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TL publishes essays, columns, critical reviews, bibliographic essays, and peer-reviewed articles on all aspects of professional librarianship, within the context of a religious/theological library collection encompassing interactions with faculty and administrators engaged in religious/theological education. The primary intended audience includes: professional librarians in colleges, universities, and theological seminaries and others with an interest in theological librarianship

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We're All Librarians Now?

Recently ATLA's director of member programs, Gillian Harrison Cain, penned a thoughtful reflection on the question of what makes a librarian.¹ "What is it that defines someone as a librarian? A degree, a job title, the work they do, where they work?" she wrote.

I sympathize with Gillian and the unconventional library career she details in her column. I too have spent as much time in other roles (professor, pastor, magazine editor) as I have sitting behind a desk in a space clearly marked "library" with a title clearly stating "librarian."

It was during one of those periods when I did sit behind such a library desk that I discovered ATLA eighteen years ago. But during all the years I have been other things, I have never once stopped paying my dues, reading *ATLANTIS* and the *Newsletter*, keeping up with the literature, and even attending and presenting at conferences. Why?

Gillian notes ATLA's new Organizational Ends and their expanded definition of why ATLA exists: so that "all those involved in the practice, study and teaching of and scholarly communication in theology and religion worldwide are connected to others in the field and have the tools, skills, and primary sources needed to advance their work." A big goal, and one that may include bringing people into the life and work of our association who don't have "library" as part of their title, their place of employment, or their self-definition.

Scary? Maybe. But the more I think back on the history of librarianship in general, and of our association in particular, the more I realize we've always been concerned with these questions. The publisher's description of the fine book *A Broadening Conversation*, prepared for the 60th anniversary of ATLA, notes: "A mix of trusted routines with perpetual change is what has always been on the menu for theological librarians in their daily work."² Proving its point, that very book included contributions from scholars, administrators, and publishers as well as librarians.

Theological librarians have always talked to professors and students and deans and editors, always sought to bring books to their readers and readers to their books and readers to each other, always looked to increase scholarship in theology and religion. The pace of technological change may mean that all that happens faster and more globally now. But it's not a new task.

I've kept up my membership all these years because I wanted in on that conversation. The conversation continues in this issue. Read it, inwardly digest it, and join it in issues to come.

Jennifer Woodruff Tait

¹ Gillian Harrison Cain, "Am I, or am I not, a librarian?" *ATLA Newsletter*, last modified January 16, 2018, <https://newsletter.atla.com/2018/librarian/>.

² Melody Layton McMahon and David Stewart, ed., *A Broadening Conversation: Classic Readings in Theological Librarianship* (Lanham, MD: Scarecrow, 2006). For the publisher's quote, see the Google Books description, accessed February 26, 2018, <https://books.google.com/books?id=9iKXvI9ru3kC&dq>.

Seeing the Salzburger in their Books

Abstract

The “Salzburger Collection” now preserved at the Crumley Archives in Columbia, South Carolina, contains 160 books printed between 1615 and 1824 that once belonged to the group of Pietist Lutherans who emigrated from Salzburg, Austria, to Ebenezer, Georgia, in 1734. After a brief history and record of provenance of the collection, this essay focuses on books that demonstrate the collection’s connection to the Pietist center of Halle (in what is now Germany) and devotion to the Pietist forerunner Johann Arndt. The collection was evaluated in light of reports and letters from earliest members of the community and their supporters as well as inscriptions and other unique identifiers, giving preferences to those volumes in the collection most closely tied to earliest members of the community. In so doing, it becomes clear that while sweeping assumptions about a community based upon the presence of a book in such a collection are ill-advised, when proper attention is given to matters of provenance, the contents of a library can reflect the beliefs and practices of a religious community. Furthermore, the archival effort to preserve such a collection provides an excellent backdrop for recounting their communal story.

Who were the Salzburger?

Christianity in many ways promotes a culture of the book. While we do well to use caution in theorizing with limited data, there is arguably something to be learned about any community of Christians based on the books they collect and read — particularly when they preserve those books through tremendous hardships. This essay seeks to provide a glimpse into the Salzburger Pietist community who settled in Ebenezer, Georgia, in 1734, by way of reviewing the recent accession of key works now being preserved in the James R. Crumley Jr. Archives — books that were inherited from the Jerusalem Church in Ebenezer by the Lutheran Theological Southern Seminary during its earliest years.

In 1731, newly elected archbishop Count Leopold A. E. von Firmian (1679-1744) of the Salzburg territory (in what is now Austria) ignored the requests of the weakened Holy Roman Emperor Charles VI and increased persecution of Lutherans in his territories. (Firmian was a staunch supporter of the Counter Reformation efforts of the Jesuits to halt the spread of Protestant ideas in his jurisdiction.) The Treaty of Westphalia, which had ended the Thirty Years’ War in 1648, upheld the idea that the religion of the ruler was the religion of the land in Imperial states and that princes had the right to expel nonconformists. Although the law required that those expelled be given three years to leave, Firmian violated that law by issuing the Edict of Expulsion in 1731, giving propertied Salzburger Lutherans only three months to leave and requiring all other non-conformists to be gone in eight days.

Firmian justified this action by claiming that these were not actually Lutherans but some unrecognized sect. However, those expelled are generally understood to have been Lutheran Pietists, educated by their parents and versed in the Augsburg Confession. As Norman Threinen notes:

This growth [of Protestant faith in the Catholic lands held by Firmian] resulted from a natural alienation of the mountain people from the urbanites in Salzburg, as well as annual treks of rural people seeking seasonal work in the Lutheran territories of the north; returning to their homes for the winter, the migrants brought with them Protestant books which they read throughout the winter months.¹

Whether these emigrants were distinctively Pietists at the outset of their expulsion is uncertain, but their Lutheran faith built on books and centered in homes — rather than around church structure or established clergy —

¹ Norman J. Threinen, “Fredrich Ziegenhagen: The London Connection to India and America,” in *Halle Pietism, Colonial North America, and the Young United States*, ed. Hans-Jürgen Grabbe (Stuttgart: Franz Steiner Verlag, 2008), 46.

paralleled the usual Pietist focus on the individual spiritual life and small home Bible studies. Their lack of ecclesial structure gave Firmian the grounds for his claims that they were not traditional Lutherans protected by the Treaty of Westphalia.

The hardship of these devout Lutherans garnered the attention and compassionate response of Protestant rulers in various German states, especially Brandenburg-Prussia. There, in 1717, the king had required all Lutheran clergy to study for some time in the Pietist center of Halle. At the time of the expulsion, Frederick William I, self-proclaimed protector of Protestant Christians and ruler of Brandenburg-Prussia, resettled nearly 20,000 Salzburg emigrants in areas of East Prussia and Lithuania. But still more important to the particular group of Salzburger who would settle in Georgia was the positive attention paid by King George II of England.

Although head of the Church of England, George was actually a practicing Lutheran. He and the royal family were also supporters of the Society for Promoting Christian Knowledge (SPCK), founded to promote Christian knowledge among the poor in Britain and her colonies. George's Lutheran chaplain, Friedrich Zeigenhagen, along with Samuel Urlsperger, senior minister of the Lutheran Ministerium in Augsburg and Pastor of St. Anne's Church, were both considered "Reverend Fathers" by the Salzburger community, and were members of the SPCK. They promoted the cause of the Salzburger in the English court at the behest of the Francke Foundation in Halle. In 1732, Urlsperger agreed to recruit 300 Salzburger emigrants to settle in Georgia, and all English (SPCK) donations for Salzburger resettlement were restricted to the Georgia immigrants from that point onward.

In 1733, a small group of those Salzburger recruited by Urlsperger were joined by Johann Boltzius and Israel Gronau, two Pietist ministers who had served as instructors at the Latin School of the Francke Foundation in Halle. The Francke Foundation has been described as "something like the primordial cell of social-educational reformation in the eighteenth century."² Boltzius and Gronau arrived in Georgia with their congregation in 1734 and were given property near Savannah by James Oglethorpe, the founder of the colony of Georgia. Their settlement was subsequently named Ebenezer. Both men served there until their deaths.

Boltzius took a primary role as a strong autocratic leader in both religious and secular matters, and he held the community together through many hardships that included recurring bouts of sickness and disease as well as difficulty raising crops. Because the colony's initial location proved to be poor land for farming, Oglethorpe eventually conceded to pressure from Boltzius and allowed the group to move to a better location on a bluff above the Savannah River in 1736. They carried the name Ebenezer to the new location.

Following a difficult period that began with the death of Boltzius in 1765 and continued through internal divisions, deadly disease, and great losses during the American Revolution, the Ebenezer community petitioned the "Reverend Fathers" in Halle for help. A minister named Johann Ernst Bergmann volunteered and came to Ebenezer in December of 1786. His son, Christopher, took up the pastorate in 1824 following the death of his father.

The Salzburger Books

The James R. Crumley, Jr. Archives received the Salzburger book collection, containing 160 books, from the Lutheran Theological Southern Seminary (LTSS) on May 31, 2016. The LTSS library acquired the entire collection in the earliest years of the school's existence and a probable lineage is outlined below. A large number of the books have labels from the "Classical and Theological Seminary, Lexington, S.C." (the location of LTSS from 1834-1856) pasted inside the front or back cover, and nearly thirty of the volumes from the collection are listed in library archives from as early as 1836.

Many of the books have undeniable connections to the Salzburger emigrant community who settled in Ebenezer, Georgia, in 1734. The collection contains many important devotional and song books reflecting the Pietism of the community. Several of the books are mentioned in the letters of their first pastor, Johann Boltzius, with publication dates early enough to have been brought in the first transport of 1734 or sent in response to his requests prior to his death in 1765. For instance, the following volumes from the collection now held at Crumley are noted by Russell C. Kleckley in

² Markus Matthias, "August Hermann Francke (1663-1727)," in *The Pietist Theologians*, ed. Carter Lindberg (Malden, MA: Blackwell, 2005), 100.

Appendix 5 of his translation of Boltzius's letters:³

1. *The portrayal of ideal, diligent students of theology and how they prepare properly for becoming useful servants of the Lord.* by Augustus Hermann Francke (1717).
2. *True Christianity: five spiritually inspiring books on the subjects of salutary penitence, heartfelt contrition, sorrow for sin, and genuine faith.* by Johann Arndt (1722).
3. *An inspiring hymnal with selected spiritual and favorite songs that are both old and new. . . Part One* by Johann Anastasius Freylinghausen (1733).
4. *A harmonized exposition of the holy four gospels with many comments explained and with complete indexes. 14 volumes in 7.* by Paul Anton (1737-1748).
5. *First outline of modern geography for beginners* by Hieronymi Freyer (1741).
6. *Freyer's first introduction to universal history 5th ed.* by Hieronymi Freyer (1741).
7. *The complete passion of Jesus Christ according to a harmonized account of the four gospels, Part 2* by Carl Heinrich von Bogatzky (1753).

At least four more of the books in the collection are inscribed with the signature of Israel Gronau, Boltzius's first associate and dear friend:

1. *Philological & exegetical notations to five hagiographical books of the Old Testament, vol. 1: Psalms & Proverbs* by Johann Heinrich Michaelis & Christian Benedikt Michaelis (1720).
2. *Duties of the evangelical life: A year of sermons based on the appointed Gospel lessons for Sundays and feast days* by Philipp Jakob Spener (1727).
3. *A truthful, detailed history of the Swedish prisoners in Russia and Siberia, who after 1709 in their captivity at Pultaw in the Ukraine met up with other poor souls held by the Russians, some of whom were powerfully awakened to repentance, and in particular what happened at Tobolsky to those who had built a school. . .* by Curt Friedrich von Wreech (1728).
4. *The salt of the earth, which according to Matthew 5:13 is the Christian duty of every teacher and listener, in three parts* by Joachim Justus Breithaupt (1729).

Other volumes are inscribed with the names of subsequent pastors to the community. Two books are inscribed simply with the name Lemke, likely a reference to Gronau's first replacement, Hermann Lemke. Another has the inscription of Hermann's daughter Salome and her husband, and three more have the name of Hermann's son Timothy. One of the Timothy Lemke inscriptions is found in the Wreech book which had belonged to Gronau, and Salome's husband's inscription is also in the Spener book that belonged to Gronau. These both make sense considering that Lemke not only inherited Gronau's position but married his widow and inherited his estate.

The name of a third associate, Rabenhorst, who came to help Boltzius and Lemke not long after Gronau died in 1745, is also inscribed in four of the books. One final and unifying attribute of the collection is that many of the books have the inscriptions either of J. E. Bergmann, who accepted the pastorate of the Jerusalem Church in 1786, or of his son Christopher, who took up his father's mantle until his own death in 1832. This includes several of the texts mentioned above — evidence that the books were handed down with the pastorate.

It is likely that the Salzburger book collection came to the LTSS library by way of Christopher Bergman. In 1824, Rev. John Bachman, chairman of the South Carolina Lutheran Synod, swayed Bergman to take up his father's position at Ebenezer. In the following years the younger Bergman served with Bachman as the secretary to the general synod of South Carolina. He held that office through 1829 — the year in which the synod resolved upon the founding of

³ *The Letters of Johann Martin Boltzius, Lutheran Pastor in Ebenezer, Georgia: German Pietism in Colonial America, 1733-1765*, ed. Russell C. Kleckley and Jürgen Gröschl (Lewiston, NY: Edwin Mellen Press, 2009), 823-31.

a seminary in South Carolina. An 1831 resolution lists Bergman as part of the board of directors for the proposed seminary.

However, the books did not come directly from Christopher Bergman himself because he became ill and died in 1832 prior to the full establishment of the seminary. Rather, Appendix B to the minutes of the 1835 meeting of the South Carolina Lutheran Synod states: "The Library [of the Seminary established in Lexington in 1834] has received several valuable additions since last year. From the congregation of Ebenezer we have received several boxes of books."⁴ Based upon these findings it is relatively certain that the entirety of this collection came to the library from the descendants of the emigrant community at Ebenezer during the early years of the seminary. Further corroboration of the collection's journey can be found in the story of seven books that were discovered at Newberry College (where the seminary was located 1885-1903) in Newberry, South Carolina, in 1989 and given to the Salzburg society in Ebenezer in 2012. These books also contained the inscriptions of Rabenhorst and Bergman.⁵

The books themselves are in quite good condition considering that the vast majority of them were published in Europe (many in Halle), carried across the Atlantic Ocean during the eighteenth and nineteenth centuries, and kept in the very humid climates of coastal Georgia and Central South Carolina. Most of these books are in German, some in Latin, and a very few in English or French. The earliest publication date is 1615, found on a German book of church order.

The archival inventory for the collection has been arranged loosely by topic and chronologically within each topical division. There are approximately twenty books that have been listed as "Devotional/Pietist" books because they are works focused on the spiritual life of the individual believer. Among these are Christian Scriver's *The Soul's Treasures* and Johann Arndt's *True Christianity*. However, it should be noted as cautionary evidence against any overly individualized understanding of the Pietism of the community in Ebenezer that many of the books testify to a genuinely communal faith. Nearly fifty volumes are lectionaries, liturgies, catechisms, and hymnals published for the sake of worshipping communities. Of the fifty-one books of theology, doctrine, and biblical studies, the majority are books of pastoral theology or transcripts of sermons, again pointing to the fact that these early Pietists were committed to a deeply communal albeit quite practical faith.

How the Salzburger Built their Library

Documents show that along with financial support and much needed medical supplies, the "Fathers" in Halle were frequently petitioned by Boltzius for books, and as often as possible the petitions were met with generosity. Samuel Urlsperger mentions in an update on the second transport of emigrants:

Since the Pastors who had gone to Georgia on the first transport had written for a number of books, and since the departing colonists had asked for some themselves, a large box was sent along containing large and small Bibles, New Testaments, books of holy verse, catechisms with and without pictures, Arndt's *True Christianity* and *Garden of Paradise*, Briegish and other hymn books, books for the sick, teachings of the cross, history of the passion with and without copper plates, and Schaitberger's letter.⁶

Later, Boltzius wrote to G. A. Francke (the son of Augustus Hermann Francke and the director of the Francke foundation):

After all the gifts from London, Halle, and Augsburg for us and our community were brought to our place and were distributed...my heart has been awakened anew to write to Your Reverence yet a few lines of thanksgiving for such considerable benefactions in books and medicines in two trunks that were sent partly after the departure of Herr Lemke and partly on...October of last year from Halle...The Bibles, the Books on

⁴J. C. Hope, "The second Annual Report of the Board of Directors of the theological Seminary, at Lexington SC to the Twelfth Meeting of the Evangelical Lutheran Synod and Ministerium of South Carolina and Adjacent States"(November 14, 1835; Minutes of SC Lutheran Synod, 1834-1849, James R. Crumley Jr. Archives, Columbia, SC).

⁵ Vince Exley, "Newberry College returns old books to Ebenezer," *Effingham Herald*, September 14, 2012, accessed August 16, 2017, <http://www.affinghamherald.net/archives/19123/>.

⁶ *Detailed Reports on the Salzburger Emigrants Who Settled in America...Edited by Samuel Urlsperger, Vol. 1, 1733-1734*, ed. George Fenwick Jones, trans. Hermann J. Lacher (Athens: University of Georgia Press, 1968), 13.

True Christianity of the blessed Arndt, the hymnbooks, Reports from East India and all other books and tracts are very dear to us.⁷

Urlspurger's and Boltzius's lists are not exactly shipping manifests. However, there is one rather specific list of books in Boltzius's letters that reveals what one of the many trunks full of books sent to the emigrants might have held:

- 24 copies of large Canstein Bibles
- 36 copies of small Bibles
- 60 copies of the excerpts of the Freylinghausen hymnbook
- 36 copies ditto in large print
- 60 copies of Luther's Small Catechism
- 60 copies of Freylinghausen's *Ordnung des Heils* [Order of Salvation]
- 60 copies of Bogatzky's *Little Treasure Chest*
- 24 copies of Arndt's *True Christianity*⁸

Overall, the occasional mentions of gifts and requests for books, along with the list, serve as excellent comparisons to the actual collection inventory of the books now housed in the Crumley Archives.⁹

Some Things the Collection Can Tell Us

Several specific works give not only further evidence to the provenance of the Salzburger collection but also insight into the faith and journey of the Ebenezer community.

As noted above, the label "Pietists" should be used carefully when discussing the community that fled persecution in Salzburger and made their way to Ebenezer, Georgia, in 1734. What is known about them is that they were not Roman Catholic, and were loyal enough to a Lutheran heritage to leave everything. However, their benefactors and the pastors who volunteered to join them on the way were clearly Pietists, and the books in the collection inherited from them attest to that fact.

Johann Boltzius was a teacher at the school founded in Halle by Augustus Herman Francke. Francke's efforts in Halle to "care for and educate poor children developed into a vast enterprise" by which Pietism at Halle came to be "a social reform movement."¹⁰ As Kleckley has noted, Francke — along with two Pietist theologians, Joachim Justus Breithaupt and Paul Anton — "transformed Halle into a center of Pietist influence and mission."¹¹ Boltzius knew and revered all three of these men, as evinced by frequent requests for their writings as well as a statement in his letter to Gotthilf August Francke dated November 30, 1749: "I regard it [his acquaintance with them in Halle] as the greatest benefactions that God has shown me in my life."¹²

The collection housed in the Crumley Archives substantiates this appreciation. For example, there is extant in good condition a complete fourteen-volume work on the Gospels by Anton published as seven volumes in Halle between 1737-1748. Along with that set, the Salzburger collection contains two copies of Francke's work, *The Portrayal of Ideal, Diligent Students of Theology and How They Prepare Properly for Becoming Useful Servants of The Lord* (1717 and 1723) as well as a book of his sermons from 1746. Crumley holdings also include two collections of Breithaupt's sermons (1724 and 1732) and his commentary on Matthew 5:13 (1729).

⁷ *The Letters of Johann Martin Boltzius*, 484.

⁸ *The Letters of Johann Martin Boltzius*, 671.

⁹ See the Appendix for a list of all Salzburger books mentioned in the essay in fuller bibliographic detail.

¹⁰ Douglas H. Shantz, *An Introduction to German Pietism: Protestant Renewal at the Dawn of Modern Europe* (Baltimore: Johns Hopkins University Press, 2013), 117.

¹¹ Russell Kleckley, "Introduction" in *The Letters of Johann Martin Boltzius*, 9.

¹² *The Letters of Johann Martin Boltzius*, 545-46.

Several books in the Salzburger collection have an even stronger claim to being called formative Pietist works, such as the writings of the radically mystical Gottfried Arnold. The Salzburger accession contains four texts of Arnold's mystical theology and church history, including his German translation of the writings of Macarius of Egypt (1740). However, Boltzius makes only one vague reference to Arnold in his letters and there are no mentions of him in Urlsperger's reports. Furthermore, the books by Arnold have Latin inscriptions that reveal they are a gift from one Johannis G. W. de Brahm to the elder Bergman, so they do not seem indicative of the faith of the earliest pastors or members of the community.

Soul's Treasures by Christian Scriver is another significant Pietist text of which this collection contains three copies (1692, 1719, and 1723). Scriver has been described as a member of "a group of Orthodox Lutheran preachers...remarkable for their reforming energy and ideals."¹³ The oldest copy of this work in the collection belonged to Christian Rabenhorst who was one of two pastors who came to support Boltzius after Gronau died. Of even greater interest is the 1723 copy which belonged to Boltzius. Inside the front cover of this volume archivists found a certificate written in Fraktur that experts determined had been tipped in to the front of the book; it was evidently given as a parting gift. This certificate seems to be a commemorative document presented to Boltzius on his departure for Georgia, and our initial translation indicates that it is a record of a "last monument of love" from the students and faculty of the Latin School in Halle.¹⁴ Still, regardless of the significance of provenance of this particular copy and the fact that there are three copies in the collection, Scriver does not seem on the evidence of the collection to have been as significant an influence on Boltzius and the community as were two key Pietist authors: Philip Jacob Spener (1635-1705) and Johann Arndt (1555-1621).

Spener is often called the father of Pietism. He "initiated" the Lutheran Pietism that Francke eventually "institutionalized" in his introduction to a collection of Arndt's sermons which he later published on its own under the title *Pia Desideria* [*Pious Desires*].¹⁵ Francke was an avid defender of Spener and formed his school on Spener's model of conventicles, and it was upon Spener's recommendation that Francke received his post at Halle.¹⁶ Boltzius makes reverent reference to Spener such as when in a letter dated November 21, 1750, he speaks of concerns that the religious mood of Brandenburg is not good and that people "did not regard the time of the gracious visitation of God through the blessed Spener and other upright teachers."¹⁷

Within the Salzburger collection there are four extant books by Spener. One of these, *Duties of the Evangelical Life*, is mentioned above because it has the distinction of having belonged to Boltzius's first associate minister, Israel Christian Gronau. Another of the four is *The comfort of the evangelical faith: based on the divine benefactions and treasures of salvation in Christ ...* (1727), which has the signature of Lemke, one of Gronau's two replacements sent to help Boltzius. The final two Spener texts in the collection are

1. *Defense of the evidence for the eternal divinity of our Lord Jesus Christ as the incarnate Son of the Father, by the now deceased Philip Jacob Spener (1706).*
2. *Philip Jacob Spener's theological counsels and judgments in Latin: a posthumous collection from his letters selected with special diligence and sincerity, divided into three parts, and made public for use of the church (1709).*

¹³ Shantz, 37.

¹⁴ Dr. Russell Kleckley, email message to author, June 26, 2017. Further investigation has revealed this farewell greeting to be an exciting discovery. A recent response from Jürgen Gröschl, the archivist at the Francke Foundation in Halle, stated, "The farewell greetings for Boltzius are really a surprising discovery, and we have not known of their existence so far, i.e., we do not possess another copy of this document. As it was printed, one could assume that the students of Boltzius' class received a copy, but there is no copy in our archives. Many of these students are in our database as they became teachers or inspectors in the schools of the orphanage themselves and/or pastors in their own communities later."

¹⁵ Samuel C. Smith, *A Cautious Enthusiasm: Mystical Piety and Evangelicalism in Colonial South Carolina* (Columbia: University of South Carolina Press, 2013), 11-12.

¹⁶ Peter C. Erb, *Pietists, Protestants, and Mysticism: the Use of Late Medieval Spiritual Texts in the Work of Gottfried Arnold (1666-1714)* (Metuchen, NJ: Scarecrow Press, 1989), 18-19.

¹⁷ *The Letters of Johann Martin Boltzius*, 581.

While Spener and his writings clearly hold significance for understanding the faith of the Salzburger, there is likely no work more important to the early Pietism of their leaders and community than Arndt's *True Christianity*. Arndt has also been considered the father of Lutheran Pietism. While such a label is anachronistic, the importance of his work should not be underestimated. Despite the fact that "today in Germany one can find only a few who recognize Arndt's name,"¹⁸ the frequent lauding of Arndt's writing by Urlsperger and Boltzius would seem to support the importance of *True Christianity*. Wellman claims that, "In the history of Protestantism there is no book, apart from the Bible, that has had such a circulation."¹⁹

A casual perusal of Urlsperger's reports and Boltzius's letters reveals multiple references to Arndt for every single mention of Spener, most frequently in the context of a reference to *True Christianity*. Other than the Bible, *True Christianity* appears to be the book most frequently mentioned by name in either requests for books or in gratitude for gifts. Urlsperger says of the first group of emigrants, "those who could read were supplied with Bibles, hymn books, catechisms, Arndt's *True Christianity*, and other edifying materials."²⁰ Furthermore, Boltzius and Urlsperger describe the use of the book much like one would imagine the use of a religious tract or even the Bible itself. For instance, in the early travel diaries he reports:

The 21st of April [1734]. An Englishman in our shelter is dangerously sick. Since there is no preacher here and we are not yet able to preach the Gospel in the English language, we sent the schoolmaster Ortmann to him after first giving him instructions as to what he should impress upon him and which chapter he should read him in English from Arndt's *True Christianity*.²¹

Elsewhere, as in a December 1763 letter to Francke, Boltzius quotes Arndt almost as he would quote scripture: "The blessed Arndt in the 29th chapter of the 2nd book..."²²

Francke and his followers had learned to love Arndt from Spener, who held Arndt in near equal respect to Luther. This devotion served as part of the conflict between Spener and those more scholastic teachers now considered "Orthodox Lutherans." Still, whatever may be said of Spener's contention with "Orthodox Lutherans" over the latter's tendency to make Luther a "thirteenth apostle,"²³ it would appear that by the time of the Salzburger expulsion, Spener's movement had elevated Arndt to a level not merely equal to Luther in importance but superior.

With four extant copies from various printings, no other text is represented by as many copies in the collection as *True Christianity*. The publication dates of the preserved copies of Arndt's quintessential book range from well before the first transport to after the American Revolution (1722, 1743, 1744, and 1779). The collection also contains one copy of his *Garden of paradise filled with Christian prayers about virtue* (1741).

Very few other authors show up as often in the inventory of the Salzburger holdings. As seen above, there are also four books authored by Spener. Of the writings of Boltzius's beloved mentors and associates from Halle only the works of Anton, Urlsperger, Freylinghausen, Bogatzky, and Moser are more numerous. Of those, Anton's and Urlsperger's books are well-preserved multi-volume sets of one work each, and the other three are predominately listed as the authors or editors of hymnals, catechisms, liturgical aids, and prayer books; they are not represented by one consistently venerated title.

The institutional Pietism so nurtured by Arndt's quintessential work, which Boltzius brought to the Ebenezer community of immigrants, was a continuation of the work that had been done by the Franke Foundation and its partners for decades. Even the use of Arndt's *True Christianity* to indoctrinate Lutheran emigrants receiving aid as they fled persecution was standard procedure, at least for those bound for the American colonies by way of England. Anton Wilhelm Boehm,

¹⁸ Johannes Wellmann, "Johann Arndt (1555-1621)," in *The Pietist Theologians*, 22.

¹⁹ Wellmann., 21.

²⁰ *Detailed Reports*, 7.

²¹ *Detailed Reports*, 78.

²² *The Letters of Johann Martin Boltzius*, 747.

²³ K. James Stein, "Philipp Jakob Spener (1635-1705)," in *The Pietist Theologians*, 85.

chaplain to Queen Anne and later King George I, gave aid to this earlier generation of emigrants and, “accordingly supplied them, by the aid of certain like-minded friends, with German Bibles and Hymn Books, and also with German copies of Arndt’s ‘True Christianity,’ as well as with other books of devotion.”²⁴

Furthermore, while it is true that during the late seventeenth and early eighteenth centuries the English church had its own conflicts between the established church and various separatist groups, Boehm was still able to make way for the partnership between the Franke Foundation and the Anglican Church embodied by the SPCK in part because these Pietists were in many ways unlike English separatists.

The separatists distrusted by the English establishment tended to reject the importance of ordained ministers and repudiate the Book of Common Prayer. The closest German counterpart to such radical separatists within the sphere of Halle Pietists would likely be Nikolaus von Zinzendorf (1700-1760), and even that comparison is only partially accurate. Zinzendorf had been expelled from the Franke Foundation and was roundly criticized by Boltzius precisely for his “disparagement of theological systems, his lower estimation of the role of clergy, and his heightened appreciation of emotional experience.”²⁵

The Pietism taught by Boltzius continued in the tradition of Franke’s friend and associate, Boehm, who became the chaplain to the Royal Chapel of Prince George of Denmark (Lutheran Consort of Queen Anne): “George wanted to incorporate the *Book of Common Prayer* in his chapel services, but the Lutheran chaplain he had brought along with him from Denmark...was not well versed in English.”²⁶ At the time of the Salzburger transport to Georgia, Boehm’s replacement, Friedrich Michael Ziegenhagen, “took special responsibility for the spiritual care of the Salzburgers,” and “shared with them the Worship Agenda of the German Court Chaplain in London.”²⁷ This “Worship Agenda” was the outcome of Boehm’s incorporation of Lutheran elements with the *Book of Common Prayer*, which Strobel’s history of the Salzburgers references as “the London Liturgy.”²⁸ Of it Boltzius is quoted as reporting, “In our public services and pastoral acts we use the London church order as our guide in all respects.”²⁹ The collection in the Crumley archives seems to contain two examples of this liturgical development:

1. *The book of common prayer: how the holy sacraments and other ecclesiastical rites and ceremonies are administered according to the use of the Church of England, together with the Psalms of David and how they should be sung or read in the churches, and finally the articles of religion, . . . all produced at the behest of Her Royal Highness the Princess of Wales (1718).*
2. *A prayer book compiled partly from English liturgy, partly from other spiritual prayer books; for use in the Royal German Lutheran court chapel at St. James... (1757).*

Whether these two works are different copies of the same order of worship or show a development over time has not yet been determined. However, both of these books were accompanied by notes from the earlier work done on the collection by Dr. Richard Fritz who served as Librarian of the LTSS Library for forty years starting in 1947, as well as archivist for the Lutheran Synod of South Carolina (1945-1962). The majority of Dr. Fritz’s work on the Salzburger books appears to have been regrettably lost over the years since his retirement, but his notes point to the idea that the 1757 copy was indeed a copy of the Church Agenda used by Boltzius.

²⁴ Charles F. Schaeffer, “Introduction by the American Editor,” in Johann Arndt, *True Christianity: A Treatise On Sincere Repentance, True Faith, The Holy Walk of the True Christian, Etc.*, trans. A. W. Boehm (Philadelphia: Lutheran Book Store, 1868), 34.

²⁵ *The Letters of Johann Martin Boltzius*, 72.

²⁶ Brijraj Singh. “One Soul, tho not one Soyl’?: International Protestantism and Ecumenism at the Beginning of the Eighteenth Century,” *Studies in Eighteenth Century Culture* 31, no. 1 (2002): 63. [doi:10.1353/sec.2010.0004](https://doi.org/10.1353/sec.2010.0004).

²⁷ Norman J. Threinen, “Fredrich Ziegenhagen: The London Connection to India and America,” in *Halle Pietism*, 125.

²⁸ P. A. Strobel, *The Salzburgers and their Descendants* (Athens: The University of Georgia Press, 1953), 175.

²⁹ E. Clifford Nelson, *The Lutherans in North America* (Philadelphia: Fortress Press, 1980), 65.

In the end, even if neither book contains the exact liturgy of which Boltzius speaks, they serve as telling artifacts of a community whose life of faith was indelibly tied to their books. Furthermore, given that nearly one third of the 160 books remaining from what was reportedly a large library at Ebenezer are prayer books, catechisms, church ordinals, sermon collections, and hymnals, these two are exemplary volumes amidst a collection of treasures that point to church practice rooted in the journey of a people nurtured on books and aided by the institutional pietism of Halle and supported by the royal piety of the English crown.

Obviously, there remains much work to do on the Salzburger collection. The project thus far has drawn the attention of scholars in Halle, Germany, as well as various people in the US who share an interest in the development and spread of Lutheran Pietism. It offers tangible support for much of what is understood about early German-speaking immigrants to the colony of Georgia and their impact on Protestant Christianity in the US. Some of the finds have the potential to deepen our understanding of how worship was conducted by these early immigrants. Finally, this process of establishing provenance illustrates how the archivist's efforts to document preservation work provides an excellent backdrop for telling the story of a community in such a way as to garner the interest of a broader constituency.

Appendix

Salzburger books of note with German titles, listed by order of mention in the essay

- Francke, Augustus Hermann (1717). *Idea Studiosi Theologiae, oder Abbildung eines der Theologie Beflissenen, Wie derselbe sich zum Gebrauch und Dienst des Herrn, und zu allem guten Werck, gehöriger Massen bereitet: benebst einem Anhang, Bestehend in einer Ansprache an die Studiosos Theologiae zu Halle.* [The portrayal of ideal, diligent students of theology and how they prepare properly for becoming useful servants of the Lord.]
- Arndt, Johann (1722). *Des Hoherleuchteten Sel. Johann Arndts ... Fünff Geistreiche Bücher Vom wahren Christenthum: Welche handeln Von heilsamer Busse, hertzlicher Reue und Leid über die Sünde, und wahren Glauben Welchen noch beygefüget Drey andere kleine Bücher, Welche zu Des sel. Johann Arndts wahren Christenthum gehörig. 1. Die Wiederholung und Verantwortung der Lehre vom wahren Christenthum.* [True Christianity: five spiritually inspiring books on the subjects of salutary penitence, heartfelt contrition, sorrow for sin, and genuine faith.]
- Freylinghausen, Johann Anastasius (1733). *Geistreiches Gesang-Buch, auserlesene, so alte als neue, geistliche und liebliche Lieder, nebst den Roten der unbekanntnen Melodeyen, in sich haltend, zur Erweckung heiliger Andacht und Erbauung im Glauben und gottseligen Wesen, herausgegeben von Joh. Anastas. Freylinghausen ... [Del 2] Anderer Theil.* [An inspiring hymnal with selected spiritual and favorite songs that are both old and new. . . Part One.]
- Anton, Paul (1737-1748). *Harmonische erklärung der heiligen vier evangelisten, mit vielen anmerckungen erläutert nebst vollständigen registern hrsg. von Johann August Majer.* [A harmonized exposition of the holy four gospels with many comments explained and with complete indexes. 14 volumes in 7.]
- Freyer, Hieronymi (1741). *Erster abriß der Geographie nach der nuen zeit fur die anfangende Iugend.* [First outline of modern geography for beginners.]
- Freyer, Hieronymi (1741). *Nahere Einleitung zur Universal historie. Vierte Auflage.* [Freyer's first introduction to universal history 5th ed.]
- Von Bogatzky, Carl Heinrich (1753). *Das ganze Leiden Jesu Christi, nach der harmonischen Beschreibung der vier Evangelisten, in erbaulichen Betrachtungen und Gebeten erwogen und nebst einer in der Vorrede enthaltenen kurzen Einleitung und nöthigem Register hrsg. 2. Theil.* [The complete passion of Jesus Christ according to a harmonized account of the four gospels, Part 2.]
- Michaelis, Johann Heinrich & Christian Benedikt Michaelis (1720). *Vberiorvm adnotationvm philologico-exegeticarvm in hagiographos Vet. Testamenti libros / Vol. primum, adnotationes D. Io. Henrici Michaelis, ... in Psalmos, et Christiani Ben. Michaelis, ... in proverbia Salomonis.* [Philological & exegetical notations to five hagiographical books of the Old Testament, vol. 1: Psalms & Proverbs.]

- Spener, Philipp Jakob (1727). *Die evangelische Lebens-Pflichten: in einem Jahrgang der Predigten bey den Sonn- und Fest-Täglichen ordentlichen Evangelien*. [Duties of the evangelical life: A year of sermons based on the appointed Gospel lessons for Sundays and feast days.]
- Von Wreech, Curt Friedrich (1728). *Wahrhafte und umständliche Historie von denen Schwedischen Gefangenen in Russland und Siberien: Welchergestalt dieselbe nach dem A. 1709. bey Pultawa in der Ukraine mit denen Rußen gehaltenen unglücklichen Treffen, in ihrer Gefangenschafft, zum Theil von Gott kräftig zur Buße erwecket worden, und was sich insonderheit bey der, von einigen unter ihnen angerichteten Schule, zu Tobolsky ... begeben hat, mitgetheilet, ...* [A truthful, detailed history of the Swedish prisoners in Russia and Siberia, who after 1709 in their captivity at Pultaw in the Ukraine met up with other poor souls held by the Russians, some of whom were powerfully awakened to repentance, and in particular what happened at Tobolsky to those who had built a school . . .]
- Breithaupt, Joachim Justus (1729). *Das saltz der erden, das ist, nach Matth. V, 13. Die Christliche schuldigkeit der lehrer und zuhörer: in drei theilen, nemlich/ 1) VII. Betrachtungen; 2) LXXXIII. Hallischen Ordinations-reden: erkläret*. [The salt of the earth, which according to Matthew 5:13 is the Christian duty of every teacher and listener, in three parts.]
- Church order (1615). *Kirchen Ordnung, Unnser von Gottes Genaden, Julii, Hertzogen zu Braunschweig vnd Lüneburg, etc. Wie es mit Lehr vnd Ceremonien vnser Fürstenthumbs Braunschweig, Wolfenbüttlichen Theils ... gehalten werden soll*. [The Church Order (constitution) of our blessed Duke Julius of Braunschweig and Lüneburg containing the doctrine and rubrics to be followed in Braunschweig and Wolfenbüttel.]
- Francke, Augustus (1717, 1723). *Idea Studiosi Theologiae, oder Abbildung eines der Theologie Beflissenen, Wie derselbe sich zum Gebrauch und Dienst des Herrn, und zu allem guten Werck, gehöriger Massen bereitet: benebst einem Anhang, Bestehend in einer Ansprache an die Studiosos Theologiae zu Halle*. [The portrayal of ideal, diligent students of theology and how they prepare properly for becoming useful servants of the Lord.]
- Francke, Augustus (1746). *August Hermann Franckens Sonn-, Fest- und Apostel-Tags-Predigten: darinnen die zum wahren Christenthum gehörige nöthigste und vornehmste Materien abgehandelt sind; nebst. Registern*. [August Hermann Francke's sermons for Sunday, feast days and apostles' days, which contain the noblest materials pertinent and necessary to true Christianity.]
- Breithaupt, Joachim Justus (1724). *Joach. Just Breithaupts ... Drey Creutz-Predigten: In welchen Das Gehei, mniß des Creutzes/ als der einige Grund des Wahren Christenthums, nach Anleitung der Heil. Paßion erbaulich vorgetragen wird; Gehalten im Jahr Christi 1697 ... Mit dazu kommenden Fünff Erläuterungs-Predigten ...* [Three sermons on the cross: secrets of the cross and true Christianity according to the instruction of salvation . . .]
- Breithaupt, Joachim Justus and Christophorus Sucro (1732). *D. Ioach. Iust. Breithaupts, gewesenen Abts zu Closter-Berge, Gen. Sup. und des Magdeb. Consistorii, wie auch Hall. Univ. und Theol. F. Sen. Acht Closter-Bergische Char-Freytags-Predigten, über Auserlesene Sprüche H. Schrift: nebst einer Vorrede*. [Breithaupt's sermons.]
- Breithaupt, Joachim Just (1729). *Das saltz der erden, das ist, nach Matth. V, 13. Die Christliche schuldigkeit der lehrer und zuhörer: in drei theilen, nemlich/ 1) VII. Betrachtungen; 2) LXXXIII. Hallischen Ordinations-reden: erkläret*. [The salt of the earth which according to Matthew 5:13. The Christian duty of every teacher and listener, in three volumes.]
- Arnold, Gottfried, Siegmund Jacob Baumgarten, and Macarius Egyptiern, helgon. (1740). *Gottfried Arnolds Denckmahl des alten Christenthums oder des heil. Macarii und anderer hochehrleuchteten Männer aus der alten Kirche auserlesene Schriften; Mit einer Vorrede Siegmund Jacob Baumgartens ... Vierte Auflage*. [Arnold's memorial of ancient Christianity: Writings of Macarius (of Egypt) and other enlightened men of the early church.]
- Scriver, Christian (1692, 1719, and 1723). *Seelen-Schatz*. [Soul's Treasures.]
- Spener, Philip Jakob (1727). *Der evangelische Glaubens-Trost: aus den göttlichen Wohlthaten und Schätzen der Seligkeit in Christo, in einem Jahr-Gang der Predigten über die ordentliche Sonn-und Fest-tägliche Evangelia, in der Furcht*

des Herrn gezeigt und vorgetragen ... [The comfort of the evangelical faith: based on the divine benefactions and treasures of salvation in Christ ...]

- Spener (1706). *Verteidigung des Zeugnisses von der ewigen Gottheit unsers Herrn Jesu Christi: als des eingebornen Sohns vom Vater ...* [Defense of the evidence for the eternal divinity of our Lord Jesus Christ as the incarnate Son of the Father, by the now deceased Philip Jacob Spener.]
- Spener (1709). *D. Philippi Jacobi Speneri ... Consilia et judicia theologica Latina: opus posthumum, ex ejusdem litteris singulari industria ac fide collectum, et in tres partes divisum, nunc in usum ecclesiae publicatum ...* [Philip Jacob Spener's theological counsels and judgments in Latin: a posthumous collection from his letters selected with special diligence and sincerity, divided into three parts, and made public for use of the church.]
- Arndt, Johann (1722). *Des Hoherleuchteten Sel. Johann Arndts ... Fünff Geistreiche Bücher Vom wahren Christenthum: Welche handeln Von heilsamer Busse, hertzlicher Reue und Leid über die Sünde, und wahren Glauben Welchen noch beygefüget Drey andere kleine Bücher, Welche zu Des sel. Johann Arndts wahren Christenthum gehörig. 1. Die Wiederholung und Verantwortung der Lehre vom wahren Christenthum.* [True Christianity: five spiritually inspiring books on the subjects of salutary penitence, heartfelt contrition, sorrow for sin, and genuine faith.]
- Arndt, Johann (1743). *Johann Arndts ... sechs Bücher vom wahren Christenthum: nebst desselben Paradies-Gärtlein und den Gebeten so in grössern Editionen iedem Capitel beygefüget sind.* [Johann Arndt's six books of true Christianity along with his garden of paradise and its prayers.]
- Arndt (1744) *Johann Arndts, Weiland General Superintendentens des Fürstenthums Lüneburg, Vier Bucher Vom Wahren Christenthum, Das Von heilsamer Busse, herblicher Reue und Leid über die Sünde, und wahren Glauben, auch heiligen Leben und Wandel der rechten wahren Christen, Nebst desselben Paradies Gärtlein. Aufs neue mit Fleiß durchgesehen und herausgegeben von Gotthilf August Francke.* [Johann Arndt's...four books of true Christianity...alongside his garden of paradise.]
- Arndt (1779). *Johann Arndts ... Vier Bücher Vom Wahren Christenthum: Das ist Von heilsamer Busse, hertzlicher Reue und Leid über die Sünde, und wahren Glauben, auch heiligem Leben und Wandel der rechten wahren Christen.* [Johann Arndt's True Christianity in four books...also treating the holy life and dealings of the genuinely true Christian.]
- Arndt (1741). *Johann Arndts, des gottseeligen und hoch-erleuchteten Lehrers, Paradies-Gärtlein, welches voller christlichen Tugend-Gebete erfüllet.* [Johann Arndt's... garden of paradise filled with Christian prayers about virtue.]
- Prayer Book (1718). *Das allgemeine Gebet-Buch: Wie auch die Administration der h. Sacramenten und anderer kirchl. Ritus und Ceremonien nach dem Gebrauch der Kirchen von England. Mit den Psalmen Davids. Wie solche in den Kirchen gesungen oder gelesen werden sollen. Samt den Religions-Articulen, die durch ihre königlichen Hoheit der Princess von Wallis gottseligen Eyffer für die Ehre Gottes und seine Kirche fortgesetzt und auff dero gnädigsten Befehl verfertigt.* [The book of common prayer: how the holy sacraments and other ecclesiastical rites and ceremonies are administered according to the use of the Church of England, together with the Psalms of David and how they should be sung or read in the churches, and finally the articles of religion, . . . all produced at the behest of Her Royal Highness the Princess of Wales.]
- Prayer Book (1757). *Ein Gebet-Büchlein: theils aus der Englischen Liturgie, theils aus andern geistreichen Gebet-Büchern zusammengetragen; und zum Gebrauch der Königlichen Deutschen Lutherischen Hof-Capelle zu St. James eingerichtet. Nebst den Formularen der Heiligen Tauffe, des Heil. Abendmahls, der Trauung und Confirmation, wie auch der Passions-Geschichte unsers Herrn Jesu Christi, aus den vier Evangelisten des Herrn zusammen gezogen. F.P.* [A prayer book compiled partly from English liturgy, partly from other spiritual prayer books; for use in the Royal German Lutheran court chapel at St. James...]

The Open Access Availability of Articles from Highly Ranked Religious Studies Journals: A Study of Ten Journals

by Joshua M. Avery

Abstract

This article explores the current state of open access (OA) scholarship from highly ranked journals covering religious studies. To examine the state of OA scholarship from journals of religious studies, the OA availability of articles from ten peer-reviewed journals were examined. Using the SCImago Journal & Country Rank, a portal that includes the journals and country scientific indicators developed from the information contained in the Scopus® database, the ten most highly rated journals in mid-2015, according to the SJR indicator, were selected for evaluation. Articles that appeared in the journal volumes published in 2014 were selected for analysis, and were identified through online research databases and journal websites that provided bibliographic information. Only articles and essays dealing with research were included. A total of 377 articles were included in the study. Of the 377 articles examined, OA versions were found for 132 (35 percent) of them. Approximately one third of articles (33.3 percent) were located in multiple locations, with more than half of all OA articles found (53.0 percent) in either repositories, or, on the social networking sites ResearchGate.net or Academia.edu. Of the total number of OA articles found, 87 (65.9 percent) were found by both Google and Google Scholar, and 43 (32.6 percent) were found by only Google or Google Scholar, but not both. The results indicate that religious studies journal scholarship is not widely self-archived and made available as OA as a regular practice. Results also indicate that those scholars who publish in journals covering religious studies and who do embrace open access make strong use of either institutional or subject repositories and/or social networking sites to make their scholarship openly available. Finally, results indicate that using both Google *and* Google Scholar to search for OA religious studies journal scholarship yields better results than only using Google *or* Google Scholar.

Introduction

The Budapest Open Access Initiative, originally published in 2002, defines open access (OA) scholarship as literature that is freely available on the public Internet, permitting any user to “read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself.”¹ Peter Suber more succinctly defines open access literature as “digital, online, free of charge, and free of most copyright and licensing restrictions.”²

Modes of Open Access

OA scholarship is delivered primarily through OA journals and OA repositories (online collections, repositories, or databases of OA scholarship), although social networking sites like ResearchGate and Academia.edu have played an important role in recent years.³ OA scholarship that is delivered via journals is referred to as “gold” OA, while OA scholarship made available through repositories is referred to as “green” OA. Such repositories are typically fed by authors, uploading their own work

¹ Open Society Foundations, “Budapest Open Access Initiative,” February 14, 2002, <http://www.budapestopenaccessinitiative.org/read>.

² Peter Suber, *Open Access* (Cambridge, MA: MIT Press, 2012), 4.

³ Mike Thelwall and Kayvan Kousha, “ResearchGate: Disseminating, Communicating, and Measuring Scholarship?” *Journal of the Association for Information Science and Technology* 66, no. 5 (May 2015): 876-89. [doi:10.1002/asi.23236](https://doi.org/10.1002/asi.23236).

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in a practice known as self-archiving. An important difference between gold and green OA is that green OA repositories often lack the ability to grant permission for users to re-use at will, an ability possessed by the distributors of most gold OA. In short, most green OA is “*gratis*,” meaning that it may be used free of charge, but users must still seek permission to exceed fair use, while most gold OA is “*libre*,” meaning that users have permission to exceed some licensing and copyright restrictions beyond fair use.⁴ This paper will refer to all green, gold, *libre*, and *gratis* OA scholarship as simply OA.

OA Mandate Trends

While the aforementioned definitions are widely accepted across the OA movement, the potential for openly sharing research was understood long before such definitions were codified. The arXiv repository, for preprints in high-energy physics and related fields, was started in 1991 and in December of 2014 received its one-millionth upload.⁵ In the last decade not-for-profit organizations, governmental research funders, and universities have begun to encourage, and in some cases mandate, that scholars make research openly and freely available. In 2007, the Canadian Social Science and Humanities Research Council (SSHRC) provided substantial funding for open access journals, and in 2008 began accepting applications to financially support open access journals through its Aid to Scholarly Journals program. That same year, the National Endowment for the Humanities also announced a funding program for open access projects.

In 2005, the National Institutes of Health began requiring that “NIH-funded investigators are requested to submit to the NIH National Library of Medicine’s (NLM) PubMed Central (PMC) an electronic version of the author’s final manuscript upon acceptance for publication.”⁶ In 2013 the European Commission (EC) mandated that research outputs, funded under Horizon 2020 (the European Union research framework), must be made open access. The Research Councils UK (RCUK) released its current OA policy in 2013 which aims to “achieve immediate, unrestricted, on-line access to peer-reviewed and published research papers, free of any access charge”⁷ for research supported by any of the UK’s seven research councils. Also in 2013, the Australian Research Council enacted a policy requiring that any publications arising from an ARC supported research project must be deposited into an open access institutional repository within a twelve (12) month period from the date of publication. As of 2017, more than 800 governmental, non-profit, research, and academic organizations have adopted open access mandates.⁸

OA Journal and Availability Trends

Between 2000 and 2009 the average annual growth rate was 18 percent for OA journal titles, compared to an overall 3.5 percent increase in journal publishing in general.⁹ OA journal scholarship continues to flourish with the greatest gains seen among the sciences. At the time of writing, there were 9,397 separate titles listed in the Directory of Open Access Journals (DOAJ), with 182 titles (1.9 percent) addressing “religion” within the scope of the title’s scholarly coverage.

In 2014, researchers found that the bulk of web-accessible OA scholarship was related to medicine, physics, social science, biology, chemistry, and/or mathematics.¹⁰ A 2016 study examining eleven open access mega-journals (defined as such

⁴ These definitions are drawn from Suber, *Open Access*.

⁵ Tracy Vence, “Q&A: 1 Million Preprints and Counting: A Conversation With ArXiv Founder Paul Ginsparg,” *The Scientist*, December 29, 2014, <http://www.the-scientist.com/?articles.view/articleNo/41677/title/Q-A--One-Million-Preprints-and-Counting/>.

⁶ National Institutes of Health, “Policy Notice NOT-OD-05-022,” February 3, 2005, <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html>.

⁷ Research Councils UK, “RCUK Policy on Open Access and Supporting Guidance,” accessed February 26, 2018, <http://www.rcuk.ac.uk/documents/documents/rcukopenaccesspolicy-pdf/>.

⁸ Registry of Open Access Repository Mandates and Policies, “Total Mandates,” accessed February 26, 2018, <http://roarmap.eprints.org/>.

⁹ Mikael Laakso et al., “The Development of Open Access Journal Publishing from 1993 to 2009,” *PLoS ONE* 6, no. 6 (2011). [doi:10.1371/journal.pone.0020961](https://doi.org/10.1371/journal.pone.0020961).

¹⁰ Madian Khabsa and C. Lee Giles, “The Number of Scholarly Documents on the Public Web.” *PLoS ONE* 9, no. 5 (2014). [doi:10.1371/journal.pone.0093949](https://doi.org/10.1371/journal.pone.0093949).

due to size, scope, business model, and peer-review policy), found that articles relating to the humanities accounted for only 4.0 percent of total journal output.¹¹ A 2014 study examining OA papers published in peer-reviewed journals between 1996-2013 revealed that Gold OA (i.e., scholarship published in OA journals) was lowest among general arts, humanities, and social sciences (accounting for only 2.6 percent of OA journal scholarship).¹²

Aim of Study

The OA availability of scholarship from journals of religious studies is not fully understood and relatively little research has been done to examine the global implications of the OA movement for scholarship in journals of religious studies.¹³ The main aim of this study is to provide scholars with a better understanding of the availability of OA scholarship among top-ranked journals of religious studies. To accomplish this, the OA availability of articles from ten peer-reviewed religious studies journals published in 2014 were examined.

Methodology

Using the SCImago Journal & Country Rank, a portal that includes the journals and country scientific indicators developed from the information contained in the Scopus® database, the ten most highly rated journals in mid-2015, according to the SJR indicator, were selected for evaluation.¹⁴ The SJR indicator of a specific journal is calculated by computing a citing journal's impact and its closeness to the cited journal using the cosine of the angle between the journal's co-citation profiles. Additionally, a journal's accumulated impact is divided by the fraction of the journal's citable documents.¹⁵

Drawing from methods used by Way in 2010, articles that appeared in the journal volumes published in 2014 were selected for analysis.¹⁶ Articles were identified through online research databases and journal websites that provided bibliographic information. Only articles and essays dealing with research were included. Columns, letters, editorials, etc. were excluded. A total of 377 articles were included in the study.

A search was performed in both Google (web) and Google Scholar, using the title and author(s) as search terms.¹⁷ If the results were inconclusive, additional terms and/or search limiters were then used. In addition, other search strategies (addition of quotes, etc.) were employed when no results were returned from the original query. All search queries were duplicated across both search engines to ensure uniformity.

¹¹ Simon Wakeling et al., "Open-Access Mega-Journals: A Bibliometric Profile," *PLOS ONE* 11, no. 11 (2016). doi:10.1371/journal.pone.0165359.

¹² Éric Archambault et al., "Proportion of Open Access Papers Published in Peer-Reviewed Journals at the European and World Levels—1996–2013," Rapport, Commission Européenne DG Recherche & Innovation; RTD-B6-PP-2011-2: Study to Develop a Set of Indicators to Measure Open Access, 2014.

¹³ A notable exception to this is Danielle Cooper et al., "Supporting the Changing Research Practices of Religious Studies Scholars," *Ithaka S+R*, February 8, 2017, http://www.sr.ithaka.org/wp-content/uploads/2017/02/SR_Report_Religious_Studies_020817.pdf.

¹⁴ <http://www.scimagojr.com/>. SRJ journal rankings fluctuate depending on various factors (e.g., citations, etc.) and the ten journals that were leading in the SRJ rankings in mid-2015 may not be the same at the time of this essay's publication.

¹⁵ Further discussion of the SJR indicator, its methodology, and reliability can be found in Matthew E. Falagas et al., "Comparison of SCImago Journal Rank Indicator with Journal Impact Factor," *FASEB Journal* 22, no. 8 (August 2008): 2623-28, doi: 10.1096/fj.08-107938; and Vincente P. Guerrero-Bote and Felix Moya-Anegón, "A Further Step Forward in Measuring Journals' Scientific Prestige: The SJR2 Indicator," *Journal of Informetrics* 6 (2012): 675-88, doi: 10.1016/j.joi.2012.07.001.

¹⁶ Doug Way, "The Open Access Availability of Library and Information Science Literature," *College & Research Libraries* 71, no. 4 (2010): 302-09. doi:10.5860/crl-38r1. Similar methods are also used by Mikael Laakso and Juho Lindman, "Journal Copyright Restrictions and Actual Open Access Availability: A Study of Articles Published in Eight Top Information Systems Journals (2010–2014)," *Scientometrics* 109, no. 2 (2016): 1167-89. doi:10.1007/s11192-016-2078-z.

¹⁷ For information on the reliability of Google Scholar as a reliable source for discovering available literature see Gali Halevi, Henk Moed, and Judit Bar-Ilan, "Suitability of Google Scholar as a Source of Scientific Information and as a Source of Data for Scientific Evaluation - Review of the Literature," *Journal of Informetrics* 11, no. 3 (2017): 823-34.

Results

Of the 377 articles examined, OA versions were found for 132 (35 percent) of them. Table 1 shows each journal's SJR ranking, number of articles published, and percent of OA articles found. The percent of OA articles found by journal varied from 5.9 to 100 percent. None of the journals in the study are fully OA, though some of the publishers offer their authors an OA publishing option on a per article basis.

Journal	SRJ (2015)	Articles (#)	OA (%) (2016)
<i>Journal for the Scientific Study of Religion</i>	1.127	43	41.9%
<i>Psychology of Religion and Spirituality</i>	0.758	35	45.7%
<i>Sociology of Religion</i>	0.634	25	20.0%
<i>Journal of Religion and Health</i>	0.478	156	31.4%
<i>Intl. Journal for the Psychology of Religion</i>	0.477	20	65.0%
<i>Religious Studies</i>	0.47	31	22.6%
<i>Journal of Empirical Theology</i>	0.469	12	33.3%
<i>Journal of Management, Spirituality & Religion</i>	0.456	17	5.9%
<i>Journal of Health Care Chaplaincy</i>	0.424	11	100%
<i>Journal of Contemporary Religion</i>	0.416	27	29.6%

Table 1. Percentage of OA articles by journal

Table 2 shows the location of the OA articles in terms of what percentage were found in institutional repositories, personal or organizational websites, OA journal websites, and other sites. Approximately one third of articles (33.3 percent) were located in multiple locations, with more than half of all OA articles found (53.0 percent) either in repositories either in repositories, or on the social networking sites [ResearchGate.net](https://www.researchgate.net) or [Academia.edu](https://www.academia.edu).

Institutional / Subject Repository	Personal Website	Org. Website	Academia.edu/ ResearchGate.net	Other	Multiple
70 (53.0%)	13 (9.8%)	19 (14.4%)	70 (53.0%)	4 (3.0%)	44 (33.3%)

Table 2. OA articles by location

Of the total number of OA articles found, 87 (65.9 percent) were found by both Google and Google Scholar, and 43 (32.6 percent) were found by only Google or Google Scholar, but not both. Table 3 provides information regarding what percentage of articles were found by only one search engine.

Search Engine	Google	Google Scholar
	20 (46.5%)	23 (53.4%)

Table 3. OA articles found by only one search engine

In total, 132 OA articles were found by Google and Google Scholar, with 105 (79.5 percent) found by Google and 107 (81.1 percent) found by Google Scholar. In the single instance in which all published articles in a journal were available OA (*Journal of Health Care Chaplaincy*), 100 percent of the articles were found by both Google and Google Scholar. Table 4 gives information on a journal-by-journal basis regarding the number of articles available OA, and which search engine performed best in locating the available articles.

Journal	OA Articles (#)	Google	Google Scholar
<i>Journal for the Scientific Study of Religion</i>	18	9 (50.0%)	11 (61.1%)
<i>Psychology of Religion and Spirituality</i>	16	13 (81.3%)	15 (93.8%)
<i>Sociology of Religion</i>	5	4 (80.0%)	4 (80.0%)
<i>Journal of Religion and Health</i>	49	37 (75.5%)	45 (91.8%)
<i>Intl. Journal for the Psychology of Religion</i>	13	13 (100%)	7 (53.8%)
<i>Religious Studies</i>	7	5 (71.4%)	6 (85.7%)
<i>Journal of Empirical Theology</i>	4	4 (100%)	1 (25.0%)
<i>Journal of Management, Spirituality & Religion</i>	1	1 (100%)	0 (0.0%)
<i>Journal of Health Care Chaplaincy</i>	11	11 (100%)	11 (100%)
<i>Journal of Contemporary Religion</i>	8	8 (100%)	7 (87.5%)

Table 4. OA articles found by search engine and journal

Discussion and Conclusion

Search Engine Findings

The findings of this study would seem to indicate that both Google and Google Scholar are reliable tools for finding OA content, although scholars will likely see additional benefit from using both search engines when seeking OA religious studies journal scholarship.

OA Availability of Religious Studies Journal Scholarship

The results indicate that religious studies journal scholarship is not widely self-archived and regularly made available as OA. However, results also indicate that those scholars who publish in journals covering religious studies and who do embrace open access make strong use of either institutional or subject repositories and/or social networking sites to make their scholarship openly available. These findings are supported by a 2017 study that found that among religious studies scholars, “awareness and engagement with open access is low but the perceived importance of more freely sharing work as enabled by social media platforms such as Acaedmia.edu is high.”¹⁸ Additionally, a 2015 study of OA scholarship in Germany found that scholars from non-natural science disciplines (e.g., business, philosophy, art, religion) were less likely than those in natural sciences to have experience with OA publishing.¹⁹

Reasons for these findings may include both of lack of interest or ambivalence toward OA publishing and a lack of opportunity.²⁰ None of the journals examined were fully OA and some literature has suggested a disciplinary bias toward scholarly monographs.²¹ Additional reasons may include issues of tenure and promotion, concern over copyright/intellectual property rights, and preferred venues for distribution of secondary research outputs.²² It is important to note, however, that much of the scholarship published in religious studies journals is interdisciplinary or transdisciplinary. It should also be noted that professional theologians, librarians, musicologists, psychologists, archeologists, historians,

¹⁸ Cooper et al., “Supporting the Changing Research Practices,” 30.

¹⁹ Thomas Eger, Marc Scheufen, and Daniel Meierrieks. “The Determinants of Open Access Publishing: Survey Evidence from Germany,” *SSRN Electronic Journal*, 2013. [doi:10.2139/ssrn.2232675](https://doi.org/10.2139/ssrn.2232675).

²⁰ More on this can be found in Cooper et al., “Supporting the Changing Research Practices,” 32-34.

²¹ For more on this, see Beth Sheppard, “By the Numbers: Bibliometrics and Altmetrics as Measures of Faculty Impact in the Field of Religion,” *Theological Librarianship* 9, no. 1 (2016): 28-36.

²² For more on this see Richard Lane, “Innovation through Tradition: New Scholarly Publishing Applications Modelled on Faith-Based Electronic Publishing & Learning Environments” *Scholarly and Research Communication*, 5, no. 4 (16 December 2014), and Cooper et al., “Supporting the Changing Research Practices,” 32-35.

scholars of comparative religion, and various members of the clergy all contribute to journals covering religion and religious studies and it is unlikely that common attitudes toward OA scholarship cross these disciplinary and vocational boundaries. Additionally, the recent development of such article sharing options as Humanities Commons²³ and ScholarlyHub,²⁴ combined with publisher (and user) pressure on Academia.edu and ResearchGate, may have future implications for the OA availability of articles from journals of religious studies.²⁵

²³ <https://hcommons.org/>

²⁴ <https://www.scholarlyhub.org/>

²⁵ More on this can be found at Anastasia Salter, "MLA Commons CORE and Open Access." *ProfHacker* (blog), September 26, 2016, <https://www.chronicle.com/blogs/profhacker/mla-commons-core-and-open-access/62840>; David Matthews, "Scholars Launch Non-profit Rival to ResearchGate and Academia.edu," *Times Higher Education*, November 8, 2017, <https://www.timeshighereducation.com/news/scholars-form-non-profit-rival-to-researchgate>; Richard Van Noorden. "Publishers threaten to remove millions of papers from ResearchGate," *Nature*, October 10, 2017, <https://www.nature.com/news/publishers-threaten-to-remove-millions-of-papers-from-researchgate-1.22793>; and Sarah Bond, "Dear Scholars, Delete Your Account at Academia.Edu," *Forbes*, January 23, 2017, <https://www.forbes.com/sites/drsarahbond/2017/01/23/dear-scholars-delete-your-account-at-academia-edu/>.

A Gentle Introduction to Topic Modeling Using Python

by Micah D. Saxton

Abstract

Topic modeling is a data mining method used to understand and categorize large corpora of data. As such, it is a tool that theological librarians can use in their professional workflows and scholarly practices. In this article, I provide a gentle introduction to topic modeling using the Python programming language for those who have no prior knowledge of the topic. I begin with a conceptual overview of topic modeling which does not rely on the complicated mathematics behind the process. Then, I illustrate topic modeling by providing a step-by-step example of building a topic model using *Theological Librarianship* as an example corpus. This example ends with an analysis of the success of the model and suggestions for improvement. Finally, I comment on the practical application of topic modeling for library workflows.

Introduction

As information professionals, theological librarians benefit from an awareness of tools that have been developed to help sort through and understand the increasing deluge of information we encounter every day. A topic model is one such tool that, when employed correctly, can allow its user to understand large corpora of documents. These documents can be *anything*: scholarly articles, historical resources, or tweets. The only requirement is that they are available in a digital format.

There is an unofficial tradition in introductory literature about programming or technical computer topics: the tradition of providing a “gentle introduction.” The idea behind a gentle introduction is to invite the reader into a topic without getting overly technical. It is in that spirit that I offer the following gentle introduction to topic modeling. The introduction will be gentle because I will not discuss the mathematics behind topic modeling nor will I provide the Python code I wrote as a part of this project. For those interested in the code, I have made it available on Github.¹

Conceptual Overview

In general, a model is a representation of an object that captures what is important about that object in a way that is more easily used. For example, an architectural model scales down a building so that it can be more readily observed without sacrificing the proportions and detail of the original. A topic model is similar; it models a corpus of documents, not by scaling them down, but by generating topics that are representative of the content of the document corpus. To be more specific, a topic model is a probabilistic model used to discover topics, or latent structures, across a collection of documents.² These topics can then be used to organize the documents or develop controlled vocabularies that describe the documents.

While the algorithms that lie behind a topic model are complex, a conceptual explanation of how a topic model operates is possible.³ An underlying assumption is that any given document contains within it latent topics.⁴ These topics are latent because they are not explicitly signaled by the author. Topics, in turn, are composed of words with similar semantic

¹ See https://github.com/msaxton/tl_topic_model.

² Rubayyi Alghamdi and Khalid Alfalqi, “A Survey of Topic Modeling in Text Mining,” *International Journal of Advanced Computer Science and Applications* 6, no. 1 (2015): 147–153. <https://doi.org/10.14569/IJACSA.2015.060121>.

³ For the math behind the algorithm used here see David M. Blei et al., “Latent Dirichlet Allocation,” *Journal of Machine Learning Research* 3, no. 4/5 (May 15, 2003): 993–1022.

⁴ Megan R. Brett, “Topic Modeling: A Basic Introduction,” *Journal of Digital Humanities*, April 8, 2013, <http://journalofdigitalhumanities.org/2-1/topic-modeling-a-basic-introduction-by-megan-r-brett/>.

domains. To put all of this another way, words can be grouped together to form topics, and topics are grouped together to form documents. The probability of a topic being present in a document can be measured by the words used in the document.

Take the front page of a newspaper as an example: a newspaper contains a number of articles (documents) which can be taken together as a corpus. There are a number of words that may appear in several different articles such as “Middle East,” “law,” “border,” “immigration officer,” “senate,” “visa,” “illegal,” “policy,” “undocumented,” “asylum,” “court,” “president,” “legislation,” and “international.” A topic model algorithm would iterate through these articles and record patterns of word co-occurrence. On the basis of such patterns it may sort “Middle East,” “border,” “immigration officer,” “visa,” “illegal,” “undocumented,” and “asylum” into one group and sort “policy,” “senate,” “law,” “court,” “president,” “legislation,” and “international” into another. Each of these groupings are considered topics and we could label the first “immigration” and the second “politics.”

Of course, some words could be placed in both groupings. The topic model algorithm would also assign a probability value of each term belonging to the group to which it has been assigned. Additionally, the topic model algorithm would assign a probability of each grouping being found in a given document. It is important to remember that this process occurs on the basis of any number of algorithms and *not* on the basis of human conceptual categories, even though the latter may be used to interpret the former. Insofar as a topic model does not sort documents on the basis of pre-defined categories, it is an instance of “unsupervised machine learning.”⁵

Examples of Application

There are a number of useful applications of topic modeling for librarians and scholars. One such application is to use a topic model to assist in the classification of documents. The manual classifying of documents poses a number of challenges. There is the practical challenge of how long it takes for human catalogers to classify documents. For example, the efforts of librarians at the National Medical Library who are responsible for assigning medical subject headings (MeSH) to articles published in biomedical fields take an extraordinary amount of time and are expensive.⁶ MeSh contains over 26,000 terms, and indexers look through an entire article in order to assign those subject headings. According to Ramakanth Kavuluru and Yuan Lu, this process could be streamlined by supplementing some of the process with unsupervised machine learning techniques such as a topic model.⁷ These authors argue that topic models could be constructed on the corpus of already indexed biomedical articles which could then be used to classify incoming articles.⁸ This process still requires humans to map topics to controlled vocabularies, but such efforts would go a long way toward streamlining the process.

The challenges to manual classification of documents are not just practical; there are theoretical challenges as well. Scientists are often in the business of producing new knowledge, but that new knowledge may not always relate neatly to current subject headings. Arho Suominen and Hannes Toivanen argue specifically, “The central novelty of unsupervised-learning methods in classifying scientific knowledge is that they virtually eliminate the need to fit new-to-the-world knowledge into known-to-the-world definitions.”⁹ By “unsupervised-learning methods” these

⁵ Graham Upton and Ian Cook, “Machine Learning,” in *A Dictionary of Statistics*, 3rd ed. (Oxford University Press, 2014), <http://www.oxfordreference.com/du.idm.oclc.org/view/10.1093/acref/9780199679188.001.0001/acref-9780199679188-e-2380>.

⁶ Ramakanth Kavuluru and Yuan Lu, “Leveraging Output Term Co-Occurrence Frequencies and Latent Associations in Predicting Medical Subject Headings,” *Data & Knowledge Engineering*, Special issue following the 18th International Conference on Applications of Natural Language Processing to Information Systems (NLDB’13), 94 (November 1, 2014): 189–201. <https://doi.org/10.1016/j.datak.2014.09.002>.

⁷ Kavuluru and Lu, “Leveraging Output.”

⁸ Kavuluru and Lu, “Leveraging Output.”

⁹ Arho Suominen and Hannes Toivanen, “Map of Science with Topic Modeling: Comparison of Unsupervised Learning and Human-Assigned Subject Classification,” *Journal of the Association for Information Science & Technology* 67, no. 10 (October 2016): 2465, <https://doi.org/10.1002/asi.23596>.

authors mean topic modeling. They go on to argue for the use of topic modeling as a way of classifying documents by comparing topic modeling with human-assigned subject classification.¹⁰ These authors do not suggest that humans turn over the entirety of document classification to machines, but they do suggest that topic modeling has certain advantages when it comes to classifying new knowledge.

These are not the only examples of information professionals using topic modeling to aid in the classification of documents. Topic modeling has been used in the fields of public health to organize information about substance abuse and depression among teens.¹¹ It has been used to automatically tag webpages.¹² It has also been used to organize documents for more efficient information retrieval.¹³ In short, topic modeling is a valuable tool for information professionals who organize information. There is no reason why theological librarians cannot also use topic modeling to their own advantage. The first step is to learn how topic models work, and the second step is to think creatively about how topic models can be applied to the professional activities and scholarly pursuits of theological librarians.

Step-by-Step Example of Building a Topic Model

In what follows I will illustrate the process of topic modeling by providing an example of all the major steps from gathering documents to initializing a topic model. For this example, I used *Theological Librarianship* (TL) as my corpus to be modeled. TL is a relatively small corpus (at the time of writing there are under 350 articles) so it does not illustrate the full potential of topic modeling, which can be effective on corpora with documents numbering in the thousands. But it provides the unique challenge of being a generally heterogeneous corpus focused on a niche discipline. This makes a topic model more difficult because the topics need to have a greater degree of nuance.

Software

There are a number of software packages available in different programming languages for generating topic models. MALLET is one popular option; it is written in Java, but there are wrappers available in both Python and R.¹⁴ For those who are more familiar with the programming language R, there are a few different packages available such as topicmodels¹⁵ and lda.¹⁶ For those with a preference for the Python programming language, Genism is an increasingly popular topic modeling package.¹⁷ Genism is notable for its scalability (it can handle corpora containing tens of thousands of documents) and its user interface. Any of these software options are sufficient for doing a topic model, but here I have selected Genism primarily because of the popularity and the ease of use of the Python language. That said, many of the steps in what follows are described on a conceptual level which will be of use no matter what software one uses.

¹⁰ Suominen and Toivanen, “Map of Science with Topic Modeling.”

¹¹ Wang Shi-Heng et al., “Text Mining for Identifying Topics in the Literatures about Adolescent Substance Use and Depression,” *BMC Public Health* 16 (2016), <https://doi.org/10.1186/s12889-016-2932-1>.

¹² Maria Lin and David W. Cheung, “An Automatic Approach for Tagging Web Services Using Machine Learning Techniques,” *Web Intelligence* (2405-6456) 14, no. 2 (April 2016): 99–118. <https://doi.org/10.3233/WEB-160334>.

¹³ Shoaib Jameel, Wai Lam, and Lidong Bing, “Supervised Topic Models with Word Order Structure for Document Classification and Retrieval Learning,” *Information Retrieval Journal* 18, no. 4 (August 2015): 283–330. <https://doi.org/10.1007/s10791-015-9254-2>.

¹⁴ For an introduction to MALLET see Shawn Graham, Scott Weingart, and Ian Milligan, “Getting Started with Topic Modeling and MALLET,” *Programming Historian*, September 2, 2012, <https://programminghistorian.org/lessons/topic-modeling-and-mallet>.

¹⁵ Bettina Grun and Kurt Hornik, “Topicmodels: An R Package for Fitting Topic Models,” *Journal of Statistical Software* 40, no. 13 (May 1, 2011), <https://doi.org>.

¹⁶ Jonathan Chang, *Lda: Collapsed Gibbs Sampling Methods for Topic Models*, version 1.4.2, n.d., <https://cran.r-project.org/web/packages/lda/lda.pdf>.

¹⁷ R. Rehurek and P. Sojka, “Software Framework for Topic Modeling with Large Corpora,” in *Proceedings of the LREC 2010 Workshop on New Challenges for NLP Frameworks* (Valletta, Malta: ELRA, 2010).

Genism is the tool that does the computational work of constructing the model; all it needs is a properly prepared corpus of documents. Gensim operates with three core concepts: corpus, vector, and model.¹⁸ The *corpus* is the collection of documents from which the model is generated. These documents must be prepared in a specific way to be of use to Gensim; namely, each document of the corpus must be made into a list of words. Each word in a corpus can be thought of as a feature of the corpus. If every word in the corpus is a feature, it is clear that each document will have many, but not all, features available in the corpus. A *vector*, then, is a representation of each document that tallies each of the features that document contains. Consider two similar sentences:

- (a) Corpora are composed of many documents.
- (b) Documents contain many features.

If these two sentences are taken together as a small corpus, we could say that the corpus has eight unique features: “corpora,” “are,” “composed,” “of,” “many,” “documents,” “contain,” and “features.” We can then represent the sentences in this way:

	corpora	are	composed	of	many	documents	contain	features
(a)	1	1	1	1	1	1	0	0
(b)	0	0	0	0	1	1	1	1

The rows in the above table (excluding the header) are vector representations of each sentence which tally how many times each feature appears in each sentence. Finally, in the context of Gensim, a *model* is a representation of a corpus. It is a way of referring to the transformation of one document representation to another. As a basic example, the table above is a model of sentences a and b. Sentences a and b have been transformed from sentences to a table.

Step-by-Step Procedure

The actual process of topic modeling involves five major steps: (1) create a document corpus, (2) preprocess the text to gather the most informative features, (3) process the text into a corpus that can be used by Gensim (that is, turn each document into a vector), (4) build the topic model, and (5) analyze the topic model.

Create a Document Corpus

Creating a document corpus is more than just making a list of the documents you want to model. You must get a digital text into a form that the computer program can read. This means that you must have a plain text string. It is also helpful at this first stage to collect relevant metadata for each document for later reference. When I created a document corpus for this example, I did a few things. First, with the permission of the editorial board of *Theological Librarianship*, I wrote a Python script (a) to scrap metadata off the website which included author, title, issue date, and a few other relevant links, and (b) to download a pdf of each article. (I deliberately left out the full issue pdfs as well as the “About the Journal” section at the beginning of each issue because the full issue pdfs were redundant for this model and the “About the Journal” section was outside of the content I wanted to model.) Second, I used a Python package called PyPDF2 to extract the plain text out of the pdf. This text extraction was not perfect. Often where the pdf had a “th” as in “theology,” the program read it as a “~” and displayed “~eology”; other times the program read a “th” as “o” and displayed “oeology.” This error occurred with many other instances of “th” as well as other combinations like “ff” and “ff”. These kinds of data errors are common when dealing with text data and must be accounted for when preparing a text corpus.

¹⁸R. Rehurek, “Gensim: Topic Modelling for Humans,” accessed February 4, 2018, <https://radimrehurek.com/gensim/intro.html>.

Preprocess the Text

There is a cliché in data science that is true for creating topic models: “Garbage in, garbage out.” Preprocessing is the process of “cleaning up” the text as best as one can, so that the model can be built on the most informative features. I would not want the program to count “-eology” and “oology” as two different word types because they are both misspellings of “theology.” To normalize the text, I replaced “-” and “o” with “th.” There were a number of other substitutions that had to be made as well.¹⁹ But pre-processing does not only need to normalize misspelled words, it also needs to change all the letters to lower case so that “Theology” and “theology” are not counted as separate word types. Additionally, uninformative words like “a,” “the,” “in,” “because,” and “and” need to be removed. These kinds of words are called “stop-words” and are eliminated from a topic model because they are too common to be informative. Preprocessing also requires that the text be lemmatized. Lemmatization is the process of reducing each word to its lexical form. I did not want the program to count “reduce,” “reducing,” and “reduced” as three separate words; rather, I want to lemmatize each to “reduce.” Finally, after errors have been accounted for, each word lowercased, stop words removed, and the remaining words lemmatized, the last part of preprocessing is to tokenize each document. Tokenization is the process of breaking the plain text into individual units on the level of words. (Actually, one could tokenize a plain text down to sentences as well, but that would not be useful for a topic model.) Let us take a random sentence from *Theological Librarianship* as an example of preprocessing.

The unprocessed plain text looks like this:

“~ousands of volumes were contributed to the library by retiring pastors and seminary professors.”

Account for errors from text extraction:

“thousands of volumes were contributed to the library by retiring pastors and seminary professors.”

Remove stop words:

“thousands volumes contributed library retiring pastors seminary professors.”

Lemmatize:

“thousand volume contribute library retire pastor seminary professor.”

Tokenize:

[“thousand”, “volume”, “contribute”, “library”, “retire”, “pastor”, “seminary”, “professor”]

After preprocessing, each document in the corpus has become a list of word tokens which can be processed by Gensim into a topic model.

Process the Text into a Gensim Corpus

Much of the difficult human work comes in the preprocessing phase. Processing the corpus into something Gensim can model is simpler (on the human side of things; the computer does most of the work here). The first thing Gensim does here is to create what it calls a “dictionary” based on the corpus given to it. The primary function of the dictionary is to assign an integer ID to each unique word type in the corpus and map that integer to the word itself. The reason for this is that computers can work faster with numbers than they can with words. When Gensim builds the topic model, it uses the integer ID rather than the word for faster processing. That said, an important decision needs to be made before Gensim builds the dictionary. There is an option to eliminate words that may not be informative features. Words that are used too frequently are not informative because they fail to distinguish one document from another. On the other hand, words that are used too rarely are not informative because there is not enough commonality to group similar documents together. For this topic model, I eliminated any word that is used in more than 50 percent of the entire corpus and any word that is used in less than five documents in the entire corpus.

¹⁹ For specifics see https://github.com/msaxton/tl_topic_model/blob/master/tl_topic_model.py.

After making the dictionary, Gensim can now create a corpus to train the topic model. The corpus created here is different from the starting corpus in that now each document is represented by a series of number pairs. The first number in the pair represents the integer ID assigned to a word type and the second number in the pair represents how often that word type occurs. A document in this corpus may then look something like: [(9,5) (72, 1) (56, 2)...] where in the first pairing “9” may refer to the word “library” (for example) and “5” refers to the number of times the word is used in the document.

Initialize the Topic Model

After Gensim makes the dictionary and creates the corpus, initializing the model is not complicated for the human (but it is very complicated for the computer). Topic models use different algorithms to work through the text corpus and find patterns of word co-occurrence. Gensim provides a few different algorithms, but for this topic model I selected the widely used Latent Dirichlet Allocation (LDA).²⁰ In this step there is an important parameter that must be considered: how many topics does one want to find in the corpus? This decision is not automated by the program and must be decided upon by the human user. Too few or too many topics will render a model which is not informative. For this project I ran an experiment and created four models: one with twenty-five topics, one with fifty, one with seventy-five, and one with one hundred. After looking at the results, I decided that the model with fifty topics is the most informative.

Analyze the Topic Model

How do we know if the topic model was successful? The program itself does not know the meanings of the words, it just groups the words on the basis of patterns of co-occurrence. It is up to the human user to evaluate if the model is helpful or not.

For our analysis, let us first see what a topic looks like:

(39,
 ‘0.023*”space” + 0.023*”building” + 0.020*”project” + 0.014*”room” +
 ‘0.013*”college” + 0.009*”area” + 0.009*”plan” + 0.009*”service” +
 ‘0.008*”house” + 0.008*”build”’)

This topic is simply labeled “39.” The program does not name the topics, it just generates them. We could label this topic something like “library arrangement” or “physical structures.” The list of ten words are the ten most prominent words in the topic. The number associated with each word indicates its probability of belonging to the topic. Conceptually, these ten words fit into a coherent semantic domain. The model can also indicate which documents are associated with each topic. In order to narrow the association between topics and documents in an informative way, I set the threshold at 30 percent, meaning that for a document to be associated with a topic, it must have a probability score of at least 0.3. In the case of topic 39, the model associated the following *Theological Librarianship* articles with this topic:

- Rebekah Hall, “The James E. Roling Memorial Library, Trinity International University,” *Theological Librarianship* 5, no. 1 (2012): 9-11.
- Andrew G. Kadel, “The Christoph Keller, Jr. Library, General Theological Seminary,” *Theological Librarianship* 5, no. 1 (2012): 12-15.
- Joshua Michael, “Murphey Memorial Library, Baptist College and Seminary,” *Theological Librarianship* 5, no. 1 (2012): 16-18.
- Eileen K. Saner, “Library of the Associated Mennonite Biblical Seminary,” *Theological Librarianship* 5, no. 1 (2012): 19-22.
- Garrett Trott, “The Corban University Library,” *Theological Librarianship* 5, no. 1 (2012): 23-25.
- Audrey Williams, “The John Richard Allison Library, Regent College,” *Theological Librarianship* 5, no. 1 (2012): 26-29.

²⁰ Blei et al., “Latent Dirichlet Allocation.”

Each of these articles comes from volume 5 issue 1 from a special forum titled “The Reshaping of Libraries.” In this instance, the topic model successfully identified a meaningful topic and properly associated relevant articles with the topic.

Topic 0 provides us another example (note: computers generally start a list with 0 not 1):

(0,
 ‘0.045*”church” + 0.021*”pope” + 0.013*”christian” + 0.012*”fie” +
 0.011*”john” + 0.010*”franci” + 0.009*”middle” + 0.008*”francis” + ‘
 0.008*”catechism” + 0.007*”life”’)

There are clearly some problems with words in this topic. The word “franci” should be “francis” and the word “fie” is likely the result of poor text extraction from the pdf. Nonetheless, this group of words clearly represents a coherent semantic domain. The topic model associated the following articles with this topic with a 30 percent or higher probability:

- Keith Edward Lemna, “Pope Francis’ Strong Thought,” *Theological Librarianship* 7, no. 2 (2014): 45-53.
- Lorraine H. Olley, “Benedict Biscop: Benedictine, Builder, Bibliophile,” *Theological Librarianship* 7, no. 1 (2014): 30-37.
- Michael R. Mitchell, “Christian Catechetical Texts,” *Theological Librarianship* 5, no. 2 (2012): 92-94.
- Matthew Baker, “Christian Traditions in the Contemporary Middle East,” *Theological Librarianship* 4, no. 1 (2011): 68-74.
- Fred Guyette, “The Literature of Ecclesiology: A Ten Year Retrospective,” *Theological Librarianship* 4, no. 1 (2011): 75-90.
- Katharina Penner, “Information Behaviour(s) of Theologians: A Literature Review,” *Theological Librarianship* 2, no. 1 (2009): 67-82.
- Fred Guyette, “An Open Access Source for the Study of Religion and the Law: The Proceedings of the Old Bailey: London’s Central Criminal Court 1674-1913,” *Theological Librarianship* 1, no. 2 (2008): 28-37.

While not all of these articles have an explicit focus on Pope Francis or Catholicism, they each are related to the topics of church or ecclesiology in ways that other articles in *TL* are not.

Topic 36 appears to be primarily about Methodism, but “consortium” and a few other terms form this topic, so there is room for improvement here:

(36,
 ‘0.054*”methodist” + 0.030*”church” + 0.024*”united” + 0.023*”methodism” + 0.018*”consortium” +
 0.014*”denomination” + 0.011*”culture” + 0.011*”episcopal” + 0.009*”draw” + 0.009*”century”’)

The topic model associated the following articles with this topic:

- Christopher J. Anderson, “We Desire Everything Illustrating the History of Methodism That We Can Procure: Examining the Methodist Collections at Drew University,” *Theological Librarianship* 6, no. 1 (2013): 9-15.
- James Wiser, “‘Playing Well With Others’: New Opportunities for Library Consortia,” *Theological Librarianship* 5, no. 2 (2012): 43-47.
- Mark R. Teasdale, “Growth of Declension: Methodist Historians’ Treatment of the Relationship Between the Methodist Episcopal Church and the Culture of the United States,” *Theological Librarianship* 3, no. 2 (2010): 34-44.

The three topics above provided examples of coherent semantic domains (even though there is room for improvement in each). However, not all topics generated by this model are as informative.

Topic 7 is an example of a “junk” topic that lacks informative cohesion:

(7,
 ‘0.020*”religion” + 0.013*”dictionary” + 0.013*”religious” + 0.013*”entry” + 0.009*”theology” + 0.008*”subject”
 + 0.008*”essay” + 0.008*”editor” + 0.008*”cover” + 0.007*”index”’)

There is nothing wrong with these words per se, but they do not form a coherent semantic domain. It is no surprise then, that the topic model associated 40 different articles with this topic having a probability score of 0.3. The only seeming connection between these articles seems to be that they are about librarianship, books, or theological books generally. Such an insight may be helpful about a multi-disciplinary corpus, but is hardly helpful in a corpus of articles about theological librarianship.

The final topic for this analysis is topic 29:

(29,
 ‘0.022*”site” + 0.016*”bible” + 0.016*”search” + 0.015*”http” + 0.012*”user” + 0.011*”available” + 0.011*”version”
 + 0.010*”www” + 0.010*”link” + 0.009*”digital”’)

This topic forms a coherent semantic domain. We could label this topic something like “online resources” or “digital objects.” However, the model identified nearly thirty articles with this topic having a probability score of 0.3 or higher. While it may be the case that these articles all address online resources, it may also be the case that the letter sets “http” and “www” are too general, perhaps coming from citations, to be informative features.

Based on this brief examination of some of the topics generated and the articles associated with those topics can we say that this model was successful? Does it model the corpus of *Theological Librarianship* in helpful ways? I would say that it was moderately successful with much room for improvement. The good news is that improvements may be possible.

If I were tasked with classifying the articles in the *Theological Librarianship* with a topic model with more precision, I would make the following improvements: (1) The plain text extracted from the pdfs needs more nuanced cleaning. A mechanism to distinguish when “~” was inserted for a “th” from when it was inserted for a “fi” needs to be developed. Alternatively, the plain raw texts could be extracted from the epub files using a Python package such as eBookLib, but that method will have its own issues to address. Improving on the quality of the raw plain text would go a long way toward initiating a more useful topic model. (2) It may be useful to identify bi-grams in the text and include those as significant features. Gensim, as well as a few other Python packages such as the Natural Language Toolkit (NLTK) provide this kind of functionality. (3) The parameters that are intended to eliminate less informative features could perhaps be adjusted. All of this work would be worth the effort because once a sufficient model is initiated, it could not only be used to categorize the existing articles in *Theological Librarianship*, it could also be used to categorize new articles as they are published.

Conclusion

By way of conclusion we can ask: How can the process of topic modeling be applied to library related projects? Alternatively, why should a librarian bother to learn this skill? Insofar as many library workflows aim at the organization of information, there is potential for topic modeling to enhance the activities of a librarian. Here are some examples.

First, many academic libraries serve as the repository for theses written by graduate students. Using a topic model trained on an existing collection of theses would allow a librarian to automate much of the process of cataloging new theses. I am not suggesting that the entire process of cataloging be automated, but cataloging workflows for unpublished materials like graduate theses could be made more efficient by mapping a topic model’s topics to a controlled vocabulary used by an institution. This is especially true if a library has a sizable collection of graduate theses in digital form.

Second, and similarly, as digital archival collections grow, there is a growing need to make these collections more discoverable. An archivist could train a topic model on an existing digital collection and use that model to group sub-collections and assign key words to digital objects. The digital archivist could then use the topic model as the basis for suggesting “related items” to any digital object.

Finally, many libraries collect qualitative survey data. If that data becomes too large to be easily manageable, a topic model could help librarians break it down into categories that are easy to process. These are just a few examples of how librarians can apply topic models to their work. These examples are by no means exhaustive, and with a little effort the readers of this journal could think of many more. In fact, the more that librarians familiarize themselves with skills like topic modeling, the more creative librarians can get in applying such skill sets.

The goal of this gentle introduction was to expose the readers of *Theological Librarianship* to topic models as a way to understand and process large corpora of documents. Toward that end, I discussed topic modeling on a conceptual level, I pointed out a few applications, and then I provided a step-by-step example of building a topic model of *Theological Librarianship* including an analysis of that example. That topic model was somewhat successful in modeling *Theological Librarianship* in helpful ways, but I also made a few suggestions whereby that model may be improved. My hope is that this article inspires a curiosity in its readers to learn more about topic modeling and find creative applications of this process for their professional workflows and scholarly practices.

Bibliography

- Blei, David M., Andrew Y. Ng, Michael I. Jordan, and John Lafferty. "Latent Dirichlet Allocation." *Journal of Machine Learning Research* 3, no. 4/5 (May 15, 2003): 993–1022.
- Brett, Megan R. "Topic Modeling: A Basic Introduction." *Journal of Digital Humanities*, April 8, 2013. <http://journalofdigitalhumanities.org/2-1/topic-modeling-a-basic-introduction-by-megan-r-brett/>.
- Chang, Jonathan. *Lda: Collapsed Gibbs Sampling Methods for Topic Models* (version 1.4.2), n.d. <https://cran.r-project.org/web/packages/lda/lda.pdf>.
- Graham, Shawn, Scott Weingart, and Ian Milligan. "Getting Started with Topic Modeling and MALLET." *Programming Historian*, September 2, 2012. <https://programminghistorian.org/lessons/topic-modeling-and-mallet>.
- Grun, Bettina, and Kurt Hornik. "Topicmodels: An R Package for Fitting Topic Models." *Journal of Statistical Software* 40, no. 13 (May 1, 2011). <https://doaj.org>.
- Jameel, Shoaib, Wai Lam, and Lidong Bing. "Supervised Topic Models with Word Order Structure for Document Classification and Retrieval Learning." *Information Retrieval Journal* 18, no. 4 (August 2015): 283–330. <https://doi.org/10.1007/s10791-015-9254-2>.
- Kavuluru, Ramakanth, and Yuan Lu. "Leveraging Output Term Co-Occurrence Frequencies and Latent Associations in Predicting Medical Subject Headings." *Data & Knowledge Engineering*, Special issue following the 18th International Conference on Applications of Natural Language Processing to Information Systems (NLDB'13), 94 (November 1, 2014): 189–201. <https://doi.org/10.1016/j.datak.2014.09.002>.
- Lin, Maria, and David W. Cheung. "An Automatic Approach for Tagging Web Services Using Machine Learning Techniques." *Web Intelligence* (2405-6456) 14, no. 2 (April 2016): 99–118. <https://doi.org/10.3233/WEB-160334>.
- Rehurek, R. "Gensim: Topic Modelling for Humans." Accessed February 4, 2018. <https://radimrehurek.com/gensim/intro.html>.
- Rehurek, R., and P. Sojka. "Software Framework for Topic Modeling with Large Corpora." In *Proceedings of the LREC 2010 Workshop on New Challenges for NLP Frameworks*. Valletta, Malta: ELRA, 2010.
- Rubayyi Alghamdi, and Khalid Alfalqi. "A Survey of Topic Modeling in Text Mining." *International Journal of Advanced Computer Science and Applications* 6, no. 1 (2015): 147–153. <https://doi.org/10.14569/IJACSA.2015.060121>.
- Shi-Heng, Wang, Yijun Ding, Weizhong Zhao, Yung-Hsiang Huang, Roger Perkins, Wen Zou, and James Chen. "Text Mining for Identifying Topics in the Literatures about Adolescent Substance Use and Depression." *BMC Public Health* 16 (2016). <https://doi.org/10.1186/s12889-016-2932-1>.

- Suominen, Arho, and Hannes Toivanen. "Map of Science with Topic Modeling: Comparison of Unsupervised Learning and Human-Assigned Subject Classification." *Journal of the Association for Information Science & Technology* 67, no. 10 (October 2016): 2464–76. <https://doi.org/10.1002/asi.23596>.
- Upton, Graham, and Ian Cook. "Machine Learning." In *A Dictionary of Statistics*. Oxford University Press, 2014. <http://www.oxfordreference.com.du.idm.oclc.org/view/10.1093/acref/9780199679188.001.0001/acref-9780199679188-e-2380>.

An Evaluation of the Classification Scheme for Adventists and Ellen White

by Felipe E. Tan and Terry Dwain Robertson

Abstract

Libraries at Seventh-day Adventist affiliated colleges and universities collect their denominational materials exhaustively. Many use the Library of Congress Classification Scheme (LCC). The challenge is that these exhaustive collections must fit in a classification scheme based on a general collection that does not typically hold much on this topic. LCC uses BX6151-6155 for Seventh-day Adventists. Following the LCC notation without modification or expansion results in the proliferation of decimals, impeding both library users and staff. When a number of institutions share this same need, finding a standard notation they all can use is a mutual benefit. This paper reports on the development of a modification and expansion to LCC to address this need for libraries with exhaustive collections of Seventh-day Adventist books. This scheme follows a different method than the other denominational collections that have published an expanded or modified LCC to meet their purposes. The method has proven functional, and collaborative efforts have made the scheme a success for libraries using it. This method may be of use to other small and highly specialized denominational collections in the LCC class BX.

Introduction

The Library of Congress Classification scheme was developed to classify and organize the library collection of the U.S. Congress.¹ Even though the LCC does not cover all existing academic disciplines, many university and research libraries and some large public libraries adopted the LCC.² The advantage of using LCC is that the scheme corresponds to major academic disciplines. Its enumerative scheme and the use of letters *and* numbers as notation has made it convenient for future expansion. Librarians also find LCC's research orientation convenient. Even so, when it comes to classifying topics not present in the LCC, catalogers have creatively expanded or modified the LCC numbers for local purposes.

The problem is compounded when an academic library collects materials on a comprehensive level on a subject that is not a major subject interest of the LC collection. Catalogers then face the challenge of keeping track of a long list of modifications to the existing limited numbers provided by the LCC.

Literature Review

The need for library classification systems that organized larger collections by topic became of interest in the late nineteenth century. In the United States, the dominant system that emerged from that era and is still widely used is the Dewey Decimal System (DDC), first published in 1876 by Melville Dewey. Under the leadership of Herbert Putnam, the Library of Congress, one of the largest libraries in the United States at the time, developed a more expandable and flexible system, the LCC, now widely used in larger academic libraries.

Given their inherent limitations, one of the earliest responses to these classification systems in theological libraries resulted in the development of the **Union Classification** system by Julia Pettee in 1908. Rebecca Butler has chronicled the history of this system and its use in theological libraries.³

¹ Lois Mai Chan, Sheila S. Intner, and Jean Weihs, *Guide to the Library of Congress Classification*, 6th ed. (Santa Barbara, CA: Libraries Unlimited, 2016), 11.

² Lois M. Chan and Athena Salaba, *Cataloguing and Classification: An Introduction*, 4th ed. (Lanham, MD: Rowman & Littlefield, 2016), 645.

³ Rebecca Butler, "The Rise and Fall of Union Classification," *Theological Librarianship* 6, no. 1 (2013): 21-28, accessed July 28, 2017, <https://theolib.atla.com/theolib/article/view/254/691>.

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For Catholic libraries, Jeannette Lynn provided a series of schedules that would allow individual collections to adapt either the DDC or the LCC for large **Catholic literature** collections. The most comprehensive option adopted the LCC class BQ, using a third letter to subdivide the literature, i.e., BQT for Catholic Theology.⁴ One contemporary library that has adapted one of these schedules is the Ralph B. Gehring Library of Loyola School of Theology at Ateneo de Manila University in the Philippines, one of the largest theological libraries in Southeast Asia. It possesses the best Roman Catholic collection in the region. The librarian used the BVQ subclass to accommodate Roman Catholic works on canon law after finding LCC BX1935–BX1953 limited for the broad subject of canon law.⁵ John Macey and John Benyo have chronicled the history of the use and eventual decline of the Classification for Catholic Books scheme.⁶

In 1953, a classification for **Lutheran libraries** was compiled by Karl Jacobsen. This particular schedule worked within the LCC for Lutherans, but expanded the schedules to provide notations for an authoritative list of synodical organizations.⁷

Also in 1953, D. Glenn Hilts, librarian at La Sierra College,⁸ prepared a “Classification Scheme for Works of Mrs. E. G. White.”⁹ He appropriated the classification “W” as a complement to the LCC. Andrews University, which serves the Seventh-day Adventist Theological Seminary and which includes a branch office of the Ellen G. White Estate, was inaugurated in 1960 by merging three Seventh-day Adventist institutions: a college, a graduate school, and a seminary. The new university needed a proper library, and so James White Library was built. In merging collections from the earlier institutions, the LCC was adopted. This library collects all resources by and about Ellen White on an exhaustive level. The collection also includes all subsequent translations and editions of Ellen White publications. To keep all these works together, JWJ catalogers adopted Hilts’s scheme from the beginning using the W notation to classify its substantive collection. To illustrate the scale of this collection, a search on the LC online catalog found 245 entries in an author search and 121 in a subject search on publications by and about Ellen White, while the same searches in the JWJ catalog found 3,845 title entries.¹⁰ Andrews University may be the only library that continues to use the Hilts scheme. It was not included in the subsequent Adventist classification scheme that is the focus of this article.

Another notable example is the *Methodist Book Classification*, first published in 1955 for Garrett Biblical Institute (now Garrett-Evangelical Theological Seminary). It uses a BY class for items relating to **Methodism**, and is now used by a number of libraries at Methodist universities and seminaries.¹¹

A novel approach was used by Brigham Young University for **Mormon literature**. In 1959, the BYU library developed a Dewey Decimal Classification (DDC) schedule for Mormon works. Then in 1977, the decision was made to convert the library to LCC. To simplify the reclassification process, the library used the LCC BX86- stem to replace its existing M2-stem, including the cutter numbers based on C. A. Cutter’s *Three Figure Author Table* rather than the LCC cutter table. This

⁴Jeannette M. Lynn, *An Alternative Classification for Catholic Books: A Scheme for Catholic Theology, Canon Law and Church History* (Milwaukee, WI: Bruce Publishing, 1937), accessed July 20, 2017, <https://catalog.hathitrust.org/Record/001163525>. Note: BQ is currently the LCC class for Buddhism, adopted in 1972; see Chan et. al., *Guide*, 111.

⁵Felipe E. Tan, “An Evaluation of the Book and Periodical Collections of the Library of the Loyola School of Theology, Ateneo de Manila University” (Special Problem, Institute of Library Science, University of the Philippines, 1988), 64. See <http://ralphbgehringlibrary.weebly.com/> to view Loyola School of Theology’s Ralph Gehring Library online catalog.

⁶John F. Macey and John C. Benyo, “Quo Vadis Specialization?: The Current Status of Catholic Schemas in Light of Vatican II and OCLC,” *Cataloging & Classification Quarterly* 8, no. 1 (1987), https://doi.org/10.1300/J104v08n01_10.

⁷Karl T. Jacobsen, *Library of Congress Classification Schedules for the Lutheran Church, Modified and Expanded, Together with an Alphabetical List of Lutheran Synodical Organization* (Minneapolis, MN: Board of Christian Education, Evangelical Lutheran Church, 1953), accessed July 20, 2017, <https://catalog.hathitrust.org/Record/006753768>.

⁸Now La Sierra University, Riverside, California, <https://lasierra.edu/>.

⁹D. G. Hilts, “Classification Scheme for Works of Mrs. E. G. White,” (Center for Adventist Research, Andrews University, 1953.)

¹⁰Statistics from the online catalogs of Library of Congress and James White Library. Accessed March 27, 2017.

¹¹Lucy W. Markley, *A Methodist Book Classification*, 4th ed. (Madison, NJ: Drew University Library, 2005), accessed July 28, 2017, <https://www.atla.com/Members/divisions/denominations/Methodist/BY%20Schedule/byschedule.pdf>

approach proved helpful where some collections were using LC and others DDC.¹²

Because of their roots in nineteenth century North American libraries, both the DDC and the LCC have historically reflected a strong Christian and Protestant bias in their classification schemes. More recent work on the modification and expansion of existing classification schemes has focused on non-Christian religions, including Baha'i and Islam; however, not only are the available number classes limited, but the terms and categories are different than Christian counterparts.¹³

The Seventh-day Adventists

The Seventh-day Adventist denomination emerged out of the Great Awakening of the 1830s and the Millerite movement of the 1840s. Two core beliefs included the sacredness of the seventh-day Sabbath and the pre-millennial second advent of Christ, both of which were attested to when the approximately 3,500 Adventists chose a name and formally organized as a denomination in 1863. They realized this step was necessary so they could corporately own property — namely, a publishing house.¹⁴ James and Ellen White were among the most influential leaders leading up to and following this milestone; James White is remembered as a publisher and editor, and Ellen White as a prolific author. Her writings hold a special place as primary sources in understanding the growth and development of Seventh-day Adventist theology, spirituality, organization, mission, global orientation, and education, and they continue to shape and guide the denomination today. Following her death in 1915, the Ellen G. White Estate¹⁵ has continued to publish new works compiled from her extensive correspondence, sermons, articles, and manuscripts.¹⁶

Academic libraries with extensive Seventh-day Adventist publications have also faced the daunting task of classifying denominational resources. While Adventist publications do not match the quantitative scope of the Catholics or Methodists, nonetheless there are far more Adventist books than may be currently found in the LC collection. It wasn't until 1980 that Keith Clouten, librarian of Canadian Union College (CaUC)¹⁷ at the time, became acutely aware of the limitations of LCC, following the trend of transitioning academic library collections from DDC to LCC. These he summarized as follows:

- “A range of only five numbers (BX 6151-55) is allocated by LC to the Seventh-day Adventist denomination, which is treated as any other branch of Adventism. In contrast, a range of twenty-five numbers is allocated to Adventists in general.
- “Biography of Adventists, including Seventh-day Adventists, is classified at BX 6191-93. These numbers are separated from the S.D.A. numbers by all other branches of Adventism.

¹² Robert Divett, Naoma Rich, Chad Flake, and Kayla Willey, eds. *Mormon Classification Schedules*, 2013 ed. (Provo, UT: Harold B. Lee Library), v.

¹³ Vanda Broughton, “A New Classification for the Literature of Religion: Presented at the 2000 IFLA Conference,” *International Cataloging & Bibliographic Control* 29, no. 4 (2000); Haroon Idrees, “Classification of Library Materials on Islam: A Literature Survey,” *OCLC Systems & Services: International Digital Library Perspectives* 27, no. 2 (2011), <https://doi.org/10.1108/10650751111135427>; William P. Collins, “Classification of Materials on the Baha'i Religion,” *Cataloging & Classification Quarterly* 8, no. 2 (1988), https://doi.org/10.1300/J104v08n02_09.

¹⁴ Richard W. Schwarz and Floyd Greenleaf, *Light Bearers: A History of the Seventh-day Adventist Church*, rev. ed. (Nampa, ID: Pacific Press Publishing Association, 2000), 146. The Seventh-day Adventist Church was officially organized on May 21, 1863.

¹⁵ Ellen G. White Estate, <http://ellenwhite.org/>, accessed March 5, 2018.

¹⁶ Ellen G. White wrote about 8,000 letters and manuscripts. The manuscripts included sermons and talks, diaries, and testimonies addressed to individuals or groups. The total number of typewritten pages in this category is about 60,000. The ministry of Ellen G. White resulted in more than twenty books during her lifetime and many compilations and selections since 1915. Compilations are published by the Ellen G. White Estate in accordance with the guidelines in her will. For further discussion, see George R. Knight, “Ellen G. White's Writings,” in *The Ellen G. White Encyclopedia* (Hagerstown, MD: Review and Herald Publishing, 2014), 138-139.

¹⁷ Canadian University College (located in Lacombe, Alberta, Canada) was renamed Burman University on December 11, 2015. <https://www.burmanu.ca/namechange>.

- “Ellen White is allocated a Cutter number within BX 6193. It is quite impossible to place here all works by or about Ellen White.
- “Provision for ‘Individual Adventist Churches’ (BX 6185) and ‘Converts’ (BX 6189) is made outside of the number range specific to Seventh-day Adventists.”¹⁸

A colleague, Warren Trenchard, theology faculty member at CaUC, encouraged Clouten to make the change to LCC anyway, and together they came up with an intentional modification of the LCC numbers on Adventist topics.¹⁹ They first published “A Classification Scheme for Adventists and Ellen White” (CSA) in 1980.²⁰

In 1985, the Association of Seventh-day Adventist Librarians (ASDAL) formed a Standing Committee on SDA Classification. The committee assumed the role of publisher for the CSA, and fostered conversation on additional modifications and expansions. Clouten continued as editor until 1993, followed by Marilyn Crane from Loma Linda University. Felipe Tan from Andrews University assumed the responsibility in 2007. Distribution was managed by Clouten at CaUC until he assumed the role of Library Director at Andrews University in 1993. Since then, distribution has resided at Andrews University.²¹

The SDA Classification scheme is currently used by the two largest Seventh-day Adventist academic libraries — the James White Library at Andrews and the Del E. Webb Memorial Library of Loma Linda University, California. It is also used by at least twelve other institutions.²² Because of a reluctance to reclassify a substantive collection of works already in the library prior to 1985, Andrews University did not formally adopt the CSA until 2006. Reclassifying works already on the shelves is not happening, but as new works are added, they are classified using CSA. The notational complexity of the section using the original LCC is clearly evident, and finding individual works is challenging.

In 1985, a copy of the CSA was submitted to the Library of Congress. In a response from the LC by Mary Pietris, she commended the effort:

Your modification of the BX numbers appears to be very well done. After a quick comparison of your scheme and ours, my only regret was that you were not able to expand without substantial changes to some of the numbers, which will make it harder for those who have used LC numbers to adopt your scheme without reclassification. However, it would have been impossible to keep our numbers without resorting to considerable use of decimals, and we appreciate you have been able to fit your 44-page development inside the existing span so well.²³

¹⁸ Felipe E. Tan, ed., *A Classification Scheme for Adventists and Ellen G. White: A Modification of the Library of Congress Religion Schedules, BX 6101-6189* (Berrien Springs, MI: Association of Seventh-day Adventist Librarians, 2011), ii, accessed July 20, 2017, <http://www.asdal.org/wordpress/wp-content/uploads/documents/classification2011.pdf>

¹⁹ Keith Clouten commented that sometime in 1980, the Canadian Union College Library decided to switch from DDC to LLC. It was during this transition that Clouten “discovered that LC’s allocation of numbers for Adventist topics was quite inadequate.” Warren Trenchard, who spent considerable time doing research in the University of Chicago Library, where the collections were organized by the comprehensive LCC, encouraged and helped Clouten in modifying and expanding the LCC numbers for Adventists, particularly the Ellen White section. Email from Keith Clouten, May 21, 2013.

²⁰ Ibid.

²¹ Ibid., ii.

²² Based on responses to an inquiry on a listserv of SDA librarians; there may be more libraries using the system, but their librarians didn’t respond to the listserv. Institutions known to be using CSA are Adventist University of Health Sciences (Orlando, Florida), Burman University (Lacombe, Alberta, Canada), Pacific Union College (Angwin, California), Southern Adventist University (Collegedale, Tennessee), Southwestern Adventist University (Keene, Texas), Walla Walla University (Walla Walla, Washington), and Washington Adventist University (Takoma Park, Maryland). It is also used overseas by the Adventist International Institute of Advanced Studies (Philippines), Adventist University of Africa (Kenya), Middle East University (Lebanon), and Newbold College (United Kingdom). Some libraries modified their use of the Adventist Classification. For example, the James White Library uses Adventist Classification for Adventist topics but uses W classification for Ellen G. White publications.

²³ Mary K. D. Pietris, “Library of Congress Responds to S.D.A. Classification Schedule,” *ASDAL Action* 5, no. 2 (1986, April): 7.

The Structure of the Adventist Classification Scheme

The authors of the CSA modified LCC BX 6101-6146 by using BX Table 1 which has forty-three numbers. Below is an overview of the CSA numbers and LCC Table 1 (BX). For full view of the CSA alongside of LCC Table 1 (BX), see Appendix A at the end of this article.

Adventist Classification (BX)		LCC Table 1 (BX)	
6101-02	Periodicals	1	Periodicals
6107	Directories	7	Directories
6112	Sabbath Schools	12	Sunday Schools
			History
6115	History	1	General Works
6121	General works. Theology	21	General works. Theology
6123	Controversial works	23	Controversial works
6123.4	Relations with other churches	23.4	Relations with other churches
6126.9	Sermons	27	Sermons
6131-39	Organizational units		Individual churches.
		31	United States
		35	Other countries
6144-49	Ellen G. White		Biography
		41	Collective
		43	Individual

As shown above, the classification structure of the CSA scheme follows the outline of LCC BX Table 1 for other denominations such as Catholics, Baptists, etc.

The CSA scheme makes provision for Adventist teachings in BX6122. Seventh-day Adventist doctrines that are part of the general orthodox Christian heritage are classified using their corresponding classification numbers in the BT subclass. Also, BX6122.5 has been set aside in the CSA scheme for moral or ethical topics that are of great interest in discussion of Adventist norms. Another topic of major interest to the Seventh-day Adventist Church is missions. The CSA scheme assigned BX6127 for missions. It also assigned historical and geographical treatment of church work in CSA BX6117-6118, which has been assigned to cover Seventh-day Adventist history rather than BV.²⁴

The CSA scheme uses BX6131-6139 to classify together all the organizational units of the Seventh-day Adventist Church. The CSA also provides a comprehensive list of the organizational units of the different levels and entities of the Seventh-day Adventist Church, which has twenty million members worldwide²⁵ and operates an extensive and complex organization with various entities.²⁶

The CSA provides a table to show a pattern of subdivision by topic and date to be used with the classification number for the particular organizational unit.

²⁴ Tan, *A Classification Scheme for Adventists and Ellen G. White*, iv-vi.

²⁵ Andrew McChesney, "Propelled by Total Member Involvement, Adventist Church tops 20 million members," March 1, 2017, <https://news.adventist.org/en/all-news/news/go/2017-03-01/propelled-by-total-member-involvement-adventist-church-tops-20-million-members>.

²⁶ The Seventh-day Adventist Church is composed of thirteen divisions all over the world. Each division is further subdivided by various types of smaller organizational units, agencies, and departments. See *Yearbook of the Seventh-day Adventist Church 2016* (Silver Spring, MD: General Conference of Seventh-day Adventists, 2016).

.A1-14	Official periodicals
.A15	Yearbooks. Directories
.A2	Constitution. By-laws. Policies. By date
.A25	Official reports. By date
.A3	Sessions. By date
.A35	Annual councils. By date
.A38	Other councils. Spring Council. By date
.A41-49	Miscellaneous councils and committees.
.A5	General works

The table above follows the general pattern of subdivisions of the LCC tables.

In addition to the organizational units, the CSA scheme organized all publications by and about Ellen White under BX6145– 6149.9. These classification numbers were expanded to accommodate all topics regarding Ellen White, including letters, manuscripts, criticism and interpretation, controversial issues, indexes, concordances, and bibliographies.

The breakdown of these assigned numbers is as follows:

BX6145	Periodicals
BX6145.4	Collected works of Ellen G. White
BX6146	Separate works of Ellen G. White
BX6147	Compilations of Ellen White writings
BX6148	General works, Biography
BX6149	Criticism and interpretation
BX6149.3	Study and teaching
BX6149.7	Indexes and concordances
BX6149.9	Bibliography

The CSA scheme provides a comprehensive listing of all Ellen G. White publications. An alternative arrangement using BX6146 in the appendix of CSA was provided for libraries that may wish to keep all individual works of Ellen G. White, both separate and compilations, in a single alphabetical sequence.

Unlike the *Union Classification* and the *Lynn-Peterson Alternative Classification for Catholic Books*, the CSA did not develop a comprehensive stand-alone scheme. Beyond the immediate scope of the CSA, the standard LCC was sufficient and preferred. Nor did the CSA assign unused class letters or numbers in the LCC like the *Methodist Book Classification*. While some accommodation of the LCC was needed, the volume and complexity of SDA literature does not correspond with the quantitative scope of Methodism — in part because of the denomination's much shorter history, in part because of its relatively smaller size. Nor did the CSA create its own subdivisions like the *Mormon Classification Schedules*. The original editors were not attempting to accommodate both DDC and LCC, but to fully migrate to the LCC. Nor did it simply use the LCC, assigning further subdivisions as needed, like the *Library of Congress Classification Schedules for the Lutheran Church*. Adventists didn't have a comparable range of numbers to work with. The CSA innovation has proven to be right-sized to meet the need.

Summary

The CSA filled a need of Seventh-day Adventist academic libraries in organizing their relatively large collection of Adventist-related resources. The CSA scheme addressed the range of topics covered by Adventist and Ellen White resources. Instead of being limited to five numbers, BX 6151-6155, the authors of the CSA modified LCC BX 6101-6146 by using BX Table 1 which has forty-three numbers. Thus it followed the outline and notations of major denominations in LCC BX when it assigned the classification numbers for Adventist topics. This scheme follows a different method than the other denominational collections that have published an expanded or modified LCC to meet their purposes. The method has

proven functional and collaborative efforts have made the scheme a success for libraries using it. This method may be of use to other small and highly specialized denominational collections in the LCC class BX which may also be limited to five numbers.

The CSA has been in use for thirty-five years. Its usefulness as an alternative special classification will continue for years to come as denominational academic libraries will use it to classify the growing number of publications on Seventh-day Adventists and Ellen White.

Appendix A²⁷

MODIFIED SCHEDULE (BX)		TABLE I (BX)	
6101-02	Periodicals	(1)	Periodicals
6103	Societies, Associations	(3)	Societies
6104	Museums, Exhibitions	(5)	Conventions, etc.
6106	Dictionaries, encyclopedias		
6107	Directories	(7)	Directories
6108	Yearbooks		
6109	Collections, collected works	(9)	Collected works
	Study and Teaching		Study and Teaching
6110	Education of the Clergy		
6111	Education of the Laity	(11)	General works
			Sunday Schools
6112	Sabbath Schools	(12)	General works
		(13)	Service books
		(14)	Textbooks
			History
6115	History	(15)	General works
6116	By Period		By Country
	By region & country	(16)	U.S. and Canada
6117	U.S. and Canada	(17)	By state
6118	Other countries	(18)	By city
6119	Special topics	(19)	Other countries
		(20)	By administrative unit
6121	General works. Theology	(21)	General works. Theology
6122	Special topics	(22)	Minor works. Pamphlets
6122.5	Moral theology		
6123	Controversial works	(23)	Controversial works
6123.4	Relations with other churches	(23.4)	Relations with other churches
6123.6	Relations with governments		
		(24)	Creeds and catechisms
6125	Sacraments. Special services	(25)	Liturgy and ritual
		(25.5)	Sacraments
6126	Government and discipline	(26)	Government and discipline

²⁷ Tan, *A Classification Scheme for Adventists and Ellen G. White*, iii–iv.

MODIFIED SCHEDULE (BX)		TABLE I (BX)	
6126.9	Sermons	(27)	Sermons
6127	Church work. Missions		
6127.1	Evangelistic work	(27.3)	Benevolent work. Social work.
	Welfare work		
6127.8	Other classes of work		
6128	Work with persons		
		(29)	Individual branches
6130	Camp Meetings. Revivals	(30)	Camp Meetings. Summer camps, etc.
			Individual Churches
6131-39	Organizational Units	(31)	United States
		(35)	Other countries
			Biography
6141	Individual Churches	(41)	Collective
6143	Biography	(43)	Individual
6144-49	Ellen White		

Bibliography

- Broughton, Vanda. "A New Classification for the Literature of Religion: Presented at the 2000 IFLA Conference." *International Cataloging & Bibliographic Control* 29, no. 4, 2000, 59–61.
- Butler, Rebecca. "The Rise and Fall of Union Classification." *Theological Librarianship* 6, no. 1 (2013): 21-28. Accessed July 28, 2017. <https://theolib.atla.com/theolib/article/view/254/691>.
- Chan, Lois M., and Athena Salaba. *Cataloguing and Classification: An Introduction*. 4th ed. Lanham, MD: Rowman & Littlefield, 2016.
- Chan, Lois M., Sheila S. Intner, and Jean Weihs. *Guide to the Library of Congress Classification*. Library and information science text series. Santa Barbara, CA: Libraries Unlimited, 2017.
- Collins, William P. "Classification of Materials on the Bahá'í Religion." *Cataloging & Classification Quarterly* 8, no. 2 (1988): 99–133. https://doi.org/10.1300/J104v08n02_09.
- Divett, Robert, Naoma Rich, Chad Flake, and Kayla Willey, eds. *Mormon Classification Schedules*. 2013 ed. Provo, UT: Harold B. Lee Library.
- Ellen G. White Estate, <http://ellenwhite.org/>, accessed March 5, 2018.
- Hilts, D. G. "Classification Scheme for Works of Mrs. E. G. White." Unpublished manuscript, Center for Adventist Research, Andrews University, 1953.
- Idrees, Haroon. "Classification of Library Materials on Islam: A Literature Survey." *OCLC Systems & Services: International Digital Library Perspectives* 27, no. 2 (2011): 124–145. <https://doi.org/10.1108/10650751111135427>.
- Jacobsen, Karl T. *Library of Congress Classification Schedules for the Lutheran Church, Modified and Expanded, Together with an Alphabetical List of Lutheran Synodical Organization*. Minneapolis, MN: Board of Christian Education, Evangelical Lutheran Church, 1953. Accessed July 20, 2017. <https://catalog.hathitrust.org/Record/006753768>.
- Knight, George R. "Ellen G. White's Writings." In *The Ellen G. White Encyclopedia* (Hagerstown, MD: Review and Herald Publishing, 2014), 121–140.

- Lynn, Jeannette M. *An Alternative Classification for Catholic Books: A Scheme for Catholic Theology, Canon Law and Church History*. Milwaukee, WI: Bruce Publishing, 1937. Accessed July 20, 2017. <https://catalog.hathitrust.org/Record/001163525>.
- Macey, John F., and John C. Benyo. "Quo Vadis Specialization?: The Current Status of Catholic Schemas in Light of Vatican II and OCLC." *Cataloging & Classification Quarterly* 8, no. 1 (1987): 105–120. https://doi.org/10.1300/J104v08n01_10.
- Markley, Lucy W. *A Methodist Book Classification*. 4th ed. Madison, NJ: Drew University Library, 2005. Accessed July 28, 2017. <https://www.atla.com/Members/divisions/denominations/Methodist/BY%20Schedule/byschedule.pdf>.
- Pietris, Mary K. D. "Library of Congress Responds to S.D.A. Classification Schedule." *ASDAL Action* 5, no. 2 (1986, April): 7.
- Schwarz, Richard W., and Floyd Greenleaf. *Light Bearers: A History of the Seventh-day Adventist Church*. Rev. ed. Nampa, ID: Pacific Press Publishing Association, 2000.
- Tan, Felipe E. "An Evaluation of the Book and Periodical Collections of the Library of the Loyola School of Theology, Ateneo de Manila University." Special Problem, Institute of Library Science, University of the Philippines, 1988.
- , ed. *A Classification Scheme for Adventists and Ellen G. White: A Modification of the Library of Congress Religion Schedules, BX 6101-6189*. 2011 ed. Berrien Springs, MI: Association of Seventh-day Adventist Librarians, 1980. Accessed July 20, 2017. <http://www.asdal.org/wordpress/wp-content/uploads/documents/classification2011.pdf>.
- Yearbook of the Seventh-day Adventist Church 2016*. Silver Spring, MD: General Conference of Seventh-day Adventists, 2016.

Towards an Online Searchable Bibliographic Database for Ismā‘īlī Studies

by Nawazali Alibhai Jiwa

Abstract

Research in the field of Ismā‘īlī Studies has increased exponentially during the last decades. However, all of the existing bibliographies in the field are print-based, which lack the efficient and effective searchability offered by online bibliographic databases. This paper explores some ideas towards creating an ideal online searchable database dedicated exclusively to Ismā‘īlī Studies. It covers elements of an ideal database such as search features, subject headings, linking, metadata, abstracting, and indexing. Moreover, it provides the rationale for a specialized database, as opposed to using multi-disciplinary or interdisciplinary databases to conduct research in Ismā‘īlī Studies. The database can serve as a model to implement a similar specialized database for other areas of research within and beyond theological and religious studies.

Introduction and Context

The amount of research conducted in Ismā‘īlī Studies¹ has increased exponentially during the last few decades. This is attested to by the number of works cited by the existing bibliographies in the field. However, all of these bibliographies are print-based and by their nature lack the searchability and currency offered by online databases. This paper explores and makes a case for why it is crucial to build an online database dedicated exclusively to Ismā‘īlī Studies. After establishing its purpose and scope, it focuses on the content and functional requirements of such a database. The former covers the specific bibliographic sources and methods that need to be utilized in order to extract the data. The latter entails a proposal of features to enhance the searchability of that data. Particular attention is paid to the role of subject indexing and metadata in meeting this objective. Finally, this paper addresses the necessity of exclusivity, as well as identifies what types of resources are required to build and maintain the database.

This paper concentrates on secondary sources in Ismā‘īlī Studies though most of the discussion also has wider application to primary sources. The first major book-length bibliography of secondary sources was Nagib Tajdin’s *A Bibliography of Ismailism*, published in 1985.² This was followed by Farhad Daftary’s *Ismā‘īlī Literature: A Bibliography of Sources and Studies*, published in 2004.³ In 2013, the present bibliographer published a compilation of sources omitted by Tajdin and Daftary within certain limits, hereafter referred to as the *Addenda*.⁴ All of these bibliographies are print-based which in and of itself is already problematic. As Carol Hetherington explains:

Print bibliographies are inevitably imprisoned within limits of space, time and format. They are “finished” products that must be replaced with a new, updated finished product whenever additions or corrections need to be made.⁵

¹ For an extensive survey of the field, see Farhad Daftary, *Ismā‘īlī Literature: A Bibliography of Sources and Studies* (London: I.B. Tauris in association with The Institute of Ismaili Studies, 2004). See further, Khalil Andani, “A Survey of Ismaili Studies Part 1: Early Ismailism and Fatimid Ismailism,” *Religion Compass* 10, no. 8 (2016): 191–206; and “A Survey of Ismaili Studies Part 2: Post-Fatimid and Modern Ismailism,” *Religion Compass* 10, no. 11 (2016): 269–82.

² Nagib Tajdin, *A Bibliography of Ismailism* (Delmar, NY: Caravan Books, 1985).

³ Daftary, *Ismā‘īlī Literature*.

⁴ Nawazali A. Jiwa, “Addenda to Secondary Sources in Ismā‘īlī Studies: The Case of the Omissions,” *MELA Notes: Journal of Middle Eastern Librarianship* 86 (2013): 20-101.

⁵ Carol Hetherington, “Setting the Record Straight: Bibliography and Australian Literature,” *Australian Literary Studies* 21, no. 2 (2003): 199.

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Just such a point is made in a review of Daftary's book by Moojan Momen, who states:

If I were a scholar wanting to locate primary and secondary material by both Ismā'īlīs and non-Ismā'īlīs on, let us say, Ismā'īlī cosmology or the Ismā'īlī interpretation of the Qur'an (*ta'wīl*), I would not find this book particularly useful since, as a result of ... [the] lack of a subject index, I would have to read through the entire book to find what I want.⁶

Purpose and Scope

The benefits of a database dedicated to Ismā'īlī Studies are immediately apparent. Its purpose is twofold: first, to create an organized central resource of *all* available bibliographic data in Ismā'īlī Studies, and, second, to facilitate ease, accuracy, and speed of search and retrieval of that data. The database's scope will be wide-ranging and will encompass all aspects of the field. The intended audience will include students, scholars, and specialists, along with research librarians.

Types of bibliographical material included will be books, book chapters, book reviews, scholarly journal and periodical articles, articles in encyclopedias and other works of reference, theses, dissertations, and scholarly online sources. Date coverage will include all secondary sources published to the present day. In addition, it will cover materials in all languages, especially South Asian languages which have been neglected in the existing bibliographies.

Data Extraction

The data contained in the existing print bibliographies will form one part of the content of such a database. The other part of the content will require an update of the literature from 2004 to the present (with omissions from previous years). The *Addenda* identifies three broad methods to gather this additional bibliographic data.⁷ These are

1. A systematic and thorough *search* of Online Public Access Catalogs (OPACs), academic and specialized databases, digital libraries and repositories, and the Internet;⁸
2. *Chaining*, which entails the identification of seminal or "seed" studies and tracing the sources cited therein. These sources, in turn, cite further studies which are also sought and so on until the chain terminates. Chaining also entails the scrutiny of studies that cite the seed document (also known as "forward chaining");
3. Requesting select members of the "*invisible college*" to share their bibliographic data. LIS literature employs the term to describe "[a] loosely defined unofficial network of scholars, all working on similar research questions, who become familiar with each other's research through conference attendance, shared research interests, publications, listservs, web pages, and other informal avenues."⁹

In recent years, the library landscape has witnessed a rise in Discovery Services,

systems that harvest and pre-index a wide variety of library content from separate sources ..., build one giant index of all that content, and provide near instance, relevancy ranked results through one search box.¹⁰

This "Google Model" is offered by OCLC WorldCat Discovery Services, EBSCO Discovery Service (EDS), and ProQuest Summon, amongst others. Though these vendors were included in the *Addenda's* table of resources, Discovery Services as separate entities need to be added to this list. Also to be added are academic network sites such as [ResearchGate](#) and [Mendeley \(Academia.edu\)](#) being included in the original list).

⁶ Moojan Momen, Review of *Ismaili Literature: A Bibliography of Sources and Studies*, by Farhad Daftary, in *Islam and Christian-Muslim Relations* 16, no. 4 (2005): 434.

⁷ N. A. Jiwa, 23-26.

⁸ This method is accompanied by a table showing some of the different types of resources consulted.

⁹ Leslie F. Stebbins, *Student Guide to Research in the Digital Age: How to Locate and Evaluate Information Sources* (Westport, CT: Libraries Unlimited, 2006), 182.

¹⁰ Suzanne S. Bell, *Librarian's Guide to Online Searching: Cultivating Database Skills for Research and Instruction*, 4th ed. (Santa Barbara, CA: Libraries Unlimited, 2015), 7.

Searchability

The following section identifies the features that the ideal database will have in order to enhance its searchability. These features are considered standard in library databases, and the description of each is meant to be illustrative of how they would operate on this group of sources.

Field Searching

Field Searching allows a user to restrict a search to a particular field, the most common ones being author, title, and date. Assume a user is trying to find an item with a keyword search on the term “Muhammad” in the title. Without limiting it to the title field, the search will retrieve a significant amount of irrelevant results because many of the records list the term “Muhammad” as part of an author’s name.

Phrase Searching

Phrase Searching refers to looking for two or more words in a specific order. This is executed by enclosing the phrase in quotation marks, as in “Old Man of the Mountain” or its various renderings such as “*Vetulus de Montanis*,” “*Senex de Monte*,” and “*Shaykh al-Jabal*.”¹¹ Without the quotation marks, the search will retrieve records that contain the terms but not necessarily as an exact phrase.

Truncation

Truncation, also known as stemming, enables the user to search for a word and all of the possible variants of that word. It is especially useful for searching a word across different languages. For example, inserting a truncation symbol (commonly an asterisk *) at the end of the word Fāṭimid* will retrieve some of the following variants:

- Fatimide
- Fatimiden
- Fatimides
- Fatimidi
- Fatimids

Wildcards

Wildcards enable the user to search for a word that may have multiple spellings but still retains the same meaning. It is placed within a word and is commonly represented by a question mark (?). For example, wom?n will pull up both of these titles: “A Dawoodi Bohra Woman’s Experience of Arranged Marriage”¹² and “Leaving My Mother’s House: Khoja Ismaili Women and University.”¹³

Limiters

The implementation of limiters allows for more specific search results by adding certain criteria. The most common criteria include:

Limit by publication type: Book, book review, scholarly journal article, encyclopedia entry, dissertation, etc.

Limit by publication language: All languages; English only; selected language(s) only, for example, Arabic and Persian.

¹¹ The title “*Shaykh al-Jabal*” is a later Arabic translation from the Western forms. See Jerzy Hauziński, “On the Titles of the Ismā’īlī-Nizārī Leaders in the Alamūt Period,” *Folia Orientalia* 49 (2012): 238.

¹² Tasneem Arastu, “A Dawoodi Bohra Woman’s Experience of Arranged Marriage,” Master’s thesis, Michigan School of Professional Psychology, 2009.

¹³ Saira Jamal Sabzaali, “Leaving My Mother’s House: Khoja Ismaili Women and University,” PhD diss., Institute of Transpersonal Psychology, 2007.

Limit by publication date: Before or after a certain date; date range, for example, 2004-2018, and further by ascending or descending order.

Limit by publication author: Display of authors after a search ranked by the number of citations attributed to a particular author on a particular topic.

Limit by publication subject: Suggestion of subject/topic areas after a search usually displayed on the sidebar.

Limit by peer review: Peer review is intended to improve the quality control of research but the process is not without criticism. However, there is a strong consensus in academia that the benefits outweigh the disadvantages.¹⁴ For the purposes of the database, each item that has undergone the process will be readily identified. This is another instance of an electronic bibliography enhancing the usefulness of the existing (print-based) bibliographies in this subject area that do not indicate peer-reviewed items.

Boolean Operators

The database will employ Boolean operators to connect search terms together to either broaden or narrow a search.

Keyword Search (Free-Text Search)

A keyword search looks for the specified word or words anywhere in the record. This can be an advantage or a drawback, depending on the purpose of the user. For example, a keyword search on the term “Assassins”¹⁵ will retrieve a copious amount of results whereas a search on the term *Guptīs* (secret or hidden ones)¹⁶ will retrieve only a handful of results as there is not much written on the topic. The former search will have a high recall, retrieving more results; in doing so, the user is unlikely to miss any relevant items. The latter search will have high precision, which refers to retrieving fewer, but relatively dead-on and unerring, results.

Subject Heading Search

Even a cursory look at the bibliographic data in the field will reveal that many of the titles contain the terms “Fāṭimids” or “Ismā‘īlīs” with their language variants. A keyword search on one of these terms will retrieve all of the items that contain the term without taking into account the rest of the subject matter. A search can be made more focused by the addition of subject headings to each record.

Subject headings can be general — for example, “castles” and “coinage” or subject-specific — such as “Imamate” (hereditary office or institution of the Imam) and *ta’wīl*.¹⁷ A subject search on the term *ta’wīl* will retrieve all of the items that have been assigned that heading. A record may contain more than one subject heading to describe fully the content of an item. The table below lists more examples of subject-specific headings in this subject area.

¹⁴ See Emily A. Largent and Richard T. Snodgrass, “Blind Peer Review by Academic Journals,” in *Blinding as a Solution to Bias: Strengthening Biomedical Science, Forensic Science, and Law*, ed. Christopher T. Robertson and Aaron S. Kesselheim (Boston: Elsevier Academic Press, 2016), 75-95.

¹⁵ For an overview of the “Assassins,” see Farhad Daftary, “Assassins,” in *Encyclopaedia Islamica*, 2011, accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-islamica>. The term is pejorative but continues to persist in scholarly and popular discourse including library classification systems. See N. A. Jiwa, 27.

¹⁶ On the *Guptīs*, see Shafiqe N. Virani, “*Taqiyya* and Identity in a South Asian Community,” *Journal of Asian Studies* 70, no. 1 (2011): 99-139.

¹⁷ Examples of works that would be classified under this heading are Diane Steigerwald, “Ismā‘īlī *Ta’wīl*,” in *The Wiley Blackwell Companion to the Qur’ān*, 2nd ed., ed. Andrew Rippin and Jawid Mojaddedi (Hoboken, NJ: John Wiley and Sons, 2017), 463-78, which supplies a general survey of *ta’wīl* in Ismā‘īlī history; and David Hollenberg, *Beyond the Qur’ān: Early Ismā‘īlī *Ta’wīl* and the Secrets of the Prophets* (Columbia: University of South Carolina Press, 2016), which focuses on *ta’wīl* in early Ismā‘īlī and, in part, Fāṭimid thought.

Table

Personages	Ḥasan-i Šabbāḥ; ¹⁸ Ibn al-Hayṭam ¹⁹
Places	Maṣūriyya; ²⁰ Tajikistan ²¹
Groups	Bohras; ²² Qarmaṭīs ²³
Concepts	<i>nūr</i> ; ²⁴ <i>walāya</i> ²⁵
Institutions	Aga Khan Development Network (AKDN) ²⁶ <i>Jamā'at-khānas</i> ²⁷
Titles of Works	<i>Dustūr al-Munajjimīn</i> ²⁸ <i>Kalām-i Mawlā</i> ²⁹

The user will also benefit by the addition of an alphabetical subject heading guide that lists all of the subject headings used in the database.

¹⁸ On the founder of the Nizārī Ismā'īlī state and *da'wa* (summons) in Persia, see Farhad Daftary, “Ḥasan-i Šabbāḥ,” in *Encyclopaedia of Islam*, 3rd ed., 2016, accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-of-islam-3>; and Carole Hillenbrand, “A Neglected Source on the Life of Hasan-i Sabbah, the Founder of the Nizari ‘Assassin’ Sect,” *Iran: Journal of the British Institute of Persian Studies* 55, no. 1 (2017): 3-10.

¹⁹ An Ismā'īlī *dā'ī* (summoner) not to be “confused with his much more famous namesake: Ibn al-Hayṭam the mathematician.” See Regula Forster, “Dialogue and Autobiography: Ibn al-Hayṭam’s *Kitāb al-Munāzarāt*,” in *Il dialogo nella cultura araba: Strutture, funzioni, significati* (VIII-XIII secolo), ed. Mirella Cassarino and Antonella Ghersetti (Soveria Mannelli: Rubbettino, 2015), 91.

²⁰ On the city of Maṣūriyya, see Jonathan M. Bloom, *Arts of the City Victorious: Islamic Art and Architecture in Fatimid North Africa and Egypt* (New Haven: Yale University Press, 2007), 37-42. The city was named after its founder, the third Fāṭimid Imam Caliph al-Manṣūr bi’ llāh.

²¹ For an overview of the Tajik Ismā'īlīs, see Otambek Mastibekov, “Ismā'īlīs (Tajiks),” in *Oxford Islamic Studies Online*, 2016, accessed February 20, 2018. <http://www.oxfordislamicstudies.com>

²² For an overview of the Bohras, see Tahera Qutbuddin, “Bohras,” in *Encyclopaedia of Islam*, 3rd ed., 2013, accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-of-islam-3>

²³ For an overview of the Qarmaṭīs, see Ismail K. Poonawala, “Qarāmiṭah,” in *Encyclopedia of Religion*, 2nd ed., ed. Lindsay Jones (Detroit: Macmillan Reference USA, 2015), 11: 7542-544.

²⁴ On the concept of *nūr* (light) in Ismā'īlism, see Mir Baiz Khan, “*Chirāgh-i Rōshan*: Prophetic Light in the Ismā'īlī Tradition,” *Islamic Studies* 52, no. 3/4 (2013), 336-46; and Arzina R. Lalani, “Concept of Light in Ismaili Philosophy,” *Israq* 5 (2014): 404-26.

²⁵ On the concept of *walāya* (devotion to the Imam), see Hermann Landolt, “Walāyah,” in *Encyclopedia of Religion*, 2nd ed., ed. Lindsay Jones (Detroit: Macmillan Reference USA, 2005), 14: 9658-660. See further, Elizabeth R. Alexandrin, *Walāya in the Fāṭimid Ismā'īlī Tradition* (Albany: State University of New York Press, 2017), 8-16.

²⁶ On the AKDN, see *Aga Khan Development Network*, 2018, accessed February 20, 2018. <http://www.akdn.org/>. See further, Soumen Mukherjee, “Die internationalen Netzwerke des Aga Khan Development Network: Möglichkeiten und Grenzen eines muslimischen Kosmopolitismus,” in *Bessere Welten: Kosmopolitismus in den Geschichtswissenschaften*, ed. Bernhard Gissibl and Isabella Lühr (Frankfurt: Campus Verlag, 2017), 343-72.

²⁷ *Jamā'at-khānas* (houses of congregation) are not only Nizārī Ismā'īlī places of prayer but also function as “community centres for lectures, religious instruction, social activities, counseling, and administration.” Tazim R. Kassam and Ali S. Asani, “*jamaatkhana*,” in *Encyclopedia of Muslim-American History*, ed. Edward E. Curtis (New York: Facts on File, 2010), 1: 307. See further, Sharmina Mawani, “Sanctuary for the Soul: The Centrality of the *Jamatkhana* in Religious Identity Formation,” in *Perspectives of Female Researchers: Interdisciplinary Approaches to the Study of Gujarati Identities*, ed. Sharmina Mawani and Anjoom A. Mukadam (Berlin: Logos Verlag, 2016), 75-97.

²⁸ On the *Dustūr al-Munajjimīn* (*The Canon of the Astrologers*), see Eva Orthmann and Petra G. Schmidl, eds., *Science in the City of Fortune: The Dustūr al-Munajjimīn and its World* (Berlin EB-Verlag, 2017), 13-33.

²⁹ On the *Kalām-i Mawlā* (*The Discourse of Mawlā 'Alī*), see Amin Valliani, “Kalām-i Mawlā,” *Journal of the Pakistan Historical Society* 56, no. 3 (2008): 91-103.

Other features that need to be considered are “Sorting/Display/Output Capabilities.”³⁰ Examples include ranking results by relevance (Sorting); the number of results to be displayed per page (Display); and database support for bibliographic management software programs such as *RefWorks* or *EndNote* (Output).

Secondary sources in Ismā‘īlī Studies are written in a multitude of languages, including Albanian, Arabic, Dutch, English, French, German, Gujarati, Hebrew, Hungarian, Italian, Japanese, Persian, Polish, Russian, Serbo-Croat-Bosnian, Sindhi, Spanish, Tajik, Turkish, Urdu, and others. While language diversity is an asset, it can also act as a barrier between the user and the data. A user will easily miss finding items of relevance published in unfamiliar languages. It is, therefore, of prime importance to offer English translations of (at the very least) titles of items in foreign languages.

Metadata

Metadata is most commonly defined as “data about data,” and consists of elements that facilitate resource description and discovery. The following basic citation illustrates how metadata works. It has the author, date, title, publisher place, and publisher(s).

Wiley, Peter. *Eagle’s Nest: Ismaili Castles in Iran and Syria*. London: I.B. Tauris in association with The Institute of Ismaili Studies, 2005.

Here is the same resource with additional metadata. The record now includes an ISBN, OCLC Number, and a description. It also includes subject headings, a summary, and table of contents, “rich descriptive information ... [which] drives content discovery.”³² For instance, suppose that a researcher is interested in finding studies on coins from the Alamūt period.³³ Chances are the researcher would not think that Wiley’s book is of relevance based on the title. However, reproducing the table of contents³⁴ indicates to the researcher that the book includes an appendix on Alamūt coinage. A keyword search on the terms “Alamūt” and “coins” will retrieve this record, and this is an instance of metadata driving content discovery.

Scholarly journal articles have their own particular metadata elements. Here is an example of such a record.³⁵

Eagle’s nest : Ismaili castles in Iran and Syria


Author:	Peter Willey; Institute of Ismaili Studies.
Publisher:	London ; New York : I.B. Tauris ; London : in association with the Institute of Ismaili Studies, 2005.
Series:	Ismaili heritage series, 10.
Edition/Format:	 Print book : English View all editions and formats
Database:	WorldCat
Summary:	“For anybody with an interest in medieval and Middle East history, or simply with a love of castles, impressive and often inspiring sites of Alamut, Samiran and Qa’in (in Iran), and of Masyaf, Kahf and well as offering a gripping historical account of the courage, vision and endurance of this Shi’i Muslim rediscovering a forgotten, distant world, which will appeal to the armchair traveller and historian in e
Subjects	Castles -- Iran. Castles -- Syria. Castillos -- Iran.
ISBN:	1850434646 9781850434641
OCLC Number:	56458607
Description:	xxvii, 321 pages : illustrations, maps ; 24 cm.
Contents:	1. Introduction : early history of the Ismailis -- 2. Hasan Sabbah and the Ismailis of Iran -- 3. Rashid al-Din Sinan and the Ismailis of Syria -- 4. Organisation and ethos of the Ismaili state -- 5. The Mongol conquest -- 6. The strategy of Ismaili castles -- 7. Castles of the Alamut Valley -- App. IV. Ismaili coins from the Alamut period / Hussein Hamdan and Aram Vardanyan

Figure 1³¹

³⁰ Bell, 262-63.

³¹ Screenshot © 2017 OCLC Online Computer Library Center, Inc. Used with permission of OCLC. WorldCat is a registered trademark/service mark of OCLC.

³² Renée Register, “The Importance of Metadata for E-content,” *eContent Quarterly* 1, no. 1 (2013): 30.

³³ For an overview of the Alamūt period as well as the castle of Alamūt itself, see Sadeq Sajjadi, Enayat Allah Majidi, Farhad Daftary, and Roxane Zand, “Alamūt,” in *Encyclopaedia Islamica*, 2011, accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-islamica>. See further, Hamideh Choubak, “Alamut Castle (Eagle’s Nest): Hassan Sabbah Stronghold,” *International Journal of Humanities* 16, no. 2 (2009): 1-29.

³⁴ The table of contents has been modified from the original to save space.

³⁵ Screenshot © 2017 EBSCO Information Services (EIS). Used with permission of EIS.

Potentially an 'Art Object': Tajik Ismailis' Bāteni and Zāheri Engagement with Their Imam's Image.

Authors:	Remtilla, Aliaa ¹
Source:	Journal of Persianate Studies. Jul2011, Vol. 4 Issue 2, p189-207. 19p.
Document Type:	Article
Subjects:	ESSAY (Literary form) ISMAILITES AGA Khan IV, 1936- IMAMS (Shiites) MUSLIMS -- Social aspects
Geographic Terms:	TAJIKISTAN
Author-Supplied Keywords:	Aga Khan bāten images Ismaili Islam Tajik Badakhshan zāher
Abstract:	Abstract This essay explores the way Ismaili Muslims living in the Tajik district of Ishkashim engage with images of their religious leader through photographs of their Imam with the capacity to act. They do not treat these images as idols but adopt qualities of the Imam himself. Other images, such as newspaper photographs and films, provide information about the Imam as a politically engaged individual agenda for the Imam's image by abstracting it from contextualized information, and once more imbue it with agency. The article frames bāten (interior, hidden, spiritual, eternal, esoteric), questioning the effect of the Imam's post-Soviet Zāheri presence on Ishkashimis' e <small>Copyright of Journal of Persianate Studies is the property of Brill Academic Publishers and its content may not be copied or emailed, may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of data applies to all Abstracts.)</small>
Author Affiliations:	¹ University of Manchester
ISSN:	1874-7094
DOI:	10.1163/187471611X600387
Accession Number:	67669091

Figure 2³⁵

Title	The formation of the Satpanth Ismaili tradition in South Asia
Author	Momin, Wafi Ahmed
Number of pages	288
Publication year	2016
Degree	Ph.D.
School code	0330
Source	DAI-A 77/10(E), Dissertation Abstracts International
Place of publication	Ann Arbor
Country of publication	United States
ISBN	9781339873459
Advisor	Doniger, Wendy
Committee member	Alam, Muzafer; Esmail, Aziz
University/institution	The University of Chicago

Figure 3³⁷

supplied abstract and keywords (not shown here). The record also lists the dissertation advisor and doctoral committee members including the author in question (Aziz Esmail). A look at the title indicates that Momin's dissertation is on the same topic (*Satpanth*) and is in all probability of high relevance to the researcher. This serendipitous discovery would not have occurred if the researcher had restricted the initial search to the author field. This instance is contrary

Basic metadata includes the author and article title along with the journal title, volume and issue numbers, pages, and date. The record also has an ISSN, DOI, and an EBSCO Accession Number. Rich descriptive metadata consists of subject headings, an author-supplied abstract, and keywords also supplied by the author. The keywords include the terms *zāhir* (exoteric) and *bātin* (esoteric), which are not listed as subject headings. The insertion of these subject-specific keywords in the record increases the findability of the item.

The importance of a research abstract, written either by the author or abstractor, cannot be understated. If the abstract cannot be reproduced, the record can contain a link to the abstract if it is available online. The record must also contain a link to the full text (if available), and whether it is accessible on fee-and/or free-based sites. The end goal of linkage is to increase efficiency by not having the user search again, externally, for the abstract or full text.

The addition of metadata can also help fuel serendipitous searching, the accidental discovery of a source of relevance while searching for something else. Envisage a researcher who is aware of the following dissertation (i.e., a known item) and wants to determine if the author has written more on the topic of *Satpanth* (the true path):³⁶

Esmail, Aziz. "Satpanth Ismailism and Modern Changes within it, with Special Reference to East Africa." PhD diss., University of Edinburgh, 1972.

A search on the author's name as a keyword will retrieve not only this dissertation but also the dissertation by Wafi Momin (seen at left).

The basic metadata consists of the author's name, dissertation date and title, degree type, and institution. As with the previous example, this record contains subject headings, an author-

³⁶ For a succinct summary of the *Satpanth da'wa*, see Ali S. Asani, "Isma'ilism: Isma'ilism in *Ginān* Literature," in *Encyclopaedia Iranica*, 2007. Accessed February 20, 2018. <http://www.iranicaonline.org>

³⁷ Screenshot © 2017 ProQuest Limited Liability Company (LLC). Used with permission of ProQuest LLC.

to Alemu and Stevens's insistence that "library databases ... are very unlikely to offer the possibility of accidentally pertinent search results."³⁸

Online scholarly sources have their own distinctive metadata in addition to the elements discussed thus far. The following sample record for an online encyclopedia entry illustrates the metadata that is common to both print and online items, as well as some of the additional metadata required. The elements presented here conform to the Dublin Core Metadata Element Set [Version 1.1].³⁹

Common metadata includes the author, entry and encyclopedia title, publisher, publisher place, publication date, and language. Additional metadata includes the date updated, rights management, and URL identifier. It is important to realize that these and other online metadata elements are dynamic in nature. They can change over time, some more rapidly than others. Records for online documents need to be monitored regularly to ensure the completeness and accuracy of the metadata.

The encyclopedia entry is on the Ikhwān al-Ṣafā' whose name is most commonly translated as the "Brethren of Purity." However, this translation is not provided in the title of the article. A search on the phrase "Brethren of Purity" will not retrieve this particular record without additional metadata. The online illustration contains a description element which functions similar to an abstract, where the translation is given. Hence, a keyword search will retrieve this entry as will a subject search due to the fact that the phrase "Brethren of Purity" is assigned as one of the subjects. As with metadata for print sources, some records for online sources may contain the most basic metadata while others may be more detailed.

Exclusivity

The categories of resources of the first search method identified in the *Addenda* resemble the description of resources harvested by Discovery Services including OPACs, databases, and digital libraries. The question then arises: why create an Ismā'īlī Studies database when a Discovery Service performs the same task?

As mentioned earlier, the *Addenda* supplies a representative list of general and subject-specific resources consulted during its compilation. Part of the answer to that question is that Discovery Services, though quite thorough, do not index (or rather pre-index) all of these resources. Many of the resources searched inevitably retrieved duplicates, but also unique and undiscovered bibliographic data. Google Scholar, which has been used as a substitute for Discovery Services,⁴¹ must also be used in conjunction with other resources in order to maximize comprehensiveness and completeness.


Author/Creator:	Baffioni, Carmela	
Title:	Ikhwān al-Ṣafā'	
Source:	Stanford Encyclopedia of Philosophy	
Contributor:	Zalta, Edward N. (Editor)	
Publisher:	Metaphysics Research Lab	
Publisher Place:	Stanford, CA	
Language:	English	
Type:	Text	
Format:	text/html	
Subjects:	Ikhwan al-Safa, Brethren of Purity Philosophy, Encyclopedias	
Date Created:	2008-04-22	
Date Updated:	2016-07-08	
Identifier:	https://plato.stanford.edu/archives/fall2016/entries/ikhwan-al-safa/	
Description:	Encyclopedia entry on the Ikhwan al-Safa / Brethren of Purity from the online version of the <i>Stanford Encyclopedia of Philosophy</i> .	
Coverage:	9th-10th Century	
Rights Management:	https://plato.stanford.edu/info.html	
Relation:	http://www.iep.utm.edu/ikhwan-al-safa/	

Figure 4⁴⁰

³⁸ Getaneh Alemu and Brett Stevens, *An Emergent Theory of Digital Library Metadata: Enrich then Filter* (Waltham, MA: Chandos Publishing, 2015), 81.

³⁹ Dublin Core Metadata Element Set. 2012, accessed February 20, 2018. <http://dublincore.org/documents/dces/>

⁴⁰ Logo © 2017 *The Stanford Encyclopedia of Philosophy* (SEP). Used with permission of SEP.

⁴¹ Piet De Keyser, "Discovery Services, the Next Tool Libraries Must Have, or... Should Discard?" in *E-Discovery Tools and Applications in Modern Libraries*, ed. Egbert De Smet and Sangeeta N. Dhamdhere (Hershey, PA: Information Science Reference, 2016), 56–65.

There are also differences in the data harvested across Discovery Services resulting in the exclusion of items. It will be the user who will suffer by missing materials in a field that places a high premium on every study, owing to the overall paucity of research in Ismāʿīlī Studies.

In addition, the size of the data contained in Discovery Services and Google Scholar is colossal and continues to expand at an unprecedented rate. Research indicates “that, unfortunately, the larger a database is the harder it is to locate information in it, no matter how good the search engine or how expert the searcher.”⁴² For example, a keyword search on the term *taʿwīl* in Discovery Services/Google Scholar is bound to retrieve irrelevant results on the Andersen-Tawil Syndrome (ATS). By searching in a subject-specific database, the user is guaranteed to retrieve results on the right kind of *taʿwīl*.

Another question that arises is why not use a subject-specific resource already in place such as *Index Islamicus*? Besides its limitation of coverage in European languages only, the scope of that database is ambitious, attempting to cover all of the subfields and specialities in Islamic Studies. Its content is relatively large, containing over 500,000 records at the time of this writing. Even while allowing for the widest margin of error, the number of secondary sources cited in the existing bibliographies for Ismāʿīlī Studies does not exceed 5,000 entries. Searching for sources in a database of 5,000 records is more efficient and effective than searching a database 100 times its size.

For example, a keyword search on the term “Imamate” in *Index Islamicus* will retrieve quite a number of results as the concept of Imamate is not confined to Ismāʿīlism.⁴³ An Ismāʿīlī Studies database will eliminate most irrelevant results; in this instance, that being the concept of the Imamate in other schools of thought. It will also reduce the number of false drops, which are sources that are retrieved by search terms but where the terms are not used as intended. For example, a keyword search in *Index Islamicus* on the terms “Fāṭimid” and “Egypt” will retrieve all of the individual records of the *Egypt and Syria in the Fatimid, Ayyubid and Mamluk Eras* colloquia series even if they are on the Ayyūbids or Mamlūks.

The University of Chicago Library in partnership with the Middle East Documentation Center (MEDOC) supports the *Mamluk Bibliography Online*.⁴⁴ This is a resource dedicated exclusively to Mamlūk Studies, indicating that the coverage of other databases in this field is found to be inadequate. Shainool Jiwa maintains that the Fāṭimids remain relatively understudied in comparison to the successor dynasties in Egypt, such as the Ayyūbids and the Mamlūks.⁴⁵ This makes having a single database that aggregates all of the available data on the Fāṭimids (albeit as a subfield) all the more essential.

Furthermore, having a subject-specific database offers the flexibility to customize subject headings. The term *Satpanth* alluded to earlier designates a major phase in Ismāʿīlism which has been, and continues to be, marginalized in Ismāʿīlī Studies.⁴⁶ This is also reflected in the indexing of items on the *Satpanth*, where the term itself as a subject heading is absent from controlled vocabulary lists such as the Library of Congress Subject Headings (LCSH), OCLC descriptors, and *Index Islamicus* (as of yet). While these lists are undeniably useful and can be drawn upon to assign general and, to a certain extent, subject-specific headings, creating customized subject headings will allow for greater specificity.

However, it is not enough to assign more precise subject headings to a bibliographic record without taking into consideration indexing consistency. This is demonstrated through the use of the Ismāʿīlī *gināns*⁴⁷ which have their origins in the *Satpanth* period.

⁴² Donna L. O’Malley, “A Survey of Scholarly Literature Databases for Clinical Laboratory Science,” *Clinical Laboratory Science* 21, no. 1 (2008): 54.

⁴³ For the concept of the Imamate in Ismāʿīlism in particular, see Azim A. Nanji, “Ismaʿilism: The Imamate in Ismaʿilism,” in *Encyclopaedia Iranica*, 2007, accessed February 20, 2018. <http://www.iranicaonline.org>

⁴⁴ *Mamluk Bibliography Online*. 2013, accessed February 20, 2018. <http://mamluk.lib.uchicago.edu/>

⁴⁵ Shainool Jiwa, e-mail message to author, April 17, 2017.

⁴⁶ Tazim R. Kassam, “The Living Tradition of Ismaili *Ginans*: Negotiating Cultures in Poetry and Performance,” in *Lines in Water: Religious Boundaries in South Asia*, ed. Eliza F. Kent and Tazim R. Kassam (Syracuse, NY: Syracuse University Press, 2013), 136.

⁴⁷ On the *gināns*, see Asani, “Ismaʿilism.” It is worth noting that there are a number of online resources dedicated exclusively to *ginānic* studies, which is a subfield of Ismāʿīlī Studies, but none that covers the entire field. Representative resources include Pyarali Jiwa, *Library of Ginans and Granths*, The Association for the Study of Ginans, 2011, accessed February 20, 2018. <http://ginans.org/download.php>; and Karim Tharani, *Ginan Central*, University of Saskatchewan Library, 2018, accessed February 20, 2018. <http://ginans.usask.ca/>

The Ginans are hymns, religious lyrics, which have for long been a central part of the religious life of the Indian Nizari Ismaili community (known as Khojas), and of which they continue to form the living religious tradition. ... The term “Ginan” is believed to derive from the Sanskrit *jnān*, an abstract noun, which may be variously rendered as “knowledge,” “wisdom” or “cognition” (reminiscent, to some extent, of the Greek *gnosis*). In the Indian Ismaili tradition it has come to refer to the individual hymns, and is thus treated as a countable name. ... The Ginans are a vast corpus consisting of several hundred (indeed by some estimates over a thousand) hymns.⁴⁸

Different authors have offered different renderings of the term *ginān*. These include canticles, compositions, hymns, literature, liturgies, lyrics, music, odes, poems, poetry, rhymes, songs, texts, verses, and so on. These terms are usually preceded by qualifiers such as devotional, esoterical, gnostical, holy, mystical, religious, sacred, spiritual, and the like.

After having established that an item is about the *gināns*, an indexer needs to first select a subject term (let us say hymns) and assign it to the bibliographic record. This is in addition to assigning the term *ginān* to the record and is of particular benefit to a user who is not familiar with the terminology. The indexer then needs to use the same preferred terms (i.e., hymns and *gināns*) in indexing any subsequent items on the topic. This is referred to as intra-indexer consistency. Inter-indexing consistency refers to the fact that a different indexer will use the same preferred terms of hymns and *gināns* in indexing further items on the topic. Both intra- and inter-indexing consistencies⁴⁹ are paramount in facilitating effective searching by subject headings.

The term *ginān* is a subject heading in both LCSH and OCLC descriptors. Unfortunately, it is applied haphazardly and inconsistently at the time of this writing. Consequently, a subject heading search on the term *ginān* will not retrieve all of the relevant items on the topic. The problem is compounded by the fact that different items on the *gināns* are denoted by different subject headings such as the renderings listed in the paragraph before the preceding one.

An Ismā‘īlī Studies database will ensure that subject headings including *gināns* will be assigned uniformly and consistently. This will also pertain to customized subject-specific headings, some examples of which are identified in the table above. Not surprisingly, research shows that subject-specific database searches are more comprehensive and relevant than general database searches, presumably due to subject-specific indexing and content.⁵⁰

Timeline

The creation of the database can be divided into three main phases: (1) Secure Funding; (2) Database Design; and (3) Content Management.

Phase 1

Ultimately, the creation and maintenance of the database needs sufficient and continued financial support from individuals and institutions, at both private and public levels. Partial or intermittent funding may result in having to forego some of the features and settle for a basic relational database. After all, it is more prudent and beneficial to have a database with limited capabilities than none at all.

Phase 2

Once funding is secured, a database designer will need to build the database according to the specifications outlined above. There are further decisions to be made in consultation with the designer. One area in particular is the user’s experience of interaction with the database. The questions to be asked range from: “What will the font and colours of the interface be?” to “Will it consist of a single ‘Google Model’ search box or will the search page display additional information?” Many usability decisions will be determined based on the amount of funding available. Usability is not

⁴⁸ Aziz Esmail, *A Scent of Sandalwood: Indo-Isma'ili Religious Lyrics (Ginans) Volume 1* (Richmond, Surrey, UK: Curzon, 2002), 2-3.

⁴⁹ M.S. Ramalingam, *Library Cataloguing and Classification Systems* (Delhi: Kalpaz Publications, 2000), 295-96.

⁵⁰ Helen Aveyard, Pam Sharp, and Mary Woolliams, *A Beginner’s Guide to Critical Thinking and Writing in Health and Social Care*, 2nd ed. (Maidenhead, UK: Open University Press, 2015), 47.

detailed here in view of the fact that it “is open to both a subjective and objective evaluation.”⁵¹

Phase 3

Tasks that must be performed by professionally trained staff while allowing for some degree of overlap are identified below.

Bibliographic Verification

Verify all the bibliographic information contained in each entry of the existing bibliographies, correct all the errors, and eliminate duplicates, i.e., items cited in both Tajdin and Daftary. Bibliographic verification should ideally be performed by personally examining each individual document.⁵² This also applies to entries created for new content entered into the database.

Subject Indexing and Metadata

Create and assign subject headings for each entry. Add rich descriptive metadata as items cited in the existing bibliographies contain only the most basic elements. Both subject headings and metadata can be input retroactively once the database is operational.

Updating and Editing

Search for new content from 2004 to the present (including omissions from previous years). Create and assign subject headings and metadata for each entry. Perform ongoing editing of records ensuring the content is current, consistent, and complete.

Data Rekeying

Rekey all of the data from the existing bibliographies and new content into the database.

Conclusion

This paper has made a case for the imperative need to build an online database dedicated exclusively to Ismā‘īlī Studies, to further research in the field. Its scope is intentionally broad to include even the most outlier studies.⁵³ Data extracted from the existing bibliographies and data originating from updates will still need to be vetted to verify that individual items fall within the purview of the database. The search features outlined herein have a common objective, to retrieve precise and particularly required search results. The role of subject indexing and metadata is fundamental in enhancing the searchability of each record. Also fundamental is the necessity of exclusivity in order to optimize the efficiency and effectiveness of the database. Given the fact that an online searchable database dedicated exclusively to Ismā‘īlī Studies is a natural and essential progression in the field, it is the present bibliographer’s hope that the *Addenda* will be the last published bibliography of secondary sources in print form.

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⁵¹ Bell, 260.

⁵² James H. Sweetland, “Errors in Bibliographic Citations: A Continuing Problem,” *The Library Quarterly: Information, Community, Policy* 59, no. 4 (1989): 291.

⁵³ Examples include M.E. Soltan, “Environmental Chemical Study on the Marsh of Fatimid Cemetery at Aswan City, Egypt,” *Journal of Environmental Sciences* 14, no. 4 (2002): 464-73; and Barbara Czaja-Szewczak, “Conservation of a Fatimid Shawl from the Naqlun Cemetery,” *Polish Archaeology in the Mediterranean* 19 (2010): 248-50.

to thank the following vendors for giving me permission to reproduce screenshots of their databases: OCLC Online Computer Library Center, Inc. (Fig. 1); EBSCO Information Services (Fig. 2); and ProQuest LLC (Fig. 3). I also wish to thank *The Stanford Encyclopedia of Philosophy (SEP)* for granting permission to use their logo (Fig. 4). This work is dedicated to my wife, Nadia, for her unconditional support and belief in me.

Bibliography

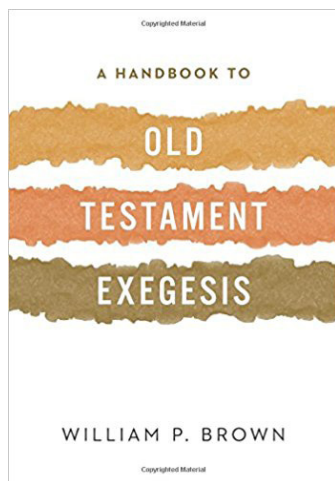
- Aga Khan Development Network*. 2018. Accessed February 20, 2018. <http://www.akdn.org/>
- Alemu, Getaneh, and Brett Stevens. *An Emergent Theory of Digital Library Metadata: Enrich then Filter*. Waltham, MA: Chandos Publishing, 2015.
- Alexandrin, Elizabeth R. *Walāya in the Fāṭimid Ismāʿīlī Tradition*. Albany: State University of New York Press, 2017.
- Andani, Khalil. "A Survey of Ismaili Studies Part 1: Early Ismailism and Fatimid Ismailism." *Religion Compass* 10, no. 8 (2016): 191–206.
- _____. "A Survey of Ismaili Studies Part 2: Post-Fatimid and Modern Ismailism." *Religion Compass* 10, no. 11 (2016): 269–82.
- Arastu, Tasneem. "A Dawoodi Bohra Woman's Experience of Arranged Marriage." Master's thesis, Michigan School of Professional Psychology, 2009.
- Asani, Ali S. "Ismaʿilism: Ismaʿilism in *Ginān* Literature." In *Encyclopaedia Iranica*. 2007. Accessed February 20, 2018. <http://www.iranicaonline.org>
- Aveyard, Helen, Pam Sharp, and Mary Woolliams. *A Beginner's Guide to Critical Thinking and Writing in Health and Social Care*. 2nd ed. Maidenhead, UK: Open University Press, 2015.
- Bell, Suzanne S. *Librarian's Guide to Online Searching: Cultivating Database Skills for Research and Instruction*. 4th ed. Santa Barbara, CA: Libraries Unlimited, 2015.
- Bloom, Jonathan M. *Arts of the City Victorious: Islamic Art and Architecture in Fatimid North Africa and Egypt*. New Haven: Yale University Press, 2007.
- Choubak, Hamideh. "Alamut Castle (Eagle's Nest): Hassan Sabbah Stronghold." *International Journal of Humanities* 16, no. 2 (2009): 1-29.
- Czaja-Szewczak, Barbara. "Conservation of a Fatimid Shawl from the Naqlun Cemetery." *Polish Archaeology in the Mediterranean* 19 (2010): 248-50.
- Daftary, Farhad. *Ismāʿīlī Literature: A Bibliography of Sources and Studies*. London: I.B. Tauris in association with The Institute of Ismaili Studies, 2004.
- _____. "Assassins." In *Encyclopaedia Islamica*. 2011. Accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-islamica>
- _____. "Ḥasan-i Šabbāḥ." In *Encyclopaedia of Islam*, 3rd ed., 2016. Accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-of-islam-3>
- De Keyser, Piet. "Discovery Services, the Next Tool Libraries Must Have, or... Should Discard?" In *E-Discovery Tools and Applications in Modern Libraries*, ed. Egbert De Smet and Sangeeta N. Dhamdhere. Hershey, PA: Information Science Reference, 2016, 56-65.
- "Dublin Core Metadata Element Set." 2012. The Dublin Core Metadata Initiative (DCMI). Accessed February 20, 2018. <http://dublincore.org/documents/dces/>
- Esmail, Aziz. *A Scent of Sandalwood: Indo-Ismaili Religious Lyrics (Ginans) Volume 1*. Richmond, Surrey, UK: Curzon, 2002.
- Forster, Regula. "Dialogue and Autobiography: Ibn al-Hayṭam's *Kitāb al-Munāẓarāt*." In *Il dialogo nella cultura*

- araba: Strutture, funzioni, significati (VIII-XIII secolo)*, ed. Mirella Cassarino and Antonella Gheretti (Soveria Mannelli: Rubbettino, Italy, 2015), 91-105.
- Hauziński, Jerzy. "On the Titles of the Ismā'īlī-Nizārī Leaders in the Alamūt Period." *Folia Orientalia* 49 (2012): 233-39.
- Hetherington, Carol. "Setting the Record Straight: Bibliography and Australian Literature." *Australian Literary Studies* 21, no. 2 (2003): 198-208.
- Hillenbrand, Carole. "A Neglected Source on the Life of Hasan-i Sabbah, the Founder of the Nizari 'Assassin' Sect." *Iran: Journal of the British Institute of Persian Studies* 55, no. 1 (2017): 3-10.
- Hollenberg, David. *Beyond the Qur'ān: Early Ismā'īlī Tā'wīl and the Secrets of the Prophets*. Columbia: University of South Carolina Press, 2016.
- Jiwa, Nawazali A. "Addenda to Secondary Sources in Ismā'īlī Studies: The Case of the Omissions." *MELA Notes: Journal of Middle Eastern Librarianship* 86 (2013): 20-101.
- Jiwa, Pyarali. *Library of Ginans and Granths*. The Association for the Study of Ginans. 2011. Accessed February 20, 2018. <http://ginans.org/download.php>
- Kassam, Tazim R. "The Living Tradition of Ismaili *Ginans*: Negotiating Cultures in Poetry and Performance." In *Lines in Water: Religious Boundaries in South Asia*, ed. Eliza F. Kent and Tazim R. Kassam. Syracuse, NY: Syracuse University Press, 2013, 125-58.
- Kassam, Tazim R., and Ali S. Asani. "jamaatkhana." In *Encyclopedia of Muslim-American History*, ed. Edward E. Curtis. New York: Facts on File, 2010, 1: 306-7.
- Khan, Mir Baiz. "Chirāgh-i Rōshan: Prophetic Light in the Ismā'īlī Tradition." *Islamic Studies* 52, no. 3/4 (2013): 327-56.
- Lalani, Arzina R. "Concept of Light in Ismaili Philosophy." *Isbraq* 5 (2014): 404-26.
- Landolt, Hermann. "Walāyah." In *Encyclopedia of Religion*. 2nd ed., ed. Lindsay Jones. Detroit: Macmillan Reference USA, 2005, 14: 9656-62.
- Largent, Emily A., and Richard T. Snodgrass. "Blind Peer Review by Academic Journals." In *Blinding as a Solution to Bias: Strengthening Biomedical Science, Forensic Science, and Law*, ed. Christopher T. Robertson and Aaron S. Kesselheim. Boston: Elsevier Academic Press, 2016, 75-95.
- Mamluk Bibliography Online*. 2013. Accessed February 20, 2018. <http://mamluk.lib.uchicago.edu/>
- Mastibekov, Otambek. "Ismā'īlīs (Tajiks)." In *Oxford Islamic Studies Online*. 2016. Accessed February 20, 2018. <http://www.oxfordislamicstudies.com>
- Mawani, Sharmina. "Sanctuary for the Soul: The Centrality of the *Jamatkhana* in Religious Identity Formation." In *Perspectives of Female Researchers: Interdisciplinary Approaches to the Study of Gujarati Identities*, ed. Sharmina Mawani and Anjoom A. Mukadam. Berlin: Logos Verlag, 2016, 75-97.
- Momen, Moojan. *Review of Ismaili Literature: A Bibliography of Sources and Studies*, by Farhad Daftary. *Islam and Christian-Muslim Relations* 16, no. 4 (2005): 433-34.
- Mukherjee, Soumen. "Die internationalen Netzwerke des Aga Khan Development Network: Möglichkeiten und Grenzen eines muslimischen Kosmopolitismus." In *Bessere Welten: Kosmopolitismus in den Geschichtswissenschaften*, ed. Bernhard Gissibl and Isabella Löhr. Frankfurt: Campus Verlag, 2017, 343-72.
- Nanji, Azim A. "Isma'ilism: The Imamate in Isma'ilism." In *Encyclopaedia Iranica*. 2007. Accessed February 20, 2018. <http://www.iranicaonline.org>
- O'Malley, Donna L. "A Survey of Scholarly Literature Databases for Clinical Laboratory Science." *Clinical Laboratory Science* 21, no. 1 (2008): 49-57.

- Orthmann, Eva, and Petra G. Schmidl, eds. *Science in the City of Fortune: The Dustūr al-Munajjimīn and its World*. Berlin EB-Verlag, 2017.
- Poonawala, Ismail K. "Qarāmiṭah." In *Encyclopedia of Religion*. 2nd ed., ed. Lindsay Jones. Detroit: Macmillan Reference USA, 2015, 11: 7542-44.
- Qutbuddin, Tahera. "Bohras." In *Encyclopaedia of Islam*, 3rd ed., 2013. Accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-of-islam-3>
- Ramalingam, M. S. *Library Cataloguing and Classification Systems*. Delhi: Kalpaz Publications, 2000.
- Register, Renée. "The Importance of Metadata for E-content." *eContent Quarterly* 1, no. 1 (2013): 30-44.
- Sabzaali, Saira Jamal. "Leaving My Mother's House: Khoja Ismaili Women and University." PhD diss., Institute of Transpersonal Psychology, 2007.
- Sajjadi, Sadeq, Enayat Allah Majidi, Farhad Daftary, and Roxane Zand (tr.). "Alamūt." In *Encyclopaedia Islamica*. 2011. Accessed February 20, 2018. <http://referenceworks.brillonline.com/browse/encyclopaedia-islamica>
- Soltan, M.E. "Environmental Chemical Study on the Marsh of Fatimid Cemetery at Aswan City, Egypt." *Journal of Environmental Sciences* 14, no. 4 (2002): 464-73.
- Stebbins, Leslie F. *Student Guide to Research in the Digital Age: How to Locate and Evaluate Information Sources*. Westport, CT: Libraries Unlimited, 2006.
- Steigerwald, Diane. "Ismā'īlī Ta'wīl." In *The Wiley Blackwell Companion to the Qur'ān*. 2nd ed., ed. Andrew Rippin and Jawid Mojaddedi. Hoboken, NJ: John Wiley and Sons, 2017, 463-78.
- Sweetland, James H. "Errors in Bibliographic Citations: A Continuing Problem." *The Library Quarterly: Information, Community, Policy* 59, no. 4 (1989): 291-304.
- Tajdin, Nagib. *A Bibliography of Ismailism*. Delmar, New York: Caravan Books, 1985.
- Tharani, Karim. *Ginan Central*. University of Saskatchewan Library. 2018. Accessed February 20, 2018. <http://ginans.usask.ca/>
- Valliani, Amin. "Kalām-i Mawlā." *Journal of the Pakistan Historical Society* 56, no. 3 (2008): 91-103.
- Virani, Shafiqe N. "Taqīyya and Identity in a South Asian Community." *Journal of Asian Studies* 70, no. 1 (2011): 99-139.

A Handbook to Old Testament Exegesis

William P. Brown. *A Handbook to Old Testament Exegesis*. Louisville, KY: Westminster John Knox Press, 2017. 380 pp. \$35.00. ISBN: 9780664259938.



William P. Brown begins *A Handbook to Old Testament Exegesis* with a bold claim: “Meaning is not something contained within the text, as if it were waiting to be unlocked and released from literary confinement. Meaning, rather, emerges from one’s encounter with the text” (3-4). This relationship between the interpreter and text in exegesis defines Brown’s work, as he considers this methodology through the basic lenses of sound biblical interpretation. His work succeeds as a unified, cohesive whole that is also useful when broken into separate parts. With its thorough but ready-for-use content, one can see continued use of the *Handbook* long after the initial read.

Brown’s reputation in and outside the academy and his education and publishing backgrounds make him more than qualified for such an undertaking. He is an active member of the Presbyterian Church (USA) and has a PhD from Emory University in Hebrew Bible studies and an MDiv from Princeton Theological Seminary. Brown’s research primarily focuses on biblical poetry and wisdom literature, two genres of biblical writings that require extensive work with language, poetics, hermeneutics, and history

of interpretation. Further, his work is known for its deft pairing of scholarly depth with genuine accessibility, helping Brown shape and remain part of academic biblical scholarship without neglecting the Bible’s lived ecclesial life.

Brown’s relational understanding of meaning and exegesis represents another iteration of the current reception historical trend permeating biblical scholarship. Like his co-faculty member Brennan Breed in his *Nomadic Text: A Theory of Biblical Reception History* and C.L. Seow in his “History of Consequences” section of his Job commentary, Brown’s approach to exegesis casts a wide net that considers how biblical texts have functioned and how readers have used biblical texts throughout history.¹ Brown grounds his central focus in this method, considering the life of a text dependent on external and historical factors. He uses this approach as a lens through which he views traditional analytical approaches alongside readings that, in some circles, remain relegated to the lesser strata of reader-response criticism. Brown breaks this pattern of relegation and elevates previously “lesser” methods alongside tried and true approaches.

Brown devotes the majority of the *Handbook* to methods of exegetical analysis and breaks his book into four sections. Part I acclimates the reader to Brown’s central argument while also offering questions to consider for what he calls a “self-exegesis.” This self-exegesis is the crux upon which Brown’s exegetical theory rests, as he argues a reader must first know themselves before beginning any attempt of biblical reception. Examples of self-exegesis from some of Brown’s students buttress his stance while providing helpful examples of what implementing Brown’s approach can yield in classroom, ecclesial, or personal exegetical settings. Brown pairs this self-exegesis with a call to be fastidious in one’s work with a biblical text’s original language, history of interpretation, and other scholarly voices so as to prevent self-indulgent interpretations.

Each chapter in part II offers a general overview of traditional biblical analysis, including Brown’s perceived strengths and weaknesses of each method. He discusses text-critical analysis, stylistic approaches, and structural, compositional, comparative, literary, historical, and canonical analyses. Part III steps beyond traditional methods and devotes eight chapters to discuss what Brown calls “Readings in Place.” He engages a number of approaches, including science, ecology, gender, empire, minority, disability, and theology. Brown ties parts II and III together, along with the respective approaches under their headings, by applying each approach to portions of Genesis 1:1-2:4. This provides a greater sense of cohesion to the

¹ Brennan W. Breed, *Nomadic Text: A Theory of Biblical Reception History* (Bloomington, IN: Indiana University Press, 2014); C. L. Seow, *Job 1-21: Interpretation and Commentary* (Grand Rapids, MI: Eerdmans, 2013), 110-248.

book as one can compare how Brown reads Genesis 1:1 from the various perspectives for a sense of what makes each unique. Part IV offers a simple but sound conclusion that urges readers to piece together seemingly disparate parts to create a unique exegetical work that is grounded in sound scholarship and personal reflection without one superseding the other.

Accessibility is the greatest strength of Brown's *Handbook*. It is both an end in itself, in terms of methodological explanation and examples, while also being a means to the end of expanded scholarship and exegesis. The content itself buttresses this strength, as each approach and perspective receives equal respect. For example, one can read disparate chapters, like "Ecology" or "Structural Analysis," and leave with a basic but sound understanding of the method, its parameters, and goals. Each major section is broken by clear and well-articulated subheadings that guide the reader without feeling overbearing or cumbersome. Another strength is Brown's guidance toward external resources. Each chapter ends with a brief bibliography of reliable sources for continued analysis.

Brown's work is not perfect, though the weaknesses are few and minor. One could argue Brown attempts to do too much in such a concise manner, but looking at the book's larger whole dampens such criticisms. In terms of Brown's handle of the methods, his familiarity with traditional approaches could be seen as favoritism, as it is clear he has a better understanding of the contents of part II. However, one could argue this bias is simply the product of a scholar working to expand his horizons and open others up to the necessary changes and growth of biblical scholarship. Further, Brown operates with an awareness of his own scholarly gaps as his best bibliographies often come after chapters with which he lacks proper familiarity. For example, Brown, being a white male, cannot properly speak to minority or non-male gender exegesis, and he handles this reality with care and skill by pointing readers beyond this book.

In short, this is an excellent volume. Brown carries a lot on his scholarly plate, but executes his intentions with the acumen scholars have come to expect from his work. It is worthy for undergraduate and graduate studies, a seminarian's library, a pastor's shelf, and anyone eager to read the Bible with precision and a critical eye.

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America's Public Bible

Lincoln Mullen. *America's Public Bible: Biblical Quotations in U.S. Newspapers*. 2016. <http://americaspublicbible.org/>. Accessed January 17, 2018.

Recent works of science fiction have explored the onset of artificial intelligence (AI) in society. *Humans*, *West World*, and *Ex Machina* explore the relationship between human and AI; experts in the field delight over the possibilities while warning of the potential perils of Artificial Superintelligence. Yet few address what happens when computers begin to read the Bible. *America's Public Bible* is one example of humans and machines uniting to benefit scholars of American religious history. The tool is a digital humanities project by Lincoln Mullen (currently an associate professor in the Department of History and Art History at George Mason University). The project won first prize in the *Chronicling America* Data Challenge and is due for a major upgrade in the fall thanks to a contract with Stanford University Press.¹

America's Public Bible identifies biblical quotations and allusions found in newspapers from the mid-1800s through the 1920s derived from the Library of Congress project *Chronicling America: Historic American Newspapers*. Mullen's use of machine learning allows for the discovery of both direct citations of biblical texts (currently from only the King James Version) and allusions to biblical texts — such as this joke found in a 1899 Mississippi paper: “It is said that up in the moonshine district in east Tennessee a popular minister has this inscription posted on his door: ‘Jug not lest ye be Jugged.’”² The strength of the site's ability to identify such allusions allows the user to uncover verses that had entered the common vernacular of a community and as such had no need for citation.

The site allows users to explore 1,700 of the most frequently quoted verses in over twelve million newspaper articles. The site's most powerful feature is its search tool, which allows users to search for select verses, then sort the results by newspaper title, location, and date. The results list also includes a link to the newspaper page digitally archived by *Chronicling America*.³ The search results are also displayed in graph form (number of quotations per 100M words by date) to form a visual display of the passage's usage over time. Through the use of this powerful tool, historians can uncover patterns of usage corresponding to significant events and movements, and gain access to a comprehensive list of citations and allusions that can be viewed on the *Chronicling America* site.

America's Public Bible also offers a list of the most quoted verses by decade and a diagram of Bible chapters most frequently quoted together. However, both of these resources are static, and as such provide little aid to the scholar who might want to dig a bit deeper into the connections between the paired quotations, or explore further frequently quoted passages. Mullen does make this possible by allowing access to some of the project's raw data, but scholars would need significant expertise in digital humanities to put the data to use. In future iterations of the tool I would expect more robust functionality, allowing users to manipulate the data as they see fit. The updated and expanded version of this project which is due to be released in fall 2018 promises a greater number of biblical translations and the ability to search a broader array of biblical texts.

The current iteration of the site is well laid out and easy for users to navigate. The instructions for the search functionality are clear and concise, allowing users of all levels the ability to explore a variety of biblical texts with little need for outside instruction. However, those who will make the most use of *America's Public Bible* are those historians with the time to work through a number of citations and allusions to uncover trends in usage.

¹“NEH Announces the Winners of the *Chronicling America* Data Challenge,” July 27, 2016, <https://www.neh.gov/news/press-release/2016-07-25>.

² *The Pascagoula Democrat-Star*, November 10, 1899, 1.

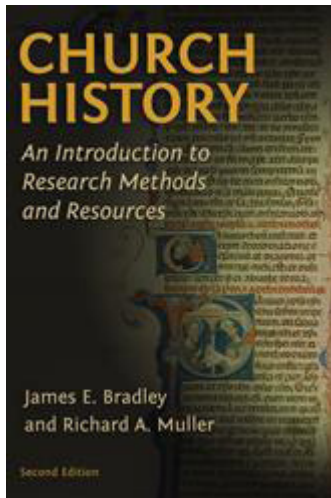
³ National Endowment for the Humanities, “*Chronicling America: Historic American Newspapers*,” <https://chroniclingamerica.loc.gov/>.

Furthermore, part of the prestige and depth of *America's Public Bible* derive from its use of the *Chronicling America's* digital archive. Unfortunately, this connection also proves a barrier to discovery, as the page load speeds for *Chronicling America* are inconsistent due to the large size of the digitized newspaper files that must be loaded on each page. For those without access to a high-speed Internet connection, the page load speed may hamper the tool's effectiveness. However, for those scholars with access to an Internet connection fast enough to load the bulky pages, *America's Public Bible* has the potential to expand the limits of research with the ability to search for biblical references in over twelve million newspaper pages from America's past.

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Church History: An Introduction to Research Methods and Resources

James E. Bradley and Richard A. Muller. *Church History: An Introduction to Research Methods and Resources*. Grand Rapids, MI: William B. Eerdmans Publishing Company, 2016. Second edition. 293 pp. \$30. ISBN: 9780802874054.



With the 1995 release of *Church History: An Introduction to Research Methods and Resources*, James E. Bradley (of Fuller Theological Seminary) and Richard A. Muller (of Calvin Theological Seminary) set out to provide a comprehensive introduction to the academic study of church history. The resulting text was highly regarded; reviews show that the book was well received for its thorough discussion of historiographic methods and its treatment of bibliographic resources, and the work was commended as a reference for both emerging and veteran scholars. In 2016, the authors published a second edition, and revisions naturally invite questions: Why is a new edition necessary, and to what extent must the work be revised? And does the endeavor succeed? Although there are some shortcomings in the second edition, it is an important and worthy successor to the earlier work.

The text's stated audience is doctoral students beginning research in church history and other historically oriented theological disciplines. Clearly, much of the work's insights come from the authors' experience in teaching and mentoring novice academics, and the work offers emerging church historians guidance throughout the full lifespan of a scholarly career. Through discussing critical methodologies and the interrelationship of church history with other disciplines both theological and secular, Bradley and Muller respond to concerns about objectivity, bias, and critical rigor. The book's emphasis is clear: the authors seek to prepare professional scholars. But this concern is valuable for students at any level of theological education, as issues regarding scholarly rigor and personal bias extend beyond just students in the beginning stages of doctoral study.

The work consists of three parts: first, the text in six chapters, which address the historiography, methodology, and the growth of church history as an academic discipline (chapters 1-2), matters of strategy and resources for study (chapters 3-4), and the scholarly practices of research, writing, teaching, and publishing (chapters 5-6); then, a substantial and extensive bibliography which presents sources organized by era (e.g., "Early Church" or "Medieval and Renaissance") and resource type (e.g., journals, dictionaries, or dissertations); and finally, an appendix which details a variety of databases and electronic resources, ending with attention to microform materials. Given the limitations of the work, resource listings are naturally selective. This is not intended as a complete register of all resources. Rather, the lists convey what the authors consider essential texts or significant introductory works; ongoing and deepening research will naturally lead to other resources. The work lacks an index, a puzzling omission for a work about scholarly information.

The second edition introduces additional material to the historiography and methodology discussion, such as a new discussion of "The Distinction and Interrelationship of Intellectual, Political and Social History" (30-31). The addition of a section on World Christianity in the bibliography reflects the authors' increased attention to the development of indigenous Christian communities. Otherwise, much of the work on methodology and approach has remained stable between editions. The bibliography has been thoroughly updated with (per the authors) "about 450 titles of reference works, research tools, and sources, most published since 1995" (xii). The bibliography is extensive; at almost one-hundred pages, it occupies one-third of the book. More important to this reviewer, however, is the revision's attention to technology and online resources. The first edition was released in the mid-1990s and displays an awareness of the major developments in information sources and research tools that were already in motion. In 1995, though, "the Internet"

was still a thing largely in quotation marks for most people, and the first edition's treatment of electronic resources wrestled with things like CD-ROMs, Telnet, and Dialog. (For some librarians, such technology might invoke nostalgia; for others, it might induce nausea.) Ultimately, any instruction in modern research strategies and resources is dead in the water without meaningful integration of modern online or digital information sources. Even though the first edition discussed far more than just information sources, a not-inconsequential portion of the work's original text and resources is now obsolete. If Bradley and Muller's work — valuable for its historiographic and methodological contents — had any future, this issue had to be addressed.

Much of this is largely resolved in the second edition. The technological changes that were on the horizon in 1995 are now part of the modern research landscape and have been integrated into the text's second edition. Updates and revisions occur throughout the text and are not confined to a single section. The discussion of secondary sources (chapter 3) includes enhanced attention to databases, networks, and online libraries. The material on primary source research (chapter 4) includes discussion of Internet databases. The first edition's appendix has been thoroughly updated and now addresses modern scholarly databases, both commercial and academic. Throughout the text, references to resources (e.g., journals, series, monographs, etc.) are accompanied by URLs where appropriate. In this respect, the revision is thorough and successful in its attention to the proliferation of electronic resources and their impact on the modern scholarly ecosystem. It shows the amount of work given to the task of updating this text.

There are some areas, however, where further discussion would have been welcome in the revision. Much has happened in libraries and information technology during the twenty-one years between the two editions of this work, and the first edition was the product of a different era. Traces of this era can be found in the book, with puzzling discussions on "Research with Computers" and "Word Processing the Dissertation" (156-160). Although these sections contain mostly current material and are meant to provide helpful counsel, separating out this kind of material can seem anachronistic. (A book that names and discusses particular word processing programs has probably shortened its shelf life considerably.)

There is a conservatism in the authors' approach to information technology and research; though they have caught up to present realities, emerging issues could have received more attention. For example, the work addresses the distinction between surface web and deep web sources, and mentions open access resources (especially digitized primary texts), but nowhere is there attention to the important debate surrounding open access publishing and secondary literature (whether journals or books). Both emerging and veteran scholars need to engage with this issue. Similarly, there is no discussion of the use of social media (and its attendant promise and perils) for primary and secondary sources in historical and social research. This material would be more valuable and forward-oriented than advice on computers and word processing.

Furthermore, a fair amount of the resources provided in the work provide database, vendor, or publisher details such as names, ownership, and URLs, which are a proverbial moving target. Given their ephemeral nature, such information changes easily and quickly. For example, references to the *ATLA Catholic Periodical and Literature Index*[®] (*ATLA CPLP*[®]) are essentially obsolete in 2018 given the database's merger with *ATLASerials PLUS*[™] (*ATLAS PLUS*[™]). On a related note, the Appendix incorrectly asserts that the *ATLA Religion Database*[®] (*ATLA RDB*[®]) and *ATLASerials*[®] (*ATLAS*[®]) are "accessible only through Association libraries" (272). Individually, these are little details, but as they accumulate they can gnaw at a work's longevity. Such problems are certainly expected in a work of this nature, but there are ways to help future-proof the work, through online errata, appendices, or updates. This, however, is a publishing-level issue, and not the responsibility of the authors. Finally, at the broader theoretical level, it is clear from the Acknowledgements that librarians assisted the authors, but some of the concerns identified here raise the legitimate question of whether a volume on research and resources might have involved a librarian at a more substantial or authorial role.

These are important concerns that could not be ignored and which would merit attention in a subsequent revision, but this is nonetheless a significant and welcome new edition of a valuable text. Bradley and Muller are to be lauded for their undertaking and for providing new life to an important work. Its potential readership is wide; *Church History: An Introduction to Research Methods and Resources* has much to offer students and scholars at various levels of study. Furthermore, the bibliography and resources in the work are not simply valuable for church historians, they are invaluable for librarians involved in collection development as well as information literacy instruction. The material on methods and approaches is particularly interesting and relevant to information literacy, and the second chapter's discussion of the

relationship of primary, secondary, and tertiary sources is particularly commendable in this regard. As a work written to introduce historical research in the history of Christianity as a lifelong scholarly vocation, there is much in this text that can accompany and shape scholars at every stage of their career. Any academic library (undergraduate or graduate) with collections in theology and religious studies would benefit from the acquisition of this text.

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STEP Bible

STEP Bible. Cambridge, UK: Tyndale House, 2018. <http://www.stepbible.org>. Accessed 22 January 2018.

STEP Bible exemplifies its name: Scripture Tools for Every Person. It is an amazing free online resource containing Bibles and commentaries. Tyndale House provides oversight of STEP Bible, with Crosswire serving as a partner for software and Bible translations. STEP Bible contains the Vulgate and works with Strong's numbers. The interface is available in 93 languages and opens in the language of the computer, with translations in 280 languages.

STEP Bible is an incredible option for the study of the Bible in the majority world. Not only can users search STEP Bible online, there are several options for downloading, both for Windows and Mac OS X, and downloads can be freely given to others. Users can also share information via social media.

STEP Bible may remind users of similar, fee-based products such as BibleWorks, Accordance (from Oaktree Software) or Logos (developed by Faithlife Corporation).¹ Among STEP Bible's fee-based competitors, Accordance and Logos offer free versions — Accordance Lite and Logos Basic — as well as other purchase and search options. Accordance, BibleWorks, Logos, and STEP Bible all aid those doing exegetical work, and each has some special features. Similar to STEP Bible, Accordance contains commentaries. BibleWorks, Logos, and STEP Bible all offer a concordance tool. Accordance is distinct in that it provides an interactive 3D map, visual exporting options, preaching and study aids, note-taking features and a citation tool. Logos incorporates media, confessional documents, and systematic theologies, as well as a Sermon Editor with the ability to create slides. STEP Bible could be enhanced by offering some of these tools, especially the citation feature.

More overlap exists between BibleWorks and STEP Bible with regard to search features and content. Both tools allow users to search by verse, word, and phrase, examining parallel versions. Both BibleWorks and STEP Bible offer dictionaries and lexicons, and both BibleWorks and STEP Bible offer approximately fifty different English-language translations of the Bible, with both including the following translations: ESV, NIV, and KJV. However, STEP Bible does not offer the NRSV nor RSV translations. BibleWorks contains over 200 Bible translations, making its content more robust than STEP Bible.

Finding desired content in both BibleWorks and STEP Bible varies. The search capabilities of BibleWorks 8 appear more sophisticated, but STEP Bible's uncluttered screen enhances its learning curve; BibleWorks has a very busy screen, and it is not always clear what the boxes and icons mean, making the learning curve steeper.² To assist users, both BibleWorks and STEP Bible provide YouTube training videos, with BibleWorks even having its own channel. In addition to YouTube videos, STEP Bible offers PowerPoint slides in both English and Spanish, as well as an extensive help section containing screenshots.

Even though STEP Bible may not be as robust as other Bible software products, its search features are still impressive. Similar to other Bible software products, users can search multiple Bible translations simultaneously. Moreover, suggestions appear as the search is being constructed. The interface allows for an interleaved search, which acts as a parallel Bible of sorts, displaying verse by verse. The interlinear function of some translations allows users to compare Bibles word-by-word. Some versions also offer grammar color coding. Users can search in other languages too, for example Greek. By hovering over a word, users see how many times the word appears in the chapter; the dictionary displays by clicking on the word and a definition and the original word in Hebrew or Greek also display. The original word displays in both Latin and non-Latin characters. Additionally, search features are not limited to one verse or passage; users can search for

¹ See BibleWorks, <http://www.bibleworks.com/>; Accordance, <https://www.accordancebible.com/>; and Logos, <https://www.logos.com/>.

² Please note that the most current version of BibleWorks is 10; however, for this review, the author explored version 8.

multiple books of the Bible in a single search. In addition to viewing how many times a word appears in a specific book of the Bible, users can see how many times the word appears in the New Testament or the Old Testament. An advanced text search allows users to search within surrounding verses. Not only can users search for Bible passages, they can look for people too. STEP Bible also has a bookmark feature that allows users to see their previous searches, and users can pin things to read later.

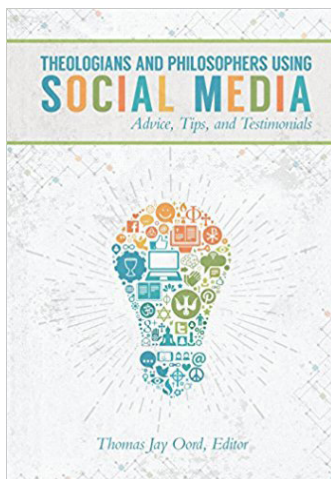
Despite STEP Bible's many strengths, there are some areas needing improvement. As noted previously, including a built-in citation tool would enhance STEP Bible, as would phone apps, which are in progress. Once the transliteration help page is complete, users will have more search guidance available.

The strengths of STEP Bible far outweigh its weaknesses. The cost, resources, ease of use, and search capabilities of this tool make it a viable alternative to Accordance, BibleWorks, and Logos. STEP Bible is clearly worth mentioning to seminary faculty and students, local clergy, and alumni.

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Theologians and Philosophers Using Social Media: Advice, Tips, and Testimonials

Thomas Jay Oord, editor. *Theologians and Philosophers Using Social Media: Advice, Tips, and Testimonials*. San Diego: SacraSage, 2017. 442 pp. \$29.90. ISBN: 9780578193991.



I began reading this engaging and slightly overwhelming book for reasons totally unrelated to ATLA: I knew many of the contributors. Despite the title, the book includes scholars from many disciplines in the field of religion — ethics, church history, missions, Bible, and liturgics, just to name a few — and, as a historian myself, I thought I might glean some advice and was curious to see what my friends (and in one case, my spouse) had said.

I was not more than three entries into the book when I saw its applicability to librarianship. Many of us have recently been grappling with the new Ithaka study on the changing practices of religious studies scholars.¹ This book represents a vast amount of thick ethnographic data bearing out the conclusions of that study: scholars are beginning their research, continuing it, and exchanging its results in a variety of formats, not all of which are under the direct control of librarians. And it is helpfully specific. Which websites, technological tools, and social media formats are scholars using? How are they using them? Who are they talking to?

Every one of the ninety-one entries has slightly different answers to that question, but overall, several things are clear. Scholars are turning to Facebook and Twitter (and to a lesser degree other social media networks) in large numbers to engage ideas, network, disseminate ideas, and share resources. In perhaps the most amazing example, one scholar maintains a Facebook group of over 6,000 people devoted to sharing needed items which he began specifically to take the pressure off his university's ILL. Quite a number of scholars are disseminating open access results of their research not (or not only) via institutional repositories but via their personal blogs, podcasts, and social media accounts (and via Academia.edu, which they are by and large nervous about, but don't see an alternative to). They're worried about how to handle academic rigor and peer review in these new spaces. They're worried about how to communicate with new audiences.

Scholars have always asked each other questions in the hallways without involving librarians, of course. But this book revealed to me the sheer scope of how big those hallways now are, and pointed towards a number of spaces librarians could fruitfully step into, providing guidance through the digital maze. The book has so many contributors that one of them is probably at *your* school. Find out what their questions are from the book, then set up a time to have coffee — or friend them on Facebook, or find them on Twitter, or subscribe to their blog. Talk to them about how you can walk through those spaces together.

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¹ Danielle Cooper et. al., "Supporting the Changing Research Practices of Religious Studies Scholars," February 8, 2017, <http://www.sr.ithaka.org/publications/supporting-the-changing-research-practices-of-religious-studies-scholars/>. doi.org/10.18665/sr.294119.