Finnian M. M. Gerety
Brown University

Digital *Guru*

Embodiment, Technology, and the Transmission of Traditional Knowledge in Kerala

The Nambudiri Brahmins of the South Indian state of Kerala transmit what may be the oldest surviving musical culture in South Asia, a fixed oral tradition of sacred songs used in ritual (Sāmaveda). Without recourse to written notation, Nambudiri practitioners teach songs face-to-face, using their voices and a distinctive system of hand gestures to convey melodies to their students. This embodied transmission of knowledge is further shaped by hereditary and social requirements that dictate who may teach, who may learn, and in what circumstances. As a result of such strict norms for teaching, and under the pressure of broader social changes, Nambudiri Sāmaveda in the late twentieth and early twenty-first centuries has declined to the point where only a single active line of normative transmission exists. This article presents a case study of the close bond and evolving pedagogical relationship between the aging *guru* (teacher) and student involved in this unique transmission, highlighting the integration of digital technology into their lessons, and examining the impact of this innovation on textual, pedagogical, and ritual authority. The "digital guru"—in the form of an archive of audio- and video-recordings—aids recall and restores a sense of authority to the transmission of Sāmaveda, and yet the living guru is ultimately a presence that cannot be replaced.

KEYWORDS: guru—Vedas—Kerala—embodiment—sound—orality

Asian Ethnology Volume 77, Numbers 1&2 • 2018, 3–31

What does it take to learn a song and pass it on? Direct experience is often primary: a singer hears a song performed by another, repeats it, and masters it; in this way, a song moves as oral, embodied knowledge from one person to another, and from one generation to the next. Yet the transmission of embodied knowledge can be facilitated, transformed, or even supplanted by disembodied forms. Written texts and musical notation make it possible to pass on a song independent of a singer's physical presence. Radio, phonograph, and digital media can transmit a song through the virtual presence of a singer, even at a great remove in space or time. Mouth and ear, stylus and parchment, microphone and tape recorder, smartphone and Internet—though the medium may change with technology or circumstance, the song remains the same. Or does it? To what extent do innovations in technologies of transmission transform traditional knowledge?

Some leading theorists of knowledge and technology have polarized orality and literacy in their efforts to explain how transmission and media affect the scope of traditional knowledge: thus Jack Goody's influential "literacy thesis" posits a causal link between the technology of writing and the advent of complex thought, arguing that certain forms of reasoning and knowledge production are precluded by strictly oral transmission (Goody and Watt 1963; Goody 1986, 1987). Meanwhile, Walter Ong (1982) places societies on a continuum with orality and literacy at either pole, allowing for some hybridization (for instance, the "secondary orality" of sonic media) but nevertheless attributing a tremendous agency to written culture in the emergence of complex knowledge forms. To a large extent, this polarity between "the oral" and "the written" has been linked to a corresponding polarity between fluid and fixed forms of knowledge, with fluidity connoting orality and multiformity, and fixity connoting literacy and precision. Yet traditional forms of knowledge in India have tended to trouble such theories, and Indologists have pushed back against the arguments of Goody and Ong by adducing examples of highly complex, rational forms of knowledge composed and fixed by entirely oral means (Staal 1986; Falk 1990; Scharfe 2002); the foremost counterexample is the massive and ancient corpus of Sanskrit texts discussed in this study, the *Veda*s. Recently, Annette Wilke and Oliver Moebus (2011) have reframed the debate by proposing *sonality*, the sounding of oral or written texts, as a "third space habitus" for transcending the dichotomy of orality and literacy in the study of Indian traditional knowledge; sonic cultures, they argue, whether transmitted by mouth,

writing, or some other means, produce texts and knowledge forms of great complexity and scope. In its own small way, the case study below validates Wilke and Moebus's efforts to destabilize the entrenched polarities between orality/literacy and fluidity/fixity, showing how an archaic, fixed oral tradition—one that has consistently eschewed literary technologies in its transmission practices—embraces new digital technologies that enable the faithful replication of sound and gesture.

In what follows, I focus on the intersection of human bodies and digital technology in the transmission of the most ancient and esoteric (surviving) South Asian musical culture, the Jaiminīya Sāmaveda, among a regional sub-group of India's priestly Brahmin caste, the Nambudiris of Kerala. In particular, I explore how digital technology has strengthened one elderly teacher's authority in a fragile line of transmission, making it possible to pass on a musical repertoire on the verge of being forgotten. The pedagogical paradigm in this tradition—as in so many Indian traditions—is oral, face-to-face transmission from a "teacher" (*guru*) to a "student" (*śiṣya*), with a curriculum that takes years to complete. The central aim of this paper is to understand what happens when a flesh-and-blood teacher in a staunchly oral tradition innovates by consulting a digital archive of recorded performances to buttress his expertise. How is traditional knowledge transformed by innovations in technology? What are the implications for textual, pedagogical, and ritual authority when the *human guru* encounters the *digital guru*?

The human guru: panjal, kerala (july 2010)

Sreejith, a student in his late twenties, sits with his legs crossed on the polished red concrete floor of his teacher's house. It is a small, enclosed porch on an erstwhile granary for the rice harvest that also serves as a private residence. A double door and two windows, wooden shutters closed, are set into pale blue stucco on the inner wall. Against this wall adorned by a mirror, a calendar, and a poster of the Hindu goddess Durga, there is an antique cot with no bedding. Two brown short-sleeved shirts, several towels, and a half-dozen *muṇḍu*s—cotton garments worn wrapped around the waist—hang from a bar overhead. A wardrobe with books on top and two duffel bags make up the rest of the scant furnishings. Across from Sreejith, looking down on him slightly from a red plastic chair, sits his teacher Vasudevan, a man of eighty wearing bifocals and a digital watch. Shirtless and clad in a white *muṇḍu*, each man wears over his left shoulder and across his chest the sacred thread (Sanskrit *yajñopavīta*, Malayalam *pūṇūl*) that is the mark of the initiated Brahmin man.

I first met Vasudevan a month prior, in mid-June 2010, when the scholar Thennilapuram Mahadevan—also a Brahmin from Kerala, but of Tamil extraction—brought me to the village of Panjal, Kerala, to hear Vasudevan chant with his older brother. Having spent my early years in grad school studying the philology and history of Sāmavedic texts in the rare Jaiminīya tradition, I was keen to hear these texts in performance and learn more about surviving Sāmavedic cultures in South India. Over the next five weeks, guided by Mahadevan, I met, observed, and interviewed most of the few practitioners of Jaiminīya Sāmaveda still active in Kerala

and Tamil Nadu. Focusing on techniques of transmission, I also made audio- and video-recordings of them teaching their students. In the course of my travels, I met Sreejith in a Nambudiri boarding school in Thrissur, where—although still a student himself—he had recently become employed teaching Sāmaveda to two boys. Now, coming to the end of my trip, I returned to Vasudevan's house, this time without Mahadevan; I was eager to observe him teaching Sreejith, reputed to be a talented and devoted student.[1]

Just outside the room in the open air, I record the lesson with my video camera and audio recorder set up in the doorway. There is no space for me inside, and anyway I feel some constraint at intruding too closely on this intense, mirror-like exchange. Seated face-to-face, eyes fixed on one another as they sing, Vasudevan and Sreejith make identical nodding movements with their heads, as well as identical gestures with their right forearms, hands, and fingers. The lesson consists of several rounds of call-and-response, unfolding in a sequence that quickly becomes familiar: Vasudevan recites the Sanskrit lyrics without the melody, and Sreejith echoes him. Vasudevan corrects him as necessary in Malayalam and then moves on to a complete iteration of the song, combining lyrics and melody, which Sreejith repeats. Sometimes they run through it again together, or else Vasudevan just listens, interrupting occasionally to refine the student's performance. A single section of the song is passed back and forth in this fashion over the course of several minutes: recited, repeated, corrected; sung, repeated, confirmed. Other chunks follow this, until the whole song has been learned.

The art of Sāmaveda lies in uniting a melody (*sāman*) with a verse (*ṛc*); the union of the two—interpolated with fragments of words, phrases, sentences, and non-lexical syllables (*stobha*)—is called a song (Sanskrit *gāna*, Malayalam *ōṭṭu*). Practitioners call the musical contour of a given melody the *svara* (tone). Each melody with its distinctive *svara* may be sung to different verses and permutations of *stobha*s, resulting in the thousands of different *gāna*s that make up the Sāmavedic repertoire.[2] The "songs" of the Sāmaveda are quite different in form and function from songs as conventionally described in folklore, anthropology, religious studies, and other disciplines: they are neither heroic epics (Lord 1960), nor poems composed in performance (Nagy 1996), nor expressive folksongs (Lomax, Erickson, and American Association for the Advancement of Science 1968), nor charismatic verses with instrumental accompaniment (Hess 2015). Moreover, Sāmavedic songs are taught not as fluid multiforms, but as definitive versions: the teacher's aim is to pass on the verses and melodies *exactly* as he learned them, and *exactly* as they have always been sung (more on this in the next section). Thus one might object that what Vasudevan is teaching Sreejith is not a "song" at all, but something quite different. All the same, I insist on this term for several reasons: first, the English word "song" generically refers to the union of words and melody; next, such a sense of "song" accurately translates the emic words in question (Sanskrit *gāna*, Malayalam *ōṭṭu*), which refer technically to the union of verse (*ṛc*) and melody (*sāman*); and finally, using "song" accentuates the explicitly *musical* nature of the Sāmavedic repertoire as opposed to the many other forms of text in the Vedic corpus, which include poetry, formulas, and prose.

On this day Vasudevan and Sreejith work on a song in praise of the storm-god Indra:

> *indram it gāthino bṛhat / indram arkāyibhīr ārkiṇaḥ / āyindraṃ vāṇīr hā hā / anūṣatā / hoyiḻā //*

As given above, this lyric incorporates musical modifications—including the chopping up of words and the insertion of non-lexical syllables (*stobha*)—of the underlying verse. Rendered into English, the modified lyrics might run something like this: "Just to Indra have the singers bellowed aloft, to Indra the chanters with their cha-yants, to I-yindra their voices, *hā hā*, *hoyiḻā*."[3]

A video clip (Gerety 2015b; https://vimeo.com/138656513) contains a montage of the footage I took that day and reveals an entirely embodied flow of knowledge from one person to another, without written materials or teaching aids. Several details should be emphasized. First is the way Vasudevan pauses and emphatically enunciates the words to make sure that his student articulates them with precision. Second is the gestures: whether singing out loud or sitting in silence while listening to one another, both men continuously make their hands swoop and dive, as if sculpting the melody in the air between them. Third is how the student aims to completely reproduce the substance and nuance of the teacher's performance—his posture, his movements, his voice. As they pass sections of the song back and forth, the two men fuse as if into a single body and its reflection, or into a single voice and its echo.[4]

After working through two or three such sequences, the lesson ends. Vasudevan's wife greets us and we all chat in English about the rubber harvest and other matters of agricultural administration around their small family estate. I bid Sreejith goodbye in the driveway as he buttons up his shirt, slips on his sandals, and starts up his motorcycle, a vintage Enfield Bullet. It's four p.m. and he has a long rush-hour commute ahead of him: a two-hour drive back to the nearest city, Thrissur, where he must get some rest before rising to begin his own teaching the next morning at dawn. Although it is unorthodox for a current student like him to teach in his own right, he explains that the urgency of reviving these traditions is such that Vasudevan pressed him to take up the task. "He is my *guru*..." Sreejith adds, then trails off, implying through his silence that he must unquestioningly follow Vasudevan's direction.

The total obedience of the student to his teacher, as well as the intensity of the affective bond that takes shape between them over years of study, is encoded in the Sanskrit word *guru*. Literally, *guru* means "heavy," and its applied meaning of "teacher" retains a weighty resonance. As Minoru Hara observes, the *guru* is "a personal and subjective master...[and] the relation between *guru* and pupil (*śiṣya*) is a rather emotional one. Devotion and obedience are the media which tie one to the other" (Hara 1980, 104). Hara differentiates *guru* from another Sanskrit word for teacher, *ācārya*, arguing that *ācārya* is a teacher in a generalized, institutional sense, while *guru* designates one's own particular teacher, a "heavy" figure in the student's life, inspiring veneration, awe, and dedication. In terms of chronology, Hara shows that *ācārya* is the older word, attested in the Vedas and associated

with the objective and authoritative transmission of Vedic knowledge, while *guru* is younger, attested in post-Vedic theistic and renunciatory traditions and linked with the subjective and personal bond between teacher and student (Hara 1980, 93–94, 98–99). From this perspective, the two terms signal the difference between a fixed and authoritative mode of teaching and learning (captured by *ācārya*) and the fluid and accommodative practices demanded in the rapidly changing contexts of everyday life (*guru*). Whether or not such historical distinctions directly inform Sreejith's usage, the fact remains that although Vasudevan and his lineage as teachers of Sāmaveda are formally classified as *ācārya*s in the Nambudiri community (see below), Sreejith routinely refers to Vasudevan in informal conversation as his *guru*. Given the role that affect and emotion ultimately play in the outcome of Sreejith's learning, his use of this term may be an acknowledgment of the personal bond that undergirds their formal pedagogical relationship.

The vedas and vedic traditions

Orally composed almost three thousand years ago in northern India in an archaic form of Sanskrit (ca. 1200–600 BCE; Witzel 1989, 1997), the Vedas (from Sanskrit *veda*, knowledge) are South Asia's oldest known corpus of texts and rituals (Staal 2008). The core texts of the corpus are the ancient *mantra* collections (*saṃhitā*), which contain thousands of *mantra*s, Sanskrit texts of various types—metrical, musical, and otherwise (on *mantra*, see Gonda 1963; Alper 1989). Layered on top of these collections are prose discourses about the meanings of mantras and rites (*brāhmaṇa*, *āraṇyaka*), metaphysical discussions about the self and soteriology (*upaniṣad*), and codifications of ritual praxis (*sūtra*). While there are four Vedas in all, three of them—the *Ṛgveda* with its verses (*ṛc*), the *Sāmaveda* with its melodies (*sāman*), and the *Yajurveda* with its formulas (*yajus*)—have been distinguished by their deployment in sacrifice (*yajña*), the preeminent ritual institution of ancient Vedic culture. As a result, this "threefold wisdom" (*trayī vidyā*, *Śatapatha Brāhmaṇa* 6.3.1.20; Weber 1855), as Vedic texts frequently term the triad of *ṛc*, *sāman*, and *yajus*, has long been promoted at the expense of the somewhat marginalized fourth Veda, the *Atharvaveda*.[5]

Conceived as a unitary corpus, the Vedas have been regarded by many Hindus over the centuries as foundational, authoritative, and even divinely revealed. Within some strands of Hindu theology, for instance, the Veda is "not of human origin" (*apauruṣeya*; see *Pūrvamīmāṃsāsūtra* 1.1.27–32 in Jha 1916; Smith 1989, 19). Instead it is *śruti* (literally "that which is heard"; but more idiomatically, "learning by hearing" [van Buitenen 1974] or "holy hearing" [Coburn 1984]), a form of auditory revelation granted to sages of the primeval past but capable of actualization in the present through the sounding of mantras. As such, the Vedic paradigm of knowledge has been influential in shaping Hindu "sonic theology" (Beck 1993) and "acoustic piety" (Wilke and Moebus 2011). Moreover, the authority of the Vedas and Vedic ontologies and epistemologies have been central to broader linguistic, religious, philosophical, and literary currents in premodern

India, involving not only Hindus but also Buddhists, Jains, and exponents of other traditions.

From the diachronic point of view, however, the Vedas did not form a canon in the sense of a single corpus—rather, as the pioneering research of Michael Witzel has shown, there is substantial evidence for Vedic *canon*s, definitive recensions of oral texts in use by the Brahmins of a particular tribe or area (Witzel 1997, 260; cf. Patton 1994 for other perspectives on Vedic authority and canon). Such groups are the genesis of the Vedic "branches" (*śākhā*) in the ancient period—localized, hereditary lineages of Brahmins made up of specialists in a particular Veda and Vedic liturgy (Renou 1947; Witzel 1987, 1989, 1997). While exhibiting idiosyncrasies in language, hermeneutics, and praxis, these branches nevertheless partook in a widely shared textual, ritual, and religious culture that we may now broadly construe as Vedic—a culture that has persisted, in shifting forms, up to the present day.

Although manuscripts and printed editions have played a significant role in the wider dissemination of the Vedas in South Asia, orthodox Vedic transmission within the branches and across the centuries has been predominantly oral, motivated by an ideal of total fidelity to the definitive oral text: the corpus must be passed on with complete precision, with every syllable of every mantra intoned exactly as it always has been (Staal 1986; Gerety 2016).[6] In this respect, orthodox Vedic transmission constitutes a *fixed oral tradition* and thus defies the boundaries of the academic category of "oral tradition," which most scholars since Albert Lord have predicated on some degree of fluidity.[7] The ideal Vedic transmission favors the reproduction of completely fixed sounds and sequences over the generation of fluid variants and multiforms. While this orientation has often led practitioners to engage with the forms of mantras and rites first and their meanings only secondarily, it does not follow that Vedic mantras and rites, as provocatively claimed by Frits Staal, are necessarily "meaningless" (Staal 1989)—a rich emic tradition of interpretation, commentary, and linguistic inquiry attests otherwise. All the same, it is a fact that as the strength of Vedic oral traditions has dwindled over the centuries, practitioners have often chosen to focus on the faithful transmission of the oldest, most authoritative Vedic works, which are the mantra collections, and on the *sounds* of the mantras above all, with scant attention to their meaning.[8]

Embodiment, the body as technology, and the "embodied archive"

As the above summary suggests, the rigorously and remarkably well-preserved textual and ritual cultures represented by Vedic traditions, as well as the broader sacral and religious value attributed to the mantras themselves, motivate a highly specific conceptualization of what it means to learn, transmit, or perform the elements of the corpus. Embodiment is a key factor: the practitioner learns, transmits, or performs the Veda by quite literally embodying it. This idea of a Brahmin being essentially identical with the texts he transmits has ancient roots. An aphorism in one of the oldest works of Vedic prose, composed ca. 1000 BCE, suggests that once a Brahmin has learned the Veda, his textual parentage supersedes even his biological parentage (*Maitrāyaṇī Saṃhitā* 4.8.1): "Why ask after a Brahmin's

father or mother? If one understands the Veda to be existing in him, *that* is his father, *that* is his grandfather."[9] And the very same idea persists today, as Borayin Larios (2013; 2017) has shown for modern Vedic traditions in Maharashtra: the Vedic practitioner, dubbed *vedamūrti* or "embodiment of the Veda," wields his authority in pedagogy and performance by embodying the texts he has mastered.

In service to this ideal of embodying a fixed text over many generations, Vedic transmission is rigidly circumscribed by hereditary, social, and pedagogical factors. To learn the Veda in the orthodox sense, teacher and student must be initiated Brahmins with a tradition of Vedic study extending back along the male line, and they must engage in many years of rigorous, face-to-face oral instruction. Vedic oral traditions overwhelmingly exhibit what I have elsewhere termed an "ideology of normative transmission" (Gerety 2016)—a commitment to fixed orality, patrilineal descent, and specific types of Brahmanical socialization. This stance has fostered the continuity of recitation and ritual within a number of regional communities of *vaidika* ("Vedic") Brahmins from the ancient period up through the present day, a remarkable record with few parallels in human history (Staal 1961; 1986; Howard 1977; 1986; Scharfe 2002; Knipe 2015).

Noting the success of this long-running enterprise, Witzel has argued that certain forms of modern recitation present us with the embodied equivalent of "tape recordings" of Vedic mantras from the ancient period (Witzel 1997, 258, 263). To achieve this replication of sound and text, Brahmins made use above all of their own bodies, developing an array of mnemonic techniques and somatic tools to assure precise transmission over long spans of time. As Staal has observed: "The eternity of mantras was not a transcendental or disembodied affair, but had to be realized by human means and depended for its continued realization on human instruments" (Staal 1986, 7). For instance, once the canonical forms of the mantras have been absorbed, advanced students learn to separate, invert, and otherwise reorder the constituent syllables in virtuosic feats of memory that promote mastery over the material (Staal 1961, 42–49; 1986, 17–19). In addition, phonetic, metrical, and musical features of the text may be reinforced and internalized through head and hand movements. In Nambudiri Sāmaveda, as we saw above, practitioners deploy "hand-showing" (Malayalam *kai-kāṭṭuka*), a system of gestures that conveys the pitch, melodic contour, and rhythm of the song (Howard 1977, 220–48; Gerety 2016, 451–52, 451n36). This gestural idiom, which has affinities with the more widespread use of "hand-signs" (Sanskrit *mudrā*) in many Sanskritic performance traditions (Staal 1983, 1: 359–75; Jones 1983), is so precise that even signing in silence, without sound, is enough to convey a song in all its intricacy. As such, hand-showing obviates the need for a written system of musical notation, which the Nambudiris do not possess. The gestural idiom itself becomes a sort of somatic notation, inscribed through the movements of the body. It is notable that bearers of Jaiminīya traditions among Tamil Brahmin communities, who have their own oral and gestural traditions of the Jaiminīya repertoire (along with written notation), recognize Nambudiri Jaiminīya chanting and gesture as distinct (Gerety 2016, 453; for literature on the Tamil Jaiminīyas, see Fujii 2012).[10]

Thus Vedic transmission, as practiced by the Nambudiri Brahmins and by other Brahmin communities, is not merely oral: it is a fully embodied practice that makes use of the mind, eyes, ears, mouth, hands, and fingers all together, with the overarching aim of guaranteeing the mantra's eternity as precisely as the machinery of the human body will allow. The body is the technology, with no need for written, mechanical, or digital aids. Brahmins like Vasudevan and Sreejith who teach and learn traditions in this way are a veritable *embodied archive* of traditions.[11] This embodied archive has been replicated generation after generation through the intensely rigorous transmission of knowledge from teacher to student. As we will see below, digital technology may offer new possibilities for assisting the replication of such archives, especially when the human bearers of tradition become unreliable or unavailable.

Nambudiri brahmins and vedic traditions

Thennilapuram Mahadevan has spoken of the Brahmin's embodiment of his knowledge as the "human oral agency" of the Vedas (Mahadevan 2008, 3; 2011, 4–5), emphasizing the way given Brahmanical populations and their proprietary textual traditions have moved in tandem as a unified agency throughout the history of the subcontinent. This is evident in the epigraphic record, where the movements of Brahmin families, explicitly identified as experts belonging to particular Vedic branches, can be traced through deeds and land grants (Mahadevan 2008; 2011; 2016). Broadly, the arc of their migrations moves east from the Vedic homeland in northwestern India in the first millennium BCE, then south into peninsular India (Witzel 1987), where groups of Brahmins prospered under the patronage of South Indian kings over many centuries during the first millennium CE. Among these early arrivals in the south were the Nambudiri Brahmins, although the circumstances and dating of their entry into Kerala remain contested.[12] Settling on the southwestern coast along the Arabian Sea in what is now the modern Indian state of Kerala, they soon established themselves as powerful landholders. The Nambudiris brought with them an impressive suite of Vedic textual and ritual expertise, organized into several different branches: the Kauṣītaka and Āśvalāyana belonging to the *Ṛ*gveda; the Taittirīya and Vādhūla belonging to the Yajurveda; and the Jaiminīya belonging to the Sāmaveda. Of these, the Kauṣītakins, Āśvalāyanas, and Taittirīyakas were well represented, while the Vādhūlas and Jaiminīyas came in much smaller numbers (Staal 1983, 1: 171–72). As a consequence, the former groups boast reasonably robust recitation traditions today, while Vādhūla recitation in Kerala has vanished, and Jaiminīya recitation in Kerala, as we will see below, has teetered on the brink of extinction for the last fifty years.

Nambudiri Brahmins have thus been established in Kerala for well over a thousand years, where they have maintained a position of religious and economic privilege. Speaking Malayalam and often educated in Classical Sanskrit as well as Vedic learning, many Nambudiris have also been prominent scholars, artists, and politicians. Nambudiri wealth and status were drastically reduced by the land reforms in the mid-twentieth century, when their feudal estates were divided and transferred

to the ownership of the farmers who worked them. Moreover, Nambudiri families have not been immune to the cascades of social change in modern south India in recent decades, with many moving to the cities and giving up traditional lifestyles.[13]

The Nambudiri ritual institution *par excellence* remains, as in ancient Vedic society, the category of sacrifice called *śrauta* for its relation to *śruti*; the Nambudiris specialize in the iteration known as the "piling of the fire altar" (*agnicayana*; Staal 1983). Although such sacrifices have been in decline since the land reforms in Kerala, they continue to be performed every spring; the first years of the twenty-first century have even seen an uptick and some signs of revival (Mahadevan and Staal 2005; Gerety 2017). Their performance requires the cooperation of experts from the three Vedas, including Sāmaveda. It has been the weakness of Sāmavedic lines of transmission, more than any other single factor, that has threatened the continuation of *śrauta* rituals in recent times (Staal 1992, 661–62; Gerety 2016, 451, 453–54).[14] Another occasion for Sāmavedic expertise is the "domestic" (*gṛhya*) rites practiced by orthoprax Nambudiri Jaiminīya families, at which an authorized Jaiminīya practitioner must officiate. The demand for *śrauta* and *gṛhya* expertise provides a practical impetus for ensuring the continuity of Sāmavedic transmission; one might say that these two ritual categories represent the key venues for the consumption of Sāmavedic knowledge. As such, this is a realm where concerns about the ritual authority mediated by transmission come to the fore: according to Nambudiri tradition, *śrauta* and *gṛhya* rites can only be conducted by authorized officiants with the proper training and status (M. Parpola 2000, 150–51).[15] Let us now take up the hereditary and social norms that guard the textual, pedagogical, and ritual authority of Nambudiri Sāmaveda.

Hereditary and social requirements for teaching and learning Nambudiri Sāmaveda

Among Nambudiris, the Jaiminīya branch, named for the ancient sage Jaiminī, is active in the transmission and performance of Sāmaveda; this is the branch to which Vasudevan and Sreejith were born. Compared to other Vedic branches represented in Nambudiri families, the Jaiminīya tradition is now vanishingly small. On more than one occasion, each man has spoken to me of his personal commitment to assuring the continuity of his heritage. Vasudevan explains it in terms of a dual obligation to the ancestral seers (Sanskrit *ṛṣi*) and to the Hindu deity Rāma: "It is my duty to my ancestors, the *ṛṣi*s. We do this for Rāmaswāmi." In this way, the daily routines of teaching and learning in modern Kerala intersect with the primeval past of sages and gods. Sreejith frames his motivation differently: confronting what he sees as a bleak future for the old ways in modern India, he has resolved to do his part to make sure that Sāmavedic traditions are not forgotten.

Part and parcel of these old ways in the Nambudiri context is a set of strict norms that determine who may teach the Veda, who may learn it, and in what conditions—learning the Veda, for Nambudiris, is socially rooted and circumscribed. Traditionally, Nambudiris settled family by family on rural tracts known as *mana*s, a term that refers to an agricultural estate and all that it encompasses,

including the main house, family, household staff, paddy fields, and often a private temple. The *mana* also serves to identify the Nambudiri patrilineal descent group that owns the estate or has an ancestral connection to it. Pedagogical and priestly status is determined by this birthright: thus, members of a given *mana* pass on the texts and rituals of a particular Vedic branch. Nambudiri tradition recognizes twenty *mana*s as authorized transmitters of Jaiminīya Sāmaveda. Of these, three are "teacher houses" (*ācārya mana*), with the hereditary duty to teach the songs and officiate in domestic rites for members of the seventeen "pupil houses" (*śiṣya mana*). All of the ancestral teacher houses are located in the single small village of Panjal in central Kerala where Vasudevan teaches Sreejith; this narrowly circumscribed region is the hallowed territory where all authorized transmissions take place (on the relations and localization of Jaiminīya houses see Parpola 1984, 434; Fujii 2012, 107). To be eligible for instruction, the Nambudiri student must also have undergone initiation into the Veda under the aegis of a teacher house and in accordance with the idiosyncrasies of Jaiminīya orthopraxy.[16] Vasudevan and Sreejith meet these hereditary and social requirements; indeed, during my research, they were the *only* active Jaiminīya teacher–student pairing to do so.[17]

Lives of singers, lives of songs

With an eye toward giving a fuller account of these lives and the lives of the songs they pass on, I now mention a few biographical details. Born into one of the most venerable Jaiminīya teacher *mana*s, Nellikkāṭṭu Māmaṇṇŭ, Vasudevan and his elder brother, Neelakanthan, learned the Sāmavedic repertoire from their father, an accomplished practitioner and ritualist revered in the community for his piety and orthopraxy.[18] They completed their training as boys in the 1940s, just before the communist state government implemented sweeping land reforms that reduced Nambudiri agricultural holdings and the incomes derived from them. This change in political and economic fortunes, along with other broad-based social and technological changes (urbanization, access to secular education, electricity, etc.), contributed to the steady erosion of Nambudiri Sāmavedic traditions in the 1950s and 60s. As such, Vasudevan and Neelakanthan are part of the last generation of Nambudiris to learn the Jaiminīya repertoire in its entirety. Vasudevan worked for many years away from his ancestral *mana*, in the postal service in far-off Trivandrum, while his elder brother took over stewardship of the house and what was left of the estate after their father's death. Although acknowledged in the Nambudiri community as among the foremost living experts of Jaiminīya traditions, and often called upon to officiate at rituals where Sāmaveda was necessary, these brothers had few occasions to pass on their expertise. After their training, transmission of Jaiminīya traditions in their patriline faltered: neither man trained his own sons in Sāmaveda. Similar patterns occurred across all the Jaiminīya teacher houses during this period: in the 1960s, normative Sāmavedic transmission declined to the breaking point. In hindsight, it is clear that this break formed part of a broader turn among *vaidika* Brahmins across India away from traditional learning and livelihoods toward the opportunities afforded by secular education and careers (cf. Knipe 2015).

For his part, Sreejith hails from the nearby and equally venerable teacher *mana* Muṭṭattukāṭṭu Māmaṇṇŭ.[19] Although born into a Jaiminīya household with a strong history of Sāmavedic expertise and ritual performance, Sreejith, like others of his 1980s generation, had scant opportunities for Vedic instruction as a child. Neither his father nor his grandfather learned the Veda. In terms of Sāmavedic accomplishment, the pride of the Muṭṭattukāṭṭu line was Sreejith's great uncle, the famous Itti Ravi Nambudiri, who officiated at numerous Vedic rituals (including the 1975 performance documented in Staal 1983) and trained twenty-five students in his lifetime (Fujii 2012, 110). Sreejith as a teenager was troubled by the decline of Jaiminīya traditions and wanted to do something about it. Although already well past the usual age for taking up Vedic study, he sought out Vasudevan as his *guru* and started to learn the Jaiminīya repertoire. At the time of the lesson described above, Sreejith was 28 and had been studying Sāmaveda on a part-time basis for more than a decade. It was not easy learning the repertoire with lessons only a few times a week, but Sreejith had managed to master a significant portion and seemed determined to persevere.

While his parents had at first been against his choice to study Veda—which they perceived as a distraction from his secular schooling, and worse, a dead end in terms of marriage and career prospects—his sense of commitment gradually won their respect. As the only member of the present generation to receive tuition from a widely respected teacher of the older generation, he soon came to be regarded as the "last hope" of Jaiminīya Sāmaveda in the Nambudiri community.[20] The hope was that he would come to embody the musical knowledge possessed by the aging Vasudevan and other practitioners coming into their dotage, and that Jaiminīya traditions might thereby continue. Sreejith felt this responsibility acutely, as he saw it to be his personal success or failure that would be shared by all Nambudiris. By the time he was in his early twenties, this responsibility expanded to include not only his own learning but also the passing on of his own (limited) knowledge to a new generation: though still a student himself, he was recruited at a traditional Nambudiri boarding school (*maṭham*) in Thrissur to teach the Jaiminīya repertoire to two boys from Ṛgvedic *mana*s on a full-time basis, for which he earned room, board, and a monthly stipend of less than 7000 rupees (approximately 100 USD).[21] "Less than a desk clerk," he once told me ruefully. This job made his own progress as a student that much more arduous, as he was forced to commute back home after work to continue his own lessons. This he did three or four times a week, driving hours in Kerala traffic on his motorcycle.

The lesson between Vasudevan and Sreejith described above exemplifies the normative features of Nambudiri transmission: it is oral, accompanied by hand gestures, conducted within a single Vedic branch, and localized in the Jaiminīya stronghold of Panjal. Moreover, the relationship involves an authorized teacher and a properly initiated student. Two non-normative features of the lessons, however, emerge from the practitioners' biographies: first, Sreejith started studying at the relatively late age of fifteen, although traditional Veda study should commence with a boy's initiation before he is twelve years old (M. Parpola 2000, 153); and second, Sreejith receives instruction from Vasudevan, who belongs to a neighboring teacher *mana*,

when he should be learning from a member of his *own* house, which also boasts teacher status. When queried, neither man acknowledged these irregularities as such. Nor did their peers: the prevailing impression among Jaiminīyas in Panjal (as well as among other Nambudiris I talked to) was that this constituted an authoritative transfer of knowledge from a venerable teacher to a worthy student, perhaps the last of its kind. Observers would often tell me that the only authentic transmission of Jaiminīya songs currently taking place among Nambudiris was this one.[22]

The digital guru: panjal, march 2012

During a longer research visit the following year, I encountered another aspect of Vasudevan and Sreejith's pedagogy—this one decidedly non-normative by traditional Nambudiri standards. I had returned to Kerala to conduct nine months of dissertation research on Jaiminīya Sāmaveda; living in close proximity to Panjal, I was able to visit with Vasudevan and Sreejith and observe their lessons several times a week.[23] At the start of each lesson and from time to time as they sang, Vasudevan would borrow Sreejith's smartphone and play back a digital audio recording of the piece they were working through. "I have to refresh myself," he would explain with a laugh, citing his failing memory. The digital recordings, he told me, were the fruit of an effort to document Nambudiri Sāmaveda undertaken by a local scholar in the late 1990s (Neelakanthan 2001; see below). Seated before a video camera and audio recorder, five practitioners of advanced age—including Vasudevan and his brother—had recorded the entirety of the Jaiminīya repertoire, amounting to more than one hundred hours of recitation. Now Vasudevan held this repertoire in the palm of his hand. Privately, I marveled at this interaction, mediated by digital technology, between the present Vasudevan and a digital phantasm of himself from many years before. Engaging in what is arguably the signature physical gesture of our era—holding a digital device up to his face—the *human guru* consults the *digital guru*, thereby mitigating the effects of age, strengthening his pedagogical authority, and perhaps even assuring the continuity of a fragile tradition (see figure 1).

At one particular lesson in March 2012, Sreejith brought his laptop so that Vasudevan could not only hear the audio but also see the visuals clearly on the screen; a second video clip (Gerety 2015c; https://vimeo.com/138655974) I made contains a montage from this occasion. The lesson takes place this time on an open-air back porch, where the overhanging tile roof shields us from the hot sun; lush greenery rustles in the background. Vasudevan sits once again in his red plastic chair, while Sreejith sits cross-legged before him. In the midst of leading Sreejith orally through the day's material, Vasudevan encounters a difficult section, turns to the computer, and asks Sreejith to cue up the corresponding video recording on the laptop. Two grainy, seated figures spring to life on the screen, singing and signing. The time stamp on this video, December 30, 1997, shows that the session was recorded fifteen years previous. The practitioner on the left of the frame, tall with a shock of thick gray hair, is Vasudevan's brother Neelakanthan; he is still living at the time of the present lesson (2012) but rarely sings anymore. The other

Figure 1: Vasudevan consults digital recordings of Sāmaveda on his student's smartphone (March 2012, photo by author).

practitioner (also named Vasudevan, from Perumaṅṅāṭŭ *mana*, smaller and bald, has lately passed away. Staring intently at the screen, Vasudevan mimes their movements as the distorted sound of the melodies crackles over the small speaker. He attends to the hand gestures above all, as if reading a printed score: the precision of hand-showing permits him to confirm the melodies from the motions accompanying them, even when the audio is fuzzy and unclear. He does this mostly *in silence*, occasionally repeating a fragment of the lyric under his breath. As my video clip of the interaction shows, both Vasudevan and Sreejith become totally absorbed in the sound and vision on the small laptop screen, giving the digital *guru*s the same attention they might give their human counterparts. They do this only for a minute or two—to see the pixelated hands and hear the compressed voices briefly is enough to get them on track. Memories duly refreshed, they then proceed to the lesson itself as if nothing out of the ordinary has happened, returning to the normative Nambudiri routine of face-to-face, embodied transmission.

As I ride away from the *mana* in a rumbling rickshaw, I reflect on the lesson. The practitioners seem unruffled by this digital interlude—after all, as Sreejith tells me later, they have been consulting the recordings on and off for several years. But I find the experience uncanny, even ghostly. Playback from this digital archive allows Vasudevan in the present day to transcend the boundaries of old age and even death to access the authority and experience of those no longer present. I

also find it surprising: predisposed by my own field experience and fifty years of previous scholarship to regard Nambudiri Vedic traditions as staunchly oral and averse to new technologies (written or otherwise; see Staal 1961; 1968; Howard 1977; Mahadevan and Staal 2005); this digital innovation in teaching seems to cry out for an explanation. It also prompts the questions with which I have framed this article: in terms of the efficacy of transmission, what does the digital *guru* achieve? What are the implications for various types of authority—textual, pedagogical, ritual—when the digital archive supersedes the embodied one? In an era when so many people—Nambudiris included—rely on digital technologies to do their jobs and live their lives, such issues seem relevant not only to the transmission of the Veda among Nambudiri Jaiminīyas, but also to the transmission of traditional knowledge more broadly.

As we consider these questions, the fragile state of Nambudiri Jaiminīya traditions must be kept in mind. These days, Sreejith is alone among his peers in committing himself to the decade or more it takes to master the songs in the margins of a busy modern life. And on the flip side, many conservative teachers of the older generation (excluding Vasudevan, of course) choose to retire rather than teach new students in conditions that compromise the standards they grew up with (Staal 1968, 410n6; 1983, 1: 39–40; 1992, 661; Howard 1977, 200; Gerety 2016, 454). Our case study reflects this new social reality: this teacher and this student together partake in the *single* contemporary, authorized transmission of the Jaiminīya repertoire among the Nambudiris at the turn of the twenty-first century. As Masato Fujii observes in an article published in the same year as this lesson took place, the Nambudiri Jaiminīya "chanting tradition…is now on the verge of complete extinction" (Fujii 2012, 111). By contrast, in the more robust lines of transmission belonging to other thriving branches of Nambudiri Veda recitation—Kauṣītaka Ṛgveda, or Taittirīya Yajurveda, for instance—there has been no corresponding integration of digital technology into teaching. Such innovations are unnecessary when there is a critical mass of Ṛgvedic and Yajurvedic practitioners to continue the embodied flow of knowledge.

The kalady recordings

Further insights may come from more closely scrutinizing the recordings that make up the digital archive. Who made them? Who paid for them? What motivates their production and dissemination?

Systematic recording and documentation of Jaiminīya Sāmaveda began with Frits Staal's landmark field research in the 1950s and 60s (Staal 1961; 1968; Levy and Staal 1968). Then in the mid-1970s, Staal and other foreign scholars helped bring attention to Nambudiri Vedic culture by organizing a performance of the *agnicayana*, the production of a film of the ritual (Gardner and Staal 1976), and the eventual publication of a massive two-volume set documenting the entire proceedings (Staal 1983). And yet, even this notable revival of interest in Vedic traditions of the Nambudiris—among insiders and outsiders alike—did little to improve the fortunes of languishing Jaiminīya traditions.[24] Such was the situation at least

up through the 1990s, a decade that saw another, albeit less celebrated, revival of interest in Nambudiri Vedic traditions. The impetus for this recent revival was the creeping awareness among Nambudiris themselves that the practitioners and ritualists of Vasudevan's generation were growing older, and that, with fewer and fewer willing students at hand, the embodied archive of Kerala's Sāmavedic culture was in danger of fading (Staal 1992). (It was around this time that Sreejith, then a teenager, resolved to devote himself to learning Sāmaveda.)

Nambudiri scholar C. M. Neelakanthan of the Sree Shankaracarya Sanskrit University in Kalady recognized the weakness of Nambudiri Sāmavedic transmission and set out to preserve the Jaiminīya repertoire in digital form. Over the course of several sessions from 1997 to 2001, Neelakanthan supervised audio- and video-recordings of the repertoire as sung by a shifting line-up of the five most venerable practitioners still alive at that time.[25] The five, all in their seventies and mostly retired from teaching and ritual performance, struggled at times to recall the repertoire. Chanting in small groups, however, they helped one another fill in the blanks, together recalling sequences that each would have been unable to recall on his own.

The resulting recordings speak to the staggering size of the Jaiminīya corpus—nearly one hundred hours of recitation—and make one appreciate the challenge of passing on such a vast repertoire. For active practitioners and their families struggling with the social pressures of finding a way to keep the Veda alive, the Kalady initiative was a watershed, for it enshrined the expertise of the last great generation of Jaiminīya Samavedins. It seemed to allay a deep anxiety that this musical heritage might be forgotten, that the obligation of Brahmins in the Jaiminīya branch to pass on their sacred knowledge would go unfulfilled. Digitization offered a partial solution to an intractable problem: even if transmission remained a lost cause in human terms, at the very least an authoritative paradigm of how to sing these ancient songs was now memorialized in digital form on plastic disks and hard drives. In this way, the embodied archive of Jaiminīya singing was transformed into a digital archive. The *human guru*, aging and increasingly frail, became the *digital guru*, frozen in time and immune to decay.

Although a single official set of recordings was gifted to each of the five performers, the university imposed a hefty mark-up for additional copies: the complete set of 95 disks, marketed to academic and cultural centers, was offered for sale in India for 60,000 rupees, and outside of India for 6,000 USD (School of Vedic Studies, n.d.). With a price tag that placed them well beyond the means of most Jaiminīyas, students like Sreejith made arrangements for their own pirated duplicates. Practitioners immediately recognized their usefulness as a teaching aid and reference: anytime a doubt about a lyric or melody arose, one could now easily crosscheck the authoritative recorded version by the older generation of Jaiminīya masters. Before, the only way to access such expertise was to seek out the *guru* in person; now, in this digital form, the *guru* became available on any smartphone or computer. By 2010—and perhaps well before—Vasudevan and Sreejith had come to routinely rely on these recordings in their lessons.

Making sense of the digital guru

As I have emphasized throughout, strict pedagogical and social norms have governed transmission of Jaiminīya Sāmaveda during the last century and probably for a long time before: these include orality, hand gestures, birth in the proper household, orthoprax initiation, and an authorized teacher. While such norms have preserved the integrity of the repertoire, they have also had the unintended consequence of contributing to its decline, insofar as their strictness starkly circumscribed the pool of eligible participants. At first, Vasudevan's recourse to digital technology struck me as a surprising aberration from the longstanding Nambudiri adherence to traditional norms. But in light of the narrowness of Jaiminīya transmission and the challenges facing Nambudiri Vedic culture at large, his consultation of the digital archive seems a predictable outcome of Vedic revivalism and the decades-long push to systematically record and preserve Nambudiri traditions in Kerala. Although raised in the most orthodox household in Panjal, Vasudevan has shown himself willing to bend the rules in order to pass along the most authoritative version of the repertoire to which he has access. This version, as it turns out, is a hybrid of his personal embodied knowledge and the digital record of others from his generation. Without drawing on this digital resource, Vasudevan might risk teaching the repertoire in an incomplete or even corrupt fashion. In this particular case, tradition seems best served by embracing modernity.

Nevertheless, it is still not entirely clear why *this* technology at *this* time. After all, Jaiminīya Sāmaveda has been steadily declining for more than a half-century: what makes these digital technologies acceptable where earlier ones (such as writing) have been eschewed? To begin, one might point to the accessibility of digital tools. Compared to film cameras and reel-to-reel tape recorders, digital cameras and audio recorders are inexpensive and easy to operate; moreover, the storage of hundreds of hours of digital video and audio is not out of reach. But the same is true of writing: stylus and palm leaf have been readily available in Kerala, and even used by Nambudiris, for centuries (more on this below). A far more compelling justification for digital technology may be its potential for modeling the technology of the body: we might surmise that the capacity of visual and auditory media to vividly and holistically *represent* embodied knowledge allows them to be integrated into the Nambudiri Jaiminīya teaching style more readily than other media.

To test this proposition, let me return to the example of writing and the integration of literacy and its associated technologies into the Nambudiri milieu. Kerala is a famously literate state (Desai 2007), and Nambudiris have long been among its most literate and literary citizens. And yet literacy has tended not to intrude on Nambudiri *Vedic* culture except at the margins. Although Nambudiri households often possess Vedic texts in palm-leaf manuscripts, handwritten notebooks, and even printed editions, these written materials exist chiefly for scholastic reference, and are seldom (if ever) integrated into recitation, performance, and teaching. Mahadevan and Staal (2005, 366–67) observe that exponents of Nambudiri Vedic culture are averse to using written materials during ritual performance, even though the Vedic practitioners of other regions of India have integrated such materials in performance without hesitation.

There are additional obstacles to the integration of literary technologies into Sāmavedic teaching in particular. One is the musical essence of the repertoire: writing on the page cannot convey a Sāmavedic melody with the same precision that a *guru* can.[26] And even if he were so inclined, a Nambudiri student could not learn the Jaiminīya songs on the basis of written materials anyway: historically, Nambudiris have never devised a written system of melodic notation, in effect guaranteeing that the songs could *only* be learned face-to-face from a teacher. Like Nambudiris affiliated with other branches of Vedic learning, Nambudiri Jaiminīyas do possess and sometimes consult inscribed palm-leaf manuscripts and handwritten notebooks—but these contain only the lyrics of the songs *without melodies*.[27] Moreover, such written materials have no place in the lessons proper: for instance, Sreejith never consulted his notebooks in his lessons, even though he used such materials at home for his own personal preparation.[28]

With the precedent of writing in mind, one might expect that the use of digital technology might be similarly circumscribed among Nambudiri Jaiminīyas: fair game for other pursuits, but eschewed in the traditional atmosphere of Vedic transmission.

Yet there are good reasons *not* to place literary and digital technologies on an equal footing in Nambudiri Vedic culture. As suggested above, digital technologies of sound and image have distinct advantages that recommend their integration into a face-to-face, oral pedagogical environment. Unlike written materials, recordings make the *guru* present to those who watch and listen. Every movement of his hands and fingers can be seen, every tremble and quaver of his voice can be heard. And unlike the mute leaves of a manuscript, a video provides ample visual and aural information to pass on the performance of a song in all its nuance. The fact that Vasudevan and Sreejith readily integrated the recordings into their lessons, while continuing to avoid written materials, suggests that video and audio have an affinity with orality that literacy lacks.

Indeed, the use of the digital archive can be understood as a reflex of a time-honored custom of Nambudiri Vedic recitation. Like their counterparts from other branches, Jaiminīya practitioners have always preferred to teach and rehearse in groups rather than alone. This custom of blending two, three, or more voices together has obvious advantages for the rehearsal of such lengthy repertoires: it aids the practitioners' recall; mistakes, if they creep in, can be easily corrected; and when an individual grows tired or his voice fails, he can drop out momentarily without interrupting the progress of the song.[29] It was this preference for ensembles that led the Kalady project to record the practitioners in small groups in the first place—together, they were able to recall and perform the songs with much greater accuracy than if they had attempted it alone. The consultation of the digital *guru*, then, could substitute for the ensemble rehearsals that Vasudevan now lacked because his elders and peers had retired from singing or passed away. Without bothering the retired Neelakanthan, who sips tea only a hundred feet away on his veranda, Vasudevan can access his brother's expertise digitally and on demand. In this way, the digital *guru* becomes an indispensable resource, simultaneously a replacement for the dwindling community of human *guru*s and an almost supernatural means

of summoning their expertise. Using a laptop or smartphone, Vasudevan complements his own knowledge and reconstitutes his authority as a Jaiminīya teacher.

From this vantage, I can return to the question with which I have framed this case study: how does reliance on the digital archive in transmission affect the textual, pedagogical, and ritual authority of Nambudiri Sāmaveda? On the whole, the use of the digital *guru* seems to present a net positive: textually, the digital *guru* is useful in shoring up the integrity of a fragile oral tradition; pedagogically, the digital *guru* has its place in facilitating, with a high degree of precision, the teaching of embodied knowledge; ritually, the digital *guru* is helpful in that it is perceived by practitioners as not compromising the sacrality of the repertoire, and further, it may assist in the training of a new generation of ritual officiants in the Jaiminīya tradition. Still, these advantages are all predicated on using digital technology *within* the highly circumscribed context of socially rooted transmission. Yet technology has a way of taking on a life of its own: once the digital archive constituted by the Kalady recordings has been disseminated, it seems feasible it will find its way into new contexts and become transformed in the process.

The future of the digital guru

So far, this case study of a single teaching relationship illustrates how video and audio recordings have been integrated into the highly conservative culture of Nambudiri Sāmaveda. I have suggested that the sensory immediacy of these media may go long way toward explaining their acceptance where other technologies alien to Sāmavedic transmission, such as writing, have been avoided. The digitization of the *guru* channels embodied knowledge with a high degree of audio-visual nuance. Digital technology serves as a conduit for the presence and expertise of the human *guru* across the bounds of old age and death. But how far might this phenomenon extend? Can the digital *guru* ever *wholly replace* the human *guru*? For practitioners of Nambudiri Sāmaveda, this is not an abstract question but an urgent and practical concern. Over the last few decades, Nambudiri Jaiminīyas have had to confront the reality of having their most respected practitioners retire or pass away. Already in 1992, commenting on the weakness of Jaiminīya lines of transmission, Staal wondered: "Will future [Vedic practitioners] learn the Sāmaveda from tape-recordings for which there is now a growing demand?" (1992, 662). Now that we have more or less arrived at the situation Staal predicted, we should meet such questions head-on. What happens when there is no one left to teach? Can the digital *guru* step into the breach?

A key problem with the digital *guru* is unidirectionality. The digital *guru* has worked well for Vasudevan and Sreejith as a tool, a complement to the human *guru*'s embodied knowledge. The living teacher can react to the song he sees and hears on the screen, qualify it as he passes it along, and correct the student's performance. By contrast, a recording cannot answer questions or point out mistakes; a recording can only serve as a model. But perhaps unidirectionality is not an insurmountable problem: the global popularity of online learning suggests that some people can master significant bodies of knowledge even through one-way

digital pedagogical platforms. Insofar as the core of Sāmavedic pedagogy involves listening and repetition, learning from a digital teacher would not be entirely unlike learning from a human teacher. It is at least conceivable that a talented and diligent autodidact could learn the Jaiminīya repertoire solely on the basis of an audiovisual recording of it.

And yet transmitting the Veda is much more than an act of rote learning and repetition. Like all knowledge, the transmission of Jaiminīya songs does not take place in a vacuum—it is socially rooted and culturally constructed. The digital *guru* can assist learning, but he cannot easily transcend the societal and cultural norms in which he is employed. The pedagogical relationship of Vasudevan and Sreejith is predicated on clear lines of heredity, authority, transmission, and performance; the digital *guru* is pressed into the service of maintaining this traditional stance. If a stranger were to master Sāmaveda through the digital archive, it seems unimaginable that Nambudiri Jaiminīyas would acknowledge his expertise. To put it another way: in the absence of the traditional framework, what it means to "learn the Veda" changes. When authorized teachers die off and eligible students can no longer learn in the traditional way, then transmission effectively ceases, whether or not the songs go on being sung by digital teachers and learned in digital classrooms. When transmission stops being regulated by strict social and pedagogical norms, the integrity of the repertoire as a body of knowledge and performance may crumble: for instance, a student may opt to learn only those songs necessary for a specific ritual, or else to learn them in a style influenced by Sāmavedic traditions from other regions (for examples, see Gerety 2016). Instead of denoting a specific repertoire preserved by established lines of authority and transmission, the unmoored "Jaiminīya Sāmaveda" could become a generic rubric under which a range of heterogeneous songs and performances may be catalogued. In such circumstances, the chain of embodied knowledge linking present-day practitioners to their ancient forbears would be corroded, or even broken entirely. The Jaiminīya songs might live on through digital media, but in a different form and social context, one which Nambudiris of the older generation might not recognize, and with which they would have no direct connection.

Epilogue: farewell to the singer, farewell to the song

Let us return now to the lives of Vasudevan and Sreejith. How have they fared with the digital *guru*? What impact has digital technology had on the fulfillment of Sreejith's ambition to rescue Nambudiri Jaiminīya Sāmaveda from extinction? I now take up what is at once the most significant and elemental difference between a human *guru* and his digital counterpart, pertaining not to the passing on of information but to the production of affect. And here the limitations of digital technology are stark, with profound implications for transmitting the Veda. The flesh-and-blood teacher inspires and motivates, while the digitized teacher is a phantasm, evoking at best only the memory of inspiration and motivation. The digital *guru* is a means to a goal; the human *guru* embodies the very goal itself. This became clear to me during a recent visit, when I heard that Sreejith had

abandoned his quest to master the Jaiminīya Sāmaveda, and that transmission of the Jaiminīya repertoire among the Nambudiris had all but ceased.

When I returned to Panjal in early 2014, Sreejith did not pick up my calls. Mutual friends told me that he planned to leave Kerala to study traditional Indian medicine (*āyurveda*) in faraway Chennai, Tamil Nadu. This turn of events was not entirely unexpected—I knew that he had been discouraged by what he perceived to be the prevailing mediocrity of the few Jaiminīya practitioners still active in Nambudiri Vedic culture, and that he was disgusted by what he regarded as "selling the Veda" in the performance of high-profile rituals, that is, trading on Vedic expertise for the sake of cash and media attention (cf. Knipe 2015, 39, 53). What was the point, he had asked, of laboring to learn the entire Jaiminīya repertoire for the sake of posterity, when others in the community could get by with learning only the bits necessary for certain rituals? He had wanted no part of this, and even turned down opportunities for ritual performance because he questioned the competence of the other practitioners involved. Moreover, I knew that his years of forgoing a career outside of the Veda had cost him personally: his younger brother, with a lucrative corporate job in Bangalore, had gone ahead and married before him, while Sreejith had a meager income and no marital prospects.

So four years after our first meeting, and some fifteen years after he had begun studying the songs with Vasudevan, Sreejith gave up. His disillusionment coincided with a decline in Vasudevan's health; the teacher's increasing infirmity prevented him from interceding with his student as he otherwise might have. The same day I was trying in vain to reach Sreejith, I got a call from a friend telling me that Vasudevan had died. When I reached Nellikkāṭṭu *mana* the next morning, Vasudevan's funerary rites had been completed and smoke billowed up from the grove of trees on the edge of the adjoining paddy. I walked into the small room with blue walls that had been the site of so many Sāmavedic lessons over the years. The closed double door that had framed these lessons was now open, affording access to an inner room and thence to the grounds beyond. I walked through into the bright outdoor light. Vasudevan's corpse was wrapped in cloth and laid out on the pyre. Flames engulfed him with a heat that scorched nearby leaves and sent me staggering backward. The villagers who had cut the wood, arranged the pyre, and ignited the blaze stood by talking in low voices, looking on as the great singer's body turned to embers and ash. Sreejith stood there beside me; he was home on a brief hiatus from his Āyurvedic studies and had come that morning with members of his family to pay respects. There was no chance to talk about Sāmavedic transmission that solemn morning. I could not ask him how he felt about giving up his efforts to master the Jaiminīya repertoire, nor about what his choice meant for the future of Sāmaveda among the Nambudiris. But circumstances made one thing quite clear: with the human *guru* gone, learning for this student became pointless and impossible. Sreejith would now study Āyurveda in a distant classroom, instead of Sāmaveda in his neighbor's house. The digital *guru*, for all his uncanny ability to preserve the voices of dead men, could do nothing more to call out to the living.

Notes

1. For the results of this research, funded by the Harvard South Asia Initiative, see Gerety 2016. I am indebted to T. P. Mahadevan for guiding me on this and subsequent trips, and for his expertise, good humor, and unstinting generosity.

2. On the fundamentals of Sāmavedic texts and practices, see Caland 1907 and 1931, i–ii; Renou 1947, 92; Staal 1961, 64; Parpola 1973, 25–26; Howard 1977, 8–9; Staal 1983, 1, 19, 33–34.

3. On this day, Vasudevan teaches Sreejith two "village songs" (*grāmageyagāna*) from the Jaiminīya Samhita, including the one given above (21.5.2) and another with the following lyric:

indra iṣe dadātu nā o hāyi / ṛbūkṣaṇām ṛbhuṃ rāyīṃ / vājī dadātu vā / vājī dadātu vo bā jāyināṃ / hāyi // (21.6.2)

The oral repertoire of such Nambudiri Jaiminīya *gāna*s remains unpublished, save for excerpts (e.g., Staal 1961; 1968). Nambudiri versions differ in some respects from the Jaiminīya *gāna*s that have been published from other regional traditions (cf. Vibhūtibhūṣaṇa Bhaṭṭācārya 1976, 92). I give the Nambudiri *gāna*s here on the basis of handwritten notebooks dictated from memory in the 1970s by the practitioner Iṭṭi Ravi Nambudiri (see Muṭṭattukāṭṭu Māmaṇṇu, n.d.). In keeping with the proprietary system of reference of the Nambudiri Jaiminīyas (see Staal 1983, 1: 276–78), my citations indicate the twenty-first "song" (Malayalam *oṭṭu*), fifth and sixth "melodies" (*sāmaṃ*), and second iteration of each.

The lyrics as given are musical modifications of verses (*ṛc*) found in the *ārcika* section of the Jaiminīya Samhita (see Caland 1907, 44; Raghu Vīra 1938, 121), which in turn have been adapted from Ṛgvedic hymns. The source verses, in praise of Indra and the Ṛbhus, divine artisans, run as follows (Ṛgveda text from Van Nooten and Holland 1994; translation from Jamison and Brereton 2014):

> *índram íd gāthíno bṛhád índram arkébhir arkíṇaḥ /*
> *índraṃ vā́ṇīr anūṣata //* (1.7.1)

Just to Indra have the singers bellowed aloft, to Indra the chanters with their chants, to Indra their voices.

> *índra iṣé dadātu na ṛbhukṣáṇam ṛbhúṃ rayím /*
> *vājí dadātu vājínam //* (8.93.34)

Let Indra give us the wealth belonging to craft (*ṛbhu*) as the craftsmaster (*ṛbhukṣan*) for our refreshment. Let the prizewinner give a prizewinner.

4. Commenting on a similar dynamic among Brahmins in Andhra Pradesh, David Knipe observes: "Transmission involves, in a remarkable reciprocity, what might be considered sound mysticism. The student, day by day, year after year, is bonded to his *guru* by mantric sound (*śabda*). He hears, and replicates, the *guru*'s voice as text. He will *always* hear the *guru*'s voice as text because he has appropriated Veda in that voice as his own" (Knipe 2015, 146).

5. Consisting chiefly of verses, charms, and spells, the Atharvaveda was historically excluded from sacrifice, only becoming associated with the three principal Vedic liturgies after the Vedic period (Witzel 1997, 278; Gonda 1975, 268). Atharvavedic traditions have never been represented among the Nambudiris.

6. Although my account follows the consensus position among Indologists, the fundamental orality of Vedic traditions remains a contentious issue in some quarters. For dissenting views, see Bronkhorst 2007; Goody and Watt 1963; Goody 1987; and Ong 1982; these scholars insist that works of such length and complexity could only have been composed and fixed with the aid of writing. For Indological responses to such critiques, see Staal 1986; Falk 1990; and Scharfe 2002.

7. Lord argued that the very essence of oral tradition as a category was fluid textuality predicated on composition-in-performance; see Lord 1960; 1995, 1. This emphasis on fluidity has long dominated the study of oral traditions (e.g., Foley 1998, 13–33). Still, there is a growing

body of scholarship dealing with traditions worldwide where fixed oral texts coexist with or replace fluid oral texts: see, e.g., Doniger 1991; Jaffee 1999; and Orwin 2005.

8. Especially in the present moment, when many Vedic practitioners regard the very "survival" of local oral traditions to be threatened, the teaching of non-mantra texts (e.g., the interpretive prose of the Brāhmaṇas or Upaniṣads) is a luxury that few can afford (Fujii 2012; Knipe 2015; Gerety 2016).

9. Schroeder (1881–86) 1970–72, vol. 4. *kiṃ brāhmaṇasya pitaraṃ kim u pṛchasi mātaram/ śrutaṃ ced asmin vedyaṃ sa pitā sa pitāmahaḥ //*

10. The manuscript tradition of Nambudiri Jaiminīyas records only the lyrics, without any reference to the melodies (Fujii 2012, 106, 112). By contrast, the manuscript tradition of Tamil Jaiminīyas gives lyrics with accompanying musical notation. Strikingly, Howard has shown that the singing and hand-showing of the Nambudiris are actually more faithful to the notated melodies in Tamil Jaminiya manuscripts than are the vocal renditions of contemporary Tamil practitioners who use the written system. Howard speculates that the Tamil system of melodic notation may be a literary derivate of the embodied system still practiced today in Kerala (Howard 1988, 18–19).

11. I am grateful to Leah Lowthorp for coining the expression "embodied archive" in our conversation about the themes of this article, and for inviting me to present this material at "Netlore: Globalizing Folklore in a Digital World," the April 2015 symposium of the Committee on Folklore & Mythology at Harvard University, where I benefited greatly from the feedback of the other participants, especially David Elmer and Frank Korom.

12. Emic accounts place the arrival of Nambudiris in the south quite early. According to one Nambudiri system of dating (*akṣarasaṃkhya*), which Thennilapuram Mahadevan describes as a "verbal algorithm" and "non-numerical way of marking history," the culture hero and founder of Nambudiri lineages, Mēḻattōḷ Agnihotri, celebrated a series of ninety-nine sacrifices that culminated in a final performance in 376 CE; a related reckoning fixes his birth in Kerala in 343 CE (Mahadevan n.d.). Mahadevan takes this as corroborating his broader thesis that the Nambudiris were among the earliest Brahmin arrivals to the south, as well as the earliest Brahmins to proceed from Tamil country to Kerala ca. 5th century CE. Kesavan Veluthat demonstrates that Brahmins were resident in Kerala well before the 7th century CE (Veluthat 1978, 4–16, 77–78), establishing a network of villages to which modern Nambudiris trace their ancestry; these early Kerala Brahmins were affiliated with temples rather than settled in the *agrahara*s typical of most south Indian Brahmin communities (see also Davis 2004, 44–48). Asko Parpola argues that the Nambudiris came to Kerala from Tamil country during the late first millennium CE, perhaps with Cera patronage (Parpola 2011, 346).

13. On the history of the Nambudiris, their present situation, and their social organization and institutions, see Staal 1961, 31–36; 1983, 1: 167–87; M. Parpola 2000; Fujii 2012. For parallel changes among *vaidika* Brahmins in Andhra Pradesh, see Knipe 2015.

14. Conversely, the fact that Sāmaveda is required *only* in the Soma sacrifice (and not at most other Vedic ritual occasions, save for domestic rites within Sāmavedic families) may have contributed to its relative weakness compared to Nambudiri traditions of Ṛgveda and Yajurveda.

15. Be that as it may, as I have shown elsewhere (Gerety 2016), the pressure to field officiants for *śrauta* ritual performance has led to the relaxation of some of the strict norms for Sāmavedic transmission.

16. Although the initiation rites of different branches among the Nambudiris share the same basic structure, those of the Jaiminīyas have certain unusual characteristics (see, for example, Staal's discussion of the Jaiminīya requirement that the initiate not change his undergarments for the duration of his initiatory year; Staal 1992, 661). Moreover, the Jaiminīyas are known for being extremely punctilious in ritual matters, so much so that they do not regard initiations as performed in other Vedic branches as sufficient for admitting boys to study the Jaiminīya repertoire.

17. On the occasional non-normative transmissions of the Nambudiri Jaiminīya repertoire undertaken during the period of research, all of which have since faltered, see Gerety 2016.

18. Their father, also Neelakanthan, led a performance of the most prestigious of Nambudiri rituals, the *agnicayana*, in 1956. As a young man, Vasudevan himself officiated at that 1956 ritual; the piled-brick altar in the shape of a bird is still visible in the jungle behind their family compound (see Staal 1983, 1: 188–89, plate 16). For a rundown of Vasudevan's ritual career, see Gerety 2016, 451n34. On the father Neelakanthan's pious and observant lifestyle, see Nellikkāṭṭu, n.d. and Fujii 2012, 110–11.

19. Both the Muṭṭattukāṭṭu and Nellikkāṭṭu houses share the second name *Māmaṇṇŭ*, an unexplained honorific from a bygone time, perhaps ten generations back, when they formed a single patrilineal descent group (Fujii 2012, 108n33; A. Parpola 1984, 34).

20. Kiḻḻimaṅgalam Vasudevan "Kuñju" Nambudirippāṭŭ, oral communication, 2010. The words of this Nambudiri aficionado of Sāmaveda carry weight, for he has spent as much time listening to and documenting Jaiminīya Sāmaveda as any non-Samavedin alive today. Kuñju, trained as a teenage Brahmin cameraman by filmmaker Robert Gardner during the filming of *Altar of Fire* (Gardner and Staal 1976), has continued to play an active role in documenting Nambudiri Vedic traditions. His most recent effort, entitled *Tradition on the Wane* (Kiḻḻimangalam Vasudevan Nambudiri n.d.), is an hour-long documentary featuring several master Jaiminīya practitioners.

21. This non-normative transmission marked the first time that Jaiminīya songs were being taught to boys who were not Jaiminīyas by birth, but rather Ṛgvedic Āśvalāyanas, an apparent concession to the urgency of saving the Jaiminīya oral tradition by any means necessary. See Gerety 2016, 454–55.

22. Such was the opinion of Polpaya Vinod Bhattathiripad (oral communication, July 2010), an active organizer of numerous Vedic rituals and founder of Namboothiri Websites Trust (Bhattathiripad, n.d.).

23. This research was funded jointly by a Fulbright-Nehru Fellowship from the International Institute of Education and by a Frederick Sheldon Traveling Fellowship from Harvard University. Ultimately, my dissertation (Gerety 2015a) focused more closely on the analysis of ancient texts of the Jaiminīya Sāmaveda and less on its modern iterations.

24. An exception to this trend was the idiosyncratic continuation of Jaiminīya teaching within a single student household, Tōṭṭam *mana*, spurred in part by the patronage of then-Śāṅkarācārya of Kañcipuram, Candraśekharendra Sarasvati. Teaching in this line has continued on and off since then, although frequently departing from the conventional norms; see Gerety 2016, 452–53.

25. In addition to Vasudevan and his brother Neelakanthan, of Nellikkāṭṭu Māmaṇṇŭ *mana*, the other practitioners were: Vasudevan of Perumaṅṅāṭŭ *mana*, and Aryan and Narayanan, both of Tōṭṭam *mana*. For further details about the scope and execution of the Kalady videos, see the promotional pamphlets (Neelakanthan 2001; School of Vedic Studies n.d.).

26. On the musical qualities of Sāmaveda and for a musicological analysis of numerous songs and performances, see Howard 1977.

27. By contrast, other Jaiminīya communities in south India have devised systems of melodic notation to complement face-to-face teaching; see note 10 above.

28. Sreejith told me he felt the lack of written melodic notation when he practiced alone without a teacher to consult. To cope with this, he tried to devise his own personal system of notation, consisting of handwritten sequences of lines, dots, and squiggles above the lyrics.

29. This ensemble practice has even been institutionalized in certain rituals of transmission such as the *trisandhā*, still attested in Ṛgvedic families among the Nambudiris (see Galewicz 2010). Vasudevan informed me that similar customs used to exist in Sāmavedic families but had not been practiced in his lifetime (oral communication, March 2012).

References

Alper, Harvey P., ed. 1989. *Understanding Mantras*. SUNY Series in Religious Studies. Albany, N.Y.: State University of New York Press.

Beck, Guy L. 1993. *Sonic Theology: Hinduism and Sacred Sound*. Studies in Comparative Religion. Columbia, S.C.: University of South Carolina Press.

Bhattathiripad, Polpaya Vinod. n.d. "Namboothiri Websites Trust," last modified March 2, 2011. http://namboothiri.com/

Bronkhorst, Johannes. 2007. *Greater Magadha: Studies in the Culture of Early India*. Handbuch Der Orientalistik. Zweite Abteilung, Indien: 19 Bd. Leiden & Boston: Brill.

Caland, Willem, ed. 1907. *Die Jaiminīya-Samhitā mit einer Einleitung über die Sāmavedaliteratur*. Breslau: M. & H. Marcus.

Caland, Willem, ed. and trans. 1931. *Pañcaviṃśa-Brāhmaṇa: The Brāhmaṇa of Twenty Five Chapters*. Bibliotheca Indica 255. Calcutta: Asiatic Society of Bengal.

Coburn, Thomas B. 1984. "'Scripture' in India: Towards a Typology of the Word in Hindu Life." *Journal of the American Academy of Religion* 52 (3): 435–59.

Davis, Donald R. 2004. *The Boundaries of Hindu Law: Tradition, Custom, and Politics in Medieval Kerala*. Torino: Comitato "Corpus iuris Sanscriticum et fontes iuris Asiae Meridianae et Centralis."

Desai, Manali. 2007. *State Formation and Radical Democracy in India*. London & New York: Routledge.

Doniger, Wendy. 1991. "Fluid and Fixed Texts." In *Boundaries of the Text: Epic Performances in South and Southeast Asia*, edited by Joyce Burkhalter Flueckiger and Laurie J. Sears, 31–41. Ann Arbor: Center for South and Southeast Asian Studies, University of Michigan.

Falk, Harry. 1990. "Goodies for India: Literacy, Orality, and Vedic Culture." In *Erscheinungsformen kultureller Prozesse*, edited by Wolfgang Raible, 103–20. Tübingen: Gunter Narr Verlag.

Foley, John. 1998. "The Impossibility of Canon." In *Teaching Oral Traditions*, edited by John Foley, 13–33. New York: Modern Language Association.

Fujii, Masato. 2012. "The Jaiminīya Sāmaveda Traditions and Manuscripts in South India." In *Aspects of Manuscript Culture in South India*, edited by Saraju Rath, 99–118. Leiden: Brill. https://doi.org/10.1163/97890042234 79_006

Galewicz, Cezary. 2010. "Inscribing Scripture through Ritual: On the Ritual Cycle of the Trisandhā." In *Grammars and Morphologies of Ritual Practices in Asia*, vol. 1 of *Ritual Dynamics and the Science of Ritual*, edited by Axel Michaels, 117–40. Wiesbaden: Harrassowitz Verlag.

Gardner, Robert, and J. F. Staal. 1976. *Altar of Fire*. Film Study Center, Harvard University, color, 58 min.

Gerety, Finnian M. M. 2015a. "This Whole World is OM: Song, Soteriology, and the Emergence of the Sacred Syllable." PhD diss., Harvard University. Accessed September 1, 2015. http://dash.harvard.edu/handle/1/17467527

———. 2015b. "human_guru," video of Sāmavedic lesson in Panjal, Kerala, July 2010, MPEG video, :50, https://vimeo.com/138656513

———. 2015c. "digital_guru," video of Sāmavedic lesson in Panjal, Kerala, March 2012, MPEG video, 1:18, https://vimeo.com/138655974
———. 2016. "Survivals & Revivals: The Transmission of Jaiminīya Sāmaveda in Modern South India." In *The Vedic Śākhās: Past, Present, Future*, Harvard Oriental Series, Opera Minora 9, edited by Jan Houben, Julieta Rotaru, and Michael Witzel, 443–74. Cambridge, MA: Dept. of South Asian Studies, Harvard University.
———. 2017. "The Amplified Sacrifice: Sound, Technology, and Participation in Modern Vedic Ritual." *South Asian History and Culture* 8 (4): 560–78. https://doi.org/10.1080/19472498.2017.1371505

Gonda, Jan. 1963. "The Indian Mantra." *Oriens* 16: 244–97. https://doi.org/10.2307/1580265
———. 1975. *Vedic Literature: (Saṃhitās and Brāhmaṇas)*. A History of Indian Literature, vol. 1. fasc. 1. Wiesbaden: Harassowitz.

Goody, Jack, and Ian Watt. 1963. "The Consequences of Literacy." *Comparative Studies in Society and History* 5 (3): 304–45.

Goody, Jack. 1986. *The Logic of Writing and the Organization of Society*. Cambridge: Cambridge University Press. https://doi.org/10.1017/cbo9780511621598
———. 1987. *The Interface between the Written and the Oral*. Cambridge: Cambridge University Press.

Hara, Minoru. 1980. "Hindu Concepts of Teacher, Sanskrit *Guru* and *Ācārya*." In *Sanskrit and Indian Studies: Essays in Honour of Daniel H. H. Ingalls*, edited by M. Nagatomi, B. K. Matilal, J. M. Masson, and E. C. Dimock Jr., 93–118. Dordrecht, Boston, & London: D. Reidel Publishing Company. https://doi.org/10.1007/978-94-009-8941-2_6

Hess, Linda. 2015. *Bodies of Song: Kabir Oral Traditions and Performative Worlds in North India*. New York: Oxford University Press.

Howard, Wayne. 1977. *Sāmavedic Chant*. New Haven & London: Yale University Press.
———. 1986. *Veda Recitation in Vārāṇasī*. Delhi: Motilal Banarsidass.
———. 1988. *The Decipherment of the Sāmavedic Notation of the Jaiminīyas*. Studia Orientalia 63. Helsinki: The Finnish Oriental Society.

Jaffee, Martin S. 1999. "Oral Tradition in the Writings of Rabbinic Oral Torah: On Theorizing Rabbinic Orality." *Oral Tradition* 14 (1): 3–32.

Jha, Gaṅganātha, ed. and trans. 1916. *The Pūrva-mīmāṃsā-sūtras of Jaimini: Chapters I–III*. Allahabad: The Pāṇini Office.

Knipe, David M. 2015. *Vedic Voices: Intimate Narratives of a Living Andhra Tradition*. Oxford & New York: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199397686.001.0001

Jamison, Stephanie, and Joel Brereton, trans. 2014. *The Rigveda: The Earliest Religious Poetry of India*, 3 vols. New York: Oxford University Press.

Jones, Clifford. 1983. "Notes on Comparison of Vedic Mudras with Mudras Used in Kūṭiyāṭṭam and Kathakali." In *Agni*, vol. 2, edited by Frits Staal, 380–82. Berkeley: Asian Humanities Press.

Kiḻḷimangalam Vasudevan Nambudiri. n.d. *Tradition on the Wane*. Documentary film, color, videocassette.

Larios, Borayin. 2013. "The *Vedamūrti*: Embodying the Veda in Contemporary Maharashtra." *International Journal of Hindu Studies* 17 (3): 289–314. https://doi.org/10.1007/s11407-014-9141-2

———. 2017. *Embodying the Vedas. Traditional Vedic Schools of Contemporary Maharashtra*. Warsaw & Berlin: De Gruyter Open.

Levy, John, and J. F. Staal. 1968. *The Four Vedas: The Oral Tradition of Hymns, Chants, Sacrificial and Magical Formulae*. Folkways Records FW 04126, 33 1/3 RPM.

Lomax, Alan, Edwin E. Erickson, and American Association for the Advancement of Science. 1968. *Folk Song Style and Culture*. Washington: American Association for the Advancement of Science.

Lord, Albert Bates. 1960. *The Singer of Tales*. Cambridge, MA: Harvard University Press.

———. 1995. *The Singer Resumes the Tale*. Ithaca, NY: Cornell University Press.

Mahadevan, Thennilapuram. 2008. "On the Southern Recension of the Mahābhārata, Brahman Migrations, and Brāhmi Paleography." *Electronic Journal of Vedic Studies* 15 (2): 43–185. Accessed September 1, 2015. http://dx.doi.org/10.11588/ejvs.2008.2.327

———. 2011. "The *Ṛṣi* Index of the Vedic Anukramaṇi System and the Pravara Lists: Toward a Pre-History of the Brahmans." *Electronic Journal of Vedic Studies* 18 (2): 1–140. Accessed September 1, 2015. http://dx.doi.org/10.11588/ejvs.2011.2.320

———. 2016. "The Institution of Gotra, the *Ṛ*gveda, and the Brahmans." In *The Vedas in Indian Culture and History: Proceedings of the Fourth International Vedic Workshop (Austin, Texas 2005?)*, edited by Joel P. Brereton, 259–87. Florence, Italy: Società Editrice Fiorentina.

———. n.d. "Akṣarasaṃkhya: A Novel App of Nambudiri Data Storage." Unpublished PDF. Accessed September 1, 2015.

Mahadevan, T. P., and Frits Staal. 2005. "The Turning Point in a Living Tradition: Somayāgam 2003." In *Indische Kultur im Kontext: Rituale, Texte und Ideen aus Indien und der Welt*, edited by Lars Göhler, 365–89. Wiesbaden: Harrassowitz.

Muṭṭattukāṭṭu Māmaṇṇu Iṭṭi Ravi Nampūtiri. n.d. Unpublished handwritten notebooks of Jaiminīya Sāmaveda, from the collection of Asko Parpola. PDF file from a photocopy by Masato Fujii, accessed September 7, 2015.

Nagy, Gregory. 1996. *Poetry As Performance: Homer and Beyond*. Cambridge & New York: Cambridge University Press.

Neelakanthan, C. M. 2001. "Sāmaveda, Audio and Video Recording." Kālaṭi: Sree Sankaracharya University of Sanskrit, School of Vedic Studies. Printed pamphlet.

Nellikkāṭṭu Nīlakaṇthan Akkittirippāṭu. n.d. *Karmamārga: Memoirs of Brahmaśri Nellikkāṭṭu N. Nīlakaṇthan Akkittirippāṭu*, edited and translated by Asko Parpola. Unpublished manuscript in Microsoft Word file, version of February 2012. Accessed September 1, 2015.

Ong, Walter. 1982. *Orality and Literacy: The Technologizing of the Word*. London: Methuen. https://doi.org/10.4324/9780203328064

Orwin, Martin. 2005. "On the Concept of 'Definitive Text' in Somali Poetry." *Oral* Tradition, 20 (2): 278–99. https://doi.org/10.1353/ort.2006.0010

Parpola, Asko. 1973. "The Literature and Study of the Jaiminīya Sāmaveda in Retrospect and Prospect." *Studia Orientalia*, 43 (6): 1–33.

———. 1984. "On the Jaiminīya and Vādhūla Traditions of South India and the Pāṇḍu/Pāṇḍava Problem." *Studia Orientalia* 55: 429–68 (3–42).
———. 2011. "Codification of Vedic Domestic Ritual in Kerala: Pārvaṇa-Sthālīpāka —The Model of Rites with Fire-Offerings—In Jaiminīya-Gṛhyasūtra 1, 1–4 and in the Malayāḷam Manual of the Sāmaveda Nampūtiri Brahmins of Kerala, the Sāma-Smārtta-Caṭaṅṅu." In *Travaux de Symposium International Le Livre. La Roumanie. L'Europe, Tome III: La troisième section, études euro- et afro-asiatiques*, edited by Jan E. M. Houben and Julieta Rotaru, 261–354. Bucharest: Éditeur Bibliothèque de Bucarest.

Parpola, Marjatta. 2000. *Kerala Brahmins in Transition: A Study of a Nampūtiri Family*. Studia Orientalia 91. Helsinki: Finnish Oriental Society.

Patton, Laurie, ed. 1994. *Authority, Anxiety, and Canon: Essays in Vedic Interpretation*. Albany, NY: State University of New York Press.

Raghu Vīra. 1938. *Sāma Veda of the Jaiminīyas*. Sarasvati Vihara Series 3. Lahore: International Academy of Indian Culture.

Renou, Louis. 1947. *Les écoles védiques et la formation du Véda*. Paris: Imprimerie National.

Scharfe, Hartmut. 2002. *Education in Ancient India*. Handbuch der Orientalisk 16. Leiden, Boston: Brill.

School of Vedic Studies. n.d. "Sāmaveda in Audio & Video Cassettes." Kālaṭi: Sree Sankaracharya University of Sanskrit, School of Vedic Studies. Printed pamphlet.

Schroeder, Leopold von. (1881–86) 1970–72. *Maitrāyaṇī Saṃhitā: die Saṃhitā der Maitrāyaṇīya-Śākhā*, 4 vols. Wiesbaden: F. Steiner.

Smith, B. K. 1989. *Reflections on Resemblance, Ritual, and Religion*. New York: Oxford University Press.

Staal, J. F. 1961. *Nambudiri Veda Recitation*. Disputationes Rheno-Trajectinae 5. 'S-Gravenhage: Mouton & Co.

———. 1968. "The Twelve Ritual Chants of the Nambudiri Agniṣṭoma." In *Pratidānam: Indian, Iranian, and Indo-European Studies Presented to Franciscus Bernardus Jacobus Kuiper on his Sixtieth Birthday*, edited by J. C. Heesterman, G. H. Schokker, and V. I. Subramoniam, 409–29. The Hague, Paris: Mouton.

Staal, Frits. 1983. *Agni: The Vedic Ritual of the Fire Altar*, 2 vols. Berkeley, CA: Asian Humanities Press.
———. 1986. *The Fidelity of Oral Tradition and the Origins of Science*. Mededelingen der Koninklijke Nederlandse, Akademie van Wetenschappen, Afd. Letterkunde, nieuwe reeks 49 (8). Amsterdam, Oxford, & New York: North Holland Publishing Company.
———. 1989. *Rules Without Meaning: Ritual, Mantras, and the Human Sciences*. New York: Peter Lang.
———. 1992. "Agni 1990. With an Appendix by H. F. Arnold." In *Ritual, State, and History in South Asia: Essays in Honour of J. C. Heesterman*, edited by A. W. van den Hoek, D. H. A. Kollf, and M. S. Oort, 650–76. Leiden, New York: E. J. Brill.

———. 2008. *Discovering the Vedas: Origins, Mantras, Rituals, Insights*. New Delhi: Penguin Books.

van Buitenen, J. A. B. 1974. "Hindu Sacred Literature." In *The New Encyclopaedia Britannica / Macropaedia: Knowledge in Depth*, 15th ed. Vol. 8, *Geraniales–Hume*, edited by Philip W. Goetz, 932–40. Chicago: Encyclopaedia Britannica.

Van Nooten, Barend A., and Gary B. Holland, eds. 1994. *Rig Veda: A Metrically Restored Text*. Harvard Oriental Series 50. Cambridge, MA: Dept. of Sanskrit and Indian Studies.

Veluthat, Kesavan. 1978. *Brahman Settlements in Kerala: Historical Studies*. Calicut: Sandhya Publications, Calicut University.

Vibhūtibhūṣaṇa Bhaṭṭācārya, ed. 1976. *Jaiminīya Sāmagāna*. Sarasvatī-Bhavana-Granthamālā 109. Varanasi: Sampurnanand Sanskrit Vishvavidyalaya.

Weber, Albrecht, ed. 1855. *The Śatapatha Brāhmaṇa in the Mādhyaṃdina-Śākha*. Berlin: F. Dümmler.

Wilke, Annette, and Oliver Moebus. 2011. *Sound and Communication: An Aesthetic Cultural History of Sanskrit Hinduism*. Berlin: De Gruyter.

Witzel, Michael. 1987. "On the Localisation of Vedic Texts and Schools (Materials on Vedic Śākhās, 7)." In *India and the Ancient World. History, Trade and Culture Before A.D. 650. P. H. L. Eggermont Jubilee Volume*, Orientalia Lovaniensia Analecta 25, edited by G. Pollet, 173–213. Leuven: Departement Oriëntalistiek.

———. 1989. "Tracing the Vedic Dialects." In *Dialectes dans les littératures indo-aryennes*, edited by Colette Caillat, 97–265. Paris: Collège de France, Institut de Civilisation Indienne.

———. 1997. "The Development of the Vedic Canon and its Schools: The Social and Political Milieu (Materials on Vedic *Śākha*s 8)." In *Inside the Texts, Beyond the Texts: New Approaches to the Study of the Vedas*, Harvard Oriental Series, Opera Minora 2, edited by Michael Witzel, 257–348. Cambridge, MA: Harvard University Dept. of Sanskrit and Indian Studies.