitive in our relationship with oral-aural media. I also address the issues of narrative form with regard to oral media including film, music, photography and sound and how oral storytelling and narrative form shape the foundation for the aesthetic of these media forms.

In the third section entitled “Multimedia,” I return to the 19<sup>th</sup> century to investigate the theories of Richard Wagner and others, who helped build the foundation for multimedia storytelling in the 20<sup>th</sup> century. There have been many experiments designed to commingle literal media and oral media and we’ll review a few of them before we move into digital development. The age of “digital orality” appears to be in two phases: one that looks at forms of broadcasted literal materials; and a second that looks to advance the fusion of the storyteller with the audience. I look at augmented reality and virtual reality before moving into more complex ideas about digital storytelling.

In the “Conclusion,” I attempt to pull it all together and explain what’s going on now and what could happen in the near and distant future. That investigation had me asking questions about human cognitive abilities and the potential for organic and computer data integration. Is it possible for the human mind to connect to artificial

intelligence? Many theorists think so and that innovation will certainly transform the method for storytelling.

## **Methodology**

Which leads me to a few paragraphs about methodology. Most of the advice about writing a dissertation included the idea that one must write as they are reading, which I did aggressively. I found that in the development of this thesis, I started with a sweeping 180-page sketch of ideas and found myself backtracking and sweetening theories as I found more definitive research. The core of my thinking was this: Walter Ong defined oral communication; Terry Eagleton explained literal theory; and Marshall McLuhan wrote in a flowing free form about the intersections of both the oral and the literal. A decade ago, researchers began writing about “Digital Orality” or the influences of digital media over the human condition but the theory here doesn’t appear fully developed; nevertheless, I read through it filtering out the important points and added them to the thesis.

As I moved through this research, I found my own ideas shifting and the title and themes of my thesis began shifting too. I wanted to focus on journalism, but I discovered that fiction and non-fiction story forms have been influencing each other equally and I realized that the aesthetic of storytelling was more apropos; from there, I realized that if print is the medium for text and light and sound are the media for film and music, what is the defining medium in the Digital Age? I concluded that binary code is the alphabet for the all the current media forms—text, photo, video and sound all can be reduced down to a digital format called binary code—we can finally find

ways to fully deliver integrated multimodal stories. This reductive reasoning had me arrive at the following research question: What is the future of storytelling in the Digital Age?

Initially, I believed that repackaged multimedia stories presented on an accommodating piece of consumer electronics would be the solution but then I discovered there was something more going on.

During the first Incunabula (1455 to 1505), the idea of story altered significantly. In fact, the definitions of story and the purpose of storytelling shifted in new and exciting ways. During the “Secondary Orality,” (1820 to 1990) the same was true. And it’s clear to me, during this pending Digital Age (1990 to the present), the way we tell stories is shifting again and the dynamics of that change haven’t been fully realized. One theorist suggested that the way humans and computers communicate will change substantially in 2045 and this change will alter the entire structure of human development. Armed with that idea, I began realizing that the initial premise of storytelling was escapism, and that fiction forms were created to transport the audience to imaginary realms developed by authors/producers. (For nonfiction stories, the purpose of the producer is to act as the eyewitness for the audience, and this work has the same ability to transport readers/viewers through both time and space.) For the next 500 years, this relationship of the storyteller and the audience remained fairly defined: the producer creates the story, which is preserved in time until the audience discovers it. This is true in poetry, novels, audio recordings, film and video. But with the advent of augmented reality and virtual reality, the relationship between the producer and the audience becomes closer. With regard to VR specifically, the idea of

this technology is to trick the human senses to experience what the producer experiences: this is a form of first-person storytelling that attempts to place the audience in a place where they share the same sentient experiences of the storyteller. This is the first step towards true “empathetic” storytelling. Developments in computer software programming are only amplifying this experience, and that idea had me looking at Artificial Intelligence and the future of human-computer data exchanges. All that aside, my research question remains the same: **What is the future of storytelling in the Digital Age?** Specifically, I am curious what our stories will become by the middle of the century. They will certainly be transmitted digitally, but what form will they take? How will they be packaged and delivered? Will this new future and the narrative design of the story? And what will define the aesthetic—the artfulness—of these works? My initial idea was to address the evolution of multimedia storytelling: specifically, what media forms will influence fiction and nonfiction stories; but as my research evolved, I realized that we may be departing entirely from written stories and more towards these multimodal story forms that will transform the author/audience relationship. In the end, I address both ideas, and arrive at a place very distant from where I thought I was headed.

### **Back on Capitol Hill**

In 1993, as President Bill Clinton was being sworn in, I was exploring the hallways of the U.S. Capitol Building with a friend. What surprised me is that the complex actually has an underground maze of corridors leading outward from the Capitol Building; on the south side, hallways lead to the three House Office Buildings,

and on the north side, hallways lead to the three Senate Office Buildings. During my three-year tenure as a journalist covering Congress, I found myself weaving through this system, pausing occasionally to investigate and appreciate elements that weren't necessary open to the visiting public. (On one occasion, I stumbled into Vice President Al Gore's empty Capitol Hill office and got as far as his desk before I realized my transgression.) I also spent a fair amount of time in the Rayburn House Office Building, which is where most of the Congressional testimony is heard. I became a permanent fixture in the House Sciences subcommittee hearings, sitting at the press table, listening to Congressional members conversation unfold as they spoke about the development of the Internet. Then as now, I felt as though I had advanced into the Digital Age years before my peers in the news corps. Hearing the Congress muse over its visions of the future was fascinating. Examples from Congressional testimony included the idea that, via the Internet, "future English literature students would be able to read Shakespeare in the original manuscript...". This idea wasn't remotely possible, but that wasn't really the purpose of this argument; the purpose was over the growing ubiquity of communication. Overall, these Congressional members believed the Internet would transform everything... and to their credit, it did.

That was half a lifetime ago. I was 26 and single... I had shocks of wavy blond hair... and a mountain of student debt. I was also alive with the curiosity of the future and, again, that curious nature had me all over Capitol Hill.

At one point, I found my way down a corridor that aligned beneath the three House Office Buildings and walking East found a narrow pathway with a sign that read "To the Library of Congress" and I followed it. The hallways are old and sloping,