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The University of Pennsylvania possesses the largest collection of Sanskrit and vernacular Indian languages in the Western hemisphere. In 2014, Penn was awarded a three-year Preservation and Access Grant (PW-51547-15) from the National Endowment for the Humanities (NEH), entitled "Providing Global Access to Penn's Indic Manuscripts." The project was completed in 2017, within the scheduled three-year period for the award. The original terms of the grant stipulated that staff at the Rare Book and Manuscript Library, now under the auspices of the Kislak Center for Special Collections, Rare Books, and Manuscripts at Penn Libraries, were to catalog, rehouse, and digitize 1,728 Indic manuscripts, building on Penn's cataloging and digitization efforts from previous years. The collection highlights Penn's historical commitment to traditional Sanskrit studies and also includes a broad range of vernacular sources including Pali, Prakrit, Hindi, Awadhi, Bengali Marathi, Gujarati, Marwari, Persian, Tamil, and Telugu.[1] In what follows, I will briefly outline some of the

I would like to thank Elizabeth A. Cecil as well as Annette Yoshiko Reed for reading early drafts of this article.

1 For more details on languages of the Penn collection, see Benjamin J. Fleming, "The Materiality of South Asian Manuscripts from the University of Pennsylvania MS Coll. 390 and the Rāmamālā Library in Bangladesh," *Manuscript Studies* 1, no. 1 (2016): 28–51.

FIGURE 1. Case and wall displays from the exhibition "Intertwined Worlds" held at the Goldstein Family Gallery, Penn Libraries, 26 August–22 December 2017. Shot of the section entitled "Image, Ritual, Poetry," featuring Jain, Hindu, and Buddhist manuscripts from Penn's Indic manuscript collection along with objects from the University of Pennsylvania Museum of Archaeology and Anthropology. Photo: Benjamin J. Fleming.

recent history leading up to the NEH project, including my own involvement as project cataloger and collection consultant. I will then give an overview of the project and highlight some of its scope, content, and significance. Finally, I will consider some possibilities for promoting the collection in the future.[2]

Penn has made the digital images of the Indic manuscripts available in two main formats. The first is an open data repository called OPenn, where full-resolution TIFF files can be freely accessed and downloaded along with

2 This article will not examine the important and valuable contributions of the department of conservation at Penn Libraries, but will primarily focus on the cataloging aspects. A separate review of the conservation of the Indic material is warranted.

web-friendly JPEG files.[3] The second format is a web-based interface tool called "Penn in Hand" that allows all digitized manuscripts to be searched and viewed.[4] I would estimate that currently about 80 percent of Penn's Indic holdings can be viewed through OPenn and about 95 percent of digitized material via Penn in Hand. Additional collections of Asian manuscripts beyond Penn's core Indic material are also available through these formats. These additions include the Rāmamālā Library collection of Sanskrit and Bangla works, Arizona State University Sinhalese manuscripts, and the Thai Manuscript collection.[5]

The outcomes of Penn's NEH project have received an overwhelming and positive response from the broader scholarly community and will greatly benefit and advance the study of Indic languages in the digital age. The most obvious positive result is the database and wealth of digital images of manuscripts now available to scholars. Another is the new digital cataloging record that I created between 2011 and 2017 using MARC standards, improving on existing heritage records and building on the foundational, organizational, and cataloging work. Such foundational, pre-digital-era work is seen in Horace Poleman's 1938 catalog of Indic manuscripts and in Stephan H. Levitt's 1970s microfilm project (see further below). Additionally, the project benefited from the individual efforts of countless scholars, students, and librarians who left their traces on the collection through the decades, since its inception in the early twentieth century. These traces include let-

3 http://openn.library.upenn.edu. It can be found in the "Repositories" link followed by clicking "University of Pennsylvania Books & Manuscripts Repository" near the bottom of the page. Individual entries can be searched via the find window of the browser or scrolling through the tens of thousands of entries (both Indic and other materials).

4 http://dla.library.upenn.edu/dla/medren/index.html.

5 The Thai and ASU Sinhalese materials are available through both OPenn and Penn in Hand. The Rāmamālā collection is currently available only through Penn in Hand. For more on the Thai manuscript collection, see Justin McDaniel and Susanne Ryuyin Kerekes, "Siamese Mauscript Collections in the United States," *Manuscript Studies* 2, no. 1 (2017): 202–37. On the Rāmamālā library, see Fleming, "The Materiality of South Asian Manuscripts," as well as Fleming, "Ancient Texts and Modern Technologies: New Approaches to Asian Manuscripts," in *Prachyavidya Patrika*, ed. Dulal Bhowmikh (Dhaka: Department of Sanskrit, University of Dhaka, 2015), 1–15.

ters, handwritten notes, scrawls, Post-it notes, as well as printed emails left in envelopes or boxes accompanying the manuscripts.

The resulting records can now be tracked through the digital metadata associated with each of Penn's Indic manuscripts. This data will be invaluable to scholars wanting to make connections between manuscripts from within the Indic collection as well as beyond.[6] Such connections, for instance, could potentially be linked to manuscripts from other institutions with similar or parallel digital collections, thus building a fabulous index of scribes, scribal families, and pre-modern libraries. Such examples have the potential to engender cross-institutional and collaborative research projects and through these links develop new perspectives on the social history of scribal practice, ownership, and the historical dynamics of textual production.

History of Penn's Indic Collections

The origins of the Indic manuscript collections date to around 1930–35, the period when W. Norman Brown, then professor of Sanskrit at Penn, began to collect South Asian manuscripts through funding from the University of Pennsylvania as well as through external, private sources.[7] The manuscripts collected by Brown represent about 90 percent of Penn's Asian holdings in Special Collections. Brown had begun collecting manuscripts for his personal collection before this period, however, in 1928. The first manuscript he

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6 Below I discuss the connections between scribes and personal libraries I was able to make through Penn's tracking tools. Similarly, I was able to compare a watermark from four Indic manuscripts, that of J. Whatman, with the same watermark in the binding of a completely unrelated work, a copy of *Periermenias Aristotelis* (LJS 101, http://hdl.library.upenn.edu/1017/d/medren/9951865503503681).

7 For a full account of Brown's funding from internal sources at the University of Pennsylvania as well as outside donations from private funders, see David N. Nelson, "The Penniman-Gribbel Collection of Sanskrit Manuscripts," retrieved from http://repository.upenn.edu/cgi/viewcontent.cgi?article=1021&context=library_papers; reprinted from *The Penn Library Collections at 250: From Franklin to the Web* (Philadelphia: University of Pennsylvania Library, 2000), 203. Also see Stephan H. Levitt, *Collected Papers on Manuscriptology, Epigraphy, and South Asian Art* (Delhi: Motilal Banarsidass, 2018), 3–105.

purchased was a copy of the *Kālakācaryakathā*, a Śvetāṃbara Jain work currently cataloged as MS Coll. 390, Item 3020; this manuscript is not included in Horace Poleman's 1938 catalog since it did not enter into Penn's possession until much later (see further below).[8] Once Brown's interest in manuscripts was sparked, he formed a relationship with the Maharashtrian Brahman, Pandit Narayana Shastri Khiste, who lived in Varāṇasī. It was through their collaboration that Brown purchased 2,839 works directly for the University of Pennsylvania.

Because of Khiste's background, a number of manuscripts in the collection appear to come out of the transplanted Maharashtrian Brahman community living in the city of Varāṇasī, some 1,200 kilometers away. These include multiple copies of Bhaṭṭoji Dīkṣita's *Siddhāntakaumudī* (Elucidation of the established conclusion) as well as works by his students in the collection.[9] Thus, Khiste's influence upon the shape and scope of the collection cannot be understated.

Many of the manuscripts are partial, and many individual "items" sold to Penn are sections of larger, complete manuscripts for which Penn may hold a complete work across multiple item numbers. The actual number of complete or unique works from this period is perhaps closer to 2,500 than to the 2,839 purchased. Connections between parts of works that have virtually linked and reestablished "whole" manuscripts have been integrated into catalog records where possible. The connections were made through identification of scribes, paper types, watermarks, and the like.[10] I will address this phenomenon in more detail below.

In 1938, Horace I. Poleman with editorial help from Norman Brown published *The Census of Indic Manuscripts*, which contains entries for every

8 http://hdl.library.upenn.edu/1017/d/medren/9958661393503681. See Nelson, "The Penniman-Gribbel Collection of Sanskrit Manuscripts," 206–8.

9 Penn possesses eighty-three manuscripts associated with this title, for example.

10 See for example, MS Coll. 390, Items 890, 893, and 896, sections of the Pañcadaśī by Mādhava. Item 896, though undated, was dated to Śaka 1772 (1850 CE) because of its clear connection with items 890 and 893. Such connections were typically made through identification of identical paper types, watermarks, scribes, and the like.

manuscript acquired by Brown and Khiste between 1930 and 1935.[11] From 1938 until the completion of Penn's NEH project in 2017, Poleman's reference work has been the single-most used resource for scholars and students of South Asian languages seeking knowledge of Penn's Indic manuscripts. It is hoped with the completion of the project that this dependence on Poleman will largely be done away with, at least so far as Penn is concerned.[12]

A numbering system was put in place during this time: 1 to 2,839. The last item (2,839) is Penn's sole Tibetan manuscript. When Poleman and Brown created the catalog, Poleman assigned each Penn item, along with items from other institutions, a separate "Poleman number." This allowed his catalog to absorb manuscripts from multiple institutions into his unique system. Thus, his system had nothing to do with Penn's manuscript numbers, although it may in fact have been part of the push and motivation behind the creation of Penn's system of numbering manuscripts.

After the publication of the Poleman catalog, Penn acquired additional manuscripts, absorbing collections from other institutions, donations, as well as new purchases. These manuscripts have expanded the geographic and linguistic scope of the collection beyond South Asia. A number of these additional works were gifts or purchases from scholars well known to the Indological community. These include the art historians Ananda Kentish Coomaraswamy and Stella Kramrisch as well as Brown himself.[13] Others works have found their way somewhat mysteriously into Penn's collections. Boxes in storage rooms in the basement of the Van Pelt–Dietrich Library Center have languished there for decades with relevant materials, some perhaps yet to be discovered. One such small collection of Asian and Western manuscripts appeared in two boxes that were previously owned by

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11 Horace I. Poleman, *A Census of Indic Manuscripts in the United States and Canada* (New Haven, CT: American Oriental Society, 1938).

12 Other institutions, notably Harvard, may eventually complete an online catalog and a digital archive of their own Indic materials and give patrons and the scholarly community open access to them.

13 There are currently six works formerly owned by Coomaraswamy (MS Coll. 390, Items 2671, 2672, 2670, 2673, 2674, and 2675) all dated around 1906 CE; one item, MS Indic 26 (formerly MS Coll. 390, Item 3001) was owned by Kramrisch and sold to Penn for $50, according to accompanying documentation.

eccentric collector Casey Wood, a one-time resident of a houseboat in Kashmir in the 1920s, according to the accompanying documentation.[14] Brian Zahn is another donor who contributed several Jain works in the late 1990s. When and how such additions entered Penn Library collections often remains obscure. Such examples point to the growth and continued acquisition of Indic materials beyond the initial efforts of Brown and Khiste. Indeed, Penn continues to acquire works of South and Southeast Asian provenance both physically and digitally.[15]

From 1972 to 1974 a former student of Norman Brown, Stephan H. Levitt, undertook a microfilm project of all of Penn's holdings of Indic manuscripts from both the Penn Libraries (nos. 1–2,839) plus an additional 195 on top of Brown's initial purchase, for a total of 3,034 manuscripts.[16] Levitt and a team of students created item-level descriptions of each manuscript that were handwritten onto a template of white legal-sized office paper. These were largely drawn from Poleman but had some corrections and additions. These sheets of paper accompanied each manuscript and, in the recent rehousing efforts under the NEH grant, have remained housed with each item.

By this time (1972–74), the collection had not yet been integrated into Penn Libraries' catalog records and remained siloed within the South Asian reading room. Manuscripts could be freely consulted by anyone entering the reading room, during what I refer to as the "Wild West" days. Once they were retained and put under the auspices of the Rare Book and Manuscript Library in the late 1990s, however, the manuscripts became more secure. At

14 Today Wood is best remembered as the "Birdman of McGill" due to his extensive collection of bird manuscripts held at McGill University; however, he also was an avid collector of religious works in Persian, Hebrew, Arabic, Sinhalese, and Thai, as well as other Southeast Asian materials. His collection is now identified as Ms. Coll. 1293, "The Casey Wood Collection of Manuscripts," and is still in process.

15 Some recent acquisitions include a Persian version of the *Viṣṇu Purāṇa* (*Gurmukhi Bisnu Puran*, MS Indic 6) and a Rajasthani version of the *Aśvamedhaparvan* of the *Mahābhārata* (MS Indic 2). Purely digital holdings include the Rāmamālā Library project, mentioned above, and three Sinhalese works digitized on behalf of Arizona State University.

16 Levitt's project also included a number of Southeast Asian Buddhist works now currently at the University of Pennsylvania Museum of Archeology and Anthropology.

FIGURE 2. One of Stephan H. Levitt's information sheets accompanying a palm-leaf manuscript from Penn's Indic collection. These sheets were central to Levitt's microfilm project from 1971 to 1974, and some of their information was absorbed into the online digital catalog record of the NEH project. Photo: Benjamin J. Fleming.

this time, there was no comprehensive umbrella number assigned to the collection. The South Asian bibliographer at the time, David Nelson (retired 2010), along with former curator of manuscripts Nancy Shawcross (retired 2014), arbitrarily assigned the collection number "MS Coll. 390" to absorb this historic body of works. At the same time, Nelson and Shawcross began to introduce new South and Southeast Asian acquisitions under "MS Indic." This was intended to maintain the historical integrity of Penn's manuscripts and create a way to absorb new works as well.

Nancy Shawcross, partially inspired by Peter Scharf's 2010 *Mahābhārata* digitization project (see note 22 below), as well as her own success digitizing Penn's medieval European manuscripts, decided to work toward the NEH grant covering the entire collection of Indic manuscripts at Penn. Because of my work on Scharf's project, I was hired by the Rare Book and Manuscript Library in 2011 to begin to assess and catalog the thousands of manuscripts, and to write the subject-content of the NEH grant. The grant was submitted in 2013, right at the time the Rare Book and Manuscript Library

was subsumed under the newly formed Kislak Center. The NEH Indic grant was awarded in 2014. Upon Shawcross's departure from the library soon after, David McKnight, director of the Rare Book and Manuscript Library, took on the role of principal investigator in her place. I was included for my expertise in South Asian religions and languages, as well as for my experience in manuscript studies and material texts.

Overview and Significance of the Collection

The original vision for cataloging the collection was to propose a limited number of manuscripts based on the subject arrangement of the Poleman catalog. It was quickly realized, however, that Poleman's categories were text-centered rather than manuscript-centered (as discussed above). The Kislak Center promotes fidelity to the material text and highlights individual heterogeneity of a given manuscript. Consequently, Poleman's arrangement could not work since it divided a single manuscript into multiple entries. The beauty of the OCLC system of cataloging for unique items (as opposed to serials) is that it allows for subject complexity even when its system of authority headings conflict with current scholarship.[17] As a result, each manuscript was considered anew and entered into Penn's library system to reflect as much of its original intricacies as time would allow. For instance, a given manuscript may fit into numerous categories because it contains multiple kinds of texts, because it is a compendium, or simply because it reflects a genre that fits within multiple categories. A philosophical or grammatical work, for instance, might also fit into a devotional category because some of its subject matter also addresses ritual/religious

17 The Library of Congress authority heading system is sometimes outdated or contradictory. An example of this is its misidentification of two distinct Patāñjalis as a single author; see Fleming, "The Two Patāñjalis: Challenges of Cataloguing Penn's Sāṃkhya Teaching," Penn Rare, 2015, available at https://pennrare.wordpress.com/2015/05/17/the-two-patanjalis-conflicts-cataloguing-penns-sa%e1%b9%83khya-teaching/.

concerns, or because of a short work appended to it.[18] Below I briefly sketch out some of the larger groupings and major categories of manuscripts using the Library of Congress subject headings they appear under.

"Hindu Philosophy" (also cataloged as "Philosophy, India") is by far the largest grouping of works, with nearly eight hundred manuscripts linked to this category. The two most dominant subcategories, "Advaita" and "Nyāya," together comprise more than half of this grouping on their own. There is also an extensive array of commentaries and subcommentaries making up nearly half the collection of philosophical works. Thus, a single manuscript can sometimes bear two or three works from different authors spanning centuries.

The second largest grouping of manuscripts is "Rites and Ceremonies," with more than seven hundred works. This grouping contains the subcategories of "Hindu Law" and "Dharma," which combined cover more than five hundred works on a range of related topics: *vratas* (penances), marriage, funerals, bathing customs, atonement, and others. From a material-text perspective, these works give us valuable insight into the different ways that manuscripts were employed as manuals and guides during the performance of rituals, ceremonies, and so on. Most were pulled from larger manuscripts and highlight a single ritual, rite, or religious observance. The range of materials encompasses both the exalted and the seemingly mundane, a diversity that shows us something of the religious life of pre-modern Hindu communities as well as something of concerns and ideas that are perpetuated in contemporary Hindu liturgies. Penn's collection of ritual manuscripts beautifully encapsulates the creativity, practices, and concerns of the Hindu tradition.[19]

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18 An example of this is Śaṅkarācārya's Vākyasudhā (MS Coll. 390, Item 1136,_http://hdl.library.upenn.edu/1017/d/medren/9963242973503681), a synopsis of his Vedānta teachings, with the addition of a hymn (*stotra*) dedicated to Śiva's *jyotirliṅgas* (*liṅgas* of light), a network of pilgrimage sites honoring the deity.

19 Many include rituals surrounding gifts, property, temples, homes, well building, flag pole raising, the veneration of images, tree worship and more. Works dedicated to women (or for use by their husbands) are both general and extremely specific. For instance, there are many manuals dedicated to women's fasts (*vratas*) as well as a manual of rites for the husband of a child bride menstruating for the first time (the *Ṛtuśānti*, MS Coll. 390, Item 1334,

The third largest grouping is "Devotional Literature," with more than six hundred manuscripts, many of which are tiny and can fit easily in the palm of someone's hand—a genre of pocket-book manuscripts. The grouping contains many devotional hymns, prayers, and other liturgical literature dedicated to individual Hindu deities and meant to be recited during times of worship (*pūjā*). More than three hundred works are dedicated to Śiva, and more than one hundred each to the deities Rāma and Kṛṣṇa (forms of Viṣṇu). In addition to pan-Asian deities like Śiva and Viṣṇu, other works are dedicated to deities from particular geographical areas such as the goddess of smallpox, Śītilā, popular in Bengal. The child-god Pāṇḍuraṅga is especially popular in Maharashtra, as are the Vināyakas (special forms of Gaṇeśa) seen, for instance, in the *Vināyakaśānti* (MS Coll. 390, Item 178).[20] Some of the devotional works follow the structure of a *kavaca*, a kind of protective amulet in words. The reciter seeks bodily protection (physical or spiritual) through praise of a particular god or goddess (see, e.g., MS Coll. 390, Item 2660).[21]

"Hindu Mythology" is the fourth largest group, with more than three hundred works, among which the *Mahābhārata* as well as the *Bhāgavatapurāṇa* are prominent.[22] Additionally, there are some *Rāmāyaṇa*-themed manuscripts as well as other *purāṇic* materials. There is a complete version of the *Rāmacaritamānasa* in Awadhi (related to Hindi) by Tulasīdāsa, for instance (MS Coll. 390, Item 2615),[23] as well as a complete *Vāmanapurāṇa* (Ms. Coll. 390, Item 2172),[24] among others. Much like the "Hindu Philosophy" grouping, "Hindu Mythology" contains numerous commentarial works, many philosophical in nature. Among these, the philosopher Śrīdharasvāmin, well known for his fusion of philosophical and devotional themes, is promi-

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http://hdl.library.upenn.edu/1017/d/medren/9963979573503681). This grouping also contains many manuals to aid in a minutia of rites related to Vedic fire and Soma sacrifice.

20 http://hdl.library.upenn.edu/1017/d/medren/9958644313503681.

21 http://hdl.library.upenn.edu/1017/d/medren/9957581533503681.

22 Many of the *Mahābhārata* and *Bhāgavatapurāṇa* manuscripts, approximately 220, were cataloged prior to 2011 as part of an NEH-sponsored grant (PW-50408-09, https://securegrants.neh.gov/publicquery/main.aspx?f=1&gn=PW-50408-09) investigated by Peter Scharf.

23 http://hdl.library.upenn.edu/1017/d/medren/9974015703503681.

24 http://hdl.library.upenn.edu/1017/d/medren/9951887233503681.

FIGURE 3. *Rāmacaritamānasa* in Awadhi (related to Hindi) by Tulasīdāsa. Philadelphia, University of Pennsylvania, MS Coll. 390, Item 2615, fols. 141v–142r.

nent. His commentaries are related to close to fifty manuscripts, especially manuscripts of the *Bhāgavatapurāṇa*.

The fifth largest body of works in the Penn collection is "Hindu Astronomy," with more than two hundred and fifty manuscripts. There are many unpublished and understudied titles as well as a number that are unknown due to their unique specificity, such as personal astrological almanacs (*pañcāṅga* or *pañjika*). There are treatises on how to read astrological charts, birth records, and various life-cycle events (marriages, etc.). There are works divining the meaning and significance of house geckos falling on different parts of one's body (the *Pallīpattanakārikā*). Additionally, there are numerous

astrological works of a medical nature, making predictions about a person's health, drawing upon beliefs about the alignment of the body and the movement of the planets and the stars. Perhaps more than any other part of the Penn collection of Indic manuscripts, the astrological material has much to offer scholars of the history of science and religion.

The sixth largest group of manuscripts is "Sanskrit Language," with nearly two hundred and fifty works, mostly grammars, but also containing reference works such as dictionaries, lexographies, encyclopedias, and similar materials. This category also contains a plethora of commentaries and super-commentaries on other, well-established grammatical writers, especially Pāṇini and Patañjali. These commentaries represent a breadth of interpretation and reception about Sanskrit grammar from the late medieval period and into the modern age. This grouping also gives us insight into Norman Brown's interest in promoting the study of Sanskrit grammar at Penn and provides us a wealth of data about Sanskrit studies more broadly. This body of material is an important resource, allowing students and scholars to better understand the fabric of grammatical commentaries while also, more basically, outlining specific case endings, declensions, and other important aspects of language learning.

The seventh largest grouping of Penn's Indic collection, "Sanskrit Poetry," contains close to one hundred manuscripts. This grouping includes works of traditional, non-epic *kāvya* by authors such as Kālidāsa, Bhāravi, Māgha, and others. Additionally, within this genre, are works on poetics, Sanskrit rhetoric (*alaṃkāraśāstra*), and treatises on ascetics taking the form of commentaries on works of major figures (Kālidāsa, etc).[25] Here we might also mention a few scattered works of "Sanskrit Drama." Though too few to make up an independent category, they are relevant to this grouping. Of particular note is a seventeenth-century satire, the *Laṭakamelakaprahasana* (MS Coll., 390, Item 1567), which deals with issues and tensions, possibly social critique, surrounding Jain and Buddhist monks.[26]

25 See, for instance, MS Coll. 390, Item 497 (http://hdl.library.upenn.edu/1017/d/medren/9959555703503681), the *Raghuvaṃśaṭīkā* by Mallinātha.

26 http://hdl.library.upenn.edu/1017/d/medren/9967590553503681.

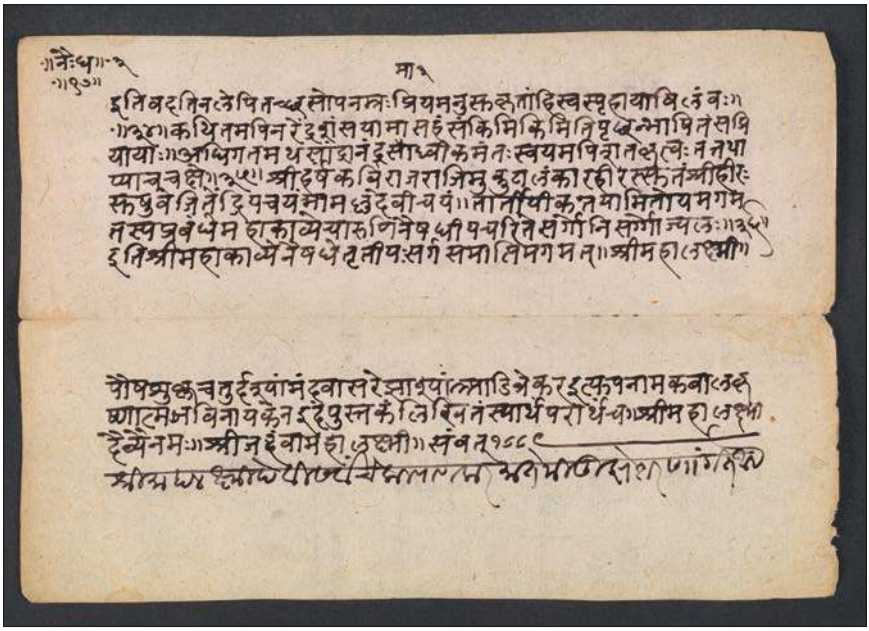

FIGURE 4. Naiṣadhīyacarita (selections) by Śrīharṣa. Philadelphia, University of Pennsylvania, MS Coll. 390, Item 533, fols. 48v–49r. Contains an endnote in Modi script, formerly used exclusively for Marathi language, but mostly lost during the nineteenth century.

Finally, there are a number of unique and "oddball" items that do not fit neatly into any genre or category of more traditional literature. One such work is MS Coll. 390, Item 3045, a list of items written in either the related Laṇḍā or Khojki script from the Punjab, typically used by merchants and traders.[27] This work had been folded up and used as a cover of a Vedic ritual manual (MS Coll. 390, Item 42), but may give us some insight into the lives and libraries of different communities of South Asia, as well as the fluidity between different religious, scribal, and commercial communities. One work pointing to the diversity of scribal communities is MS Coll. 390, Item 533, the colophon for which is written in the abandoned Modi script, formerly used exclusively for Marathi language. Other oddball items include dried

27 http://hdl.library.upenn.edu/1017/d/medren/9964459513503681.

snake skins, embedded within the folios of two manuscripts.[28] While such works are not central to the significance of Penn's Indic collection, they highlight some of its details and material dimensions that can be seen throughout.

Scribal Units and Personal Libraries

One noteworthy outcome of the NEH project is the identification of scribal units and the identification of pre-British-era libraries within Penn's Indic material that are contained specifically within MS Coll. 390. I found multiple works copied by a single scribe as well as groups of manuscripts produced by whole communities of scribes, including father-son lineages as well as master-student lineages. One scribe, Bhāskara Dāḍekara, has so far been identified with thirty manuscripts—many of these having to do with the building of dwellings and other architectural structures and the rituals that were performed during their construction.

Another scribe of note is Sadāśiva, the son of Kāśīnātha, who is associated with at least twenty-two manuscripts. Sadāśiva himself was the scribe of at least fourteen of these, while at least seven were scribed by his students and one possibly by his father, as identified in the colophons of these works. The school of scribes spans a period of over fifty years from the mid-seventeenth to early eighteenth centuries. Such identifications will be especially important for understanding how Indian intellectual communities produced manuscripts and will give scholars very specific examples of a unique community in pre-British India.

More than one hundred and fifty records have been identified with specific owners, and from among these we see traces of a number of personal libraries in which a single figure owned multiple works. One prominent owner is Janārdana Koṇḍadeva Gāḍagīla, who comes from the village of Gāḍagīla in present-day Jarakhand. He owned more than twenty manuscripts and actively collected for over five decades from the mid-eighteenth

28 MS Coll. 390, Item 292 and Item 2053.

to early nineteenth centuries. His library includes philosophy, commentaries, ritual, and devotional works. The scribe he employed to make copies for his library was identified as Ballāḷa Bhuskuṭa. Another figure is Viśvanātha Goḍisa, the son of Raghunātha, from Allahabad in the late seventeenth century, who is identified with four manuscripts. In another case, a manuscript contains pre-modern records for two owners of a single work (MS Coll. 390, Item 1783).

Conclusions

Prior to this NEH project, many connections between Penn's Indic manuscripts went unnoticed or unrecorded, and few links were identified between individual manuscripts. This is the result of a number of factors. When manuscripts were sold to Brown between 1930 and 1935, the sellers broke up complete manuscripts into smaller units. This was perhaps to increase sales or simply to create separate, identifiable texts, according to the instructions of Brown himself. The disassociation of "text" from manuscript, however, was compounded further by Horace Poleman in the formation of his 1938 catalog. Poleman tended to list works by text alone and not by the manuscript they came from. Thus, a single manuscript, even two or three folios long, could potentially have as many as *ten* Poleman numbers and be spread throughout his catalog. This makes the study of the manuscripts difficult without consulting them directly or without the painstaking task of tracking and comparing Poleman and Penn numbers, which I was uniquely able to do. Having the opportunity to work slowly through the collection allowed me the chance to pull many of these lost scribal units and libraries together and to note these connections in the digital record. In some cases, even texts without named scribes could be connected through careful identification of watermarks, paper quality, and hand analysis. Thus, I was able to employ new technologies to build upon the foundational groundwork accomplished by Brown and Poleman in the early to mid-twentieth century. I am happy to have contributed to this scholarly legacy, while also to have been able to move the study forward by emphasizing a material cultural perspective, discovering new texts within the collection, as well as

creating an expanded, searchable index of scribes and former owners. The work accomplished through the NEH project will position Penn's Indic collection as an invaluable resource for the international community and as a touchstone for future digitization and cataloging projects of Indic manuscripts, cross-institutional collaboration, and general promotion of South Asian cultural heritage in the digital age.