E-Scripture: The Impact of Technology on the Reading of Sacred Texts (2013)

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E-SCRIPTURE: THE IMPACT OF TECHNOLOGY ON THE READING OF SACRED TEXTS (2013)

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The tradition of religious readers in transition is not new: Augustine expressed "amazement" that Ambrose read silently and not aloud, movable type in the fifteenth century made the Bible publishable without scribal work, and today, electronic pages have become interactive in ways scarcely imagined a short time ago. How readers of today imagine a page (now conceptualized as a 'web-page') and consequently, reading in general, has profound implications for the 21st century. Acknowledging the fact that "the significance of a religious book lies not only in the message of its content, but also in the form and self-presentation with which it makes itself available to worship and transmission," this project assumes that a great deal of perspective is provided by looking at this current transition in light of the old. In virtually all previous reading transitions, a religious 'pattern of reading technology' can be seen, whose pieces are all well-known but have not been collectively applied to the current situation of e-reading. The pattern operates with a three part assumption: readers will initially use a new technology to perform the same functions as the old technology, only more quickly, with more efficiency, or in greater quantity. This early use of new reading technology, in other words, largely attempts to imitate the functions and appearance of the old format. The second part is that the old technology becomes sacralized or ritualized in the face of the new technology's standardization. As this standardization occurs, the new technology develops its own unique and innovative functions, exclusive to that form and shedding some or most of the imitative appearance and functions of the old technology – the third part of the pattern. Reviewing these transitions of the past and present, it becomes clear that perhaps fear of the new technology – however relatable – proves somewhat unfounded. New reading technology does not prove ultimately inimical to the old formats, or to religion, and despite many initial practical concerns, actually provides a multitude of benefits in the reading of sacred texts.

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1.0   INTRODUCTION

All ancient books which have once been called sacred by man, will have their lasting place in the history of mankind, and those who possess the courage, the perseverance, and the self-denial of the true miner, and of the true scholar, will find even in the darkest and dustiest shafts what they are seeking for -- real nuggets of thought, and precious jewels of faith and hope.
-- Max Müller, *Introduction to the Upanishads,* Vol. II

"The question is whether the enormous force of technology, and its insistence on speeding up time and compacting space, will reduce the human need for narrative—narrative in the traditional sense. Novels will become user-generated. An individual will not only tap a button that gives him a novel designed to his particular tastes, needs, and moods, but he'll also be able to design his own novel, very possibly with him as main character. The world is becoming increasingly customized, altered to individual specifications. This shrinking context will necessarily change the language that people speak, write, and read. Here's a stray question (or a metaphysical leap): Will language have the same depth and richness in electronic form that it can reach on the printed page? Does the beauty and variability of our language depend to an important degree on the medium that carries the words? Does poetry need paper?"
-- Don DeLillo, author of *Underworld* and *White Noise*

Holding a printed book and eyeing nostalgically the towers of his cathedral, Archdeacon

Claude Frollo mutters '*ceci tuera cela*' – 'this will kill that.' Columbia English professor

Nicholas Dames notes that one only has to "hold their smart phone while looking at a copy of

Hugo's novel—or read Hugo's novel on our smart phones"[1] to understand how Frollo felt,

although ultimately Dames and others find his fears too defeatist. This is because Frollo fears

that because small things overcome great ones, the book will essentially kill the building or, in

other words, the printing press will kill architecture as the only uncensored and highest form of

art and communication. But this fatalistic notion that a new reading technology will eliminate or

outright replace an existing format of communication is only one attitude in an immensely wide

field of responses and concerns that arise for readers when a new reading technology appears.

While Dames reads Frollo's (and Hugo's) concerns as ones of technological supersession in a

typical interpretation of the novel, his fears may also prove informative if read from a religious

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[1] Nicholas Dames, "This Will Kill That," *n+1 Magazine Online,* August 11, 2010, http://nplusonemag.com/this-will-kill-that.

perspective. As a religious figure, however, Frollo's perspective in Victor Hugo's classic *The Hunchback of Notre Dame* is for many people an easy one to sympathize with. This is especially the case because religious readers, who are reading the sacred texts of their traditions, necessarily respond to the new technology in myriad ways. Just as scholars of the book have studied the reception and reading practices of the religious during earlier transitions (scroll to codex, written to printed), it is imperative to study the influence of new technology on reading sacred texts due to the ever-increasing prevalence of e-books and online reading.

Zondervan, the world's leading Bible publisher, reported that the updated New International Version of the Bible (NIV) is the company's "fastest selling e-book, and broke into the USA Today bestsellers list" as it "sold twice as many copies compared with the same period last year."[2] Christians are not the only group using these new media to read sacred texts. The top 25 Project Gutenberg downloads includes a number of religious texts, including the Bible and The Art of War by Sunzi.[3] The popular online store Amazon "stocks hundreds of thousands of e-books (six of ten of its sales are now for the Kindle edition when it's available), and Google is digitizing millions more, including ones out of print."[4] In other words, this transition to e-formats is occurring quickly, and on a large scale – and religious readers are keeping up. Arguably, this current transition is the fastest and most radical yet: "it took 4,000 years from the invention of writing to the Roman-era codex of bound pages replacing scrolls, 1,000 years from the codex to movable type creating printed books, 500 years from the printing press to the Internet – and only

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[2]PR Newswire, "Updated NIV Bible eBook Hits Bestseller Lists, Becomes Zondervan's Fastest-Selling eBook," *General OneFile*, January 7, 2011.

[3] Michael Kozlowski, "The 25 Most Downloaded eBooks on Project Gutenberg," *The Good eReader Blog,* August 30, 2011, goodereader.com.

[4]L. Gordon Crovitz, "Information Age: From the Roman Codex to the iPad," *The Wall Street Journal*, February 1, 2010: A 15.

25 years to launch the iPad."[5] This project aims to study the reception and reading of sacred texts in new formats, but will use the scholarship and research regarding earlier transitions to shed light on this one. A backwards glance at earlier transitions from scroll to codex and from written to printed type properly situates this new transition in history, and gives new insight to it. To understand and master "the electronic revolution of tomorrow (or today)" by situating it historically "permits us fully to appreciate the new possibilities created by the digitalization of texts, their electronic transmission, and their reception by computer."[6] Essentially, the debate around supersession will here be reconfigured to shed light on those same issues in religious communities. How does the form of the text influence its religious nature or message? Does the use of technology present merely a different expression of traditions or do virtual communities and online reading constitute something entirely different, separate from religion? These are questions which exemplify how new technology and religion intersects with more philosophical questions about ritual and what it means to read sacred texts. This is where scholarship needs to go, as it seems that the current transition in relation to sacred texts is addressed only tangentially where it coincides with the study of the history of the book. That work will humbly begin here.

Readers today, religious or not, are in the midst of a dramatic period of upheaval: the page has taken on a new reality, as "the book has now ceased to be the root-metaphor of the age; the screen has taken its place."[7] The tradition of religious readers in transition is not new: Augustine expressed "amazement" that Ambrose read silently and not aloud, movable type in the fifteenth century made the Bible publishable without scribal work, and today, "electronic pages

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[5]Ibid.

[6] Roger Chartier, *Forms and Meanings: Texts, Performances, and Audiences from Codex to Computer,* (Philadelphia: University of Pennsylvania Press, 1995), 20.

[7] Nathan D. Mitchell, "Liturgical Theology: Ritual as Reading," in *Source and Summit: Commemorating Josef A. Jungmann*, editor Joanne M. Pierce, (Collegeville, Minnesota: The Order of St. Benedict, Inc., 1999), 170.

have become interactive in ways scarcely imagined a short time ago."[8] How readers of today imagine a page (now conceptualized as a 'web-page' or 'home-page') and consequently, reading in general, has profound implications for the 21st century – not only because it means drastic changes for the publishing industry, but also because it affects what the modern person reads as well as how they read, how books are written, and how information is disseminated and controlled.[9] This has clear implications not just for publishers, authors, and librarians or those worried about consumption patterns, but also inevitably for the larger understanding of what it means to be religious, to participate in ritual, and to read sacred texts. How the new technologies affect society at large and readers in general will obviously translate to a religious context in both similar and unique ways. While broad cultural shifts are difficult to predict, the increasing prevalence of new reading technologies seems to imply significant effects not only on how and what is read, but also the human (religious or not) mind and the religious ritual of reading.

Recognizing the above as true, and acknowledging the fact that "the significance of a religious book lies not only in the message of its content, but also in the form and self-presentation with which it makes itself available to worship and transmission,"[10] this project assumes that a great deal of perspective is provided by looking at this current transition in light of the old. By tracing a 'pattern' during previous transitions as an entryway into the discussion of the current transition and the use of new formats by religious readers, several key themes arise that are important for the study of religion and the reading of sacred texts, largely because the new technology has significant effects and necessitates change in the ritual of religious reading,

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[8]Ibid, 170.

[9]See Nicholas Carr, *The Shallows* (2011) on how digital reading changes our habits and mental capacities.

[10] Catherine Bell, "A Precious Raft to Save the World: The Interaction of Scriptural Traditions and Printing in a Chinese Morality Book," *Late Imperial China*, 1996: 160.

both publicly and privately. In virtually all previous reading transitions, a religious 'pattern of reading technology' can be seen, whose pieces are all well-known but have not been collectively applied to the current situation of e-reading. The pattern operates with a three part assumption: readers will initially use a new technology to perform the same functions as the old technology, only more quickly, with more efficiency, or in greater quantity. This early use of new reading technology, in other words, largely attempts to imitate the functions and appearance of the old format. The second part is that the old technology becomes sacralized or ritualized in the face of the new technology's standardization. As this standardization occurs, the new technology develops its own unique and innovative functions, exclusive to that form and shedding some or most of the imitative appearance and functions of the old technology – representing the third part of the pattern. Claude Frollo's fears of technology's deteriorating effect on religion may seem legitimate, considering the ubiquity of the printed book that was to come and which has been sustained until the present. Those fears, which remain for religionists and lovers of the codex today, may seem equally reasonable as the digital word is poised not to replace but, at the very least, to heavily reduce the influence and instances of printed books that are published and read. What can be seen immediately in the historical pattern of technology, however, is that there is certainly no outright replacement of a certain reading technology (or institution) upon the advent of a new one. Reviewing these transitions of the past and present, it becomes clear that perhaps Frollo's fear of the new technology – however relatable – proves somewhat unfounded. New reading technology does not prove ultimately inimical to the old formats, or to religion, and despite many initial practical concerns, actually provides a multitude of benefits in the reading of sacred texts. Religious ritual plays a large role in the maintenance of older formats, largely as a

part of the second step in the pattern, and for this reason many sources in this project provide a perspective on reading from a ritual standpoint.

1.1   PRELIMINARY DISTINCTIONS

Before beginning an in-depth discussion of the technological pattern in history and in the present American context, it is important to make some clarifying distinctions and overall observations. Firstly, this research will focus largely on the issues at stake in the contemporary American context, after discussing the historical pattern in previous European transitions. The issues in America are unique and will therefore be informed by sources particular to the American history of the book, like those of David Paul Nord and Matthew Pentland Brown. Second, this discussion is not one about religion or ritualizing online. Rather, it is an analysis of the process of reading, writing, disseminating, worshipping, translating, and experiencing a sacred text. 'Doing' religion online, compared to reading sacred texts in e-formats, is seemingly, and for these purposes, another issue entirely.[11] In many cases, the conversation regarding 'online religion' focuses on ritual, communal, or other religious practices being conducted via the internet. While this could include the reading of sacred texts, the pattern of technology applies specifically to it and so this project will refrain from discussing religious practice online, focusing on the use of electronic devices or computers strictly as pieces of reading technology.

Another important distinction that must be made is between reading online (or more generally, on a computer screen) and the newer phenomenon of reading an e-book. This is not a cut-and-dry electronic versus print dichotomy; there have been two stages of new technology in recent years, each with their own benefits and disadvantages. While the discussion of both

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[11]There are a large variety of sources regarding 'doing' or 'practicing' religion online. See Brenda Brasher, *Give Me That Online Religion* (2001); Lorne Dawson and Douglas Cowan, *Religion Online: Finding Faith on the Internet* (2004); etc.

formats overlaps in many ways, one important difference remains: it seems that the e-book represents a kind of 'return' to a more traditional book format. It preserves the market system for books that is lost online, requires stricter reading (as compared to listening or watching), and reimposes the author's role onto the text. Citations are made more conventional with an e-book rather than an online source, and that author-title-publisher formality carries with it a sense of authority that online sources are perceived to lack. The important non-linearity of the codex/printed book, which will be discussed more in-depth later, is somewhat negated by the e-book format, according to some. Some texts, especially complex or religious ones, "demand the kind of navigation that only the codex provides," and while internet or computer reading maintains this quality, using an e-book seems to sacrifice that non-linear experience.[12] It is interesting to note that the e-book in some ways returns to the dynamic of the scroll format, by removing the reader's power over the flow of their reading experience which was originally allowed them by the printed codex format. When readers 'scroll' through a computerized text or an e-book, they "resemble readers of antiquity reading a volume or roll,"[13] albeit a scroll that retains print inventions such as pagination or tables of content and also introduces keyword searching that differs greatly from the linearity offered by a scroll. As a result, pagination is a significant concern among e-book/internet users and researchers. Journalist Jeff Duntemann argues that standard pagination has three important benefits. First, there is a uniformity of application, meaning that page numbers work in the same way in every book – that is, page numbers today count pages, not paragraphs or sentences. Secondly, they provide a uniformity of

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[12]Lev Grossman, "From Scroll to Screen," *New York Times Book Review*, 4 September 2011.
[13]Guglielmo Cavallo and Roger Chartier, "Introduction," in *History of Reading in the West*, by editors Guglielmo Cavallo and Roger Chartier, (Amherst and Boston: University of Massachusetts Press, 1999), 27.

reference. When referring to the same edition of the same book, "everybody sees a given page begin at the same point in the text."[14] Lastly, page numbers provide a precise system of reference. Every reader, by referring to a page number, can be put within a few hundred words of the referenced passage. For Duntemann, this loss of pagination that accompanies the use of the e-book seems insurmountable. He does suggest, however, an alternative system of decimal places within the e-text, where clicking on or holding one's finger on a word or sentence will correspond to a specific decimal number which is standard for all electronic editions of the text. This is perhaps the spirit of new technology, where innovations like Duntemann's hyperlink reference system are one of the new and unpredictable effects of using a new format, just as the printed book fostered new inventions like tables of content. It is interesting to note, however, that standard pagination was a gradual invention, and that particularly with sacred texts or scriptures, the referencing system is to chapters and verses, and in many cases remains that way today.

The two forms of 'e-scripture', despite the aforementioned distinctions, present many similar issues and represent two points in the same field of study. For example, both formats (e-book and online) imply a new economy of writing, in which the traditional publishing and printing model is wholly altered. Both make "the production, transmission and reading of a given text simultaneous" and unite "in one individual operator the tasks, until now distinct, of writing, publishing and distributing," which in turn "annuls the old distinctions between intellectual roles and social functions."[15] The distinctions between the "separate processes of creation, reproduction, and distribution that characterize the classic industrial model of print

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[14] Jeff Duntemann, "Pages in Peril: what we may lose as e-books go mainstream," *The Indexer*, 2008: 148-151.

[15] Cavallo and Chartier, 27.

commodities"[16] are erased. This issue is of vital importance, especially for religious texts, and will continually be implicated in more detail throughout the project. For this and other reasons, the pattern of technology posited here will be applied to both the e-book and online reading – albeit with their subtle but important differences in mind.

One last overall consideration to bring to this entire body of work is the theory that the history of reading has fallen into a trend from intensive (the reading of a few books intensely in the time of manuscripts) to extensive, or consumerist, reading (the reading of a myriad of texts more quickly.) The intensive reader in the early stages "faced a narrow and finite body of texts, which were read and reread, memorized and recited, heard and known by heart, [and] transmitted from generation to generation," while the extensive reader of modernity "is one who consumes numerous and diverse print texts, reading them with rapidity and avidity and exercising a critical activity over them that spares no domain from methodical doubt." [17] This was not a rapid and comprehensive transition but a gradual process, aided by the explosion of reading material provided in large part by the advent of new reading technologies. As more texts became available, in other words, readers adopted a different reading style: silent skimming, becoming increasingly voracious and cursory as history proceeded. This overall trend is particularly relevant to religious reading, as "the intensive reading of a small collective canon of texts" refers mainly to religious books, primarily the Bible, which changed in "a modern, secularized and individual way" as "extensive reading was characterized by an eagerness to consume new and

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[16] Geoffrey Nunberg, "The Places of Books in the Age of Electronic Reproduction," *Representations*, 1993: 21.
[17] Chartier, *Forms and Meanings,* 17. See also the works of Paul J. Griffiths and Rolf Engelsing.

varied reading materials for information, and for private entertainment in particular."[18]

Essentially, intensive reading is most often synonymous with the in-depth study and

memorization of just a few religious texts in the early modern era,[19] while extensive reading has

come to mean the consumption of a wide variety of texts for a similarly wide variety of reasons:

not just for religion but for entertainment, education, or even curiosity.

2.0 THE PATTERN OF TECHNOLOGY IN PREVIOUS TRANSITIONS

Before applying the three-part pattern of technology to the current print-to-electronic

transition, it is obviously necessary to establish the pattern using evidence from historical

transitions. Each 'step' of the pattern will be discussed in reference to each of the two major past

transitions: from scroll to the codex (bound book) and from written to printed, moveable type.

This will set the vital historical background for the application of the three-part pattern to the

current print-to-electronic transition.

2.1 EFFICIENCY AND IMITATION

The transition to the codex from the scroll undoubtedly followed the first step, wherein

new technologies are employed mainly in imitation of the old technology in both function and

appearance. In other words, the new technology is initially used to do what the old formats did,

but in a quicker or more efficient way, and in largely the same arrangement or design. The

codex, for example, "imposed its form" but "did not render obsolete" the scroll and its uses.[20]

This was largely because the codex merely bound together in a different way the same pages,

illustrations, and conventions of the older scroll format.

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[18] Reinhard Wittman, "Was there a Reading Revolution at the End of the Eighteenth Century?" in *A History of Reading in the West*, editors Guglielmo Cavallo and Roger Chartier, (Amherst and Boston: University of Massachusetts Press, 1999), 285-6.
[19] Matthew Pentland Brown, *The Pilgrim and the Bee: Reading Rituals and Book Culture in Early New England,* (Philadelphia: University of Pennsylvania Press, 2007), 14.
[20]Ibid, 19.

The first step also occurred, and perhaps to a larger extent, during the advent of the printing press. It is frequently noted that "neither in their appearance nor in their content do these earliest pieces of printing differ from manuscripts…the printers strove to imitate manuscripts as closely as possible."[21] Until at least the sixteenth century, the format of the printed book reproduced that of its predecessor. It remained dependent on the manuscript's "layout, scripts, and appearance, and, above all, it was completed by hand,"[22] with the addition of finishing touches, corrections, titles, and miniatures. Many activities specifically associated with the format of the manuscript also continued long after the introduction of printed books. Scribes and those with religious affiliations continued to "copy books by hand for centuries after Gutenberg."[23] The printing press by no means put an end to the tradition of copying manuscripts, especially as a religious practice (which will be discussed later.) Again, while the "new technological marvel" of the printed book was of at least "equal interest" to European rulers and citizens, "hand-copied manuscripts would retain a special allure into the sixteenth century and beyond."[24] Perhaps as a result of nostalgia, or perhaps economical or traditional reasons, the initial users and creators of the book "favored new combinations of old ideas at first" and only later attempted "the creation of entirely new systems of thought" and production.[25] In fact, readers continued to read aloud in the tradition of a handwritten text even when confronted with

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[21] M.T. Clanchy, "Looking Back From the Invention of Printing," *The Quarterly Journal of the Library of Congress*, 1982: 174.

[22] Chartier, *Forms and Meanings,* 14.

[23] Crovitz.

[24] Andrew Pettegree, *The Book in the Renaissance,* (New Haven: Yale University Press, 2010), 20.

[25] Elizabeth Eisenstein, *The Printing Revolution in Early Modern Europe,* (Cambridge and New York: Cambridge University Press, 2005), 44.

the new printed text; "the hushing up of the reader has been a gradual process, and even the printed word did not success in silencing all readers."[26]

Nor did it initially eliminate the punctuation and formatting intended for the ease of reading aloud, as even in "the sixteenth and seventeenth centuries punctuation continued to be for the ear and not the eye."[27] The key to this step is that, in combination with the second and third step, outright replacement of one format for a new one rarely occurs. As mentioned, scribes even after the advent of print were "kept busier than ever" due to the fact that "the earliest printed books were hybrid products that called for scribes and illuminators to provide the necessary finishing touches."[28] The written to print transition was a gradual one, and no initial distinction in terms or language between print or written was made at first. It can be seen that "the first printers, indeed, restricted themselves to transferring into new books the sizes, dispositions of texts, characters, and ornament found in manuscript."[29] It was perhaps not until print developed its own advantages and innovations – the third step – that there was any distinguishing terminology.

One specific example of this first part of the pattern during the transition to print is the use of the new print technology to satisfy an age-old impulse: to preserve. It is often recognized that "complaints about an overabundance of reading materials predated Gutenberg by hundreds of years."[30] In fact, the phenomenon of creating large libraries and compendiums amidst a sea of texts and information dates back to the mythically-proportioned library at Alexandria. In fact, in

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[26]Marshall McLuhan, *The Gutenberg Galaxy,* (New York: University of Toronto, 1962), 104.
[27]Ibid, 105.
[28] Elizabeth Eisenstein, *Divine Art, Infernal Machine: the Reception of Printing in the West from First Impressions to the Sense of an Ending,* (Philadelphia: University of Pennsylvania Press, 2011), 6.
[29]Ibid.
[30]Eisenstein, *Divine Art, Infernal Machine*, 87

Alexandria and other ancient cultures, "far from complaining about overload, scholars seem to have thrived on the challenges of mastering increasing numbers of books."[31] The impulse to compile and demarcate was further carried out even before print in 'commonplace books,' in which readers of the Renaissance "often made their own anthologies by copying out choice excerpts from what they read" as part of the reading process.[32] The commonplace books essentially amounted to private anthologies or compilations – a 'personal' library of favorite excerpts. The advent of the press and the rapid increase in the number of available books, therefore, would only seem to exacerbate this interest in the preservation and differentiation of important books. Indeed, the invention of print (and, consequently consumerist or extensive reading) complicated the process of commonplace books – an innovation molded by the written manuscript. The problem arose that "if you read many books of many kinds, and industriously excerpt passages from them all as you go, you will very soon have in your commonplace book a mass of material of a diversity and range that in the fourteenth century would have been unthinkable…it will not be obvious how to control and order this material; nor will it be obvious how to decide what to excerpt, and from what to excerpt."[33]

But the problem posed in its most recent manifestation by print could also be solved by print itself, following the pattern of addressing old problems or functions more efficiently with a new technology. The utility and nonlinearity of a printed text itself made it "akin to a library" as a reference system, overcoming the shortfalls of the manuscript "in terms of size and

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[31]Ann Blair, *Too Much to Know: Managing Scholarly Information Before the Modern Age,* (New Haven: Yale University Press, 2010), Ch 1.
[32] Paul J. Griffiths, *Religious Reading: The Place of Reading in the Practice of Religion,* (New York: Oxford University Press, 1999), 105.
[33]Ibid, 105-6.

durability…compounded by its lack of navigability."[34] Recognizing these "preservative powers

of print,"[35] printers and readers began to employ the new technology to satisfy this old impulse

of an extensive library or an anthology to demarcate and preserve important texts. There was a

marked increase in average library size at the same time that more and more material was being

produced, compounding the problem of organization and storage and preservation.[36] Printing

was credited with finally "restoring ancient wisdom and preserving it for posterity, with

spreading letters and learning" that had been impossible previously.[37] Now, printers could collect

together and present in a lasting form "the writings that been scattered in manuscript form and

were thus vulnerable to being destroyed."[38] They could preserve lost tongues, highlight

celebrated texts of antiquity, and otherwise separate "the wheat from the chaff."[39]

The chief concern for some was that "unless contained and restrained…the increase in

output would result in intolerable disorder, and it would become a disgrace rather than an honor

to be an author,"[40] which would seem a particularly acute problem for religious texts. But, as

mentioned, in addition to satisfying this old desire or function, print complicated the processes of

categorizing, storing, and cataloguing, Readers and religious people were "caught between long-

lived fears of loss (stemming from repeated catastrophes in the age of scribes) and an increasing

anxiety aroused by the astonishing multiplicity of books,"[41] and so the impulse to create a library

or collect works in a single printed book became stronger. There was a rapid increase in the

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[34]Brown, 33.
[35]Eisenstein, *Printing Revolution*, 80. See also Brown, 143-44.
[36]Eisenstein, *Divine Art, Infernal Machine,* 86.
[37]Ibid, 13.
[38]Ibid, 39.
[39]Ibid, 27, 80.
[40]Ibid, 87.
[41]Ibid, 88-89.

"output of tables, catalogues, gazetteers, and other reference works"[42] which spoke to the age-old

practical and religious desire for preservation. As print became more and more standard, the

impulse remained; an impulse borne in scribal culture but maintained with print at first to collect

and preserve, and then eventually to demarcate the importance or superiority of certain texts –

even into the 19th and 20th century. Preservation in these more recent times becomes a deeper

concern – with industrialization, there is an explosion of printed material, and the ideal of an

extensive library conveniently also addressed the concern of what will happen to all of these

books. Great libraries in the 19th century were opened, with big public collections, all geared

toward the preservation of all this new material and highlighting the most important among

them. Libraries inherently involve collection, classification, and labeling, and these 19th century

libraries were no different.

Evidence of using a new technology (print) to satisfy this older preservation impulse can

also be seen in the creation of dictionaries in the 17th and 18th centuries, which appealed to "the

growing desire to systematize and to compress cast areas of human knowledge onto the printed

page in order to make them available to a literate elite in the most efficient format possible."[43]

More evidence is found in anthologies like Max Muller's *Sacred Texts of the East* or *The*

World's Great Classics series, published in 1900. Though not all the texts in the latter collection

are religious, a vast majority are – and the compendium itself cites the "increase of the reading of

the best books of all time"[44] as its motivation. As if there were any doubt of the series' place in

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[42]Eisenstein, *Printing Revolution*, 69.

[43] William A. Graham, *Beyond the Written Word: Oral Aspects of Scripture in the History of Religion,* (Cambridge: University of Cambridge, 1987), 26-27.

[44]Literary Editor Julian Hawthorne, "Introduction to the Series" in *The World's Great Classics, Volumes 1-32* (New York: The Colonial Press, 1900).

the historical pattern of technology, the series' editors included this passage as a part of their introduction, explicitly citing the printing press:

> "The art of printing has revolutionized the world. The printing-press has proved far more potent than any other civilizing influence. Learning is no longer confined to the few. The literature of civilization is free to all. 'He that runs may read.' The danger lies in reading everything we run across. Indiscriminate reading is seldom beneficial...In the 'World's Great Classics' the intellectual pleasures and luxuries of life are made accessible to every home where the love of reading prevails. The publishers have provided a feast with the "Immortals."[45]

Including everything from The Divine Comedy to Plato's Dialogues and the Analects to the Talmud, this 60-volume set was clearly intended to appeal to those with a penchant for the preservation and demarcation of important texts, employing the technology of print to fulfill an age-old impulse rather than a new desire unique to print. Works like these and earlier dictionaries evolved into the modern encyclopedia, which "offers a generally literate public not only a comprehensive reference work, but functions as a symbolic token of modern progress: it expands our knowledge of the world and makes access to it available to everyone."[46] Essentially, using the new print technology to satisfy the age-old impulse of preservation and classification is a clear, concrete example of a new technology during the first step of the pattern of technology.

2.2   SACRALIZATION OF OLD

It is important to remember for the second step in the pattern that ""the mistaken doctrine of supercession…underlies expectations (false ones it seems at the moment) that photography would put an end to painting, movies would kill the theatre and television would kill movies."[47] The 'real' truth is, however, that scrolls were not thrown away upon the advent of the codex and that hand-written books were produced even centuries after Gutenberg. As mentioned in the

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[45]Literary Editor Julian Hawthorne, General Introduction to the Series in Vol. 1, emphasis mine.

[46]Graham, 26-27.

[47]Eisenstein, *Divine Art, Infernal Machine*, 228.

introductory material, there is very rarely outright replacement of a new form for an old one;

rather, the old technology often becomes sacralized.

As a specific example of this second step in the pattern, it is well-known that the Jewish

community maintained the use of the Torah scroll for ritual, converting to the new codex format

only for study. It is clear that in its early stages, adopting the codex was a predominantly

Christian venture, at least in relation to religious practice, while the Jews invested in the scroll a

great deal of prestige and significance. This explicitly represents the second stage in the 'pattern

of technology,' then, which is an emerging reverence for the older technologies, especially when

the new ones begin to more fully dominate the market. The scroll necessarily became important

in different ways than it used to, but it did not disappear. It became the "the prestige format, used

for important works only: sacred texts, legal documents, history, literature."[48] In Judaism, the

scroll became sacralized and ritualized in the face of the new technology (the codex.) The scroll

remained in use long after outlasting its advantages as a matter of familiarity, identity, and

ritualization, to the effect that now there is no way to overstate the importance of the Torah scroll

in Judaism. Now, the medium is part of the message and "form gives shape to context" for Jews.

The symbolic significance of the spiral scroll format is so strong in some traditionalist

communities, primarily those identified as ultra-Orthodox, that "if a Torah scroll is not available

in synagogue, the Bible is not publicly read at all."[49] When it is read, a procession carries the

scrolls to the front of the congregation, with many kissing it as it passes by. Other 'ritualistic

elements' that appear in Orthodox communities and some others include the required presence of

a *minyan* (ten adult males) and the correct posture and pronunciation of the reader, the use of

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[48]Grossman.

[49] Mel Alexenberg, *The Future of Art in a Postdigital Age: From Hellenistic to Hebraic Consciousness,* (Bristol, UK: Intellect, 2011), 13-14.

benedictions before and after the reading, and the repetition of misread portions so as not to

affect the meaning, similar to the manner of a dramatic performance.[50] Torah may be studied in

book format, but for ritual purposes the scroll is irreplaceable, which is an important idea that

will return later. As a result of their vital and revered place in the ritual, the scrolls are also now

meticulously constructed: "written on the finest parchment according to the strictest regulations,

with its embroidered velvet mantle and its silver casing, finials, crown and breastplate."[51] It

maintains its status as "the central symbol of synagogue worship"[52] and a "hallowed object"[53]

with ritual purpose. Its position is so significant, particularly in very Orthodox communities, that

certain codes of conduct and decorum are required:

> "one may not touch the parchment of the scroll with a bare hand, one may not move the scroll for no apparent reason, one must rise in honor of the scroll when it is taken out and returned to the ark (during synagogue services), if a scroll falls or is dropped, one should tear the garment (as mourners do according to Jewish law), fast and request absolution; if one sees a Torah scroll which has been torn, then one should rend one's garment twice, once for the parchment and once for the writing itself; if the scroll was burned or desecrated, a public fast is declared; a scroll that is no longer fit for use is buried in an earthenware vessel next to a scholar, and so on."[54]

The reasons for this sacralization of the scroll, whether as a reaction to the Christian

appropriation of the codex or not, are unclear. The phenomenon, however, serves to exemplify

the fact that only in very rare cases does a new technology entirely replace or eradicate an old

one. More often, the old technology becomes invested with purpose (in some cases, religious)

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[50]Louis Jacobs, "Reading of Torah" in *Encyclopedia Judaica*, editors Michael Berenbaum and Fred Skolnik, (Detroit: Macmillan Reference USA, 2007). [The idea of the Torah reading as a dramatic performance is particularly strong in the Kabbalistic community, who consider the reading of the Torah a "dramatic re-enactment of the theophany at Sinai."]

[51] John F.A. Sawyer, *Sacred Languages and Sacred Texts,* (New York: Routledge, 1999), 56.

[52]Ibid.

[53] Shalom Sabar, "Torah and Magic: The Torah Scroll and Its Appurtenances as Magical Objects in Traditional Jewish Culture," *European Journal of Jewish Studies*, 2009: 135-170.

[54]Ibid.

over time as the new formats become more and more standard. To put it poetically and existentially: "The exact same words printed in codex book form convey the wrong message. If the divine message encoded in the Torah is trapped between two rectilinear covers, it loses its life-giving flow. The message of the Torah must not be enslaved in the rectangle…The heart of the Torah is where the end connects to the beginning in an endless flow…Form and content join together to symbolize the essence of Jewish values."[55]

Why this occurred especially (and arguably only) for Jews is a matter of much debate, considering the fact that the fledgling Christian movement, in a near wholesale fashion, adopted the codex.[56] There are many practical reasons that may provide possible answers as to why this is so. Scrolls were uneconomical and "cumbersome, and their weight added to the danger of tearing."[57] They were "clumsy for consultation and reference"[58] and therefore perhaps unsuited for Christian proselytizing. The codex, on the other hand, provided advantages like better organization, easier handling, pagination, indexes, quicker comparison, and the ability to skim. It was a "powerful form of information technology -- compact, highly portable and easily concealable" and was also inexpensive – "you could write on both sides of the pages, which saved paper -- and it could hold more words than a scroll."[59] The codex was unbelievably easier to carry around, and with the Bible being one of the largest books on the market, these seem to be very persuasive benefits. A codex could not only be carried around more easily but also

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[55]Alexenberg, 14.
[56]For a fuller discussion of the variety of arguments regarding these issues, see Gamble, 54-58 and Millard, 63-69.
[57] Alan Millard, *Reading and Writing in the Time of Jesus,* (New York: New York University Press, 2000), 63.
[58]Ibid, 63.
[59]Grossman.

required only one hand, freeing the other to aid in speaking, writing, or walking.[60] And unlike the manuscript, the codex allowed for new experience of reading: that is, "you could jump to any point in a text instantly, nonlinearly."[61] In other words, "the scroll…is a technology that mandates 'linear' reading: reading that must begin at the start of a document and carry through, unbroken, to the end."[62] This "confining technique" of the scroll, then, is set in contrast to "the increased freedom of 'spatial' and 'radial' practices" – that is, turning the pages of a bound book, moving either between texts or parts of the same text.[63] The Bible required intensive work, and often in this fragmented or non-linear style. The codex provided the proper format for this work, allowing the reader to flip back and forth between passages, compare and bookmark pages, skim certain sections or reread others meticulously – which was perhaps a "supernaturally empowering" experience of "random-access memory."[64] Recently, journalist and writer Lev Grossman argued this point, mourning the loss of this non-linearity with the e-book format. However, this is a matter of debate. The e-book may well be less linear than he thinks, and this problem is not entirely relevant in the case of online reading – but nonlinearity will be discussed further in later sections.

For Christians, the practical benefits of the codex may have coincided nicely with their conception of the gospels. The new form of the book could easily be adapted to "the textual needs of Christianity: in particular, comparing the Gospels and mobilizing citations of the Sacred

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[60] Guglielmo Cavallo, "Between Volumen and Codex: Reading in the Roman World," in *History of Reading in the West*, by editors Guglielmo Cavallo and Robert Chartier, (Amherst and Boston: University of Massachusetts Press, 1999), 86-89.
[61] Grossman.
[62] Charlotte Eubanks, "Circumambulatory Reading: Revolving Sutra Libraries and Buddhist Scrolls," *Book History*, 2010: 1.
[63] Eubanks, 1.
[64] Grossman.

Word for preaching, worship and prayer."[65] While these are feasible, practical arguments, there

seems to be another reason to explain why "beyond Christian circles…mastery and use of the

possibilities of the codex gained ground only slowly."[66] Otherwise, with all of these practical

advantages, why were Jews adamant about retaining the scroll as their primary sacred format for

rituals. It is perhaps likely, along with the practical benefits of the codex, that the Christian use of

the codex and Jewish maintenance of the scroll were largely about demarcating religious

boundaries. Put simply, Jewish practices tended to "mandate the continued use of the scroll as

the material form most proper to sacred text, a tradition against which Islamic and Christian

cultures attempted to distinguish themselves by inscribing their sacred works preferentially in

codex form."[67] It is hard to say whether Christians adopted the codex to delineate themselves

from Jews or whether Jews maintained the scroll well past its 'natural' life to maintain difference

from Christians. Regardless, the fact that Jews (and Pagans, for that matter)[68] still "kept their

sacred text in the form of a scroll" was an important point of differentiation.[69] The "Christian

predilection for the codex may have been to distinguish themselves from Jews" in the sense that

Christians "from the beginning saw themselves as innovators rather than preservers of tradition"

and the new format of the codex "pointed nicely in this direction."[70] If the Christians were

innovators, the Jews were bearers of tradition. Perhaps it is so that "those endeavoring to be loyal

to an ancient faith cannot help but be somewhat ambivalent with respect to much that is new and

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[65]Chartier, *Forms and Meanings,* 19.
[66]Ibid.
[67]Eubanks, 1.
[68]Clanchy, 176.
[69]Grossman.
[70] Sawyer, 56.

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modern" or somewhat condescending "toward human creations."[71] It could also be that as promoters of a largely oral tradition, Jews naturally prized the scroll, a format which did not encourage less reliance on memory[72] and which had always been read aloud.

But Jews were not the only ones retaining old formats in the face of the new; during the later transition from written to printed material, there was also an attempt at the retention of an old format. There was "a discourse of resistance" from some people who believed that print culture was too "commercial" and that the printing process was "corruptive."[73] Others perhaps simply maintained a sense of nostalgia for an old format: "enthusiasm for technological advance was countered by nostalgia for a world that was lost"[74] or "reverence for the antique,"[75] engendered by the advancements of the printing press. From a religious perspective, ancient Jews were not the only group who maintained the prestige format in the face of technological change; at the beginnings of print, some monastic Christians maintained scribal activity as a religious ritual. There is "at least one example where an abbot insisted that hand-copied texts were superior to printed ones…[Johannes] Trithemius asserted that monks should not stop copying because of the invention of printing" due to the fact that "hand copied works on parchment, he argued, would outlast printed works on paper."[76] Some historians claim that paper quality was probably not the reason for monastic upholding of scrolls, as no evidence suggests that skin was only used for manuscripts or that one outlasted the other. Rather, "the abbot's plea for the continuation of hand-copying seems to have been designed largely for domestic

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[71] Jay Newman, *Religion and Technology: A Study in the Philosophy of Culture,* (Westport, CT: Praeger, 1997), 121.

[72] Phil Mullins, "Sacred Text in an Electronic Age," *Biblical Theology Bulletin* , 1990: 100.

[73] Eisenstein, *Divine Art, Infernal Machine*, 32.

[74] Ibid, 194.

[75] Eisenstein, *Printing Revolution*, 127.

[76] Eisenstein, *Divine Art, Infernal Machine*, 15.

consumption – perhaps partly to keep his monks busy and out of mischief and probably also because copying sacred texts was spiritually edifying."[77] In other words, aside from the argument of paper preference, "the usefulness of keeping idle hands busy, encouraging diligence, devotion, knowledge of Scripture, and so on" led to their "preserving a form of manual labor which seemed especially suitable for monks."[78] It was a spiritual activity, and thus required a certain format – even in the face of new ones.

2.3   NEW INNOVATIONS

As was briefly hinted at in reference to why Christians would wholesale accept the codex, this new format presented a great number of new innovations and functions as it became the standard technology. This is the third step of the process in which innovations and features specific to the new format emerge, mostly simultaneous with its standardization. In addition to the previously mentioned portability, non-linearity, and tables of content, the codex format also introduced pagination and indexes for reference and ease of study. There were also multiple "navigational aids – both internal (canon tables, alphabetized indices, running heads, rubrics, page numbers) and external (concordances, indices, catalogues)" which permitted for cross-referencing."[79] The features of the codex, like tactility or indexicality, made it "relatively accessible" and "phenomenologically felt."[80] Most of these prominent innovations of the codex fall collectively under the term 'paratexts,' additions to the main text: "the ancillary items that surround the main text: title page, frontispiece, preface, dedication, table of contents, index, illustration, and advertisement."[81] An illustrative example of this kind of innovation with a new

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[77]Ibid, 15.
[78]Eisenstein, *Printing Revolution*, 10.
[79]Brown, 33, 71.
[80]Brown, 100.
[81]Ibid, 32-33.

format is the Bibles produced in the Near East in the early tenth and eleventh centuries. Known

as the Masoretic codices, these were "the first Bibles to contain the marginal annotations known

as the Masorah," which essentially were vowel points and marginal notes or markings on

meaning and pronunciation.[82] Because traditionally a Torah scroll could not contain any

markings or notes (only consonantal characters), the codex presented a format in which the texts

could be written including all of the notes on variants, vowels, and the like. The Torah was a text

which was written to be read aloud, therefore, on a scroll. The codex was the form that offered

an alternative for outside of the synagogue. The Masoretic Text is still the authoritative text used

as the basis of translations of the Jewish Bible and some Christian Old Testaments today, and so

the importance of these innovations, spurred by the invention of the codex, remains significant.

With the requirement of the scroll for official religious texts, this last step in the pattern of

technology is solidified; the old format becomes revered as sacred, while the new format is

employed in new ways – i.e. for study and discussion.

　　During the transition from written to printed books centuries later, even further new

innovations were ushered in by the printing press. This transition, like that of the scroll to the

codex, also followed the third step of the pattern: new innovation with increasing

standardization. As a result of the new technology of print, interesting practical additions were

adopted: "regularly numbered pages, punctuation marks, section breaks, running heads, indexes

and so forth" which led to a reordering of the reader's thought and helped with "more accurate

indexing, annotation, and cross referencing."[83] Editors, authors, translators, and especially

printers repeatedly asserted the "advantages of typography over hand-copying" due to its

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[82]Stern.

[83]Eisenstein, *Printing Revolution*, 73

functional and innovative additions like dedications, prefaces, and the like.[84] Countless other

benefits came as a result of print. Media theorist Marshall McLuhan argues that print led to a

certain uniformity: the "reduction of all language to one mode," although to say that no clear

distinctions remain in the style of writing in different books depending on their audience may be

an overstatement. Certainly, however, some higher degree of uniformity seems to have

developed as the revolutions of print became standard – despite the recent challenge of Adrian

Johns to this idea.[85] The concept of print-as-commodity, mentioned earlier as one reactionary

fear to the advent of print, is related to this uniformity. This increasingly became a factor as print

became standard and less expensive. Print was the "first mass-produced thing" and therefore

became "the first uniform and repeatable 'commodity'" in a way distinct from the manuscript.[86]

Grammatical errors also became possible, as "it is presumably impossible to make a grammatical

error in a non-literate society, for nobody ever heard one. The difference between oral and visual

order sets up the confusions of the ungrammatical." In addition to style and grammar uniformity,

McLuhan, like Benedict Anderson, also argues that national uniformity and government

centralism were created by print – but so were individualism and opposition to the government

as such.[87] These countless new features were also recognized as clearly beneficial to education,

proselytizing, and liturgy standardization by everyone from the Roman Catholic Church to

Napoleon.[88] One of the most significant innovations of the printing press was the creation of the

single 'author' as a figure, and also as a commodity in their own right. Before the printing press,

people in the Middle Ages

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[84]Eisenstein, *Divine Art, Infernal Machine*, 11.
[85]Adrian Johns, "How to Acknowledge a Revolution," *American Historical Review,* Vol 107, No 1, February 2002, 106-125.
[86]McLuhan, *Gutenberg Galaxy*, 153, 197.
[87]Ibid, 280-286. The work of Anderson in *Imagined Communities* is clearly relevant here.
[88]Eisenstein, *Divine Art, Infernal Machine,* 14.

"did not possess the concept of 'authorship' in exactly the same significance as we have it now. Much of the prestige and glamour with which we moderns invest the term, and which makes us look upon an author who has succeeded in getting a book published as having progressed a stage nearer to becoming a great man, must be a recent accretion." The indifference of medieval scholars to the precise identity of the authors whose books they studied is undeniable. The writers themselves, on the other hand, did not always trouble to quote what they took from other books or to indicate where they took it from; they were diffident about signing even what was clearly their own in an unambiguous and unmistakable manner. The invention of printing did away with many of the technical causes of anonymity, while at the same time the movement of the Renaissance created new ideas of literary fame and intellectual property."[89]

In contrast to manuscript or codex culture, which was largely "do-it-yourself" or patron-oriented and likely looked at the "relevance or usability" of the items rather than their authors, print authorship could now be a "direct means of fame and perpetual memory."[90] Collections of works were no longer published under the author of the first tract's name, as was common practice before print. Perhaps the clearest example of this is Martin Luther, whose Reformation movement was enabled by the printing press, and who is seen by some as the first best-selling author. Luther was, to be sure, the first man who could sell books merely because of his name; he was responsible for "no less than one third of *all* German-language books sold between 1518 and 1525."[91] Print technology, as a result of all of these new additions to the experience of reading, clearly follows the familiar third step of innovation and standardization that eventually occurs with new reading technology.

3.0   THE PATTERN APPLIED TO NEW TECHNOLOGY

Having looked at some examples of how the three-part pattern of technology has manifested in two historical transitions of reading technology, it is the goal of this project to ask

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[89]McLuhan, *Gutenberg Galaxy*, 160.
[90]Ibid, 161.
[91]Anderson, 39.

the question: what does the new electronic format mean for religious readers, if it follows the pattern?

3.1 EFFICIENCY AND IMITATION

The first part of the pattern, using new technology for the same actions as the old in a faster or more efficient way, is certainly noticeable here. Just as the word processor was initially used by those who had switched from the typewriter simply to "write more (or at least faster) and perhaps to undertake more revisions,"[92] readers are executing the same actions with e-books or online texts as they did with printed books. Readers can buy and store more books, and more quickly than if those same books were in print – but the acts of buying, reading, and storing originally conceived with codex or print forms are maintained with the new format. The e-book format also follows the first-part of the pattern, in which the form of the new technology largely imitates that of the old. The Kindle or the Nook mirrors the codex format in many ways, from simulating the sound and animations of turning a codex page to including tables of content, appendices, and pictures. Indeed, "many digital formats are still straightforward recreations of the book; the Kindle and its cousins reproduce a mise en page that hasn't changed in fundamentals since 13th century scribes at the new universities of Western Europe offered harried students books with running heads, chapter titles, indices, and the like."[93]

One example in particular again resonates in this step of the pattern: the idyllic desire for the preservation and delineation of certain texts. With the vast numbers of available texts, "today many much more sophisticated reference resources are on the way to displacing the encyclopedic

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[92] Marty Tuman, "Introduction," in *Literacy Online: The Promise and Peril Of Reading and Writing With Computers*, by editor Marty Tuman, (Pittsburgh: University of Pittsburgh Press, 1992). Also see Bolter, 19.
[93] Dames.

book or set of books"[94] and so the impulse remains unfulfilled but stronger than ever. More and more, the "knowledge explosion demands recourse to new forms of information transmission, storage and retrieval that allow for constant updating and manipulation for readers and users."[95] This new technology in the face of an ever-increasing number of texts means a revival of the library impulse, particularly because preservation and collection no longer involves funding and creating 60-volume series' but merely posting electronic versions of texts onto a server which holds virtually unlimited data. This exact same impulse carries from one medium to the other in the transition; the editors of the *Classics* series recognized the benefits that print provides, as well as the need for such a compendium in the vast expanse of literature produced by it. Therefore, the internet similarly not only creates the need for such a collection (to separate and point out 'the best' of literature) but also provides the tools and medium with which to do it. With "the abundance of information provided in a digital era, where the world appears to be overgrown with data, options, and demands with a billion web sites and millions of blogs, tens of thousands of books in the store and hundreds of television channels," it seems that a society "overwhelmed by an avalanche"[96] of texts mimics societies which have historically felt the tension between overload and glut versus scarcity and loss. This has resulted in the creation and maintenance of a variety of available 'Sacred Text' web archives, in which various versions of sacred texts from traditions around the world are collected under the heading of religious texts.[97] These websites, although rarely sanctioned by their respective mainline denominations, finally edge toward the dream of an idyllic religious library like those of Alexandria or Babel. It is in this way that the new electronic format is being used as a vehicle for the fulfillment of old

[94]Graham, 26-27.
[95]Graham, 26-27.
[96]Eisenstein, *Divine Art, Infernal Machine*, 237.
[97]A sampling of these websites is provided in the bibliography of this project.

desires, imitating the attempts at collecting and prioritizing texts that used scrolls or print. This is the first step in the pattern upon the introduction of a new reading technology: "cutting-edge technologies typically embody old wishes in new forms…the latest technological innovation [is] supporting a desire that stretches back at least to the library at Alexandria."[98] In other words, "what has changed is not the dream, but the sense of technical possibilities."[99]

The texts on these websites like the Gutenberg Project and the online Koran or Torah have "electronic techniques that make the ancient dream thinkable," but vary from previous attempts at storage or review because they are unprecedentedly searchable and skimmable.[100] Versions of the Bible, the Torah, and even the Book of Mormon can be accessed and searched using keyword, character, chapter, or theme. With features like this available for so many texts, it is easy to imagine (and indeed hope for) "universal access to the entire patrimony of writing."[101] This once-extravagant dream "is promised us by the libraries without walls, even without a specific location, that are undoubtedly in our future."[102] Prior to the internet, the libraries and compendiums created using codices or printed books always fell disappointingly short, as no matter how large, even the library at Alexandria "can provide only a partial, lacunary, and mutilated image of universal knowledge."[103] Clearly, however, the creation of a single database of every imaginable text will take time – and is not perhaps the evolutionary zenith of reading experiences anyway. This kind of availability and searchability is obviously beneficial for study, but is sometimes criticized for "dissolving, as it were, the traditional boundaries not just between individual works but between authors and ages as well and altering our existing notions of

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[98]Eubanks, 18
[99]Eubanks, 19.
[100]Cavallo, 29. See also Shandler, 176.
[101]Cavallo, 29.
[102]Chartier, *Forms and Meanings*, 21.
[103]Chartier, *Forms and Meanings*, 21.

literature and the act of reading itself."[104] In other words, there is a perceived loss of textual and authorial independence – especially because things are so searchable. This subtle and irrevocable "eroding [of] the status of the independent, unified text"[105] will be discussed in more detail as one of the new innovations of the e-text format.

3.2 SACRALIZATION OF OLD

As seen in the earlier switches, the prestige of the older format plays a large role during the transition to a new one. Does this same pattern emerge in the current switch? There is already a significant movement towards retaining the printed book, a prizing of physical books over e-readers or online texts. This will perhaps lead to a reverence or further sacralization of the book by many groups and individuals, secular or religious – only time will tell. But the second step which was exemplified by the Jewish maintenance of scroll use for ritual and other 'sacred' uses of old technology during previous transitions is no less present in the current transition from print to electronic texts, if only less developed. Many theorists argue that just as the scroll had prestige after the codex, so the printed word will retain a level of importance or authority after e-formats.[106] While this could be a result of the technical imperfections of the still-new format, there are a significant portion of readers who are accustomed to reading a printed book that engage in a kind of 'fundamentalism' for the book – regardless of its functionality. In the contemporary transition, the reverence for an older technology comes not just from a religious perspective, as non-religious or secular motivations also represent a large part of the retention of print over digital formats. It may be that it requires too much effort to learn a new manner of reading, or that modern readers are nervous of new technology. This is certainly the case for a

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[104]Tuman, 5.
[105]Ibid, 8.
[106]Nunberg.

number of famous authors, publishers, and readers who join 'anti e-book' campaigns. Don DeLillo, award-winning author and essayist, expressed these sentiments in the introductory epigraph. Whatever the reason, there is a tangible resistance to new technology and a reverence for the feel of paper in one's hands, even from those not concerned about technology's effect on religious texts. One example of this general resistance to the new reading format is the collection effort being conducted by internet entrepreneur Brewster Kahle. Kahle "has made it his mission to collect and preserve one copy of every book ever published," according to recent interviews.[107] Citing the fact that Amazon and other companies sell more e-books than hard-copy print books, Kahle poses a solution: collect and store all of the physical copies, much like the Library of Congress. With the goal of stockpiling at least 10 million books in a warehouse he owns, Kahle argues that even though he is digitizing the books as well, it is important to maintain the physical copy for fear of a "digital disaster."[108] This is a seemingly common fear, that despite online access, there must be preservation of the actual extant copies; the digital formats seem less tangible and permanent. Another reason for his collection of books represents this second step of sacralization of an old format; Kahle says that "physical books will diminish…but there's something about touching original materials that transports you in a way digitized versions never will. There will always be a role for books."[109] Here, Kahle is clearly hinting at the same ideas and concerns that have motivated the reverence or retention of old formats in historical transitions, albeit from a non-religious point of view.

Another example of a non-religious retention of the printed word comes from designers and book-lovers who lament the decreased attention given to the appearance, style, and publication

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[107]Levy.
[108]Ibid.
[109]Ibid.

of digital books. Because publishing an e-book necessitates a new process of publication, major

publishing companies have "completely abdicated responsibility for producing the digital

versions of their catalogues," relying on outsourced computer programmers and developers to

design their digital versions.[110] For many, this results in a "rushed, unprofessional layout and

design" for even the most cherished titles; a good programmer, it is argued, does not a designer

make. This is surely reminiscent of the bibliophile's fears at the advent of the printing press that

rushed design and printing for profit resulted in low quality books and a corruption of the

material. There are surely a variety of factors at play in this dynamic, but no small part of the

tension is created by "an aesthetic rejection [of the e-book] based on the publisher's historical

reverence for the printed page."[111] In other words, some say, the publishers are not as concerned

with the appearance or even functionality of e-books due to their implicit (or explicit) preference

for the printed word. Remembering that much of the resistance to new formats and consequent

sacralization of older ones is tied to economic concerns (like the resistance to print due to its

'commercial corruption'), this and other rejections of the e-book are non-religious but still

involve a kind of reverence for the older dominant printed text. In this instance, the preference

for an older format does not resemble religious reverence per se, but manifests as such in the

context of sacred texts. As another example not of religious reverence but of reverence for the

book as a result of economic factors is the Domtar Corporation's PaperBecause campaign. In one

ad featured in *Newsweek* magazine in 2012, a young boy dressed in superhero garb reads a

printed book, surrounded by text which claims that reading on paper allows you to "Read Faster!

Retain More!" and that "studies show you'll read up to 30% faster while retaining more

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[110]Stevens.
[111]Ibid.

information" if you read non-electronically.[112] While this seems to be an overt example of the

preference of the printed book, it represents a non-religious type as the motivations here are

clearly fiscal. Domtar operates in many business segments including the pulp and paper industry,

from which approximately 85% of their revenue comes.[113] With the increase in e-book sales and

use of the internet texts, Domtar is clearly just one example of a number of groups concerned

with the fate of the printed book from a secular (and occasionally commercial) perspective.

These examples of secular or non-religious reverence for the printed book are representative

of a larger, over-arching theme: the fear of the end of erudition or 'book-learning,' coterminous

with the complete loss of the printed book as a viable medium. Sales of eBooks regularly post

increases of 160 percent, while print (codex) sales show a steady decline.[114] This has led to a

recent article in the *Library Journal* called "The End of Books," echoing the fears of Claude

Frollo centuries ago. There, artificial intelligence entrepreneur Raymond Kurzweil predicts that

the paper book will be obsolescent by the early twenty-first century, "although because of its

long history and enormous installed base, it will linger for a couple of decades before reaching

antiquity."[115] While this is a radical claim which is discounted by many other scholars, it does

represent the fear of a total replacement of books (and interestingly, the recognition by other

theorists of the second step of the pattern of technology). Other scholars, presenting a more

tempered view of the transition, argue that it is "precisely because these technologies transcend

the material limitations of the book that they will have trouble assuming its role."[116] Because

electronic formats present such new opportunities, they are not poised to replace the codex,

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[112]PaperBecause Ad, *Newsweek*; See Appendix A.
[113]Domtar.com, "Corporate Info"
[114]Grossman.
[115]Nunberg, 13.
[116]Ibid, 16, 33.

which performs different functions. Transitions do not imply replacement, but are more about trade-offs and new innovations, following the three-part pattern of technology. There is "no reason to suppose that these genres will replace traditional textual forms. The mere fact that a modality is available doesn't mean that authors or readers will find it generally convenient or necessary."[117] The codex will maintain its distinct advantages while the electronic format will develop its own as well – per the third step.

But, as with the historical reading technology transitions, the religious are also making efforts to maintain and in some cases sacralize print formats. Religion and media scholar Jeffrey Shandler records a discussion with a professor while browsing a digitized version of the Torah. "'This will change everything,' he said, eyes glued to the screen. 'It's the end of erudition. Our professor of Talmud will be out of a job.'"[118] This professor is not alone. Biblical exegetes who memorize passages and perform theological work and rabbis who know the Torah by heart fear a loss of authority when searchable databases do the same work faster and from the comfort of the user's home. Proximity searches, cross-referencing, and hyperlinks present the same kind of benefits as a scholar's memorization. It is unlikely, however, and perhaps a fearful overreaction, that reading a religious text will no longer require expert aid. Having sacred texts in digital, searchable formats has certainly challenged their "traditional pedagogy, which is rooted in committing the extensive text to memory."[119] Religious texts, however, and especially the Torah, still will require a great deal of scholarship. Shandler reassured his colleague with his belief that: "At the same time, knowing how to read the Talmud's highly elliptical language" and other elements of study "remains difficult, if not impossible, to master without training. Professors of

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[117]Grossman.

[118] Jeffrey Shandler, *Jews, God, and Videotape: Religion and Media in America,* (New York and London: New York University Press, 2009), 275.

[119]Ibid, 276.

Talmud are not obsolete as a result of digital technology, but it will compel them to develop new methods of teaching and evaluating their students, just as the advent of print transformed Talmudic scholarship, organized around a standard printed page."[120] Remembering previous transitions, it is "misguided to think that one medium displaces another and we have a choice of either analog or digital. The history of communication is that new technologies reinforce rather than displace the old."[121] Regardless, there is a clear perception that e-formats will replace the need for traditional religion or institutions entirely. Many believe that technology's dominant presence can only come at the "expense of religion…concern about the competition is central to almost every major religious antitechnologist's position."[122] It is a common theme in religious discourse – that "in technologically advanced societies…the relationship between sanctity and authority changes," to the detriment of "true sanctity."[123] Why does technology seem so deeply inimical to religion? Many feel that by its very nature, technology is sterile and ultimately antithetical to the sentiments of religion. It is a format which is seen as particularly prone to abuses of privacy and power: an Orwellian nightmare.[124] The new formats also represent the extensive or consumerist reading style of modernity; the old formats retain the traditional, intensive study perceived as appropriate for sacred texts. The internet and e-readers are simply "not very compatible with the demands for solitary contemplation and social disengagement that

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[120]Ibid.

[121]Crovitz.

[122]Newman, 11.

[123]Shandler, 182. See also Roy Rappaport, *Ritual and Religion in Making of Humanity* (1971).

[124] Joshua Meyrowitz, *No Sense of Place: The Impact of Electronic Media on Social Behavior,* (New York: Oxford University Press, 1985), 326.

most religious traditions prescribe for true spiritual development."[125] This may be true or not, but at the heart of this notion is perhaps an understanding that religion and technology offer the same benefits, through different avenues. Jay Newman summarizes this opposition, saying that "technology's very success in contributing to the realization of ideals such as freedom, knowledge, happiness, and peace – ideals that most defenders of religion see as historically associated with the traditional ethicosocial program of religion – may lead the practical observer to believe that religion is no longer as necessary as it once was, if indeed it has ever been as necessary as its defenders have assumed it to be."[126] This dichotomous competition may be overstated, as many scholars and religionists currently argue that perhaps technology and religion are not so inimical. Shandler argues this, saying that "these media practices, however, have not compromised practitioners' experience of sanctity as valid and authentic."[127] Essentially, the practitioners are deciding for themselves whether technology is effective or helpful to their religious practice. Scholars are challenging their colleagues to delve into this more deeply before assuming such a defeatist notion as the 'end of the book'. They suggest that it is possible that what constitutes an authentic religious experience is changing, and that scholarship must reject the notion that technology's innovations "jeopardize our sense of the authenticity of religious experiences people are claiming."[128] By rethinking how one conceptualizes religion and technology together, it can be seen "that in important ways technology is not merely compatible with traditional religion but is actually useful to it or even

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[125] Lorne L. Dawson, "The Mediation of Religious Experience in Cyberspace" in *Religion and Cyberspace*, editors Morten T. Hojsgaard and Margit Warburg, (New York: Routledge, 2005), 18.
[126]Newman, 110-112.
[127]Shandler, 182.
[128]Dawson, 34.

required by it."[129] Religious practices may change or develop new aspects as a result of this technology, while using technology could also be used to continue and maintain traditional religious endeavors. Specific evidence of this constantly evolving and changing nature of religious practice in the American context can be found in numerous recent published studies like Meredith McGuire's *Lived Religion.[130]*   Shandler claims that "far from being inimical to spirituality, new communications media can instigate innovations in religious practice, including when their use is characterized as extending or maintaining traditions, rather than diverging from precedent."[131] For example, as mentioned in reference to historical transitions, copying texts in the age of scribes and manuscripts was considered a type of religious practice. As a part of an ascetic lifestyle, "correcting and copying central Christian texts was a religious act."[132] Making a network of textual connections, digitizing religious texts, or adding hyperlinks or comments to sacred works could eventually be seen as a continuation of this ancient ritual.

3.3   NEW INNOVATIONS

For secular and sacred texts, the third part of the pattern at the turn of the century is perhaps the most remarkable and drastic of any previous transition. New innovations abound, and have serious implications for the contemporary transmission and consumption of texts, especially religious ones. This section will begin to ponder these innovations, pulling out four major themes regarding sacred texts as a result of new innovations with digital formats: what it means that a sacred text is in an electronic format is malleable and interactive, that the format changes the ritual of reading due to its lack of place and author, that e-formats perhaps make it

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[129]Newman, 110-112.
[130]Meredith McGuire, *Lived Religion,* (New York: Oxford University Press, 2008).
[131]Shandler, 4.
[132] Anthony Grafton and Megan Williams, *Christianity and the Transformation of the Book,* (Cambridge: Belknap Press of Harvard University Press, 2008), 192.

more difficult to enforce a canon, and that it may have positive effects or present new opportunities, especially for new or minority religions or subjugated groups. While some of these certainly represent new innovations that are applicable to all digital books and not just religious ones, the effects of these innovations on sacred texts will be the emphasis here.

3.3.1 Physical/Practical Innovations

The first set of innovations and advancements in electronic reading technology involves the physiology and practicality of reading. These innovations certainly apply to all digital texts, but their implications are particularly crucial for a religious reading community – in both negative and positive ways. Because they "modif[y] not only the technology for reproduction of the text but even the materiality of the object that communicates the text to readers," it has been suggested that this transition is more radical and "extensive than Gutenberg's."[133] There are a plethora of 'physical' concerns with the e-book or online text. The "substitution of screen for codex" is an intensely drastic transformation because it alters methods of "organization, structure, consultation, even the appearance of the written word."[134] In even the most basic of ways, the physiology of reading is changed. Gone are the musty smell of an old book, the feel of turning a page manually, and the ornate or stylish cover design of a printed work. A reader cannot write in the margins or underline important passages in the same way – although it is conceivable that sacred texts have always been intentionally left unmarked by reader notations. This change in reading experience is surely a part of the feeling of printed book 'fundamentalism' discussed earlier. To conceptualize one's progress in a book and the actual experience of reading becomes more difficult when there is no 'book,' but merely a file. There is no tangible sense of what one is reading, as the reader never holds the text itself but only the

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[133]Cavallo and Chartier, 15.
[134]Ibid.

vessel: the e-reader or laptop. It would seem there is a perception of 'losing' the text or being abstracted from it, as was evidenced by Kahle's storage project. The reader can also perceive themselves as one step removed from the content, "so there is inevitably a sense of disconnection between the text that is immediately present to the senses and the text that stretches out indefinitely and invisibly on either side of it… they remain representations, at a physical remove from the boundaries of the text itself. You literally cannot grasp an electronic text in its entirety."[135] The e-book or webpage is not a solid, material, worship-able thing. It has no apparent permanence; it is not an artifact or object, not tangible in the same sense as a printed book. As "objects in space," printed books were "permanent" and "discrete, and thus provided a sense that they were complete."[136] It has been suggested that now, however, "our culture's image of the word is shifting away from such nuances of stolidity, finality, and stability" to a notion of the word as "temporary and open."[137] The printed book is now termed a "hard copy," which is resistant to change, permanent, "tactile" and "bulkily present in space."[138] The electronic text is present only through the function of a complex machine, and is "exclusively visual,"[139] not employing the five senses in the physiology of reading like a handheld book.

Printed copies of books can also be taken anywhere, used for an unlimited amount of time, and engaged with at any time of the day or week. Indeed, it was in part their portability that initially made them an effective alternative to the codex for Christian proselytizing. They are limited only by the life of the materials that creates them and the space available to store them. The printed book "requires no batteries," and for some, "no electronic display has yet matched

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[135]Nunberg, 18.
[136]Mullins, 101.
[137]Ibid.
[138]Ibid, 104.
[139]Ibid.

the elegance, clarity and cool matte comfort of a printed page."[140] But an electronic version is limited by battery life and charging, and in many cases requires a computer or internet connection to purchase or download books. There is also a religious concern regarding this connection with electricity – for example, can Jews use a Kindle on Shabbat? There is great rabbinic debate surrounding the mandate against electricity use on the Sabbath, with most Orthodox Jews eschewing TVs, computers, or e-readers on the holy day.[141] This problem, however, is not solved – with some theorists predicting an end to the printed book entirely in a matter of decades, the issue will remain live for Orthodox Jewish and other religious communities.[142] How will observant Jews read a newspaper or magazine as they are increasingly converted to digital-only publications? This is especially significant when some Jews conduct textual work online, like online *responsa*, recreating a traditional practice of textual interpretation in a digital format.[143]

In all reading technology transitions including the present one, it is not a "clear-cut case of a superior technology displacing an inferior one" but, as mentioned, rather a more complex situation involving "trade-offs."[144] So, tempering these physical concerns are a number of similarly 'physical' benefits to electronic formats. These are wide-ranging, from "their ability to store, manipulate, and transmit huge amounts of information at a very low cost" to "their versatility as tools for the production, diffusion, and reception of texts."[145] Storage is certainly a major benefit to e-formats, in the case of e-readers which can store hundreds of books and

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[140]Grossman.
[141]See Friedman and also Simon for further research.
[142]In a sense, the halakhic principle which informs the mandates against electricity seems to accidentally or inadvertently sacralize an older format; it is not that the format is older or more familiar, but simply that it is the only option permitted by the law.
[143]Steinitz. See also the Bar Ilan University Online Responsa Project.
[144]Grossman. See also Nunberg.
[145]Nunberg, 15.

perhaps even more so for online texts. Taking the feared information overload to a new height, the push for preservation and collection of texts that began at Alexandria is equally transformative in our own time.[146] An e-reader or laptop takes up less space and is more compact and portable than one book, let alone multiple books. Searchability and location of passages or texts also become easier, particularly in online texts: "days of lengthy, time consuming searches through piles of books"[147] and "bibliography hopping"[148] seem to be quickly becoming things of the past. Another important advantage which applies to both e-books and online versions of books is the creation of hypertext. Hyperlinks are clickable words or portions of the text, and with the e-book, "TOC items and index citations are simply internal hyperlinks."[149] To jump to a passage in the book, the reader simply clicks on a citation and is directed to precisely the page or section desired. Essentially, "the fact that all e-book reader devices are basically computers makes entirely new ways of searching and cross-referencing possible."[150] This clearly hints at the power of hypertext for both e-readers and perhaps even more so for computers; a footnote can be clicked on and the reader taken to that specific reference in the bibliography with no shuffling back and forth or counting of pages. Retrieval and referencing is clearly improved, or at least faster. There is also the additional benefit of bookmarking and annotations. While a reader cannot write in the margins of an e-book or computer screen, notes can be made in on-screen notepads, attached to the text, or even voice-recorded. Pages are no longer clouded by blocks of

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[146]Blair.

[147] Shandler, 275.

[148] Meyrowitz, 327.

[149]Duntemann.

[150]Ibid.

notes on the side of the page, and books are not awkwardly bristling with a "yellow beard of Post-it notes."[151]

On a somewhat related note, another significant benefit of digital formats is market simplification. One of the major concerns since the birth of the printed book has been publication: "How many books should be printed? How should they be brought to the market? Would another printer attempt to spoil the market with a competing edition?"[152] The manuscript market, which relied largely on patronage and specific requests, offered no help in conceptualizing and predicting mass markets. The e-book market and online availability of texts in some ways returns to "the world of the scribe, where demand and supply were exactly aligned."[153] Issues of publication costs, shipping, dissemination, supply and demand are nearly eliminated. Copies are produced with much "greater ease and accuracy than print technology can"[154] because they are digital copies. Market predictions are less of a burden on publishers, as over-publication or under-selling does not mean a warehouse full of wasted material capital. In the case of sacred texts online, it simply means posting a digital copy to a server for universal, free, worldwide access. This is so much the case that the e-text market essentially seems "no longer to be subject to many of the laws that govern the production and distribution of physical commodities."[155] Perhaps for good reason: the e-text is not a physical commodity but a digital one, and as seen in several examples, this terrifies the extant print publishing market. Their concerns are particularly acute given the sheer quantity of texts available on the internet or in e-

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[151]Ibid.
[152]Pettegree, 44.
[153]Ibid.
[154] David Jay Bolter, "Literature in the Electronic Writing Space," in *Literacy Online: The Promise and Peril of Reading and Writing with Computers*, by editor Myron Tuman, (Pittsburgh: University of Pittsburgh Press, 1992), 35.
[155]Nunberg, 19.

book format, following the historical trend discussed early on from intensive to extensive reading.

3.3.2   Lack of Place & Author

A second overall theme in the category of 'innovations' is one of negation; that is, not an innovation which adds functionality but rather changes the reading experience or ritual. The intangibility of e-formats, some media theorists argue, has "decreased the significance of physical presence in the experience of people and events," meaning that the walls of the home or library are no longer a barrier socially or historically.[156] This also changes the ritual of reading and how people behave when reading, however, because it involves "audiences that are not physically present and arenas that do not exist in time and space."[157] Put simply, without a "sense of audience," the feeling of "estrangement from an invisible public" surfaces.[158] Reading hard-copy books together or even alone provides a kind of ritual or communal experience "that technological societies provide for only clumsily, and reminds the individual reader, when she is by herself, also to meet the text ceremoniously before, and sometimes instead of, analysing it."[159] Countless ritualists, media theorists, and scholars of the book have discussed the experience of reading as a 'ritual,' and this proves to be particularly relevant for sacred texts where ritual reading holds pride of place. Benedict Anderson in particular notes the idea of reading the daily newspaper as an individual ritual performed with a printed material, which in his understanding solidifies the ideas of nationalism and communal understanding among those who read it.

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[156]Meyrowitz, vii.
[157]Ibid, ix.
[158]Eisenstein, *Divine Art, Infernal Machine*, x.
[159] Robert Detweiler, *Breaking the Fall: Religious Readings of Contemporary Fiction,* (London: Macmillan Press, 1999), 39.

In addition to the change in the ritual of reading, another innovation during this transition is the malleability, interactivity, and transiency of electronic formats. The act of reading a religious text is "interpretive, and in that sense it is interactive"[160] already, but the internet or e-readers add a further dimension of interactivity even beyond that. Unlike broadcast technologies that are one-way, "the distinct advantage of the Internet is its capacity for ongoing, adaptive, and two-way interaction (though still largely in typed words)."[161] The reader is no longer a passive recipient, as is largely the case with the printed book. Instead, readers can experiment with new forms of interaction: "hypertext fictions, multimedia travel books, and the rest."[162] A sense of intangibility is further increased by this interactivity with e-format texts. If the reader can effect change in the book, can jump around to other sections of the book or even other books, and edit or manipulate files in any manner they choose, the text is bound to morph at the will of the reader. This contributes further to that feeling of a lack of "fixity: in place of the stable printed text, the computer offers a fluid and interactive text."[163] The computer or e-book, by presenting texts as malleable and interactive, promise to reverse the elements of fixity, stability, and preservation identified with printing. Just as the e-book and online marketing system has in some ways returned to a manuscript formula, it seems that the interactivity with a text also imitates that patron-focused culture. The reader, just like the patron or scribe, makes choices regarding the "physical properties of the document," from "the binding, paper stock, size, and even fonts of the printed volume" if they choose to print their work, or the "layout and appearance of a screen representation."[164] The reader or user chooses which texts are "copied (that is, transferred,

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[160] Dawson, 17.
[161] Ibid.
[162] Nunberg, 19.
[163] Bolter, 22.
[164] Nunberg, 22.

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downloaded, displayed, or printed)" just as the scribe or patron did in the days of the manuscript. (Interestingly, this interactivity makes it difficult to create, find, or maintain an urtext of any document, just as the manuscript culture and reader/scribal interaction or error also rendered this nearly impossible.[165]) This kind of increased interactivity, also discussed in the last section, means that a reader "can not only subject an electronic text to numerous processes…but, better yet, become its coauthor."[166] This kind of interactivity is gradually negating the original author-reader dynamic that print established: "the reader seated before a monitor screen becomes one of the authors of a multi-author text….they have the power to intervene at any moment to modify a text, rewrite it, or appropriate it."[167] For the reader, this means a new kind of interaction with the text, but for authors it means something else entirely. What changes for them is "the image of the deist author, a godlike figure who embodies meaning in texts that are then sent forth to be received by compliant readers."[168] Texts on e-readers and even more so in online formats are becoming more and more reader-driven, as authors are forced to create 'webs' or domains of meaning, with hypertext, links, comment sections, and the like. While this is a certain advantage for new, more interactive ways of reading and learning, it also poses interesting challenges to authors as the distinctions between reading and writing, author and reader are blurred.[169] What is particularly interesting about the increased interactivity in both e-books and electronic texts is that the 'non-linearity' that appears lost in the transition from printed book to e-format is perhaps salvaged in some ways. An e-text is "fluid" as a result of hypertext, allowing the process of

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[165]Bolter, 36.

[166]Chartier, 20. See also Mullins, 8. It is true that scribal copying also led to a kind of interactivity, in that those copying the text could individualize their copies by adding personal notes and thoughts as they copied the text.

[167]Cavallo, 27.

[168]Tuman, 9. See also Mullins, 4.

[169]Chartier, 20. Crovitz.

reference to continue almost "indefinitely as it cannot do with footnotes in a printed book…the author creates the elements and defines their relations and then hands the structure to the reader."[170]

For religious readers, this presents obvious benefits and challenges. A clear benefit is that "the public is drawn into the book-making process" in an unprecedented way, and some media theorists suggest that those who do not take advantage of that benefit are merely "regarding the patterns of the precious environment with nostalgic reverence,"[171] as represented in the second step of the pattern of technology. But the addition of reader as author, through the ability to interact and change the text, challenges the one-author standard of printed book culture: the deist or divinely-inspired image of the author is apparently lost.[172] The implicated problem for religion is that interactivity poses a challenge to the sanctity of the text. Can you interact with a religious text or is its sole purpose to be read? Will sacred texts ever be seen as divinely inspired if they can be edited or commented upon by anyone with internet access? Can religious texts be online or in an e-book format if that means allowing those texts to be malleable? How will individual traditions react to these challenges according to their unique understandings of their sacred scripture? Remembering the Jewish caveat that a scroll is required for ritual purposes, but a codex is acceptable for study, it would seem that for study and exegesis, then, the e-format is perhaps a suitable and even favorable format. For ritual or iconic purposes, however, these formats may seem a detriment to the sacrality of the text. Because "the reader is invited to move in and through the text adding his or her own notes," it means that "any text becomes a temporary structure in a changing web of relations with other, past and future, textual

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[170]Bolter, 20.
[171]McLuhan, *Theories of Communication*, 126.
[172]See Tuman and Bolter.

structures."[173] As a result, "the original text no longer seems inviolate" and "loses its privileged

status."[174] It is important to note that alternatively, scriptural work and exegesis can be a holy

endeavor, one as prized as reading a fixed text in an officially sanctioned ritual format. Roger

Chartier perhaps summarizes this conundrum for religious texts in e-formats the most skillfully:

> "to read on a screen is not to read in a codex. The electronic representation of texts completely changes the text's status; for the materiality of the book, it substitutes the immateriality of texts without a unique location, against the relations of contiguity established in the print objects, it opposes the free composition of infinitely manipulable fragments; in place of the immediate apprehension of the whole work, made visible by the object that embodies it, it introduces a length navigation in textual archipelagos that have neither shores nor borders."[175]

3.3.3 Canon & Homogenization

Continuing to think of the e-reader or laptop as a vessel for intangible texts, the issue of a

kind of homogenization arises – which was hinted at earlier. The e-reader and internet are

democratic vessels in that they can indiscriminately store all types of texts. Hundreds of

thousands of "different electronic messages can be received through a single acquired object"

like the e-reader or laptop, and "further, the characteristics of the electronic medium do not vary

with changes in the characteristics of the message."[176] A copy of *War and Peace* and a one-page

press release appear on the same screen, without changing the physical size of the computer or e-

reader. In some ways, this seems to eliminate differences between texts, homogenizing scripture

with a Tom Clancy novel by placing them next to each other in a digital library and viewing a

page of each in the same way on the same screen. Not only in content but in function, there is a

mix of the Eliadean sacred and profane at work in the use of the e-texts. Brenda Brasher, who

researches the phenomenon of religion online, notes that,

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[173]Bolter, 35.
[174]Ibid.
[175]Cavallo and Chartier, 18.
[176]Meyrowitz, 81-2.

"if computing machines are deemed sacred—are aspects of our material world that people pray over and for and through—what does this imply for the boundaries between the sacred and the profane? This is an especially perplexing dilemma, if we take into account that the computing machine (on which a child prays for God to bestow a blessing) is technically immediate kin to computing systems that monitor nuclear warheads, manage stock exchanges, and run water processing plants. It raises the question of whether it is really the computer per se that the poet wishes God to bless, or rather any element of the world that makes greater human connection and interaction possible."[177]

It seems that the hypertext and searchability which make an e-text so interactive also begins to break down the boundaries, "separateness, or individual identity"[178] between texts. This is especially concerning when anything from pornography to neo-Nazi support websites are only a click away. Scholar of online religion Paolo Apolito researched the prevalence of pornography when searching for terms like 'Madonna' or 'Virgin Mary' in 2005 and found that "the presence on porn web sites of the expression "Virgin Mary" brings these bait-sites into the great Marian archipelago; in fact, even without using that keyword, search engines might very well snag pornographic web sites that contain the expression 'Virgin Mary.'"[179] A contemporary search of the same terms yields different results – perhaps because of the increase in web material or the effectiveness of search engine censorship/restrictions on inappropriate content. The spirit of Apolito's searches remains, however; inappropriate content is never more than a click away.

A second large theme that can be seen in this same vein regards the creation of a canon. Canon involves the "natural and widespread reverence for the physical copies of sacred texts" which leads to an impulse to set such texts apart from all other forms of the written word in

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[177] Brenda Brasher, *Give Me That Online Religion,* (Hoboken: John Wiley and Sons, Inc., 2001), 42.
[178] Bolter, 23.
[179] Paolo Apolito, *The Internet and the Madonna,* (Chicago: University of Chicago Press, 2005), 173.

definitive, tangible ways."[180] This in some ways explains both the ritual reverence and laws for the Torah Scrolls, as well as the Christians' choice of the still-new codex. In e-formats, religious texts can be linked to relevant sources, definitions, explication, or commentary. Texts in e-formats are in reality webs of information and sources, and it would seem that for a religious text this involves a lot more decision-making and censorship, based largely on the beliefs, circumstances, or conditions of the 'map-maker' or webmaster.[181] Does this process add to the canon, or at least detract from its authority? Which sources are linked and which are not? Who decides this in such a highly unregulated format? Exclusion or inclusion becomes not only a question of theology but of practical efficacy. The problems elucidated by Roger Chartier regarding canons in general are exacerbated by the electronic formats. He suggests that transmission and book culture is "menaced by corruption" and therefore those concerned with creating a canon are obsessed with "possible perversion of the body of canonical texts" for two main reasons.[182] One reason is that the publishing world is perceived as "a world of commercial competition, necessary profits, and manual operations" and is full of people, practices, and values "which are not those of learning: for example, plagiarism, pirated editions, forgeries, and alterations."[183] This was seen initially in reactions to the advent of print. The second reason is that "with the proliferation of widely diffused commentaries, the authority of official interpretations is called into question."[184] Again, it is easy to see how an e-text that is so easily related or linked to other texts and open to 'non-authoritative' sources is even more subject to these two fears. Although talking about a literary canon, Jay Bolter's ideas also clearly apply in

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[180] William A. Graham, *Beyond the Written Word: Oral Aspects of Scripture in the History of Religion,* (Cambridge: University of Cambridge, 1987), 62.
[181] See Mullins.
[182] Roger Chartier, "Gutenberg Revisited From the East," *Late Imperial China*, 1996: 6.
[183] Ibid.
[184] Ibid.

the online situation along these lines. He suggests that electronic technology threatens the idea of a canon because e-texts are by definition interrelated, and "it therefore becomes impossible to isolate and canonize a few great texts and authors."[185]   Texts become more interrelated thanks to hypertext links. Texts also become related to other non-related sites or sources – pornography, celebrity news, and internet games are homogenized with sacred texts by being readily available in sequence with each other or even at the same time. Essentially, the reader is the one creating the canon, as the only boundaries in e-formats are those the user imposes upon themselves.[186] Therefore, the only way that "texts in the modern world survive as special (and deserving attention)" is "by virtue of an organized effort to set them off from the sea of texts."[187] Some are pessimistic about the effect this homogenization will have on religious texts like the Bible. Theologians are concerned that an electronic medium "invites reaction" and is seen as a more open structure rather than as an unchanging one in which "meaning is resident, enduring, and universal."[188] This implies for them an inevitable acquisition of "open-textured associations" by books like the Bible.[189]

It seems more likely, however, that a feasible way to bracket a text as sacred in an electronic world exploding with sources is not impossible, but merely has yet to be discovered or created – or perhaps will be self-imposed. Some theorists suggest that despite the perceived 'flight from authority' in modernity and the difficulty in creating a canon, perhaps religious readers will, in fact, impose one upon themselves. Religious readers, it is suggested, do not differ much from regular readers in the "extent to which their reading is constrained by authority" but

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[185]Bolter, 36-37.
[186]Mullins, 104.
[187]Ibid, 103.
[188]Ibid, 105.
[189]Ibid.

the key difference is "in the extent to which such constraint is acknowledged, and, often, in the substance of the convictions underwriting the exercise of authority."[190] With this acknowledgement of canon on the part of religious readers, it is hoped that "their reading practices presuppose a select list of works worth reading, things that must be read, and read religiously; as well as a concomitant (and much longer) list of works not worth reading, things that ought not be read, or at least not religiously."[191] Other religious and media theorists are similarly showing optimism for the effectiveness of sacred reading online or in e-books despite these canonic challenges. For example, many Jewish scholars have suggested that both the design of the Talmud and hypertext linking in the design of the Internet are "structured so that they facilitate and encourage creative, associative, and multiple perspectives."[192] In this way, the traditional study of the Torah, which has never been silent, independent, or linear, is particularly well-suited and not inimical to the hypertextual nature of e-format reading. It has been suggested that the methods of hypertext actually resemble the "ancient technique of Torah study," so much so that some suggest "this crucial feature of modern computer software originated thousands of years ago in the study of Torah."[193] While this may be overstated and apologetic, it is certainly true that if the text of the Torah is a *yam,* a sea to surf through, then perhaps the best 'surfing' tool in the modern world, the internet, is less opposed to Jewish textual study than originally thought. Outside of the Jewish tradition, this idea may be applicable to all religious traditions and their reading practices. Fundamentally, "if the reflexivity and consequent changes in religiosity found on the Internet are mirroring and extending a more generalized spiritual reflexivity" in

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[190]Griffiths, 63-4.
[191]Griffiths, 64.
[192]Alexenberg, 22-24.
[193]Boxer.

religious people, it may be possible that the interactivity of hypertext is actually "compatible

with genuine religious experience."[194]

3.3.4   New Opportunities

If technology is understood as not antithetical to religion, then, a last innovation of e-

formats involves the new opportunities that e-formats will present for religious reading.

Disregarding Frollo's fear that reading technology will 'kill' religion for the time being, it is a

legitimate question of what the effects of sacred electronic reading will be on actual religion.

Some suggest that even in the modern world, religious conversions and transmissions occur

"largely on a one-to-one basis, and along the lines of preexisting social ties."[195] It may seem

surprising that even with mass media and an extensive communication network, this is still the

preferred or prevailing mode of transmission. If this is truly the case, then technology's effect

will be limited and electronic texts will largely be underused in the spread of religion. The

ubiquity of technology, however, suggests that it is unlikely that the transmission of texts will

continue to ignore the innovations of e-formats. It seems apparent that "far from being

incompatible or destructive, new media can enable a wealth of possibilities for enhancing

religiosity."[196] Remembering the conversion experience of famous figures like St. Augustine

(pick up and read!), it is a notable trend that "many of the most momentous events in religious

history are the product of human encounters with words."[197] The power and importance of sacred

texts in transmitting and expressing religion is paramount, and it seems improbable that the

internet and e-books will be ignored when they provide such an effective "vehicle for the

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[194]Dawson, 28.
[195]Ibid, 73.
[196]Shandler, 12.
[197]Dawson, 17.

delivery of many moving words and images."[198] The innovations that this medium will provide, if utilized, are innumerable. One of the potential uses of these new media is to provide a greater opportunity for the spread of minority or new religions. Because "new technologies do not limit or predetermine the possibilities for their place in religious life,"[199] they seem to present unrestricted access and usage by religions, especially those with little opportunity in strictly controlled and well-established media markets. Looking at Martin Luther's reformation as an example, it is feasible that technology is often employed by a new religion during a transition. Luther published a myriad of pamphlets in the vernacular language, thereby engendering his anti-hierarchical movement. This propaganda was enabled by the new printing press. Similarly, the principal text of Jewish mysticism, the Zohar, was "printed and broadly distributed during this same period," and helped to popularize Kabbalah.[200] These examples hint at the opportunities that new technology can provide for minority religions: "a platform for the articulation and testimony; an online community in which countercultists and former members can find mutual support and reinforcement; and a cyberpolitik unrestrained by the commercial exigencies of print publication."[201]

As one particularly cogent example, Canadian professor of Religious Studies Douglas Cowan writes about the effect of new technology on the Christian counterculture movement. Nearly anyone, barring those without access to certain technologies, can "find and view Countercult websites in a matter of seconds; downloading material and printing it consumes

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[198]Ibid.
[199]Shandler, 4.
[200]Brasher, 15.
[201] Douglas E. Cowan, "From Parchment to Pixels: The Christian Counterculture on the Internet," London: Presented at the 2001 CESNUR (Center for Studies on New Religions) Conference, 2001.

mere minutes."[202] In the case of e-formats, distribution becomes extremely easy, inexpensive, and open to an unimaginably wide audience with the press of a button. Along with distribution, storage is also a benefit for new or minority religions. Virtual space is essentially unlimited, thereby providing "a library for the storage and retrieval of countercult material."[203] Additionally, the users and readers can contribute to the movement and the literature online or in e-formats. Although "for most of its post-war history, the Christian countercult has been limited by and to the exigencies of print publication,"[204] that is no longer the case. The internet offers website hosting, authoring tools, and publication opportunities, as well as public forums, so that anyone with the proper tools can contribute to and discuss the movement. Overall, these new formats provide the following for minority religions: a library for information, a platform to express opinions, a community to see that there are others who think similarly, and a means to influence others – "an instrument of ideology."[205] Essentially, "electronic media offer previously isolated groups a new form of social access and movement."[206]

Egalitarianism in terms of gender is also a new opportunity presented by e-formats. Gender distinctions and issues suddenly seem surmountable, mainly because of the anonymity of usage of technological media. Women, for example, can utilize technology for Torah reading or Talmud study, an enterprise they are otherwise excluded from undertaking in ultra-Orthodox communities.[207] The use of e-reading devices in the home more generally "not only liberates

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[202]Cowan.
[203]Ibid.
[204]Ibid.
[205]Ibid.
[206]Meyrowitz, 181.
[207]See the Responsa of Rabbi Yehuda Henkin, and also the phenomenon of *Daf Yomi* and the toll-free hotline. *Daf Yomi* was a hotline for daily Torah study, where automation of the system allowed for women to call in and participate in an aspect of textual study that law

women from the home's informational confines but also tends to reintegrate the public and

domestic spheres and to foster a 'situational androgyny.'"[208] The computer or e-reader in the

home has the potential to slowly remove the split between public and private, domestic or

business, man or woman. This means the end of the "place/situation" link, meaning that "a man

and a woman can be physically separated yet socially together, or isolated together in the home

yet connected to other social spheres."[209] This new technology is less likely to divide people

according to 'traditional' categories like age, sex, religion, class, or education level because

those conditions are not barriers to its access. It provides the same information to everyone

publicly and simultaneously. In other words, the "conditions of attendance" are different with a

computer than with a printed book, because "almost every person will be able to attend easily to

almost any source."[210] This homogenization of access parallels the homogenization of content

that was discussed earlier.

But the homogenization of access is not equally hailed by all because it calls into

question the role of authority, not unrelated to the debate around the creation of a canon online.

If it is true that "authority rests on information control," then it seems inevitable that such

authority will dissolve entirely within such an unrestricted format.[211] Neither the creation nor

consumption of electronic media is limited by any sort of authority: the skills needed to create

content are easily accessible and do not necessarily require years of training, while the

knowledge needed to access them is even smaller. In light of this, it could be argued that

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reserves for Jewish men. Gender issues around *Daf Yomi* are even further complicated by e-mail
and the internet.
    [208]Meyrowitz, 224
    [209]Ibid, 225.
    [210]Ibid, 88-9.
    [211]Ibid, 160-2.

"The more a medium of communication tends to separate what different people in a society know, therefore, the more the medium will allow for many ranks of authority; the more a medium of communication tends to merge informational worlds, the more the medium will encourage egalitarian forms of interaction."[212]

This apparent dissipation of traditional authority clearly has implications for believers, hierarchies, and religious leaders in most religions, particularly in the Abrahamic traditions.

Countless other new innovations and opportunities could be discussed here and certainly deserve further attention in future works: for example, the benefit of e-formats for the environment as a part of the increased environmental awareness in the 21st century. In this particular transition, it seems that going 'green' may be a motivation to switch formats, unlike in any other previous historical transition. Reactions from paper companies, like Domtar Corporation, will certainly play a role in this debate as well. Another example of possible future research is the effect of social and economic class on the access to new formats like e-books or e-readers. An economic study of the effect of the high cost of new technology upon its inception and in reference to religious reading may prove interesting. On one of the sacred text archive websites, the headline reads: "wisdom is priceless, the sacred-texts CD-ROM is 49.95."[213] Does the fact that new technologies are cost-prohibitive and are only available to the wealthiest first make a difference? Particularly for religion? The price of computers or e-readers may rival the price of a new printed book, bound and illuminated shortly after the invention of the printing press. There are simply too many factors, but this project has attempted to summarize and organize as many as possible in a reasonable manner.

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[212]Ibid, 64.
[213]Sacred-texts.org

4.0   CONCLUSION

Although the three-part pattern of technology has been posited here, it is clear that more research is needed and that time will be the ultimate determining factor, as it always is during transitional periods. It should be kept in mind, though, that it is ultimately a matter of experience over methodology. In the end, these decisions are entirely up to the reader/participant, not a media theorist. This kind of work is merely to suggest the ways in which those readers are feeling, and speculate about their current choices in light of historical perspective. Although many scholars have suggested that technology and e-formats are ultimately inimical to reading sacred texts, it seems to be a stronger conviction that reading practices will adapt to the new formats and the opportunities they provide. Perhaps the printed book will become sacralized and acquire prestige, as the scroll has. Regardless, both old and new technologies will emerge from this transition with distinct roles – e-formats may develop a hyperlink referencing system as Duntemann suggests just as the printed book format developed tables of content. There will be no replacement of one or the other, and eventually e-formats may inevitably become perceived as real or acceptable for religious reading. In this vein, as mentioned, it also seems possible that while sacred texts may lose their iconic, ritual, or performative aspects[214] by being digitized, they will still maintain a level of importance for scholarly or religious study. Perception and intention seems to be the most important factor: "the Bible is still the Bible…though dressed in modern fashion, the message is the same message that was carried in the first tracts" and people remain "committed to the experience of *reading* the word – serious, contemplative reading."[215] That 'Jewish' caveat appears again – old forms become sacralized, while readers glean academic

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[214]James Watts, "The Three Dimensions of Scriptures," *Postscripts*, 2006: 135-159.
[215] David Paul Nord, *Faith in Reading: Religious Publishing and the Birth of Mass Media in America,* (New York: Oxford University Press, 2004), 159.

benefits from studying sacred texts in the new form. In no prior transition have the innovations of a new format completely eradicated an old one, although "premature obituaries of the end of the book and the death of print are themselves testimony to long-enduring habits of mind."[216] Old printed books may even be getting a new lease on life by being published in e-formats, thereby generating renewed interest in those texts. With all the historical transitions considered, "coexistence seems more likely than supersession for some years to come."[217] It certainly does seem that Claude Frollo's "resigned pessimism as well as his technological determinism" are somewhat "unwarranted now, for reasons both abstract and pragmatic."[218] It is more likely that our expectations and reception will change "as technology rewrites what it means to be a book."[219] To better understand this transition, ethnographic and anthropological work is required, particularly research which observes and analyzes cases of reader reception of new technologies by specific religious traditions. This is where scholarship needs to go, as it seems that the current transition in relation to sacred texts is addressed only tangentially where it coincides with the study of the history of the book. The theoretical work that humbly began here can only benefit from experiential data and ethnographic research into the actual reception and conceptualization of new reading technologies in religious communities. It is true that only time will tell, and that contemporary research nearly always runs the risk of becoming irrelevant or inaccurate; but a backwards glance at historical transitions can only better inform our understanding of the current one, and perhaps can convince Frollo and like-minded readers – religious or not – that there is hope.

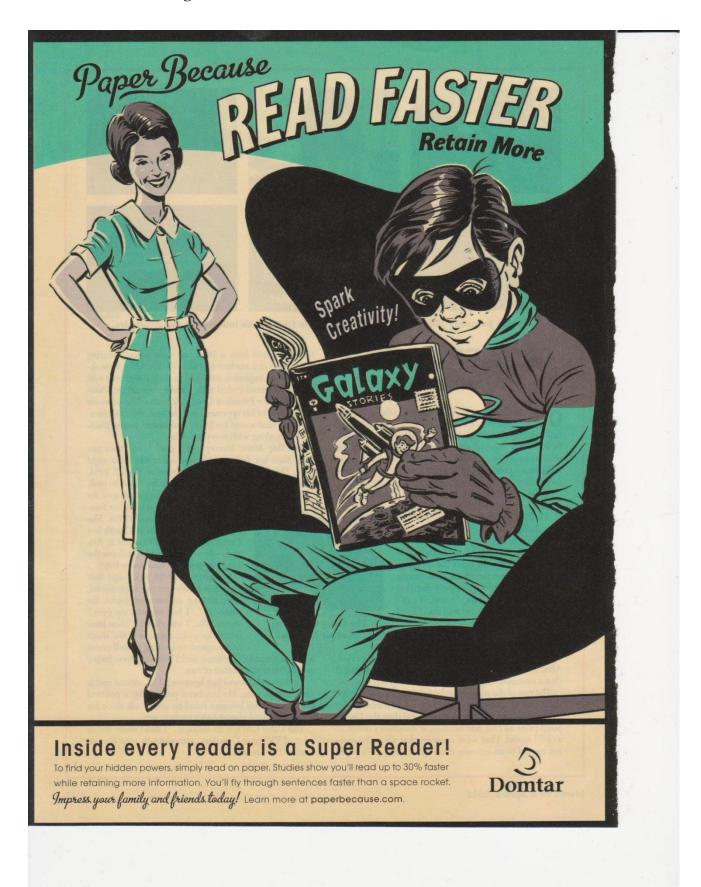[216]Eisenstein, *Divine Art, Infernal Machine* 245.
[217]Ibid, 240.
[218]Dames.
[219]Crovitz.

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APPENDIX A

Figure 1.   PAPERBECAUSE CAMPAIGN AD

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(http://www.bl.uk/onlinegallery/sacredtexts/index.html)

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