

From Scroll To Codex:

How Technology Transformed Reading

Documentary

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Scroll To Codex: How Technology Transformed Reading – Script / Storyboard

Script	Images	Citation
<p>Introduction</p> <p>Most people today learn to read at a young age. We teach our children first through sounding out the words while they follow along to associate the sounds they know with the words on the page. Then we have them read those pages out loud as they get older. By grade school, students are reading sentences and pages out loud with peers. Eventually, they learn to internalize those sounds and read them silently. In this way, most English speaking adults have become literate.</p>	<p>Progression of Images from Children Reading</p>	
<p>General Theme</p> <p>However, this progression is not unlike the progression of reading we have in history. In this documentary, we will trace the history of reading from the first scroll and to the codex or handwritten book. We'll examine how the technology of reading changed and how readers used that technology, transforming their culture and their understanding of the world.</p>	<p>Diagram showing progression</p>	
<p>Scroll Descriptions</p> <p>Along with tablets, Scrolls are one of the oldest writing technologies. Scrolls were created out of variety of different materials including papyrus paper, animal skins, thin copper sheets and tree bark. In each case, they were rolled into sheet between 20 and 30 feet and written on one side. As a reader or writer used it, he or she would unroll the scroll to display a portion of the text or writing space. This made scrolls far more portable and useful when compared to tablets and parchment which were heavier and often made of stiffer materials.</p>	<p>Image of Long Scroll</p>	<p>(Evans, E. A. 2008)</p>
<p>Scroll Production</p> <p>The production of scrolls was often quite costly. With papyrus, the plant needed to be gathered and the stems cut into small strips. They were then arranged in two layers that overlapped in opposite directions and laid in water to decompose. After a time, the layers were taken out, glued together and hammered until the layers were indistinguishable. The new roll of paper was laid out to dry, with linen used to help the absorb moisture. In all, it took from three days to a week to manufacture paper for a scroll. This made paper for scrolls extremely expensive and prized.</p>	<p>Production Process of Scrolls</p>	<p>(Evans, E. A. 2008)</p>
<p>Speech in Text</p> <p>As such, ancient writers saw writing not as an independent</p>	<p>Greek and Roman Readers and Speakers</p>	<p>(Saenger, P. 1982)</p>

<p>form of communication but as a record of speech to be recited by a reader in the future. Ancient writers crafted their sentences in way that sought to replicate performative speech with its rhetorical techniques and sound. The earliest Greek writing of Homer and Hesiod included the dactylic Hexameter, a rhyming scheme used to recall key concepts. Similar patterns were also found in the works of other authors. Plato for example wrote his dialogues to mimic conversation. Later Roman authors like Caesar, Pliny the Elder and Plutarch styled their writing as speeches to be given on topics and often dictated their work, converting speech to text directly. Up until the middle ages, vocal rhythm continued to be important part of how ancient authors styled their writing.</p>		<p>(Bolter, D.J. 2001) (Plato. Ed. Cooper, J. p.xxi) (Hansen, M.H. 1999)</p>
<p>Oral Based Reading and Writing Conventions</p> <p>Similarly, early readers didn't read though grasping the meaning of the words visually. Instead, they needed to listen to the sound of the words and process the meaning auditoraly. Writing on scrolls often did not include many of the writing conventions we use today. There were no headings and sub heading to separate parts of the text. Punctuation like commas, periods and colons didn't provide assistance to the reader. In every Indo-European and Semitic writing system, spacing between words didn't exist. In ancient Hebrew, vowels were not part of the writing system. Readers as such were the interpreter of the text for their audience and few readers read silently or could read ahead of what the pronounced.</p>	<p>Subtract titles, punctuation and word spacing to get the correct effect</p>	<p>(Hendrickson, G.L. 1929) (Saenger, P. 1982) (Bolter, D.J. 2001)</p>
<p>So without spaces or punctuation, how could a reader actually read a text? To do this, the reader needed to have strong grasp of the spoken language, including where pauses would come, how to separate sounds into words and where to put intonation. As such, scrolls were written for the fluent speaker who read each symbol from the page phonetically to an audience, not for casual reader trying to learn a language or understand the text in solitude.</p>	<p>Contrast performance with personal reader</p>	<p>(Suetonius. <i>Augustus</i>, 87-88) (Saenger, P. 1982)</p>
<p>Searching for Information</p> <p>In addition to the performative and oral bias of scrolls, the technology also reinforced linear reading of texts. If you have ever used a VHS or cassette tape, you know the struggle ancient readers would have had searching for a spot in the middle of a scroll. The reader needed to unroll and reroll the scroll to find the desired spot. And with no headings to give guidance, the reader would randomly have to read parts and recall where in the scroll he or she was. Like our VHS or cassette tapes, it made sense to read in a linear way and punished those who flipped between locations in the text. As such, the scroll promoted linear, phonetic, performative reading.</p>	<p>Visual comparison of scrolls and tapes to create visual analogy</p>	<p>(Grossman, Lev. 2001)</p>

<p>Introduction and How to Make a Codex</p> <p>However, starting in the first century AD, the codex or, hand written book, became a popular new technology to store writing.</p> <p>To create a codex, a book maker would bind sheets of parchment or paper between two skins. If parchment was used, it would often be created using animal skins that were separated, treated, stretched and dried. Parchment was often stiffer and therefore better suited to book making than papyrus paper.</p>	<p>Demonstrate codex and what the books looked like.</p>	<p>(Agrwal-Hollands, U. & Andrews, R. 2001)</p>
<p>The Early Codex</p> <p>The early adopters of the codex are sometimes thought to be Christians in the first and second centuries AD. The codex offered them a more compact and durable way of transporting, concealing and persevering copies of the new testament.</p> <p>Although common among Christians, Roman writers also appreciate the codex. It offered simplicity in finding information through its design and cost less because each side of a page could be written on. These advantages made the codex both economically and functionally superior to the scroll.</p>	<p>Images of Early Christians</p> <p>Then Romans writers</p>	<p>(Saenger, P. 1982)</p> <p>(Agrwal-Hollands, U. & Andrews, R. 2001)</p>
<p>Shift from Scroll to Codex</p> <p>With the gradual adoption of Christianity, the codex came to replace the scroll as the dominant technology of writing by the third century. Major works like Aristotle, Plato, Plutarch and Cicero were transferred from scroll to codex while many lesser known works did not survive the change in technology. The codex as a technology also changed.</p>	<p>Change to codex slide</p>	<p>(Saenger, P. 1982)</p>
<p>Non-Linear Writing Conventions</p> <p>With the extra space afforded by using both sides of a page; titles, heading and indexes were added to help guide readers through a text. This allowed a reader to pick up reading at any place in the text rather than start from the beginning or struggle to find a piece of information.</p> <p>The margins in codices were also used for commentary as well and added a non-linear characteristic to writing that promoted thoughtful interaction with the text.</p> <p>Later on, the art of illumination was added to codices to give books an extra aesthetic appeal, while also providing the reader with an added source of guidance.</p>	<p>Codex with titles</p> <p>Codex with comments in Margins</p> <p>Illuminated Codex</p>	<p>(Grossman, Lev. 2001)</p> <p>(Saenger, P. 1982)</p>

<p>The Change in Audience and Technology</p> <p>The transformation of the codex through the addition of titles, commentary and illumination demonstrated a shift in who the audience was. Whereas, with scrolls, the writer was directing his writing to an oral audience, the writer of the codex instead directed his writing to the reader. No longer did a text need to be written for a performance but could instead be used for reference. Augustine’s City of God included a reader’s guide and index that broke the two volume set down and made searching for key information easier. Other writers also included indexes for their readers and other reference materials like handbooks and almanacs became popular. Biblical, and scholarly commentary, also became popular and were meant to be read along-side a primary texts like the Bible, Plato or Aristotle. Thus, the technology facilitated a shift from performance to personal reading.</p>	<p>Change in Audience title screen</p> <p>Augustine writing</p> <p>Collection of Texts</p>	<p>(Saenger, P. 1982)</p> <p>(Agrwal-Hollands, U. & Andrews, R. 2001)</p>
<p>Shift to Silent Reading</p> <p>However, by the 8th century, readers still read phonetically out loud even while alone. Monks often read in groups and it was odd for a reader not to speak while reading or writing. However, as Latin expanded as the language of religion and scholarship in Northern Europe, writing transformed again.</p> <p>When Latin was read by Latin speakers, pauses and separations between words were intuited. However, new readers of Latin in England and Ireland struggled to learn the dominant language of scholarship. To assist second language learners, many teachers of Latin began to include spaces between words, so that students could better distinguish and pronounce each word. However, this had an unintended consequence. Some readers began to read in a new way.</p>	<p>Monks Reading out loud</p> <p>Roman Empire Map</p> <p>Reading Students</p>	<p>(Bolter, D.J. 2001)</p> <p>(Hendrickson, G.L. 1929).</p>
<p>Phonetic to Ideographic Reading</p> <p>Instead of reading each letter and pronouncing them phonetically, new readers read words as idea or ideographically. This new way of reading transformed the phonetic writing system of Europe into a system more akin to stylized iconography of China. And like the Asian writing systems, readers no longer focused on the sounds the letters made but instead translated the words directly into ideas. By adding spaces and punctuation to the codex, the reader was now able to forego vocalizing words, read silently and read quickly. Reading transformed gradually from oral to silent reading until the 15th Century when silent reading had become the dominant form of reading across Europe.</p>	<p>Comparison between phonetic and ideographic reading</p> <p>Chinese and English</p>	<p>(Saenger, P. 1982)</p>

<p>Visual Reading and Visual Culture</p> <p>This new form of reading focused on reading visually, rather than orally. Readers now no longer retained what they read through using oral memory but instead focused on the visual memory of the text. Although Bolter in Writing Space suggests that we are now transitioning to a visual culture, the way that people since the Middle Ages have read has been primarily visual. Through the change in how people read and the expansion of literacy, visual culture began to dominate Western society. As such, visual culture has grown with literacy and the adoption codex over the last twelve hundred years.</p>	<p>Writer / Reader looking up remembering</p> <p>Times Square (Visual Culture)</p>	<p>(Saenger, P. 1982)</p> <p>(Bolter, D.J. 2001)</p>
<p>Conclusion and Summation of the Change from Scroll to Codex</p> <p>As we have seen, through the transition from scroll to codex, reading dramatically changed. Reading went from instructions for oral performance to individual silent interaction with text. It also began to transition from a linear medium where a reader was encouraged to start at the beginning of a text to a non-linear medium where the reader could begin at any point and use texts as reference sources. This transition fits Walter Ong's theory that early literate societies gradually transformed how they read and used text, because literacy transforms thought. As such, writing evolved into its own form of communication, with its own conventions separated from speech.</p>	<p>Visual Recap of the changes</p>	<p>(Ong, W. 1982)</p>
<p>Although we may think the book and scroll are interchangeable mediums for writing, they greatly affected how we read and use texts. Without the technological shift from scroll to codex, scholarly study and research would likely never have been developed and as a result, much of the literature, history, philosophy and science that exist today would not be possible.</p>	<p>Library pan out</p>	

Primary and Secondary Sources:

- Agarwal-Hollands, U. & Andrews, R. (2001). From Scroll ... to Codex ... and Back Again. *Education, Communication & Information*. Vol 1.1. [Online]. Retrieved from <http://web.b.ebscohost.com.ezproxy.library.ubc.ca/ehost/pdfviewer/pdfviewer?sid=5baff224-456c-4881-b9e6-0ea43f52fa86%40sessionmgr115&vid=1&hid=107>
- Bolter, D.J. (2001). *Writing Space: Computers, Hypertext and the Remediation of Print*. New Jersey: Lawrence Erlbaum. [Print].
- Evans, E. A. (2008). Papyrus: A Blessing Upon Pharaoh, Occasional Paper. [Web log comment]. Retrieved From <http://mcclungmuseum.utk.edu/papyrus/>
- Grossman, Lev. (2001) From Scroll to Screen: Centuries before e-books changed the way people read, the codex replaced the scroll. *New York Times*. Sept 4, 2011. pg A13. [Online]. Retrieved from http://go.galegroup.com.ezproxy.library.ubc.ca/ps/retrieve.do?sgHitCountType=None&sort=RELEVANCE&inPS=true&prodId=LitRC&userGroupName=ubcolumbia&tabID=T004&searchId=R1&resultListType=RESULT_LIST&contentSegment=&searchType=AdvancedSearchForm¤tPosition=1&contentSet=GALE%7CA266031020&&docId=GALE|A266031020&docType=GALE&role=LitRC
- Hansen, M.H. (1999). *The Athenian Democracy in the Age of Demosthenes*. Oklahoma City: University of Oklahoma Press. [Print].
- Hendrickson, G.L. (1929). Ancient Reading. *The Classical Journal*. Vol 25.3. pp. 182-196. [Online]. Retrieved from http://www.jstor.org.ezproxy.library.ubc.ca/stable/3289463?pq-origsite=summon&seq=1#page_scan_tab_contents
- Jaeger, W. (1965). *Paideia: The Ideals of Greek Culture*. Vol. 1. New York: Oxford University Press. [Print].
- Ong, W. (1982). *Literacy and Orality*. New York: Routledge. [Online]. Retrieved from <http://lib.myilibrary.com.ezproxy.library.ubc.ca/Open.aspx?id=1960>
- Plato. Ed. Cooper, J. (1997.) *Plato: Complete Works*. Indianapolis: Hackett. [Print].
- Saenger, P. (1982). Silent Reading: Its Impact on Late Medieval Script and Society. *Viator*. Vol 13.1. [Online]. Retrieved from <http://search.proquest.com.ezproxy.library.ubc.ca/docview/1297911610?OpenUrlRefId=info:xri/sid:summon&accountid=14656>
- Suetonius. Trans. Edwards, C. (2000). *Lives of the Caesars*. Oxford: Oxford University Press. [Print].

Images Cited: (By display order)

(According to Fair Dealings – Section 29)

- (1)
Codex Vaticanus [online image]. (2013). Retrieved June 28, 2015 from <https://encrypted-tbn3.gstatic.com/images?q=tbn:AND9GcQfSz5Qt8hKqCp5QmLDRAXIA7TW1qpNur3eeOd9dhgvapGnEp-WRFge1T3Q>
- Scroll [online image]. (2013). Retrieved June 28, 2015 from <https://encrypted-tbn1.gstatic.com/images?q=tbn:AND9GcTOayNYBVD8voFjCA7RU4nxesvw5ymzU9brW5T5jyre3wrWrsRG1ahYzIA>
- (2)
Mother and Child Reading 1 [online image]. Retrieved June 28, 2015 from <http://www.pbs.org/parents/education/reading-language/reading-tips/summer-reading-tips-for-parents-of-babies-toddlers-and-young-children/>
- (3)
Mother and Child Reading 2 [online image]. Retrieved June 28, 2015 from <http://www.lynnkenney.com/wp-content/uploads/2015/03/reading-w-child.jpg>
- (4)
Children reading [online image]. Retrieved June 28, 2015 from <http://www.vaughanpl.info/leisure/2013/06/>
- (5)
Boy reading [online image]. Retrieved June 28, 2015 from <http://nbclatino.com/2013/07/03/should-you-use-incentives-to-keep-your-child-reading/>
- (6)
Man reading on plane [online image]. Retrieved June 28, 2015 from http://goodereader.com/blog/uploads/images/draft_lens18440123module153438464photo_1316471339electronic_book_readers.i.jpg
- (7)
Greek woman reading [online image]. Retrieved June 28, 2015 from [https://commons.wikimedia.org/wiki/File:Musa_reading_a_volumen_\(scroll\)-cropped-2.png](https://commons.wikimedia.org/wiki/File:Musa_reading_a_volumen_(scroll)-cropped-2.png)
Cicero Speech [online image]. Retrieved June 28, 2015 from http://1.bp.blogspot.com/--FkmQ0wyH6I/T3xZg7UU_oj/AAAAAAAAABDY/fyOZTobdPK0/s1600/Cicero.jpg
- Augustine of Hippo Writing - Caravaggio [online image]. Retrieved June 28, 2015 from http://www.ara.cat/cultura/Caravaggio_0_504550124.html
- Monks Reading [online image]. Retrieved June 28, 2015 from <http://www.splendorofthechurch.com.ph/wp-content/uploads/2013/01/medieval.jpg>
- Thomas Aquinas [online image]. Retrieved June 28, 2015 from <http://i0.wp.com/listverse.com/wp-content/uploads/2007/09/friedrich-herlin-reading-saint-peter-1466.jpg>
- (8)
Greek Readers [online image]. Retrieved June 28, 2015 from <http://www.art-prints-on-demand.com/a/jean-auguste-dominique-ingres/thegreektragediansstudyfo.html>
- Saint Jerome [online image]. Retrieved June 28, 2015 from http://3.bp.blogspot.com/_IBaISjSEUQ/TB8agsB3OhI/AAAAAAAAAHGc/c_eKvu80BLE/s1600/saint_jerome+de+stridon.jpg

- (9)
Cuneiform Tablet [online image]. Retrieved June 28, 2015 from http://www.blog.egidija.com/2012_03_01_archive.html
- (10)
Ibid. (Slide 7).
- (11)
Papyrus Scroll [online image]. Retrieved June 28, 2015 from http://i01.i.aliimg.com/photo/v0/141777923/Papyrus_papers_in_rolls.jpg
- (12)
Copper Scroll [online image]. Retrieved June 28, 2015 from <http://img.geocaching.com/cache/large/981ebc89-86ac-4dd5-b0f6-27c4786443ab.jpg?rnd=0.202862>
- (13)
Long Scroll [online image]. Retrieved June 28, 2015 from <http://pbs.twimg.com/media/A4RSW8kCUAAI32i.jpg>
- (14)
Torah Scroll [online image]. Retrieved June 28, 2015 from <https://seoklee.wordpress.com/2011/03/11/the-codex-and-the-illuminated-manuscript-1st-century-a-d/>
- (15)
Roman Tablet [online image]. Retrieved June 28, 2015 from <http://c3e308.medialib.glogster.com/media/07/0797e01930082409a87fc7ab1e0b17c946ceb0b83f5bc8cac1de36940e8e14be/roman-tablet-jpg.jpg>
- (16)
Papyrus Plant [online image]. Retrieved June 28, 2015 from <http://www.plantsrescue.com/wp-content/uploads/2013/05/Cyperus-papyrus.jpg>
- (17-21)
Papyrus paper Making [online image]. Retrieved June 28, 2015 from <http://gb.fotolibra.com/images/previews/32327-making-paper-from-papyrus.jpeg>
- (22)
Ibid. (Slide 11).
- (23)
Plato's Academy [online image]. Retrieved June 28, 2015 from <http://purplemotes.net/2008/12/28/context-of-the-socratic-method/>
- (24)
Greek Cylx [online image]. Retrieved June 28, 2015 from <http://www.beazley.ox.ac.uk/tools/pottery/inscriptions/>
- (25)
Roman Youth Reading Mosaic Fragment [online image]. Retrieved June 28, 2015 from <http://italophiles.com/images/anbooks7.jpg>
- (26)
Demosthenes Painting [online image]. Retrieved June 28, 2015 from http://2.bp.blogspot.com/-1ejM35KK-z4/T_TMo_Fg8eI/AAAAAAAAACRw/317McaI0TAg/s1600/CiceroKnollerMed.jpg
- (27)
Trojan Horse Painting [online image]. Retrieved June 28, 2015 from <https://pantherfile.uwm.edu/prec/www/course/mythology/1200/1912.jpg>
- (28)
Raphael. School of Athens [online image]. Retrieved June 28, 2015 from <http://4.bp.blogspot.com/-wdI9rTEaFDM/TyYOOuVKkDI/AAAAAAAAACGw/lmIhoNZ9AM/s1600/Italy+Rome+Vatican+School+of+Athens+Close+up+Plato+and+Aristotle.jpg>
- (29)
Death of Socrates [online image]. Retrieved June 28, 2015 from http://rocket.csusb.edu/~tmoody/The-Death-of-Socrates-philosophy-380388_800_521.jpg
- (30)
Cicero in the Senate [online image]. Retrieved June 28, 2015 from <https://100falcons.files.wordpress.com/2009/02/cicero-speaking-painting2.jpg?w=640>
- (31)
Roman Teacher and Student [online image]. Retrieved June 28, 2015 from http://www.vroma.org/images/mcmanus_images/index8.html
- (32)
Ibid. (Slide 7)
- (33)
Roman Scroll Reading Posture Mosaic [online image]. Retrieved June 28, 2015 from <http://ccat.sas.upenn.edu/rak/courses/735/book/scroll-posture.jpg>
- (38)
Roman Diploma [online image]. Retrieved June 28, 2015 from <http://www.livius.org/a/1/romanempire/diploma2.jpg>
- (39)
Roman Group Reading Frieze [online image]. Retrieved June 28, 2015 from <http://trema.revues.org/docannexe/image/1664/img-2-small580.png>
- (40)
Roman Youth Reading Sketch [online image]. Retrieved June 28, 2015 from <http://purplemotes.net/wp-content/uploads/2013/02/reading-scroll.jpg>
- (42)
VHS Tape [online image]. Retrieved June 28, 2015 from http://upload.wikimedia.org/wikipedia/commons/9/9b/VHS_cassette_tape_12.JPG
- (43)
Jewish Rabbinical Scroll [online image]. Retrieved June 28, 2015 from <http://www.israel21c.org/wp-content/uploads/2014/01/book3.jpg>
- (44)
Cassette Tape [online image]. Retrieved June 28, 2015 from <http://static.guim.co.uk/sys-images/Guardian/Pix/pictures/2010/3/29/1269883821038/cassette-001.jpg>
- (45)
Ancient Library [online image]. Retrieved June 28, 2015 from http://www.blog.egidija.com/2012_03_01_archive.html
- (46)
Ibid. (Slide 10)
- (47)

Codex II [online image]. Retrieved June 28, 2015 from http://bible-translation.net/upload/2891/Codex_II.jpg

(48)

Codex Front [online image]. Retrieved June 28, 2015 from <http://i.ytimg.com/vi/jr1f1VSGhPY/hqdefault.jpg>

(49)

Making Velum [online image]. Retrieved June 28, 2015 from <http://www.williamcowley.co.uk/wp-content/uploads/2012/09/William-Cowley-25.jpg>

(50)

Open Codex [online image]. Retrieved June 28, 2015 from

<http://preservationhistory.wikispaces.com/Preservation+strategies+from+the+ancient+world+through+the+eighteenth+century>

(51)

Second Century Bible Page [online image]. Retrieved June 28, 2015 from [https://s-media-cache-](https://s-media-cache-ak0.pinimg.com/236x/e8/b4/5c/e8b45cf8dea08b551831502fce63ceca.jpg)

[ak0.pinimg.com/236x/e8/b4/5c/e8b45cf8dea08b551831502fce63ceca.jpg](https://s-media-cache-ak0.pinimg.com/236x/e8/b4/5c/e8b45cf8dea08b551831502fce63ceca.jpg)

(52)

Saint James the Just [online image]. Retrieved June 28, 2015 from http://upload.wikimedia.org/wikipedia/commons/9/96/Saint_James_the_Just.jpg

(53)

Augustine of Hippo [online image]. Retrieved June 28, 2015 from http://upload.wikimedia.org/wikipedia/commons/4/44/Augustine_Lateran.jpg

(54)

Codex Pages from Climaci-Rescriptus[online image]. Retrieved June 28, 2015 from [http://www.bornrich.com/wp-content/uploads/s3/images/2009/07/01/codex-](http://www.bornrich.com/wp-content/uploads/s3/images/2009/07/01/codex-climaci-rescriptus_LDMxy_48.jpg)

[climaci-rescriptus_LDMxy_48.jpg](http://www.bornrich.com/wp-content/uploads/s3/images/2009/07/01/codex-climaci-rescriptus_LDMxy_48.jpg)

(55)

Ibid. (Slide 1)

(56)

Ibid. (Slide 1)

Ibid. (Slide 28)

Ibid. (Slide 26)

(57)

Codex Vaticanus [online image]. Retrieved June 28, 2015 from <http://www-user.uni-bremen.de/wie/Vaticanus/images/title/title-Jo.jpg>

(58)

Codex Sinaiticus [online image]. Retrieved June 29, 2015 from [https://curtisward.files.wordpress.com/2014/03/saint_catherines_monastery_mount_sinai-book-](https://curtisward.files.wordpress.com/2014/03/saint_catherines_monastery_mount_sinai-book-codex_sinaiticus-hd.jpg)

[codex_sinaiticus-hd.jpg](https://curtisward.files.wordpress.com/2014/03/saint_catherines_monastery_mount_sinai-book-codex_sinaiticus-hd.jpg)

(59)

Codex Castella [online image]. Retrieved June 29, 2015 from <http://www.proel.org/img/lenguas/castella.jpg>

(60)

Albertus Magnus Illumination [online image]. Retrieved June 29, 2015 from [https://lh3.googleusercontent.com/proxy/MZdS--](https://lh3.googleusercontent.com/proxy/MZdS--y5MBmKnL9XlylowCs7RbgFWvWSgHm0di59nDZuuwAlWitXicandGVki3TdVxAg-F5uuy20Usq82COdIZjf2kmSe88VTpQIBP9M1XP=w426-h447-p)

[y5MBmKnL9XlylowCs7RbgFWvWSgHm0di59nDZuuwAlWitXicandGVki3TdVxAg-F5uuy20Usq82COdIZjf2kmSe88VTpQIBP9M1XP=w426-h447-p](https://lh3.googleusercontent.com/proxy/MZdS--y5MBmKnL9XlylowCs7RbgFWvWSgHm0di59nDZuuwAlWitXicandGVki3TdVxAg-F5uuy20Usq82COdIZjf2kmSe88VTpQIBP9M1XP=w426-h447-p)

(61)

Ibid. (Slide 58)

Ibid. (Slide 59)

Ibid. (Slide 60)

(62)

OldBooks png [online image]. Retrieved June 29, 2015 from <http://www.thealicebook.com/images/books.png>

(63)

Ibid. (Slide 7)

(64)

Ibid. (Slide 7)

(65)

Scholar [online image]. Retrieved June 29, 2015 from https://static.suite.io/article_images/orig/63513eb7-4a10-4d61-bbde-c6efee5f563c.jpg

(66)

Greek Poet Thalia [online image]. Retrieved June 29, 2015 from http://www.vroma.org/images/mcmanus_images/poet_thalia.jpg

(67)

Thomas Aquinas [online image]. Retrieved June 29, 2015 from <http://poesypluspolemics.files.wordpress.com/2013/05/aquinas.jpg>

(68)

Ibid. (Slide 7)

(68)

Roman Empire Map [online image]. Retrieved June 29, 2015 from

http://vignette1.wikia.nocookie.net/uncyclopedia/images/c/ca/Roman_Empire_Map.png/revision/latest?cb=20090816103337

(69)

Ibid. (Slide 25)

(70)

Middle Ages Reader [online image]. Retrieved June 29, 2015 from <http://britishlibrary.typepad.co.uk/.a/6a00d8341c464853ef01901e458bbe970b-500wi>

(71)

Monks Reading [online image]. Retrieved June 29, 2015 from

<http://preservationhistory.wikispaces.com/Preservation+strategies+from+the+ancient+world+through+the+eighteenth+century>

(72)

Old Book [online image]. Retrieved June 29, 2015 from http://www.wpclipart.com/blanks/old_book.png

(73)

Bard Illumination [online image]. Retrieved June 29, 2015 from <http://www.veritasfaire.com/wp-content/uploads/2014/08/bard.jpg>

(74)

Monks Reading 2 [online image]. Retrieved June 29, 2015 from https://medievalfragments.files.wordpress.com/2014/07/7211744496_a94cd43bf1_z.jpg?w=640

(75)

Ibid. (Slide 7)

(76)

Ibid. (Slide 7)

Ibid. (Slide 74)

(77)

Thomas Aquinas [online image]. Retrieved June 29, 2015 from http://3m7ajlsrzj92lfd1hu16hu7vc.wpengine.netdna-cdn.com/wp-content/uploads/2015/01/Saint_Thomas_Aquinas_-_by_Francisco_de_Zurbaran-660x350-1421666751.jpg

(78)

Times Square [online image]. Retrieved June 29, 2015 from <http://i.huffpost.com/gen/1703970/images/o-TIMES-SQUARE-facebook.jpg>

(79)

Bible Page [online image]. Retrieved June 29, 2015 from <http://www.bl.uk/learning/timeline/external/tyndalenev-tl.jpg>

(80)

Students Reading and Writing [online image]. Retrieved June 29, 2015 from

http://41.media.tumblr.com/21b3c3e36c8ab901deaf0d6d32417a7f/tumblr_mvsmxuO0m11soj7s4o1_1280.jpg

(81)

Ibid. (Slide 8)

(82)

Ibid. (Slide 7)

(83)

Ibid. (Slide 50)

(84)

Ibid. (Slide 48)

(85)

Scholar [online image]. Retrieved June 29, 2015 from https://medievalbooks.files.wordpress.com/2014/12/bodl_canon-class-lat-257_master_2r.jpg?w=661&h=372&crop=1

(86)

Biblioteca Marciana [online image]. Retrieved June 29, 2015 from <https://acdn.architizer.com/thumbnails-PRODUCTION/f2/47/f247bd867d59b499f5ae82416d387503.jpg>