Hinduism, Buddhism, and Science

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RELIGIOUS RITES AND SCIENTIFIC COMMUNITIES: *AYUDHA PUJA* AS "CULTURE" AT THE INDIAN INSTITUTE OF SCIENCE

by Renny Thomas and Robert M. Geraci

Abstract. *Ayudha Puja*, a South Indian festival translated as "worship of the machines," is a dramatic example of how religion and science intertwine in political life. Across South India, but especially in the state of Karnataka, scientists and engineers celebrate the festival in offices, laboratories, and workshops by attending a puja led by a priest. Although the festival is noteworthy in many ways, one of its most immediate valences is political. In this article, we argue that *Ayudha Puja* normalizes Brahminical Hinduism within scientific culture through the inclusion of non-Hindus and through scientists' description of the festival as "cultural" rather than "religious."

Keywords: culturalization; ethnography; Hinduism; India; ritual; science; technology

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The Presence of Religion in Scientific Life

Ayudha Puja, a South Indian festival translated as "worship of the machines," is a dramatic example of how religion and science intertwine in political life. Across South India, but especially in the state of Karnataka, scientists and engineers celebrate the festival in offices, laboratories, and workshops by attending a *puja* led by a priest. Although the festival is noteworthy in many ways, one of its most immediate valences is political. In this article, we argue that *Ayudha Puja* normalizes Brahminical Hinduism within scientific culture through the inclusion of non-Hindus and through scientists' description of the festival as "cultural" rather than "religious."

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The Politics of Religion and Science: A Western Discipline in India

The integration of religion and science in *Ayudha Puja* bears witness to the fact that religion and science are not always in conflict with one another, which has been repeatedly demonstrated by historians, theologians, and philosophers. Responding to nineteenth century conflict theses, Robert K. Merton (1970) argued in his 1936 PhD thesis that certain religious perspectives are conducive to scientific progress, and later coalitions of scientists and theologians sought to politically reconcile religion and science, forming collaborations. In particular, members of the Institute for Religion in an Age of Science and other groups argued that religion and science need not always be in conflict and that the modern age of advanced weaponry made collaborations necessary (see Gilbert 1997). A seminal contribution during this time came from Ian Barbour, who established the first typology of possible relationships between religion and science: conflict, independence, dialogue, and harmony (see Barbour 1997).

Historians subsequently revealed how specific scientific and theological ideas varied over time and location (e.g., Lindberg and Numbers 1986; Numbers 2009; Harrison 2015). In particular, historians studying the specific biographical details of individuals (e.g., Brooke 1991; Brooke and Cantor 1998) and case studies of events (e.g., Cantor 2011) revealed complex interplays where Barbour's typology failed to capture the richness of individual experience. Furthering this historical approach, historians came to realize that the relationships between religion and science were often driven by personal, local, and international politics rather than by religious or scientific ideas themselves (e.g., Biagioli 1993).

More recently, Michael Stenmark (2010, 280) notes that much scholarship in religion and science presupposes the search for reconciliation between the two and further that the classifications by which one party makes such classifications may not be shared by those they so classify (Stenmark 2010, 281; see also Geraci 2010, 144–45). Ultimately, Stenmark restructures typological thinking to be more flexible under historical conditions, cognizant of the political motivations of those in the debate, and reflective of varying approaches to religion and science themselves. This article is not an attempt to show some form of "reconciliation" or "integration" between religion and science, but rather to show that the integration of religion, science, and technology can have political repercussions. Empirically, we recognize a practice with religious lineage, happening in a scientific environment, and incorporating technological apparatus. We thus acknowledge that religion and science show no particular antagonism in *Ayudha Puja* and seek to demonstrate one function served by the co-presence of religion, science, and technology in this festival.

In the case of non-Western cultures—and often in the West also—the study of religion and science has shown a preference for sweeping statements that ignore the mechanics and politics of local life. This problem is especially notable with regard to Hinduism, where one author's religious perspective is often taken to be illustrative of a wider community without evidence to the fact (e.g., Raman 2011). Sociological surveys designed to overcome such problems shed some light but they too often contradict themselves or provide inadequate understanding of how Indians, themselves, would define their realities (e.g., Keysar and Kosmin 2008). By necessity, respondents must use the terms and categories provided by the surveyors and this can lead to inconsistencies or misunderstandings.

Ethnographic analysis is therefore vital to understanding the relationships between religion and science in the contemporary moment. Although fieldwork is desirable to ascertain the conditions that pertain to religion, science, and technology throughout India's diverse culture, this essay engages only the political ramifications of integrating religion, science, and technology in a scientific institution. Our analysis hinges upon the words and experiences of scientists and engineers and through observations of religious practice in scientific spaces. The South Indian festival of *Ayudha Puja* is a perfect example of such relationships, and it reveals how culture is normalized through ritual practices that bend and subvert expected distinctions between religion and science, tradition and secular modernity.

History shows how scientists and others integrated Hinduism into wider Indian science and thereby normalized it within the nationalist movements of the late nineteenth and early twentieth centuries. For example, Ashis Nandy ([1980]2012, 61–62) notes that J. C. Bose integrated Vedantic monism with science when he moved away from physics toward plant physiology and biophysics, disciplines that he combined in the belief that all of matter revealed essential characteristics of life. "By rediscovering traditions through science, he [Bose] helped retain a core of self-esteem in a people threatened by the patent supremacy and power of a foreign system" (Nandy [1980]2012, 83). Bose's efforts at reconciling science and religion suffer from his insufficient rigor in questioning his convictions (Brown 2016, 119); but they represent an interesting political move that finds echoes in *Ayudha Puja*. Although the festival may or may not be effective at reconciling the disparate elements in its conjunction of religion, science, and technology, we are interested in how that conjunction serves social and political ends (just as did Bose's).

Major figures in Indian science often cheerfully integrated religious and scientific identities—or are believed to have done so, at any rate. Deepak Kumar, writing about colonial India, argues that science was not seen to conflict with the Hindu tradition. Darwinism, for instance, was readily imported and the theological issues at its heart did not cause a ripple in India (Kumar 2010, 677). Likewise, Dipesh Chakrabarty argues that

nineteenth-century reformers like Rammohan Roy and Dayanand Saraswati and nationalist scientists like J. C. Bose strove to develop dialogues between the "scientific-rational" and the "religious-spiritual" (Chakrabarty 1995, 752; see also Prakash 1999, 95). John Bosco Lourdusamy argues that social reformers like Rammohan Roy, despite their virulent attacks on religious practice, did not consider it detrimental to the progress of modern science (Lourdusamy 2008, 103). The fascination with science and scientific discoveries also enthralled the imagination of some rulers who harbored deeply religious views. For instance, the Raja Sarfoji II, who ruled Tanjore in the early nineteenth century, was passionate about science, spending several hours each day engaged in philosophical recreation and scientific study even while leading a deeply religious life rooted firmly in Hindu traditions (Nair 2012, xvii). In his intellectual world, knowledge of medicine, natural philosophy, and God were intimately linked (Nair 2012, 73). This pattern continued into the twentieth century. For example, both Ashis Nandy ([1980]2012) and Shiv Visvanathan (2003) note how Srinivasa Ramanujan's cultural and religious background allowed him to describe his mathematical discoveries as a gift from the goddess. Similarly, the physicists Abdus Salam and E. C. G. Sudarshan perceived their religious activities as being part of their scientific pursuits (Raina 2011, 57).

There are, however, important constraints on the integration of science and religion in India, and we must not be overly eager to accept the belief (held by some scientists and nonscientists alike) that Hinduism is somehow uniquely close to scientific investigation. This coexistence of science and religion in Hindu traditions has been criticized and questioned by various scholars (e.g., Nanda, 2004, 2010; Brown 2012). C. Mackenzie Brown criticizes claims to the natural coexistence of science and religion in India and argues that Hindu reformers' use of ancient texts to prove the "existence of science in India from time immemorial" is a process of "scientizing of tradition and spiritualizing of science" (Brown 2012, 228). Moreover, he reveals that the adoption of evolution into India was not as seamless as Kumar suggests (Brown 2012, passim). Similarly, Meera Nanda criticizes the appropriation of modern science by Hindus to justify Hindu tradition as "Hindu Scientism" (Nanda 2010, 280). She offers a powerful criticism of Indian thinkers' reconciliation of science with Indian tradition, showing how such efforts typically contribute to Hindu nationalist attacks on secular modernity (Nanda 2010, xiv, 38). As anthropologists, we need to shy away from the ideological construction of tradition, which has been often premised upon a selective recovery of a Hindu past and used largely to assert communitarian claims over the nation state.

Nanda (2016) likewise describes how Hindu nationalists interpret modern science through a religious perspective—claiming that ancient Indians discovered much if not all of science—to strengthen their cultural position. Nanda, who rejects the claim that modern science can be reduced to

ancient Indian religious thought, underscores the powerful degree to which the integration of religion and science is used as a justification for political work in India.

Ayudha Puja has little overlap with the question of whether ancient Indians had previously discovered the achievements of modern science, but the culturalization of *Ayudha Puja* described in this article is certainly a parallel move in the politics of Hinduism and science. Faith in the scientific veracity of ancient Indians can serve nationalist aims; the celebration of *Ayudha Puja* does something very similar. Although this celebration is not tied specifically to Indian nationalism, it does fit into broader patterns in the development of modern science in India. In *Alternative Sciences*, Nandy uses J. C. Bose and the mathematician Ramanujan to illustrate two ways in which Indians adopted modern science in the early twentieth century. Although Bose's integration of Vedantic monism into science led him to preach the unification of Eastern spirituality and Western science, he never overcame an essential conflict between the colonialist categories of old and new, India and the West (Nandy [1980]2012, 141). Ramanujan, however, allowed the religious sentiments at the core of his approach to mathematics to undergird his vision of math without requiring a psychological conflict over whether his Hindu practices and beliefs need become subservient to Western modes of thought (Nandy [1980]2012, 136). Ramanujan, if Nandy is correct, represents an ideal form of what *Ayudha Puja* might provide contemporary Indian scientists: the unapologetic maintenance of tradition in structural support of scientific thought.

The *Ayudha Puja* festival celebrated in South India reveals that many Hindu scientists interpret their religious heritage and shape their scientific communities through traditional practices. *Ayudha Puja* means "rite of the implements" or, more often, "worship of the machines," and provides an opportunity for people to honor the machines that make their lives possible and to come together as a community in their workplaces. Offices and laboratories are cleaned, machines are garlanded with flowers or anointed with sandalwood or vermillion, and celebrants share sweets. The celebration happens annually in September or October and is almost universally popular in South India, including among scientists and engineers. Occurring on the ninth day of the *Durga Puja*,[1] *Ayudha Puja* is especially popular in Karnataka—the one Indian state in which it is a government holiday—and thus has a powerful impact at one of India's premier scientific institutions: the Indian Institute of Science (IISc), which is not only India's leading-ranked university[2] but also the point of origin for many of India's scientific and technological powerhouses, including the information technology (IT) industry, Hindustan Aeronautics, the Indian Space Research Organization, and more (see Ranganathan 2008, 20–24). The scientists at IISc celebrate various festivals and practices, but the celebration of *Ayudha Puja* is the most noteworthy due to widespread participation in it and the

explicit way in which religion and science come together in it. Although the cosmopolitan nature of Bangalore and IISc mean that the institute's population is not limited to South Indians, the vast majority of scientists and engineers join the festivities.

Ayudha Puja bears investigation on many counts, but we confine ourselves here to its role in the "culturalization" of Brahminical Hinduism. Although the majority of scientists and engineers have no difficulty labeling the festival "Hindu" and/or "religious," there is a substantial number who prefer to describe *Ayudha Puja* as "cultural." This discursive move and the participation of non-Hindus and non-Indians serves the interests of dominant Hindu and Brahmin interests at IISc, as it normalizes traditional Hindu religious practices and makes these a part of scientific culture.

Observing *Ayudha Puja*

The ethnographic data in the argument to follow derives from (1) the principal author's year-long fieldwork at IISc in 2012, which included participation in *Ayudha Puja*; (2) the co-author's interviews conducted during his fieldwork at IISc from 2012 to 2013, which included conversations about, but not participation in, *Ayudha Puja*; and (3) both authors' participation in multiple department celebrations held at IISc during *Ayudha Puja* of 2016. All interviews were conducted in English; data from them have been anonymized, and quotations are included without stylistic editing.

In Bangalore, participation in *Ayudha Puja* is widespread. One professor at IISc estimated that 80 percent of the community participates in the ritual; a tech entrepreneur described it as "something everybody seems to do," and noted that even Catholic communities practice it. We did meet one Catholic scientist who joins *Ayudha Puja* celebrations only to make his Hindu colleagues happy, but Catholics across South India also celebrate the festival at their churches. In academia, *Ayudha Puja* is widespread, though not ubiquitous. One scientist at IISc, a self-described atheist, noted that "people in the mechanical [engineering] workshop do conduct *Ayudha Puja* with much gusto, and we all make ourselves present at the occasion if we can to show our support (and to eat the delicious food!)." Scientists easily explain the popularity of *Ayudha Puja*, as there are many reasons to participate in the celebration, including good food, socialization, and, for some, an opportunity to experience the divine (Geraci, forthcoming). So, as one researcher put it, "there is something for everybody." All of these rationales are acceptable, reasonable, and recognized by participants, who comfortably include one another's differing perspectives, interpretations, and modes of observance.

Ayudha Puja at the Institute is visually rich thanks to decorative *kolam*, *tilak*, flowers, and banana leaves in front of departments, office rooms, copy

centers, canteens, the library, and even some of the offices, workshops, and laboratories. Many practitioners arrive early to clean the workspaces and anoint machines with sandalwood paste or vermillion. Special *prasadam* (sweet foods that have been blessed by the gods)[3] were provided at the outdoor café on campus in 2012 but not (to our notice) in 2016. On the earlier occasion, many scientists who visited the café received the *prasadam* reverently, with solemn attention. Special meals were also served in the students' mess halls.

In the laboratories and workshops, the technical and office staffs generally initiate the celebration; but the scientists participate in it quite actively and heads of the departments give permission to conduct the *puja* and, in some departments, take a leading role as hosts of the event by passing out sweets to the guests. It is an official holiday in the institute and many Brahmin priests are present on campus, though some labs and departments do without them. A *pujari* (either a Brahmin called in for the occasion or a member of the staff) performs the ritual in the presence of scientists and other staff members. However, it is generally the non-teaching staff members who clean the offices, anoint equipment with sandalwood paste and/or flower garlands (see Figure 1), and prepare food for distribution after the *puja*. Each workshop serves multiple lab groups (e.g., the

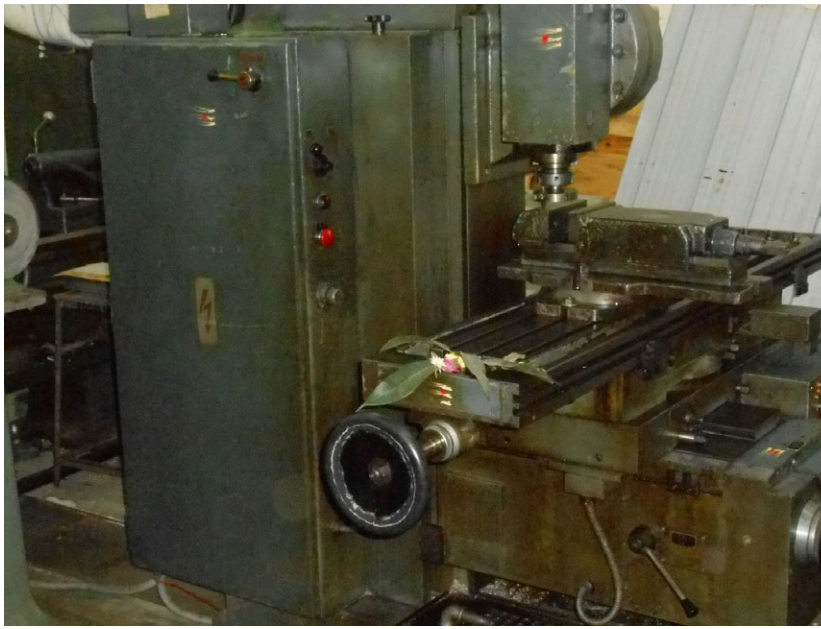

Figure 1. Workshop equipment in the Physics Department marked with *tilak* and garlanded with mango leaves for *Ayudha Puja* 2016. [Color figure can be viewed at wileyonlinelibrary.com]

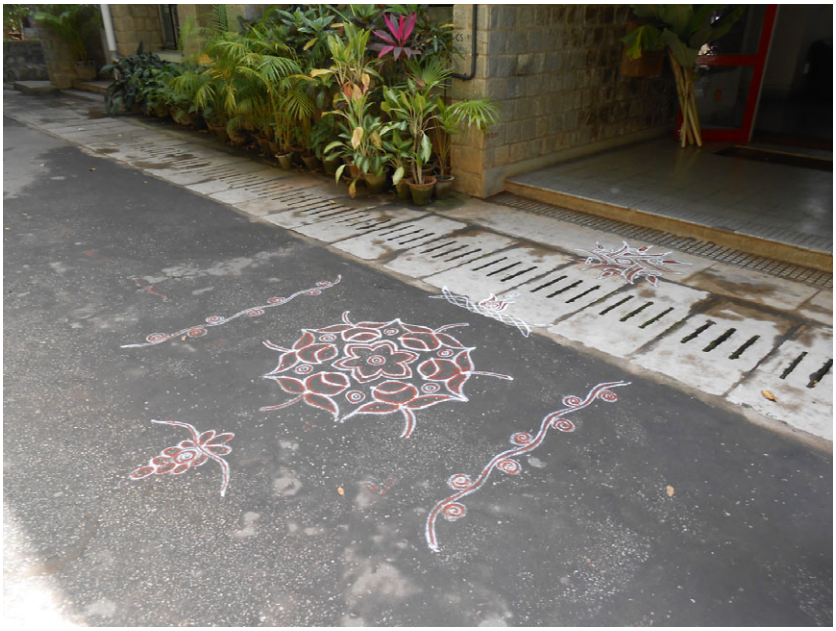

Figure 2. *Kolam* drawn in chalk outside a building at IISc during *Ayudha Puja* 2016; the stalks of banana leaves are visible in the upper right doorway (the potted plants at the center top are typical decorations and not specific to *Ayudha Puja*). [Color figure can be viewed at wileyonlinelibrary.com]

Chemistry workshop is used by many labs in the department), and is thus a communal space for holding the festival.

In addition to placing banana leaves and drawing *kolam* in chalk at the doorways (see Figure 2), the organizers set up altars with pictures of various Hindu gods and goddesses, such as Ganesha, Rama, Saraswati, and Lakshmi. Worship is inclusive of many gods, and never directed solely towards just one god or goddess. The divine images are often permanently fixed in the workshops, mess halls, or offices; when there is no divine image in the lab or workshop, the organizers of the *puja* acquire images for the event.

The ritual involves chanting Sanskrit *shlokas*, lighting lamps, honoring gods, and the blessing and distribution of *prasadam* (see Figure 3). After his arrival, the *pujari* prays in front of the divine images, reciting *shlokas*. He then sanctifies the *naivedya*, food made of rice or a mixture of rice and jaggery (and sometimes bananas), which sits adjacent to a large oil lamp (*vilakku*). The *pujari* sanctifies the *naivedya* by reciting more *shlokas* and leaves a small amount of food in front of the images for the gods and goddesses. As a result of the *puja*, the *naivedya* becomes *prasadam*, and, with help from some of the organizers, the *pujari* distributes it to the

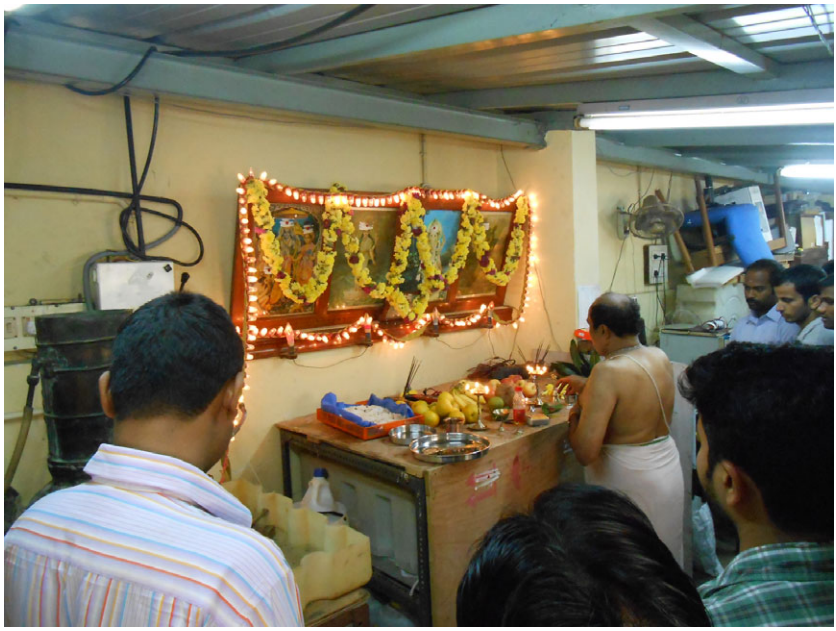

Figure 3. A priest chants *shlokas* during the Chemistry Department's *puja* in the workshop area during *Ayudha Puja* 2016. [Color figure can be viewed at wileyonlinelibrary.com]

participants. Participants occasionally approach the divine images to pray before receiving the *prasadam*. Although most participants eat the *prasadam* immediately, some (including scientists of considerable renown) collect it to share at home. Some departments distribute an entire bag of sweets—filled primarily with sweet puffed rice—to every attendee. If the *pujari* is from outside the lab or workshop (e.g., a Brahmin priest paid to conduct the ritual), then he sometimes leaves to perform the *puja* in another workshop or lab at the close of the ritual.

Almost all of the *puja* elements are typical of Hindu *pujas* in general. The tools that give the festival its name are almost entirely ignored during the ritual. They have been already garlanded and/or marked with *tilak*, and during the *puja* some of them will be sprinkled with a diluted sandalwood paste. No prayers are actually directed at the tools, however, and they are not treated with any special attention. Indeed, most participants simply ignore the machines other than, perhaps, to lean on them or place the *prasadam* on them. As one frequent participant indicated, the only recognizable difference between the *pujas* at temple and at *Ayudha Puja* is the location in which they take place.

The celebration lasts twenty to thirty minutes, including gathering time, the Sanskrit chanting, and the distribution of sweets. For the first five to ten

minutes, students, researchers, and faculty mill around, often aggregating according to their status and making strategic decisions about where to stand: proximity to the *puja* area, association with those of similar rank and/or gender, and the location of friends all seem to be relevant in this decision. The *pujari* then performs the ritual itself for ten to fifteen minutes, chanting mantras, sprinkling water or diluted sandalwood paste on the divine icons and, in some workshops, the equipment, lighting incense, and walking a sacred fire among the attendees, who make small donations and wave the smoke onto themselves in an act of prayer. At the close of the *pujari*'s work, *prasadam* are distributed as many, but not all, participants line up to say prayers at the altar and use vermillion to mark their foreheads before they leave.

The workshops, which are part of various departments, generally remain closed for two days after the priests conduct the rituals. It is considered inauspicious to touch the tools and machines during these two days, and this belief seems especially prevalent among the mechanics and non-teaching staff. Some scientists find it frustrating, as in the case of one materials scientist who disliked having his lab shut down for even a single day; but most scientists and engineers are comfortable with the closure. Equipment accessibility aside, many among the faculty celebrated the festival with the students and researchers in their labs and even distributed sweets to colleagues from other laboratories. For example, one biology professor celebrates *Ayudha Puja* regularly at her lab, and in 2012 joined her students in decorating and distributing sweets to others.

One finds decorated cars, buses, bikes, and bicycles across campus on *Ayudha Puja*. All the workshops were decorated and *puja* was performed in many. One internationally renowned chemist does not celebrate *Ayudha Puja* in the lab and prefers that it not happen there. That scientist does celebrate *pujas* at home, which are generally conducted by his mother. Regardless of whether he "believes" in the efficacy of such practices, they are appropriate at home and merely permissible at work. Even at home, this scientist rejects the label of religion, referring to both *pujas* and temple attendance as "cultural and related to family." He does think that if people want to celebrate *Ayudha Puja* outside of his lab then they should be welcome to do so; his students joined the festivities in the department workshop. Such *laissez-faire* sentiments are widely shared across Bangalore's scientific and engineering communities. Although almost all members of institutions like IISc participate in *Ayudha Puja*, interviewees confidently expressed that each individual could choose to participate (or not) as he or she wishes. Though most laboratories do not have a separate *Ayudha Puja* celebration, the affiliated department workshops do and various professors from the departments participate in these.

The annual celebration of *Ayudha Puja* continues even when technology advances in ways that make the celebration challenging. For example, the

Materials Science Department no longer holds a celebration in its workshop because the sensitive machinery might suffer from interference, but the department nevertheless holds a *puja* in one of its hallways, ensuring a continuity with tradition. This anomalous celebration reveals flexibility among the practitioners and within the tradition, and also shows the cultural authority of the practice, which continues even when it can no longer be held in its traditional format.

Categorizing Religion and Culture

For many, the observations and pictures above would suffice to comfortably situate *Ayudha Puja* within the categories of Hinduism and religious ritual. But both Hinduism and religion are complicated concepts and require some attention before we can blithely assume they apply. The crux of this article's argument is that when some practitioners elide the religious nature of *Ayudha Puja* and disconnect it from the history of Hinduism they in fact inscribe Brahminical Hinduism as the default mode of life at IISc. As such, we must briefly engage the meaning of religion and Hinduism, so as to justify their use in this article.

The power relationships at play in the study of religion confuse matters, as the category of religion is one that allows for value judgments and political domination. David Chidester (2015) traces the rise of comparative religion as a discipline, noting that it was part and parcel of European colonial control. He has also shown how Europeans refused to label indigenous practices as religion because it enabled them to argue that the locals were primitive or savage, and thus not able to govern the land or utilize its resources appropriately (1996). Chidester thus confronts the student of religion with the fact that the discipline was, itself, a tool of subjugation. In the case of studying *Ayudha Puja*, is labeling a practice religious (against the wishes of some of our interlocutors) a colonial power play or would denying the status of religion (in opposition to most) do so?

In recent decades, scholars have challenged the category of religion, arguing that such classification obscures more than it reveals and that religion is not a real phenomenon as such. Combined with the fact that several of our interviewees object to calling *Ayudha Puja* religious, this scholarly debate places our work in an immediate quandary, one that must be engaged. As we will see, not everyone at IISc believes that *Ayudha Puja* is religious; nevertheless we choose to label the festival as such because—as we describe throughout this article—the festival has a religious lineage in the Vedas and epics, includes clear reference to Hindu divinities and occurs in conjunction with other Hindu festivals, and is practiced with a typical *puja* that involves gods and the usual ritual strategies of Hinduism.

Surprising as it is for professionals whose livelihoods depend upon it, scholars of religion have engaged in a high-profile debate over whether

there is really any such thing as religion. Among the first to head in this direction, Jonathan Z. Smith argued that there "*is no data for religion* [sic]. Religion is solely the creation of the scholar's study" and encouraged scholars to, therefore, be "relentlessly self-conscious" about what examples they had chosen and how those examples provide the scholar with something meaningful to analyze (1982, xi, emphasis original). By arguing that there are no data for religion, Smith means that the category lacks definite criteria by which something does or does not count as religious. In order to link varying strands of Judaism, Hinduism, and Shinto—to name but a few cultural systems typically labeled as religions—into one category requires that we explain how to do so; there is no *a priori* method for this. Smith never doubted whether he could use the word "religion," but he insisted that scholars must be clear in what they mean by the term because they were the ones inventing it through their work. Subsequently, however, other scholars challenged whether the term has any use whatsoever.

There are legitimate questions as to the use of the term "religion" and its descriptive power. Talal Asad, for example, offers the common argument that the term "religion" cannot be used in the transnational context to which scholars have become accustomed; the word's historical context in European Christianity makes it inappropriate to usage outside that context and, further, the term is implicated in discursive practices of Western domination (1993, 29; see also Balagangadhara 1994; Daniel 2000; Feierman and Janzen 2011; Latour 2005). Asad believes that the term "religion" is already loaded with Christian meanings which are then thrust unfairly upon other cultures. Russel McCutcheon reiterates this concern, noting that most languages lack a word equivalent to religion and that the term is thus by nature imperialistic (2001, 10). Asad and McCutcheon both represent the danger that when scholars use the term "religion" to describe non-Western beliefs and practices they risk burdening the non-West with Western assumptions and limiting non-Western voices. In like fashion, S. N. Balaganghadara (2012, 41) argues that, because Western categories are used to define and describe non-Western cultures, in fact these descriptions are only an "apparent discourse about the Orient" and truly fail to meet their objective.

Nevertheless, McCutcheon rejects the idea that religion might be impossible to pin down, instead echoing Smith's position that one must appropriately theorize religion and provide a meaningful definition (McCutcheon 2001, 11–12). It is important to state one's usage and provide examples that make analytical sense without stooping to the intellectual colonization of foreign cultures. Ultimately, as David White points out, "when self-consciousness translates into self-flagellation, and self-scrutiny replaces engagement with historical others, theorists are reduced to talking about themselves talking about themselves" (2006, 130). At some point, scholars must recognize dangers inherent in their work *and then move on*.

This article, a collaboration between American and Indian scholars, thus hopes to represent a postcolonial approach to religion that can explore the practice of *Ayudha Puja* within a clearly defined sense of religion as transnational phenomenon.

We believe that the category of religion does have meaning even as it ought to be employed with as much value-neutrality as possible. Chidester provides help here, defining religion as the "negotiation of what it means to be human with respect to the superhuman and the subhuman" (2004, 17). Such a definition permits us to think beyond the categories of the Christian West and likewise helps us understand the religious nature of a celebration like *Ayudha Puja*.

Factually speaking, the scientists and engineers of IISc recognize that they are participating in an event that builds community, establishes relationships between human beings and their tools, and responds to human reflection on individual and group labor. All of this happens in the presence of divine icons, during a time of spoken and unspoken prayers to those icons, in continuity with a tradition that holds those icons in relationship to the tools honored and the individuals present, and with regard for traditions that include the performance and production of mythical tales, the elaboration of doctrines related to those tales and to divine beings, and in concert with theories of human transcendence. As such, *Ayudha Puja* is religious by Chidester's definition, and likely by any other reasonable definition of religion that isn't built specifically to dismantle the concept of religion altogether.

We must further recognize that the category of "Hinduism" is also a difficult one, given that, like religion, it subsumes an enormous number of differing practices and beliefs into one category (Pinkney 2014). Nevertheless, as Wendy Doniger puts it, "the fact that the people whom we call Hindus have defined themselves in many different ways—and that these definitions do not always delineate the same sets of people—does not invalidate the category of Hinduism" (Doniger 2014, 9). The term Hindu is no more indigenous to India than the term religion, though it dates to an earlier cultural invasion. Nevertheless, not only are there similarities in belief and practice that can be used to discuss pan-Indic Hinduism, but there are people in India and abroad who happily label themselves Hindus. We recognize that Hinduism is extraordinarily diverse, with some practices unique to specific locations or communities and other practices widely shared across India. As such, we acknowledge that Hinduism is a tricky category but believe it to be no more so than religion itself. In both cases, the terms require finesse shared by readers and writers but can nevertheless serve.

The homogenization of people under the label "Hindu" is an analytic problem for the scholar; but it is also the case that when we avoid religious labels in favor of other terms (such as "culture"), we similarly homogenize

groups in the service of political maneuvers. Indeed, although we will apply a scholar's responsibility in labeling *Ayudha Puja* a religious practice, we do so while noting that when practitioners choose otherwise they are taking a political rather than analytical stance. The culturalization of *Ayudha Puja* is a double move, first obfuscating the religious nature of the festival, and then uniting every participant in a homogenized version of Brahminical Hinduism.

The History of *Ayudha Puja*

Ayudha Puja has a long history in Indian practice, but only a brief and truncated history in scholarship. References to it trace back to the nineteenth-century British occupation of India, and it became a tool in arguments over the development and evolution of religion in the early twentieth century. More recently, the festival has tended to receive only passing reference, and sometimes even goes without name. As such, the festival remains elusive in scholarship despite its longstanding significance in South Indian religious practice and its utility for understanding contemporary Indian culture. Although there are few resources to help us recognize the importance of the festival, nevertheless existing scholarship indicates that *Ayudha Puja* has long been practiced in India and continues to be a vital part of South Indian life in the twenty-first century.

The practice of honoring weapons and other implements has a long tradition in India, one that stretches back as far as the Vedas. A. A. MacDonell notes that the *Ṛig Veda* includes passages that invoke, praise, or even deify tools, from weapons to ploughshares (1897, 155) and H. J. Rose subsequently took this as evidence that *Ayudha Puja*, itself, is as old as that text (1913, 236). For Rose, this indicates a process in the history of religions in which arose deities designated to specific tasks; and he goes on to argue that it could indicate that similar practices of tool or weapon worship operated in ancient Italy, and that these were replaced by worship of gods that represented the functions of the tools.

As with many festivals, *Ayudha Puja* has a mythical antecedent in the great Indian epics. For its early practitioners, the festival hearkened to the time when the Pandava brothers ended their exile and recovered their weapons in the *Mahabharata* (Beals and Siegel 1966, 121). Alf Hiltebeitel elaborates on this:

> [J]ust before the battle of Kuruksetra, Duryodhana learns from the Pandava Sahadeva, renowned as an astrologer, that the optimal time for kalappali is the *amavacai,* or new-moon light, which is one day hence, and gets Aravan to agree to be the victim. Krsna, seeing the danger, works things out so that Aravan will perform this sacrifice for the Pandavas instead of the Kauravas. He explains to the Pandavas that it will be an offering to Kali as part of the ayudhapuja, or "worship of weapons." Though Krsna does not mention it,

> the ayudhapuja is a sub rite of Dasara, the royal festival that opens military campaigns at the end of the rainy season. (Hiltebeitel 1991, 284)

Dasara, which honors Rama's victory over Ravana, takes place on the tenth and final day of *Navratri*. As noted above, the contemporary practice of *Ayudha Puja* takes place on the ninth day of *Navratri*. Edgar Thurston (1912, 282) equates *Dasara* with both *Ayudha Puja* and *Saraswati Puja.*

Just as the brothers needed to prepare themselves for battle, so did subsequent warriors, and it was among these that *Ayudha Puja* first flourished. Through their religious practice, the warriors reconnected to the events of the *Mahabharata*, reflecting the common practice of collapsing past and present in religious ritual. Mircea Eliade ([1954]1991), for example, argues that religious meaning could be derived only through connection to archetypal events of the mythical past and thus that annual repetition of the past is crucial to religious life. The annual practice of *Ayudha Puja* provided warriors with just such an opportunity to reassert the victory of good over evil. On a practical level, *Ayudha Puja* ensured that warriors took out their weapons and cleaned them at least once per year. The weapons thus stayed in good working order and the warriors had an opportunity to express gratitude to the tools that kept them safe. Over time, farmers and others began including their own implements in the festival.

Ayudha Puja was sufficiently novel as to arouse European interest early in the twentieth century, though that interest did little to provoke meaningful analysis. An Anglo-Indian professor, publishing anonymously, describes the festival in two brief paragraphs, outlining how different professionals perform *pujas* specific to their trades (1912, 75). *Ayudha Puja* is the only festival this author describes; but—perhaps he had little engagement with it—there is no depth to his description. Similarly, Thurston—who was superintendent of the Madras Government Museum and of the ethnographic survey of the Madras Presidency—gave a brief account of *Ayudha Puja* as it was celebrated by a few different professional groups (1912, 174–75). As Europeans became aware of *Ayudha Puja*, they buttressed their assumptions about religious life by integrating the festival into their theoretical models. For example, in *All Too Human*, Friedrich Nietzsche notes that "In India, the carpenter (according to Lubbock) is in the habit of making devout offerings to his hammer and hatchet. A Brahmin treats the plume with which he writes, a soldier the weapon he takes into the field, a mason his trowel, a laborer his plow, in the same way" ([1908]2011, §111). Nietzsche took this as evidence that premodern people saw life and vitality in nature, but not in themselves. Without having himself witnessed the event or spoken to any of its practitioners, he appears to have made *Ayudha Puja* and its traditions fit into his paradigm of religious practice, rather than allowing the ritual celebrants an opportunity to reformulate his theory.[4]

Subsequent references to *Ayudha Puja* are often camouflaged or provide only brief reference to the festival. For example, in his excellent introductory text *A Survey of Hinduism*, Klaus Klostermaier twice seems to reference the ritual, but neither time by name; he simply indicates that on certain occasions tools are worshiped or honored (Klostermaier [1997]2007, 132, 311). Other authors do recognize *Ayudha Puja* and seek to place it within the context of other Indian traditions, but they do so without providing much detail. Eliza Kent, for example, briefly connects *Ayudha Puja* to a festival held by toddy tappers in southern India (1999, 122), but her remark only points toward the curious similarity before she resumes her study of the role of Western missionary women in establishing early twentieth-century ideals of femininity in India. In her analysis of food in *pujas*, G. Eichinger Ferro-Luzzi mentions offering food to books and tools but provides no detail and does not initially cite the festival by name (1978, 89); later, she names the festival, and places it alongside Saraswati *puja* in the *Navratri* festival (Eichinger Ferro-Luzzi 1978, 98–99). Eichinger Ferro-Luzzi's approach, however, is only to identify which foods appear in the festival, not offer an explanation of the festival's meaning or place in Indian culture.

More recently, David Arnold has noted that *Ayudha Puja* has been specifically used to integrate foreign technologies into Indian life. "All technologies," he writes, "must in some way be grounded in the societies in which they are created, or, as is principally true in the Nonwest, in the societies in which they become embedded, within which they undergo adaption, compromise, and assimilation, through which they acquire new meanings and usages" (Arnold 2013, 6; see also 7). M. N. Srinivas, one of India's most renowned sociologists, offers a quick counter to this. He argues that the persistence of honoring tools during Dasara is evidence that Westernization has been incomplete or contradictory in its unfolding processes in India (Srinivas [1966]2013, 57). If Arnold is correct, the festival does work similar to J. C. Bose's integration of science and religion, which "made it possible for a growing number of Indians to take to" science (Nandy [1980]2012, 84). The contemporary practice of *Ayudha Puja* in offices and laboratories seems to be a culturally important domestication of computers and lab equipment, most of which have their origins in twentieth-century Western technology. Not only do the practices transform the foreign into the indigenous, however, they also ensure an unbroken cultural continuity that gives practitioners an opportunity to retain valued traditions and social structures.

Although scholarly attention has wavered, participation in *Ayudha Puja* remained frequent throughout the twentieth century and into the twenty-first century. Stanley Tambiah notes that "in India in the past, craftsmen who were sophisticated technicians by anyone's criteria cleaned, propitiated and decorated their tools of trade at annual rites: an observer may

say that the craftsmen are propitiating the spirit of the tools. Today in industrial factories Indian workers, though they know how the machines work and tend and repair them, may perform a similar rite of annual propitiation of the machines" (Tambiah 1990, 136). Tambiah observed a similar phenomenon in Kathmandu, where he saw "during the Dassein festival several bus drivers, taxi drivers and garage mechanics sacrificing to their machines, daubing blood on them and decorating them with flowers" (Tambiah 1990, 137). Sundar Sarukkai describes the prevalence of such practices at home and at work and alleges that the worship of machines is increasingly common in India (Sarukkai 2008, 45).

Indeed, it is familiarity with the festival, and the near-ubiquitous participation in it, that explains pop culture references that unite religion and science. For example, in the popular Tamil film *Enthiran* ("*The Robot*"), there is a scene in which two engineers perform *puja* to the eponymous robot (Shankar 2010). It is precisely the awareness of *Ayudha Puja* and similar festivals that makes this scene coherent. Religious benediction, for many Indians (as for many people elsewhere, as shown by the annual blessing of bicycles in New York City, for example) represents a cultural appropriation of the technology, an absorption of the machines into religious ways of viewing the world and acting within it. Although *Ayudha Puja* plays a role in the domestic lives of contemporary Indians, we find its place in scientific institutions particularly notable.

Whatever their religious backgrounds and perspectives, most scientists in Bangalore participate in *Ayudha Puja* festivities. The limited ethnographic data available indicate that such practice has been consistent throughout the twentieth and twenty-first centuries. Anthropologist and social historian of science Robert S. Anderson wrote about his observation of *Ayudha Puja* in the Tata Institute for Fundamental Research (TIFR), Mumbai, in the year 1967. He writes,

> The idea of one big family at TIFR was stressed in the celebration of *Ayudha Puja* in October 1967. . . . It occurred on a Friday afternoon before a weekend holiday, and the Institute was in a festive, nonworking mood. . . . Large groups strolled around the buildings and gardens. Signs were up requesting visits to various group areas and labs. The library staff served sweets to all its visitors. . . . *Ayudha Puja* consecrates tools and rededicates skill for the coming year. Whether they were students of mathematics or bus drivers, the day was in honor and praise of technique and tools. Flowers and symbols decorated the shiny air-conditioned computer in its new lab. Though TIFR was an institution with high Christian and Muslim involvement, this puja was recognized and enjoyed by everybody. A one-day generous atmosphere was created, producing some light humorous interactions between people normally kept apart in their own spaces. I strolled with an experimenter through the large workshop. Lathes were decked with flowers, and new constructions were displayed with their builders standing proudly beside them. Workshop mechanics had built an impressive shrine (pandal) for their deity. (Anderson 2010, 302)

Similarly, in his classic account of mid-century modernization in Indian industry, Milton Singer offers a one-paragraph description of *Ayudha Puja* and describes its practice as ubiquitous (Singer 1972, 325). In a follow-up to Singer's account, John Harriss notes that *Ayudha Puja* is still popular, even among businessmen who try not to let Hindu festivals dominate pluralistic workplaces (2003, 356). But the festival is popular outside of industry also: Sarukkai avers that many if not all of the leading scientific institutions in India today follow this custom (Sarukkai 2012, 175). The practice of *Ayudha Puja* is so culturally significant that it is even honored by many in the Indian diaspora, for example among Tamils living in Norway (see Jacobsen 2013, 73).

Although *Ayudha Puja* has played only cameo roles in scholarship, its consistent recurrence indicates that the festival deserves greater attention. The short descriptions of it and the minimal theorization are a great disappointment considering the universality of the festival—and the recognition of that universality by the very authors who provide merely brief comments on it. Just as *Ayudha Puja* has a long history and has played a part in Indian public and private life in the twentieth and twenty-first centuries, it remains an important festival in South India, especially in Karnataka, and by reflecting upon it we have a valuable opportunity to glimpse the complex interactions of religion, science, and politics in contemporary Indian life. Having described the festival and its historical persistence, we can now illustrate how *Ayudha Puja* normalizes a specific religious tradition (i.e., Brahminical Hinduism) through its cultural ubiquity and the descriptions of some practitioners.

Religion, Culture, and *Ayudha Puja*

Many scientists, when asked about their views on *Ayudha Puja,* describe it as part of Indian culture, and allege that it has nothing to do with religion. For instance, when asked for his view of the festival, one chemist explained: "people do celebrate religious festivals and have *Ayudha Puja* in workshops and laboratories, but you know these are actually cultural, not religious. Celebrating festivals in institutes like ours has nothing to do with religion." Such "culturalization"—the redefinition of religious practice as cultural practice—is part of a specifically Indian approach to secular culture and scientific practice. Although the religious dimensions of the festival cannot be meaningfully ignored, the performance of *Ayudha Puja* as "cultural" rather than "religious" marks a specific way in which Indian scientists and engineers overcome the practical separation of professional and domestic life. Although religious activities are common in domestic spheres (even among India's varying kinds of atheists[5]), they are considered separate from the mundane activities of professional life. By collapsing religious and scientific practices, *Ayudha Puja* forces scientists and engineers of whatever

beliefs to reconceptualize the festival and some thereafter describe it in nonreligious terms.

The scientists and engineers at IISc come largely from Brahmin castes, which likely plays into their ability to culturalize the festival. A significant proportion of the faculty and students come from Tamil Nadu, specifically, and—on account of the most populous of the Tamil Brahmin communities at IISc—the institute is sometimes disparagingly known as Iyer-Iyengar Institute of Science and Iyer-Iyengar Science Campus (e.g., see Mukherji 2014 and Thomas 2015). In an environment where many of the potential participants are already Brahmins, they are well-situated to enfold outsiders into their practices.

Although *Ayudha Puja* has a clear religious lineage and a significant number of IISc's scientists participate in it as a religious event (see Geraci forthcoming), some scientists divorce the festival from religious life altogether. One physicist argued that "*Ayudha Puja* is celebrated every year here. *Ayudha Puja* is clearly a cultural event, not religious. One has to make a distinction between religious and cultural." Repeating himself, he continued "religion is different from culture. The distinction should be made." Similarly, one biologist says "*Ayudha Puja* is cultural, and one has to treat it as a cultural fest; not as religious fest." On the day of *Ayudha Puja* in 2012, the physicist participated in the *puja* at the workshop of the physics department along with many of his colleagues, and after the *puja* he left with *prasadam*. So he participates in the festival, but resists calling it a religious event, most likely because he has distinguished between the religious spheres (at temple and home) and professional sphere, where "cultural" events may take place, but not "religious" events.

Because many Indian scientists perform *pujas* or participate in temple rituals outside of the office, they see religion as directly tied to domestic, or, at any rate, nonprofessional, spheres. As such, to have a religious festival in the office requires that one differentiate it from other such festivals and, indeed, disenfranchise the religious element altogether. They then define *Ayudha Puja* as culture, not religion, precisely because it happens in professional spheres. A related approach was taken by mid-century industrialists in Chennai, who sought to compartmentalize professional and religious spheres despite their participation in *Ayudha Puja* and other festivals (Singer 1972, 322–26). Although many scientists are comfortable labeling *Ayudha Puja* as religious, others seek to de-ritualize their professional and scientific life; for these, their traditional practices must then be "culture" rather than "religion."

There is a degree to which maintaining the distinction between culture and religion becomes a requisite effort in mental gymnastics for many scientists. Such efforts are important in order that the festivals retain their significance even in the face of encroaching secularism and as part of a broader strategy that holds religion and science as, in the words of scientists

and engineers, "siloed" or "compartmentalized." Another physicist, for example, echoed the last and expanded his concerns:

> *Ayudha Puja* is a fantastic event. To me, it is a cultural event. I should mention that culture plays a major role in our life. Unfortunately, in India culture gets mixed up with religion, rituals get mixed up with religion, that's the problem. It is a wonderful event. We all get together that day and spend some time, that's wonderful. We should be very careful not to mix *Ayudha Puja* and various other rituals with religion. It should be seen as cultural. The cultural aspect of *Ayudha Puja* should be promoted.

Here we see a political motive more clearly emerge in the distinction between religion and culture. *Ayudha Puja* should be promoted whereas, by implication, religion should not be. Mixing up ritual and religion is a problem because it implies that religion remains relevant. Of course, religion does remain relevant, which we consider to be merely an empirical fact, not a question of value.

Ayudha Puja is not entirely unique in its "cultural" role when practiced at IISc, nor is IISc the only Indian university where this distinction gets made. The physicist who described *Ayudha Puja* as a "fantastic event" also explained that *Ganesha Chaturthi* (birthday of the god Ganesha) is also very important for her. She never thought of *Ganesha Chaturthi* as a religious festival. She emphasized again and again the need to differentiate the cultural from the religious, and stressed that festivals like *Ayudha Puja* and *Ganesha Chaturthi* should be seen as cultural events. Similarly, Anjali Roy notes that the scientists of IIT-Kharagpur annually participate in and celebrate *Durga Puja*, *Saraswati Puja*, and *Vishwakarma Puja* (this last is a north Indian festival resembling *Ayudha Puja*; unfortunately there is no scholarship at present which explores the historical context or development—either independent or dependent—of the two). As Roy writes, "the academic community is not only actively involved with the semi-religious arrangements; the Puja itself, led by the Director of the Institute, who is also the patron, on the first day blurs the distinction between the professional and the personal, the public and the private" (Roy 2008, 232). They do not perceive practicing these religious events on campus as problematic or unscientific precisely because they describe the events as cultural.

The recategorization of *Ayudha Puja* benefits from non-Hindu participation in the festival. Such activity appears to make the festival also non-Hindu. One scientist justified non-Hindu participation according to the same logic that many Hindu scientists express; specifically, that *Ayudha Puja* is cultural rather than religious. He said that "such practices are cultural and part of Indian tradition, and not related to any religion." This intercultural, interreligious practice feeds off many Indian scientists' understanding that traditional Hindu practices and beliefs are not so much "religious" as "cultural." In *Ayudha Puja*, we see a key

practice at this nexus of religion, science, and culture; we see that many Indian scientists understand themselves and their scientific life as secular insofar as differences among these might be alternately maintained or dissolved.

The culturalization of *Ayudha Puja* and other rituals is a discursive and political move, one that permits scientists to defend the siloes that allegedly contain and differentiate religion and science. And yet, just as we would recognize the birthday of a god (Ganesha) as a religious festival, we can also see how honoring transcendence in machines remains also a religious festival. Although one must exercise care in using terms that contradict those of local sources, one must also recognize that most Indian scientists see the religious significance and tradition of the festival even as others emphasize a more sterilized cultural practice that can uphold a vision of science separated from religion.

Many of IISc's scientists, as we have noted already, argued that a festival such as *Ayudha Puja* is cultural. They distinguish between "cultural" and "religious" and state that *Ayudha Puja* should be described and understood as the former but not the latter. The celebration of *Ayudha Puja* has thus been normalized as a cultural event and inoculated against religious intrusion in scientific work. Even the non-Hindu scientists occasionally refer to *Ayudha Puja* as a cultural festival. Though some of the non-Hindu scientists did not celebrate *Ayudha Puja*, others join the celebration because they see it as a cultural practice. One professor of chemistry, for example, participates in *Ayudha Puja* because "these are cultural events."

Although the majority of participants in *Ayudha Puja* self-identify as Hindu, some non-Hindus at IISc participate and few suggest that they are resentful of the event. David Gosling (2007, 102–03) indicates that discomfort was common among Christians and Muslims, but his data are from the 1970s and are clearly contradicted and supervened by our more recent fieldwork.[6] There are still non-Hindus who are uncomfortable with celebrating *Ayudha Puja*, but such discomfort is no more frequent than among Hindus. That is to say, the vast majority of scientists and engineers are comfortable with *Ayudha Puja* whether or not they are Hindu. There is nothing new in the participation by Muslims and Christians in *Ayudha Puja*: Robert S. Anderson also notes that there was high involvement by Christians and Muslims in the TIFR *Ayudha Puja* celebrations in 1967, and that the festival was recognized and enjoyed by everyone (Anderson 2010, 302). The culturalization of *Ayhudha Puja* thus has a double move: to normalize a specific ritual practice chosen from among the great variety of Hindu traditions and to normalize Hinduism as the default religion of the campus.

This description of *Ayudha Puja* at the Indian Institute of Science reveals the discursive transformation of Brahminical Hinduism into culture at the

institute (and likely in Indian science more generally). We have already traced the origins of *Ayudha Puja* to Hindu scripture and practice across as much as three thousand years. That the festival is part of Hinduism is not meaningfully at issue. Scientists do not universally make the move to culturalize the festival; in fact, the majority refer to it as Hindu and Hinduism as a religion. But the culturalization of *Ayudha Puja* is quite common. Rather than providing a critique of the dominant religious perspective or an opportunity to operate outside of that perspective, however, culturalization reinforces it.

Conclusion

How do we read the meaning of events such as *Ayudha Puja*? First, we must recognize that science and religion are not mutually exclusive domains. As Tambiah writes, "Western technology and Western technological knowledge, which amplifies and extends traditional technological knowledge, does not necessarily drive out or displace ritual and magical acts which combine the purposive aims of better mechanical performance, or larger yields of rice, with the aims of a moral and prosperous social and religious life" (Tambiah 1990, 137). Second, we must recognize that religion can be normalized in scientific life through the appropriation of religious practices, even though they must often be renamed in order to complete the process of situating them in technical cultures. Third, the normalization of ritual practices as cultural legitimates some traditions at the expense of others. Identifying one set of practices as cultural lends legitimacy to those practices and also, perhaps, to practices affiliated with them. Many Hindu scientists prefer to believe that festivals such as *Deepavali*, *Holi*, *Ganesha Chaturthi*, and *Ayudha Puja* are cultural festivals. Unless Christian or Muslim, however, IISc's scientists do not celebrate or participate in Christmas or Eid (for example), nor does the institute officially recognize these events in any substantive manner. In contrast, the culturalization of festivals like *Ayudha Puja* can normalize the majoritarian religion or tradition. The normalization of particular traditions of Hinduism as "the" Hinduism goes beyond office and laboratory politics; it is part of modern India's own "agony over religion," as described by Gerald Larson (1995).

The culturalization of *Ayudha Puja* is an important element in contemporary Indian religious and scientific practices, but it is not the only phenomenon at play. Further research into gender, caste, and age dynamics, differing levels of devotion, precise relationship to broader trends in South Indian and pan-Indian religion, and the differences between *Ayudha Puja* in scientific spaces and its practice in other locations of professional and domestic life all deserve individual treatment. We hope that this article provides some impetus for further research into this festival, even as it

provokes reflection on the relationships between religion and science and on the practice of religion in contemporary life.

At IISc, Hinduism is the religion of the majority and its panoply of practices is seen by some scientists as culture in their entirety. Hinduism is a way of life, a demarcated element of domestic life that—from time to time—impinges upon professional life. But it is often stripped of its religious affect. The boundary between the cultural and the religious is a thin line; and the two domains shape and reshape one another. As Olivier Roy succinctly put it, "religion creates culture, most of the time implicitly, because religion is also lived as a culture. It is inevitable that religion has a cultural 'spin off,' for no society can maintain itself solely on the basis of an explicit belief" (Roy 2010, 109). This culturalization helps the practitioners avoid the question of religious practice in a scientific and secular institution.

Ultimately, ethnographic investigation is the only way to see how religion and science interact in the cultural matrix of a place like the Indian Institute of Science. By asking questions about religion and science, we advance our appreciation for and understanding of the cultural and religious practices of contemporary India. And although there is much still to be learned of *Ayudha Puja*, without doubt its practice at IISc reveals how contemporary Indians often attempt to maintain lines that demarcate science from religion and professional spheres from domestic, yet also how the lines between them are permeable and the categories often overlap to the point of being sometimes coextensive. It is, in fact, this very process of building and disintegrating the walls between religion and science that helps construct the scientific community at IISc—it provides space for ritualized community building, participation in ancient traditions reconstrued to adapt to modernity and secular life, and the political integration of cultural tensions into a (usually) harmonious worldview. As such, it would seem that a similar dynamic, by which religious practice is transmuted into culture, could likely be seen elsewhere, operating as the tie that binds even secularized communities together.

There are political implications for *Ayudha Puja* even though it has yet to take center stage in debates over religious nationalism in India. Clearly, India's political right wing (the Hindu nationalist organizations under the umbrella of the *Rashtriya Swayamsewak Sangh* and their political wing, the Bharatiya Janata Party) would cheerfully tout the normalization of Brahminical Hinduism as "evidence" of their claim that India is fundamentally Hindu. At present, however, *Ayudha Puja* largely escapes that narrative, probably because it is specifically South Indian (despite similar festivals in the north).

In 2016, the leader of Hindu Makkal Katchi, a nationalistic political group in Tamil Nadu, posted Facebook pictures of himself celebrating *Ayudha Puja* at home with several firearms (see Deccan Chronicle 2016).

The posting and ensuing news coverage ignited a small firestorm of opposition before the imbroglio died down. None of the reports on the conflict, however, referenced the practice of *Ayudha Puja* in scientific life, nor did the conflict influence the festival at IISc. Nevertheless, the culturalization of Hinduism through *Ayudha Puja* cannot be severed from twenty-first–century Hindu nationalism ("*Hindutva*"). As a result, although we resist the urge to disparage scientists for religious practices and inclinations, we must raise the question of whether the inclusive nature of *Ayudha Puja*—the practice of non-Brahmins, non-Hindus, and Westerners—also comes with a concomitant problem of silencing some of those voices. It is unclear how the future might retain the uniqueness of this tradition while simultaneously ensuring that diversity is welcomed and appreciated.

In the case of *Ayudha Puja*, the culturalization of religion promotes Brahminical Hinduism, perhaps at the expense of other religious perspectives. During British rule, independence advocates sought to define a national religion that could be used to assert Indian cultural strength (Chatterjee [1986]1999, 74–75). At the present time, similar ideas percolate through Indian political life, making the move towards culturalization relevant. In the early twenty-first century, vocal members of India's political circles argue that there is but one Hinduism and that it is *the* religion of India; in the culturalization of *Ayudha Puja* we see how the intersection of religion, science, and technology contributes to India's public discourse. Therefore, the affirmation of *Ayudha Puja* through practice in India's scientific institutions does political work even while it does scientific and religious work.

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Notes

1. In some states, *Durga Puja* is used to label the nine-day or, depending on region, ten-day festival also known as *Navratri* (which means "nine nights"). In other states, *Durga Puja* is simply the last day of *Navratri*. Either way, *Ayudha Puja* occurs on the ninth day of the festival.
2. Although excellent research is conducted at IISc, it is worth noting that Indian scientists do recognize that their colleges and universities lag behind their international peers and need improvement (Subbarao 2013). The institute has had noteworthy success all the same, and was recognized in 2017 as the eighth best "small university" in the Times Higher Education World University Rankings (Bhardwa 2017).
3. *Prasadam* is (usually) food, often sweet, that has been ritually offered to the gods at a temple. In Indian traditions, the consumption of *prasadam* is "just as important a part of the ritual as the offering itself, since in the Indian concept of the gift the giver ranks higher than the receiver and a unilateral offering by the devotee would put him into a superior position with respect to the god" (Eichinger Ferro-Luzzi 1978, 87). For a description of various foods offered at temples and home, see Eichinger Ferro-Luzzi. For an analysis of *prasadam* in south Asian religious practice, including various traditions, the use of non-food items, and scriptural uses of the term, see Pinkney (2013).
4. Europeans are not the only scholars to take the worship of machines as proof of their grand theoretical narratives. Dipesh Chakrabarty, for example, cites a northern variant of *Ayudha Puja* as evidence for the subaltern position that Western concepts cannot encompass Indian history (2000, 73–78). David White (2006) correctly points out how Chakrabarty's own analysis elides a host of practices associated with the festival and, indeed, lacks a meaningful history of it. In the end, Chakrabarty's position does not glorify the subaltern experience; it abuses subaltern peoples by exoticizing them while failing to admit that the festival, with its roots in warfare and a warrior festival (and not within peasant labor), is actually illustrative of subaltern people practicing their religion in an idiom acquired outside their own community (White 2006, 115–16).
5. On definitions of religion and atheism among IISc's scientists, see Thomas (2016; 2017).
6. We feel duty-bound to point out that Gosling does not indicate openly that his data are from the 1970s, and that only by reading the endnotes does the attentive reader realize this matter (2007, 176n1). Although Gosling's data have historical value and could lead to further research, they are not reflective of the current state of affairs in India. The religious conflicts of contemporary India must be evaluated in their present manifestations, not those pertinent to the 1970s.

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