Narrative Section of a Successful Application

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the Preservation and Access Programs application guidelines at http://www.neh.gov/grants/guidelines/HCRR.html for instructions. Applicants are also strongly encouraged to consult with the NEH Division of Preservation and Access Programs staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: A Comprehensive Index of North American Hymnals

Institution: Calvin College

Project Director: Harry Plantinga

Grant Program: Preservation and Access Humanities Collections and Reference Resources
Religion is central to the make-up and fabric of the United States and its history, and hymnody is a central element in the practice of religion. Hymnody reveals the spirit, momentum, and values of people; it is a window into both the intellectual and social histories of society. Throughout the American religious experience, hymns have not only served as homiletic devices for preachers and devotional aids for individuals and families, but also as educational media for children and a literary resource for poets, novelists, and speech writers.¹

The texts of American hymnody reveal explicit teaching and suggest implicit attitudes about not only theology, but also childrearing, marriage, moral values, death, and the afterlife. Studies of hymns over time offer a rich repository of data for discerning shifts that happen within these understandings. For example, an 1879 Methodist hymnal lists 45 hymns on death while a modern hymnal might have only a few. We are prompted to wonder, “When did congregations stop singing about death?” In the 1854 shape-note hymnal The Southern Harmony, and Musical Companion, the hymn “Indian Convert,” which begins with the words “In de dark woods, no Indian nigh,” reveals attitudes toward Native Americans at the time. In contrast, more recent hymnals are significantly more appreciative of other cultures, valuing cultural diversity as a preview of paradise, and including tunes based on Native American melodies. We are prompted to wonder, “When and how did attitudes change?”

The tunes of North American hymnody are also a revealing historical source. They interpret each text and thus contribute to our understanding of how particular texts might have been experienced. It makes a great deal of difference whether those hymns about death or Native American experience, for example, were set to tunes that are triumphant or contemplative, assertive or interrogative.

The tunes also function as social and cultural symbols and markers of identity. They constitute one of most significant repositories of America folk music.² And they reflect mutual influence with a wide variety of other musical repertories. For example, many hymns are directly borrowed from or influenced by a variety of classical compositions (e.g., “Ode to Joy,” “Finlandia”). Others have become staples of the jazz repertoire (e.g., “When the Saints”), or moved from jazz repertoire into hymnals (e.g., “Come Sunday”). Examples of crossover emerge with nearly every musical idiom in North America, often revealing a great deal about the identity of various denominations, communities, and sub-groups.

For this reason, hymnody also comprises a major area of music scholarship. The International Repository of the Literature of Music,³ the standard abstracting service for music scholarship, lists over 360 publications related to hymns or hymnology since 2000. The Doctoral Dissertations in Musicology list⁴ covers almost 14,000 dissertations dealing with some aspect

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³ http://www.rilm.org
⁴ http://www.chmtl.indiana.edu/ddm
of hymns or hymnology published in the last 50 years. At least fifteen are currently in progress at various institutions around the world (see Appendix A).

Hymnody offers an important primary source for other sorts of humanities scholarship, constituting a rich resource for the interpretation of the American experience. For instance, civil war hymnody embodies then-current perceptions of race, gender, and culture. Hymns by women offer unique insights into women’s experiences in the 19th century. Hymns written and sung by African-American slaves offer poignant windows into their piety and experience.

Hymns offer great value for understanding differences among immigrant communities, especially since congregations have historically been a primary institutional manifestation of the immigration experience (alongside periodicals and other fraternal organizations). For example, Norwegian, Swedish, and Danish immigrant communities may all have been largely Lutheran, but they had remarkably different pieties: some high church and some low, some pietistic and some not. Hymn texts afford a window into the character of a community and reveal differences in the character and ethos of local communities. The progression of hymnals within a given ethnic tradition reveals the pace of Americanization or assimilation, as well as the aspects of cultures of origin that each group was most eager to retain.

To this day hymn-singing communities provide a subject for academic study. In Traveling Home: Sacred Harp Singing and American Pluralism, Kiri Miller offers an ethnography of the contemporary culture of Sacred Harp singing, a kind of indigenous American folk singing that arose among rural Southerners during the nineteenth century and is still practiced today.

References to hymns are also significant in political and pop culture. A familiarity with hymnody is necessary to understand many of the great political speeches of the twentieth century by speakers such as Woodrow Wilson and Martin Luther King, Jr. “Amazing Grace” is such a significant hymn that it became the focus of a wide-ranging PBS documentary by Bill Moyers, who charted its use by pop singers, opera divas, folk concerts and churches of many sizes and social locations.

A burgeoning body of recent scholarship demonstrates the significance of hymnody for work in a variety of fields: religious studies, ritual studies, social history, intellectual history, gender studies, African-American studies, and more. Some focus primarily on hymnody: Philip V. Bolman, et al, Music in American Religious Experience; Edith L. Blumhofer and Mark A. Noll, Singing the Lord’s Song in a Strange Land: Hymnody in the History of North American

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5 See, for example, Edith Blumhofer, Her Heart Can See: The Life and Hymns of Fanny J. Crosby (Eerdmans, 2005).

6 See, for example, William T. Dargen, Lining Out the Word: Dr. Watts Hymn Singing in the Music of Black Americans (U. of California Press, 2006), Therese Smith, Let the Church Sing: Music and Worship in a Black Mississippi Community (U. of Rochester Press, 2004), Bernice Johnson Reagan, We’ll Understand It Better By and By (Smithsonian Institution Press, 1992), and James Abbington, Readings in African American Church Music and Worship (GIA Publications 2001).


8 University of Illinois Press, 2008.

Protestantism\textsuperscript{10}; Stephen Marini’s \textit{Sacred Song in America: Religion, Music and Public Culture},\textsuperscript{11} David Stowe’s \textit{How Sweet the Sound: Music in the Spiritual Lives of Americans},\textsuperscript{12} and David W. Music and Paul A. Richardson, \textit{I Will Sing the Wondrous Story: A History of Baptist Hymnody in North America}.\textsuperscript{13} Other notable work draws on hymnody as an indispensable primary source material in large-scale social and intellectual history: Nathan Hatch’s \textit{The Democratization of American Christianity}\textsuperscript{14} and Mark Noll’s \textit{America’s God: From Jonathan Edwards to Abraham Lincoln}.\textsuperscript{15} Others reflect on hymnody as source for interfaith comparisons: e.g., Jeffrey Summit’s \textit{The Lord’s Song in a Strange Land: Music and Identity in Contemporary Jewish Worship}.\textsuperscript{16} Others speak about the role of hymns in pedagogy: ritual studies specialist Catherine Bell advises religious studies teachers, “If I were teaching Christianity, I’d likely have students singing hymns in class.”\textsuperscript{17} In all these disciplines, direct access to a much fuller range of primary sources has rich potential for generating significant insights about North American culture and experience.

\textit{Dictionary of North American Hymnology}. The Dictionary of North American Hymnology (DNAH) project has been in existence for more than 50 years, becoming an increasingly critical resource for scholarship relating to hymnody. It is the only source for nearly comprehensive information. Mary Louise VanDyke of Oberlin College, past director of the DNAH project, has fielded thousands of questions from all sorts of people and for a huge variety of purposes. She reports that questions come in on barely legible penciled notes on scraps of paper, on highly formalized queries on business letterhead, and as email questions from around the world. Inquiries come from professors, researchers, authors, composers, and librarians. In the past year, she has consulted for editors of three hymnals and other hymn-related publications; consulted and researched for graduate theses at Regent College, University of Washington, and Cleveland State University; conducted research for faculty members at Hood Theological Seminary, the music division of the New York Public Library, the BBC, and the Baptist Theological Seminary of South Korea; provided material and notes for multiple hymn festivals; supplied data for several independent researchers, families of hymn writers, choir directors, and private hymn collectors; researched origins of hymns for music staffs of several denominations including the music department of the Mormon church; and much more. An example of this kind of research is included in Appendix B. VanDyke comments that “a hymn is not only a religious song, it’s a historical document and a social statement of its time. A hymnal’s index is a sociological record.”

However, even with the notable work of the DNAH project, this emerging area of interest in hymnody among historians and musicologists has, at present, been working with a thin level of direct access to essential texts and source documents. Humanities scholarship at all levels and across all disciplines will benefit from a project that allows anyone to do this kind of research online, without needing to funnel queries through individuals with access to DNAH data. In addition, the Dictionary of North American Hymnology database is somewhat limited in the

\textsuperscript{10} University of Alabama Press, 2004.
\textsuperscript{11} University of Illinois Press, 2003.
\textsuperscript{12} Harvard University Press, 2004.
\textsuperscript{13} Mercer University Press, 2008.
\textsuperscript{14} Yale University Press, 1991.
\textsuperscript{15} Oxford University Press, 2002.
\textsuperscript{16} Oxford University Press, 2000.
\textsuperscript{17} \textit{Teaching Ritual, AAR Teaching Religious Studies Series} (AAR, 2007), p. 100.
data recorded for each hymnal and for each hymn. This was necessitated by the state of technology at the time the project was designed. Hymn titles and authors were hand written on IBM cards with the intention that they would eventually be punched. It would have been impractical to add other information that might have been valuable, such as the tune name, composer, incipit, source, original language, or meter, let alone the full text of the hymn or an image of the hymnal page.

The kinds of searches one can perform using the DNAH CD-ROM, therefore, are limited. It is possible to search for the publication history of any hymn—the CD-ROM will return all of the hymnals published before 1978 in which the hymn was published. The resulting list of hymnals can be sorted by hymnal name, date of publication, and other criteria. The CD-ROM can also search for hymnals by criteria such as denomination, year of publication, and editor. For each hymnal, the CD-ROM will display the hymns it contains. For each hymn, there is a standardized form of the first line that normalizes out variations, for example, “Come, ye [you] [we] that [who] love the Lord [Christ], And let your [our] joys.” The author of the hymn is also listed.

Adding DNAH data to Hymnary.org will fill critical gaps in the kinds of queries that are possible on the data. Examples of queries requiring a relational schema and a good search engine designed for hymnody include the following:

- What percentage of hymns that were published in at least one hundred hymnals was written by women? Does the ratio vary by denomination? By the century in which the hymn was written?
- How many hymns about death are listed in the topical index for hymnals and how does that change over time?
- How do the outlines of hymnal vary by denomination? What do their contents reveal about unique emphases of a given constituency? How does this change over time?
- What hymns are drawn from classical music sources? What does this imply about the access of various constituencies to classical music?
- Find the hymns from eighteenth- and nineteenth-century hymnals that mention slavery. Are there differences in the number of occurrences (or the attitudes shown) between traditionally northern and southern denominations?

Hymnary.org has been under development since the summer of 2007, and it has a robust schema along with a search engine that is well received by users as capable and understandable. Calvin College continues to work on improving it based on usability tests and feedback from scholars and other users and is eager to add essential capabilities of interest to scholars under this project.

Princeton Theological Seminary Library, a collaborating partner in the proposed project, maintains a hymnology collection that has been called “one of the world’s great collections of hymnological literature, and probably the greatest in this country.” The Louis F. Benson collection consists of approximately 10,000 volumes. Louis F. Benson was an influential American Presbyterian who, prior to his death in 1930, had devoted 36 years to the study and collection of hymnology texts, reflective of his interest in tracing the evolution of hymn texts and tunes. In addition to publishing his own studies, The English Hymn (1915) and The Hymnody of the Christian Church (1927), which have been characterized as “important

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landmarks in American hymnological activity,” Benson edited several American hymnals, beginning with *The Presbyterian Hymnal* of 1895.19

Taking initial shape from the last decades of the nineteenth century, the American content in the Benson Collection reflects the hymn literature that burgeoned prior to and during those years: denominational hymnals, tune books, and gospel hymnody. The collection includes 2,535 English-language hymnals to 1923, with at least 129 in other languages and 11 in Native American languages. There are 99 shape-note hymnals and 1,159 Sunday school hymnals. In addition, there are other sorts of collections, including temperance hymns, revival hymns, and hymns published by a number of important American poets, including John Greenleaf Whittier. Overall, the hymns represent not only the religious history of America but also its cultural history, as hymns were a significant part of home and public life, even entertainment, especially in the seventeenth to nineteenth centuries. Moral education through Sunday School hymns and Temperance hymns was also a significant part of American culture, as well as early efforts in music education through the use of shape note and singing school hymnals.

Because many of the volumes in the Louis F. Benson collection are from the eighteenth and nineteenth centuries, many of them are deteriorating. A 1993 assessment showed an advanced state of deterioration in as much as 78% of the collection. By digitizing 1,000 hymnals selected from the collection, this project will also play a part in preserving one of our country’s best hymnology collections by reducing the need for access to the physical volumes.

**History, scope, and duration of project**

*Dictionary of North American Hymnology*

The Dictionary of North American Hymnology (DNAH) began in 1956 as a research project of the Hymn Society in the United States and Canada. It was originally conceived as an American version of John Julian’s *Dictionary of Hymnology*, under the editorship of Leonard Ellinwood, noted historian of American Church Music and a librarian on the staff of the Library of Congress. The project soon moved from the desired print publication to an effort to produce a computer database. Over a period of some thirty years, Ellinwood and many volunteers hand-typed eight indexed fields onto IBM punch cards, arranged by first-lines of hymns as they appeared in 4,876 hymnals published in the United States and Canada from 1640 to 1978. Funds for punching the cards were never realized but a microfilm version (166 reels) of the IBM cards was produced and made available for sale. Upon Ellinwood’s death, Mary Louise VanDyke of Oberlin College took over coordination of the project and provided service by phone and mail to users. In 1996, Paul Powell of Princeton Theological Seminary (PTS) became editor and began the work of converting the data to an electronic format, which resulted in publication of a CD-ROM version of the Dictionary in 2003. This CD-ROM saw limited distribution and is now aging. In 2007, Bill Clemmons of Point Loma Nazarene University in California began a project to convert the data to a relational-database format with the intent of providing access to the Dictionary via the World Wide Web at [http://www.dnah.org](http://www.dnah.org). Bill Clemmons, Mary Louise VanDyke, and Paul Powell are all on the advisory board for this project.

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**Hymnary.org**

Hymnary.org is a Web-based relational database of hymnody designed to meet the needs of a diverse set of users including scholars, researchers, song leaders, and interested individuals. It was launched in 2007 by Dr. Harry Plantinga and Greg Scheer with funding from the Calvin Institute of Christian Worship and the Christian Classics Ethereal Library. Though only two years old, Hymnary.org is already one of the largest and most-used such resources on the Internet, and it is the only one with a rich relational database schema and a search engine custom-made for hymnody. Along with Hymnary.org, the Cyber Hymnal is perhaps the other most popular Web site focusing on hymnody, and each has about 20,000 unique visitors per month. Hymnary.org logs approximately 300,000 page views per month according to Google Analytics. While CyberHymnal.org has over 7,500 hymns and songs, Hymnary.org had 34,905 hymn instances (11,829 authorities) and 25,735 tune instances (7,963 authorities) as of May 2009. (For comparison, the DNAH has over one million hymn instances.) The CyberHymnal focuses on casual users and is not suitable for serious scholarship as it has no historical data or publication information and cites few sources. It also does not have a search engine apart from Google. Several other Web sites focus on hymnody, but apart from DNAH.org, none seeks to be comprehensive and scholarly, and none has a relational structure and search engine.

The University of Illinois at Urbana-Champaign offers The Hymn Tune Index, an excellent database of “all hymn tunes published anywhere in the world with English-language texts up to 1820, and their publication history to that date.” This is a valuable scholarly resource with powerful search capabilities, but it is limited to hymn tunes up to 1820 only.

The plan is that Hymnary.org will continue to exist as a self-supporting non-profit project after the term of the grant is complete through revenue from advertising, licensing fees, and sales of downloads for in-copyright material. The Christian Classics Ethereal Library, also a project of Dr. Plantinga, has operated in this way for over 16 years, and Calvin College plans to keep the project going if Dr. Plantinga ever steps down as director. The DNAH content that is in the public domain will always be freely available on Hymnary.org for scholarship, education, and public use.

**DNAH and Hymnary.org**

In the summer of 2008, Harry Plantinga and Bill Clemmons discussed the possibility of combining projects. Clemmons was interested in developing the DNAH project on the Web, but he was not in a position to maintain or develop it long-term. After discussion with the Hymn Society, all parties agreed to move the DNAH data onto Hymnary.org as a permanent home.

This arrangement has been in development since July 2008. As of May 2009, an editorial committee governing editorial standards has been in place and active for several months. Sample data from DNAH has been added to Hymnary.org and edited online to test the editing software and develop editorial standards. These standards are nearing completion; sample pages are included in Appendix D.

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20 [http://www.calvin.edu/worship](http://www.calvin.edu/worship)
21 [http://www.ccel.org](http://www.ccel.org)
23 [http://siteanalytics.compete.com/hymnary.org+hymntime.com/](http://siteanalytics.compete.com/hymnary.org+hymntime.com/). However, an old domain name for the CyberHymnal, CyberHymnal.org, still receives even more traffic as of June 2009.
24 [http://hymntune.library.uiuc.edu/](http://hymntune.library.uiuc.edu/)
Additional work on incorporating DNAH into Hymnary.org will take place during the summer of 2009. Plans include making initial changes to the Web site to accommodate the large amount of data and adding the DNAH data to Hymnary.org to prepare it for editing. We will also continue to develop a network of volunteer editors. Adding the data is a small component of the overall project; correcting the data, performing authority resolution, and adding hymnal page scans will be the foci of the proposed project.

**Scope and duration of the project**

In this three-year project we will convert DNAH data into a format needed by Hymnary.org, scan 500,000 pages (about 1,000 hymnals at an estimated 500 pages each) from the Benson collection at the PTS library, and add them both to Hymnary.org. We are in the process of setting up a system of volunteers for additional data entry and editing, and we expect to make some modifications to the Hymnary.org site to accommodate the large amount of data in the DNAH and to improve search capabilities.

Adding page images for hymnals is essential for several reasons. First, the availability of the page images makes it possible for scholars to see all details of the artifact under study, including much not captured in the database. Second, it enables editors to proof and correct data in the DNAH database and add information not originally captured. Finally, it makes the database useful for a whole range of uses beyond publication research, such as performance.

Based on work already underway at Hymnary.org, we estimate that it takes more than 100 hours to completely enter and index a hymnal to the highest standards we use. This estimate includes typing in the required information, proofreading, and resolving authorities (connecting hymn text, tune, and author instances to the appropriate authority records in the database). Although some of this data is present in DNAH, much of it will have to be corrected. For example, in the DNAH a hymn title might be listed as “Come, ye [you] [we] that [who] love the Lord [Christ], And let your [our] joys” to cover all variants that occur in different hymnals, but in Hymnary.org it will be stored for each instance exactly as it appears in that hymnal. Therefore, the work of completely entering data for all DNAH hymnals is beyond the scope of this project.

Instead, we define three levels of editing. For **all DNAH hymnals** we will convert data into the format needed by Hymnary.org, add it, and perform authority resolution for all hymns and authors. This will add the 4,876 hymnals from the DNAH and make them usable on Hymnary.org with searching capability that is much more powerful than could be done with the DNAH CD or DNAH.org Web site, if that site were completed, making it significantly more versatile resource for scholars, researchers, musicologists, and historians. For example, it will be possible to do complex queries that constrain by denomination, date, author, and other factors in combination. On the CD or at DNAH.org it was only possible to search for hymns by first line or author or to search for hymnals by title, date of publication, and other attributes—but only a single search criterion could be used in one search.

A second level of editing will be applied to **scanned hymnals**. At this level, page images will be added to Hymnary.org in two formats: screen resolution and a full-resolution “processed master” (described below). In addition, hymn numbers will be added to hymns, and they will be connected to page images. Bibliographic information on the hymnal in DNAH will be completed and verified. A data entry specialist will spend about three hours on each hymnal; in our tests, this has proven to be sufficient to perform the specified tasks. Any additional time
available will be used to correct first lines and author names to match the form used in the hymnal. As an example of a hymnal edited to this level, see the first hymnal edited by Louis Benson at http://www.hymnary.org/hymnal/HAGA1896. A screen capture is shown below; additional images are included in Appendix E.

A third level of editing will be applied to hymnals of particular interest and, eventually, to all hymnals. At this level, all of the data that Hymnary.org captures for a hymnal is entered and proofed. Completing all hymnals in this way will take several years. The work will be done by a hierarchy of volunteer editors, describe below, assisted and supervised for three years by an editor supported by this project.

We have written this proposal for a three year period, which will enable the part-time data entry specialist to work at a rate of one to two hymnals per day. A full-time editor will be able to handle authority resolution for the hymnals in the DNAH database and facilitate and supervise volunteer editors as needed. At the end of the three years, the database will contain all of the data currently in the DNAH, as well as page images, better bibliographic information, and page numbers for approximately 1,000 hymnals from the Benson collection. The standards, procedures, and infrastructure for further editing will be in place and will have been supervised by a paid editor for three years.

Hymnary.org already has much of the support needed for adding DNAH data, and the ultimate user interface will be similar to the current one, but some changes will be required to accommodate the large amount of data and to enhance search capabilities. For example, listing all hymnals on a page or in a drop box was plausible when there were fewer than 60 hymnals, but with 4,876 hymnals, it will be necessary to show the first few hymnals and allow users to refine the view by typing in part of the hymnal name, date or place of publication, denomination, or name of the editor or compiler. We will need similar search and paging capabilities for viewing instances of a hymn, since some hymns are included in more than 1,000 of the 4,876 DNAH hymnals.

We also plan to improve the search capabilities of hymnary.org. It is currently possible to perform flexible searches for hymn texts or tunes individually, but it is not possible to enter constraints on the text and the tune at the same time. It is possible to search for hymn texts by Wesley containing the word ‘love’ in the title, and it is possible to search for tunes in the key of ‘C’, but it is not currently possible to search for all these criteria at once. To make such searches possible, we plan to build a unified search that can combine constraints across texts, tunes, authors/composers, and hymnals. To implement this, we will modify the search form for texts,
shown below in the “Refine Search” column, and for tunes, people, and hymnals, to include attributes from all types of entities.

![Hymnary.org search example](image)

**Figure 1. A sample search at Hymnary.org**

Some of this work may be completed in the summer of 2009, as one student is already at work, but the project has a large total scope, and in one summer, we can accomplish only a small part of it. When the project is completed, it will be possible to perform searches such as those given as examples above.

### Methodology and standards

#### System design

The Hymnary.org database and Web site have been under development for over two years, with the goal of capturing data important for scholarship and research as well as casual use and enabling flexible search—without complicating the design so much that it becomes difficult to use. The search engine is in its third version, each more powerful than the previous, but still easy to use. The database schema captures extensive information on hymn texts, including title,
first line, language, meter, refrain first line, original language, narrative information, notes, and full text. In addition, it represents multiple authors (translators, paraphrasers, etc.), multiple sources, and multiple copyright statements. While the DNAH database captured title, first line, refrain first line, original first line, publication date, and author information, significantly more information is represented in the Hymnary.org schema, including language, meter, original language, narrative information, full text, sources, copyright statements, number in hymnal, and more. It also represents information about tunes, which is not available in the DNAH.

Appendix C provides Hymnary.org’s relational schema.

**Authority**

One of the complexities in this domain is that there is a notion of hymn texts (“What wondrous love is this”) and hymn tunes (“NEW BRITAIN”), but also that these texts and tunes appear in different hymnals, in different combinations, and with many variations. A hymn text may be set to different tunes in different hymnals or appear with different refrains. A hymn tune may appear in different keys, arrangements, or with tune variations or different harmonizations.

This issue is handled at Hymnary.org with an authority system. There is an authority record for a hymn text such as “What wondrous love is this,” and instances of this hymn are connected to that record. Users can then search for “What wondrous love is this” and see a list of the hymnals in which it appears (see Appendix E). Without the authority system, much of the value of the database would be lost—it would not be possible to track particular hymn texts over time, for example, because it would be impossible to find all the different variants of the text. Trends and fads would be impossible to study.

**Instances** are specific hymn settings in particular hymnals. Therefore, in addition to the hymn text, each instance will normally also have a tune with information such as title, meter, key signature, composer, source, media files, etc. Thus, each hymn instance normally is connected to a text authority and a tune authority. The information stored with an instance is exactly as it appears in the hymnal, while the information stored in an authority record applies to all instances and is correct according to best scholarship. So, for example, if a tune’s composer is misattributed in a hymnal, it will appear exactly as written in the instance record, but the correct composer will be recorded in the authority record. This enables users to see (and search for) the information exactly as written on an instance page and to see the correct version on an authority page.

**Entering and editing hymnals**

Hymnal indexing information can be added at Hymnary.org on a standard spreadsheet or in XML format using our XML schema. The latter is useful for programmers transferring information from another database. Also, users who are authorized to work on a particular hymnal can make edits online. All edits are logged, so another editor can check the work. For online editing, authorized editors are able to view, correct, and add to all sorts of Hymnary.org data. We have also made it possible to set permissions on hymnals so that only the editor or proofreader of a hymnal can see it until it is complete. At that point it would be “published” and become visible to everyone.

**Editorial standards**

Under the terms of the agreement between the Hymn Society in the United States and Canada and Hymnary.org, editorial policy at Hymnary.org is set by an editorial committee consisting of
three members of the Hymn Society and two representatives of Hymnary.org. This committee consists of Harry Plantinga (the project director), Greg Scheer (co-founder of Hymnary.org), Paul Powell (general editor of the Dictionary of North American Hymnology), Tina Schneider (director of research for the Hymn Society in the United States and Canada), and Mary Louise Van Dyke (past director of the DNAH project).

This committee has been at work for several months creating editing standards for Hymnary.org. These standards are documented in an online manual at http://www.hymnary.org/wiki/Instructions_for_Editors; sample pages are included in Appendix D. These instructions govern forms of names to use, how to handle first lines, titles, incipits, meters, key signatures, and the like. In general, information from instances is to be recorded exactly as it appears in the printed hymnal.

Where possible, Hymnary.org uses standards from the Library of Congress, ISO, and other standards-generating bodies. In authority records, authors' names are stored in the Library of Congress form. Relators ("wrote", "composed", "harmonized", etc.) are used from the MARC code list. Names of languages appear as given in ISO 639-2. Tune incipits are represented in the form used by the University of Illinois’ Hymn Tune Index. Currently, no comprehensive standards for hymn text or tune authority exist, but the identifiers used by Hymnary.org will be made available on the web site for use in other projects as a web service.

**Editorial oversight**

While the editorial committee sets policy, additional area editors from the Hymn Society will be responsible for particular sections of the collection according to their areas of expertise, with area editors for particular dominations, for types of hymnody such as gospel, and for ethnic hymnody. These editors will have a specific interest in the area and credentials enabling us to trust them to abide by editorial policy. Two such editors already in place are Dr. Peter Rehnwaldt of Faith Lutheran Church, Prairie Village, Kansas, who will serve as area editor for Lutheran hymnals, and Dr. Patricia Woodard of Hunter College, who will be area editor for gospel hymnody.

The area editors will work with a team of volunteers, directing, overseeing, and checking their work. They will assign projects, keep track of progress, and check the work that is done. For each editing project, for example one hymnal, one person will enter data and a separate person will proofread it. These editors will be Hymn Society members or volunteers who come to us through the Hymnary.org Web site. Dozens of site users have volunteered to help at Hymnary.org, and we anticipate dozens of volunteer participating in this project.

**Adding page scans**

To add page scans to a hymnal in the DNAH database, they must be connected to the appropriate hymns. It might have been possible to connect the scans to instances via the hymnal name and hymn number or page number, but, unfortunately, page number and hymn number were not included in the DNAH database. Therefore, the easiest way to make the connection may be to export the information for a hymnal into a spreadsheet file, edit the spreadsheet to add page image filenames, and import the spreadsheet back into the database.

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At the same time other edits to the spreadsheet will be made, including adding hymn or page numbers as used in the hymnals.

The amount of editing and correction that could be done at this stage is much larger than the scope of the grant will permit, but allocating three hours of editing per hymnal will provide enough time to load page images onto the server and convert them into appropriate formats for use on the Web, reorder the hymns in the spreadsheet in the order in which they appear in the hymnal, connect images to hymns, verify or add bibliographic information about the hymnal, and perhaps add other data not captured by DNAH. For 1,000 hymnals, the total time required for this data entry is three years’ work half time. In addition, a programmer’s time will be required to create the tools needed to export and import the spreadsheets and modifications to Hymnary.org to handle these images appropriately.

Storage and maintenance of data

Hymnary.org runs on a high-availability, high-performance set of Web servers. A load balancer distributes Web requests to one of three mirrored Web servers and a fourth server for static files. There is a separate database server, and a spare server can be used as a replacement load balancer or database server should one of those fail. The servers are connected to a power management system including battery backup and a generator, so they keep running if power fails. They are managed by a full-time developer who works for ccel.org and Hymnary.org. The servers are mirrored, so the data is protected from any single (or double) disk failure. In addition, we make regular backups of the server data for off-site storage, and we send a backup of the Hymnary.org database to the Hymn Society each year.

Adding the DNAH data will add many demands on the database server, which is already near capacity, and in our testing some queries are overtaxing the server. The large amount of data will mean that the server must have more memory, and the queries necessitated by this application will be numerous and complex, requiring more processing power. The project will also need additional disk space for the 500,000 page images. To meet these requirements, we plan to purchase a new, more capable database server equipped with a RAID array, good processor speed, and enough RAM to ensure that all queries will be performed quickly. This is the only major piece of equipment requested in the budget, and Calvin will share the cost.

We will also purchase two workstations, one for the editor and one for the data entry specialist, as well as external hard drives for off-site backups of the data. We will use existing web servers and load balancer, which already have enough capacity.

Project evaluation

As DNAH data is added to the database, we will perform usability tests to improve the site. To perform this testing, the co-director will work with a variety of historians, musicologists, choir directors, and religious studies consultants to gather a range of questions humanities scholars might wish to ask as part of their research. The fields covered will include music history, immigrant history, religious studies, and ethnic studies, as well as cultural and intellectual history of the United States. As scholars use Hymnary.org to find answers to the questions, we will note any areas in which they have difficulty. Using this feedback as formative assessment, we will modify the Web site over the course of the next year to address these usability issues. We will perform this usability testing in the first and second summers of the project.
Before the end of the grant period, the advisory board will conduct a review to determine the status of the project, verify that the deliverables were completed, and assess the utility of the project for humanities scholarship. This review will become a part of the final report submitted to the National Endowment for the Humanities.

**Nature and quality of sources**

The scanning for this project will be of hymnals from the Benson collection at the PTS library. The proposed project budget allocates $75,000 for scanning at 15 cents per page. Therefore, 500,000 pages will be scanned, or approximately 1,000 hymnals of about 500 pages each. Since the budget is not large enough to scan the entire collection, the project leaders, in consultation with Princeton Theology Seminary Library and the research advisors will select hymnals according to the following criteria:

- Their relative importance in the development of American hymnody as noted in bibliographies and studies, including Benson’s *The English Hymn, American Hymns Old and New, American Psalmody, American Sacred Music Imprints*, and *Three Centuries of American Hymnody*
- Their printing or publication in British America or the United States
- Their public domain status
- Their distribution among denominations, genres, and ethnic groups, with the goal of creating a diverse collection

**Digitization process technical details**

The digitization component of the project will be managed by PTS Library staff working, as they presently do, in collaboration with the Internet Archive (IA), which operates a scanning center in the Library. The Scanning Center, housing ten of the IA’s Scribe scanning machines, is administered and staffed by the IA and is one of the benefits to have survived the termination of the Microsoft Book Digitization Program at PTS.

The IA, a 501 (c)(3) nonprofit founded in 1996 to build a digital library freely available through the Internet, currently operates eighteen regional scanning centers in five countries and is the leading digitization agent acting in support of permanent open access to online content. The PTS Library and the IA have together thus far digitized approximately 20,000 print items from PTS collections, all freely available online at [http://www.archive.org/details/Princeton](http://www.archive.org/details/Princeton).

To begin the work of digitizing the hymnals, library staff will examine the physical condition of prospective titles to determine physical stability and assure that pages can be lifted and turned safely without contributing to further deterioration. Once candidate titles have been identified for scanning, library staff will generate a pick list based on the Library’s online catalog, pull books from the shelves, and deliver them to the IA Scanning Center. There the IA staff, under the direction of the IA Scanning Center Coordinator, will prepare the books for scanning. Once scanning is completed, a quality assurance sampling of the resulting scans will be done by the IA Scanning Center staff and if the sampled scans are acceptable, the books will be returned to library staff who will perform their own quality assurance sampling. If either the IA or the library staff discover any image problems, the book will be rescanned. In the absence of problems, books are returned to the shelves.
The book digitization process relies heavily on the non-destructive digitization method that the IA has developed, using its in-house digitizing machine, the Scribe, to provide an optimal balance of quality and efficiency while also ensuring protection of the materials being digitized. The Scribe scanning workstation is comprised of a sturdy aluminum frame that supports two adjustable camera mounting rails, two color cameras that capture both the recto and verso pages of each book, a floating V-shaped book-cradle whose angled design minimizes stress placed on materials, a glass platen that is raised and lowered by means of a foot pedal, two banks of museum grade lights that illuminate the book, and one computer that captures the color images from the camera and performs some of the pre-processing. Once the book is digitized and quality assurance is completed, the captured images are uploaded via Rsync to processing computers in California where they become available at no charge to the public.

Scanner resolution is a key factor in image quality. The resolution used by the IA is specified in pixels per inch (ppi) and ranges from 300 ppi to 500 ppi as determined by the size of the item. Initially the digitized image is captured as a camera raw file (CR2). This is run through a JPG2000 compression to generate a raw JPG2000 for storage, which typically has a size of about 15MB.

The raw JPG2000 is then turned into a processed master that is used to generate the access formats. The processed master is a lossy, cropped, rotated, de-skewed, light compensated JPG2000. Image sizes may vary depending on the complexity of the page but are typically in the 800 KB range, yielding an approximate compression ratio of 20:1 relative to the camera raw image. The processed master is also converted to PDF and DjVu formats, both of which are processed with Optical Character Recognition software and offered for access.

General metadata about the digitized items will reside in a meta.xml file and will include Identifier, Identifier/Bibliographic ID (local ID from the pick list), Contributor, Title, Volume, Creator, Publisher, Collection, Operator, Scanner, Scan date, and Identifier/Access (URL for accessing the book).

**Preservation**

Once the digital files created in the Scanning Center are uploaded to California and processed to create storage files and access files, anyone in the world who has access to the Internet will be able to view, search, and/or download at no charge the digitized hymnals at http://www.archive.org. The IA’s model is to pay once for digitization and have the materials freely available ever after.

A recent important development in establishing a shared structure for long-term digital preservation is represented by the HathiTrust (http://www.hathitrust.org). In addition to its reliance on the IA for storage and file maintenance, the PTS Library is also exploring a relationship with the HathiTrust for the presentation, archiving, and long-term preservation of its digital content.

As preserved digital copies of the Benson Collection hymnals become available, it will be possible for the PTS Library to serve up and rely on digital surrogates for access. The ability to limit physical handling and usage of original print editions in poor condition will be an important preservation outcome of this proposal.
Handling and care of originals

The Louis F. Benson Collection is one of the Library’s Special Collections housed in an environmentally controlled book box closed to the public. Ironically enough, Benson’s own collecting efforts coincided with the very period of publication history that now poses such a preservation problem for libraries, and the collection can only be expected to retain its long-term research value through some form of reformatting. This assessment was borne out by a review of the condition of the Benson Collection in 1993 which showed an advanced state of deterioration in as much as 78% of the collection, with a number of items in the collection now boxed in protective enclosures.

Care will be exercised to assess physical condition of the titles selected for digitization while paying attention as well to other factors affecting possible digitization, e.g., text too near to the gutter to be accessible, text running to the edge of the page, or missing pages.

Work plan

Deliverables

This project will result in the following deliverables:

- Converting the DNAH data into Hymnary.org relational format adding it to Hymnary.org
- Modifying Hymnary.org to accommodate the large amount of DNAH data
- Modifying Hymnary.org to enable searching by criteria that span text, tune, hymnal, and author/composer constraints
- Performing authority resolution for hymn texts and authors on the DNAH data
- Performing two usability tests on Hymnary.org for scholars performing typical queries and making improvements to the site in response
- Scanning 500,000 pages from the Benson collection at PTS and adding them to Hymnary.org at screen resolution and as processed masters
- Placing all of the scanned hymnals on Archive.org for long-term, unrestricted access
- Adding bibliographic data and performing basic editing for the scanned hymnals
- Setting up an infrastructure to oversee continued entry and editing of data by volunteers in a way that ensures that data is entered and proofed by different editors
- Facilitating and assisting the volunteer editing process for three years
- Final project check-out

At the end of the grant period, the DNAH project at Hymnary.org will have half a million primary artifacts (scanned hymns) for use by researchers, in a relational database supporting complex queries, openly available to all on the Web. All information currently in the DNAH database will be available, along with page scans for about 1,000 of the hymnals. Volunteers will have had three years to work on adding data not previously captured by DNAH, but no matter the amount of work completed, the project will provide broad access to a huge number of primary resources important for several areas of humanities scholarship.

Year One (May 2010 to April 2011)

- As early as possible in the grant period the advisory board will meet to review plans for the project, review editorial standards, and oversee the beginning of the project. This
group will also write sample questions that researchers might try to answer through the use of this resource.

- Steven DeRose, technical consultant, will visit during the first summer to review and advise on technical plans.
- We will hire a student programmer for the summer to make changes to the Web site necessitated by the addition of the DNAH. This student will also add software capabilities to help in the editing process, perform usability testing with scholars who might use the project, analyze the results, and make changes to the site to improve usability.
- A new database server and workstations for the editor and data entry worker will be purchased and installed.
- A full-time editor and half-time data entry specialist will be hired to begin the work of adding page scans for DNAH hymnals to Hymnary.org. These people will work throughout the three-year duration of the grant.
- Training materials for editors and a promotional brochure will be created.
- Dr. Plantinga will attend the Hymn Society conference to find, meet with, and train volunteer editors, distributing promotional and training material as needed.
- At Princeton Seminary, the selection and scanning work will start as early as possible in the grant period to be completed within the first year of the project.

Year Two (May 2011 to April 2012)

- The advisory board will hold its second meeting early in the summer by conference call or webinar. The board will review progress and discuss any issues that arise. They will contribute questions for usability studies, taking into account feedback acquired over the first year from users of the project. The board will review the editing procedure to verify that the procedure ensures accurate work.
- Steven DeRose will visit during the summer to review and advise on technical implementations and plans.
- A student programmer will be hired—possibly the same one as during the first summer—to perform usability testing and work on improvements to the site in response to such testing and user requests.
- The data entry specialist and editor will continue to work.
- Dr. Plantinga will attend the Hymn Society meeting to present a project update and to continue recruitment and training of editors. Dr. Witvliet will present information at professional conferences and meetings he attends regularly (see below).
- Dr. Plantinga will present information about the project at the January conference of the Calvin Institute of Christian Worship.

Year Three (May 2012 to April 2013)

- In year three, editing of data will continue as before. The advisory board will not meet in person, but it will continue its work by email and conference calls.
- A student programmer will be hired to continue working on improvements to the site in response to user feedback and suggestions.
- Dr. Plantinga will attend the Hymn Society conference to present a project update and to continue meet with, recruit, and train editors.
- Toward the end of the year, the advisory board will conduct a review of the project to determine its status, verify that the deliverables were achieved, and assess the utility of
the system for humanities scholarship. This report will become a part of the final report to be sent to the National Endowment for the Humanities.

- Dr. Plantinga will present information about the project at the CICW January Symposium, which annually draws close to 1,500 participants. Brochures will be distributed to all conference participants.
- Dr. Witvliet will present and disseminate information on the project at professional society meetings and conferences, such as the American Academy of Liturgy, the American Academy of Religion, the American Choral Directors Association, as well as the CICW annual symposium and the Institute’s training events, academic courses, and workshops held each year.
- Dr. Polman and other Advisory Committee members will present and/or disseminate project information at conferences, and the humanities scholars associated with this endeavor will be ambassadors for the project to other campuses and professional meetings.

## Staff

The project director, Harry Plantinga of Calvin College, will oversee the project and coordinate among the collaborators. In addition, he will convene the advisory board for two meetings and conduct further business via email. Dr. Plantinga also serves as a member of the editorial committee and will participate in the work of that committee and see that its decisions are implemented. He will participate in the design of software needed for the project and oversee the technical support. He will help create training material for volunteer editors. He will also make presentations about the project at venues such as the annual meeting of the Hymn Society in the United States and Canada and volunteer editors and other project collaborators. Dr. Plantinga has extensive experience building similar Web resources including http://www.ccel.org and Hymnary.org and will devote 30% of his time to this project for the first two years and 15% for the third year, through two course releases for the first two years and one course release in the third year.

Dr. John D. Witvliet will serve as the project's co-director. Dr. Witvliet has published extensively in the areas of church history, liturgy and hymnody. He is director of the Calvin Institute of Christian Worship (CICW), based at Calvin College. Founded in 1997, the CICW is an inter-disciplinary study center that uses the unique resources of a liberal arts college—with its collegial environment, international faculty and student body, wide interdisciplinary expertise, and culture of ongoing learning—to partner with denominations, professional organizations, and publishers to further its mission. In the 10 years of its existence, the Institute has welcome over 15,000 people to its conferences and training events, welcomed guests from over 40 countries, and produced more than 30 books and an extensive website all in partnership with more than 70 current and former Calvin College faculty and staff, over 300 other conference presenters and writers, and over two dozen other ecumenical organizations, publishers, colleges.

As co-director, Dr. Witvliet will dedicate 7.5% of his time each year toward the project and will be responsible for overseeing the humanities component, working with the Advisory Board members to ensure that project content meets the needs of humanities scholars and related research interests. Dr. Witvliet will also confer with humanities experts, such as George Marsden (Notre Dame), James Bratt (Calvin College), and James Abbington (Emory University), scholars with expertise in American history, immigrant patterns, and African American music.
Editorial committee

Under the terms of the agreement between the Hymn Society in the United States and Canada and Hymnary.org, editorial policy is set by an editorial committee consisting of three members of the Hymn Society and two representatives of Hymnary.org. This committee addresses all editorial questions and sets editorial policy. The members of this committee, as originally selected by the Hymn Society under the terms of the agreement, are

- Harry Plantinga, project director, Calvin College,
- Tina Schneider, Librarian at Ohio State University and director of research for the Hymn Society in the United States and Canada
- Greg Scheer, Calvin Institute for Christian Worship and co-founder of Hymnary.org
- Paul Powell, formerly of Princeton Theological Seminary Library and general editor of the DNAH project
- Mary Louise VanDyke, past director of the DNAH project

Advisory board

An advisory board will direct the project in all matters apart from editorial policy. This board will meet face-to-face at the very beginning of the project and again by telephone about a year to address project direction and policy questions. At other times business will be conducted by telephone and email as it arises. The membership of this committee is

- Harry Plantinga, project director, Calvin College,
- John Witvliet, project co-director, Calvin College,
- Paul Powell, formerly of Princeton Theological Seminary Library and general editor of the DNAH project
- Tina Schneider, director of research for the Hymn Society in the United States and Canada
- Mary Louise VanDyke, past director of the DNAH project
- Bert Polman, Calvin College, chair of the music department
- Bill Clemmons, chair of the music department at Point Loma Nazarene University
- Steve Crocco, Head of the Princeton Theological Seminary Library

Consultant

Steven DeRose will serve the project as technical consultant. Dr. DeRose has been a chief architect of standards such as XML and TEI, the Chief Scientist and the Brown University Scholarly Technology Group, and XML specialist for the NIH National Center for Biotechnology Information. Dr. DeRose holds 11 patents and has published three books and numerous articles. Dr. DeRose will assist with architecture, markup, and other aspects of the system. Dr. DeRose will visit during the first and second summers to review and advise on technical plans.

Project staff

Nyna Sykes will be the project administrator. She will manage project finances, hire and supervise employees, track and report project status, create promotional literature, represent and communicate the project to others, assist with collaborative partnerships, procure hardware and software, and perform other tasks as needed. This will require 20% of her full-time nine-month position, or about eight hours per week, nine months per year. Ms. Sykes is uniquely positioned for this role with many years of management experience. As vice president of a Fortune-500 company, she coordinated multiple large projects; as a division general
manager in a Fortune-200 company, she had profit and loss responsibility—including development, manufacturing, marketing and sales—of a high tech product line. Ms. Sykes has been associate director and business manager for the CCEL for nearly three years and for Hymnary.org since its conception.

A half-time data entry specialist will enter information from hymnals scanned into the database.

A full-time editor/volunteer coordinator will be in charge of the editing. He or she will work with the data entry person to get the images formatted correctly and added to Hymnary.org.

A programmer/technical support person will be needed to assist editors, fix bugs, keep the servers running smoothly, perform backups, maintain the web site, install and maintain software and hardware, and perform other duties as assigned. We have budgeted for one technical support person, five hours per week for the duration of the project. The person who will do this work is Brian Vanderwal, a capable full-time developer who has worked for Hymnary.org and CCEL for more than two years.

A programmer will make changes to Hymnary.org to accommodate the DNAH data. Some of those changes will be completed before the start of the grant, but user testing will reveal additional changes that are needed to make the site user friendly. In addition, time will be needed to create tools that help the editing process along. For example, we will need programs to export hymnals as spreadsheet and import them again to facilitate the addition of page images and editing of the data. We will also need tools to assist editors in authority resolution, comparing authors and the hymns they have written, for example. Finally, the programmer will address bug reports and enhancement requests that continuously arrive through user feedback, as prioritized by the project directors.

A computer science student will be hired each summer to perform these tasks, with Dr. Plantinga and Brian Vanderwal supervising the work. Hymnary.org has been built almost entirely through programming efforts of computer science students; approximately four summers’ work for student programmers has brought it to its current state. We are confident that we will be able to find well-qualified student programmers for the next three summers who will be able to continue the work.

Dissemination

The Dictionary of North American Hymnology, including page images and information added as a part of this project, will always be freely available at Hymnary.org Web site. We expected Hymnary.org to be an ongoing project, with advertising revenue maintaining the project indefinitely even in the absence of other grants or other revenue. All scanned hymnals will be placed on the Web at the Internet Archive\(^{27}\) in page image format for unrestricted use.

The project director will disseminate the status and results of this project through presentations, brochures, and or flyers each a year at the Hymn Society’s annual meeting and a report in the journal *The Hymn*. That meeting will also serve as an avenue to find volunteers and other collaborators and to gain feedback on the project’s usability. The co-director will promote and disseminate results of the project with presentations, flyers, and/or brochures

\(^{27}\) http://www.archive.org/index.php
through an extensive network conferences, workshops, and professional society meetings, including the American Academy of Liturgy, the Hymn Society, and the American Academy of Religion, as well as at the CICW annual symposium—which draws 1,500 participants—and through the Institute’s training events, academic courses, and workshops held each year.

Project leaders will showcase the project on relevant list serves such as the American Religious History, Intellectual History, and Southern Music lists at H-Net,28 the Humanist discussion group of Digital Humanities,29 and the discussion list of the American Musicological Society.30 Hymnary.org is already a popular Web site for hymnody, and anyone searching for such information on the Web is likely to find it quickly.

Finally, through the easy availability of public domain images, the results of this project will spread through other Web sites and be used in research projects as well as in a wide variety of other contexts such as hymn sings, books, and movies.

**Sustainability**

At the conclusion of the grant period, Hymnary.org will continue to exist as a self-supporting non-profit project through revenue from advertising, licensing fees, and sales of downloads for in-copyright material. The Christian Classics Ethereal Library, also a project of Dr. Plantinga, has operated in this way for over 16 years, and Calvin College plans to keep the project going if Dr. Plantinga should step down as director. The DNAH content that is in the public domain will always be freely available on Hymnary.org for scholarship, education, and public use.

**Conclusion**

Hymnody is increasingly recognized as the prime domain of “people’s religion.” It reveals the values of people and the social histories of society. Combining the resources of the DNAH, Hymnary.org, and the Louis F. Benson collection will open up new territory for scholarly investigation into the American religious experience.

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