Janice Stargardt

Sri Ksetra, 3rd Century BCE to 6th Century CE: Indianization, Synergies, Creation

1 Introduction

George Coédès, the celebrated epigrapher of Sanskrit and Old Khmer, developed a theory of the Indianization of Southeast Asia in a colonial context in the 1930s, as a parallel to contemporary research on the Romanization of Europe. Qualified in the Asian case as a cultural, not a military, colonization, Coédès wrote: “In the majority of cases [in Southeast Asia], *one passes without transition from a late Neolithic to the first traces of Hinduism* [my translation and emphasis].”¹ He proposed processes of intensifying *cultural colonization* in the 2nd and 3rd centuries with enduring results by the 4th century. This view permeated the work of many scholars, e.g. K. N. Chaudhuri, up to 1990.² It is an undeniable fact that, at different times in the 1st millennium CE, societies throughout most of Southeast Asia that previously lacked systems of writing – and had *therefore* been widely assumed by scholars of Indianization to lack organized social structures, religions, art, and architecture – adopted Indian scripts and bodies of Indian sacred texts and adapted Indian religious thought, architecture, and art.

The exact nature of this much-invoked Indianization of Southeast Asia, its human agencies, its driving forces, and its timing, all demand constant reinterrogation through research. This chapter is such an attempt, justified by the fact that the valuable archaeological publications since c. 1990 to have addressed this problem³ include little up-to-date research on the Pyu sites of Myanmar, which covered the most extensive geographical area of any culture in mainland

1 George Coédès, *Les états hindouisés de l'Indochine et d'Indonésie* (Paris: Boccard, 1964), 44; quoted in Janice Stargardt, *The Ancient Pyu of Burma*, vol. 1, *Early Pyu Cities in a Man-Made Landscape* (Cambridge: PACSEA; Singapore: ISEAS, 1990), 41; on Greater India and Further India, see e.g. R. C. Majumdar, *Hindu Colonies in the Far East* (Dhaka: K. L. Mukhopadhyay, 1963) and other Southeast Asian “colonies” books by this author.

2 K. N. Chaudhuri, “Indian Ocean Trade and Southeast Asia.” (Lecture to the Asian Studies Centre, St. Antony’s College, University of Oxford, Spring 1990).

3 I. C. Glover, *Early Trade between India and Southeast Asia: A Link in the Development of a World Trading System*, Occasional Paper 16 (Hull: University of Hull Centre for South-East Asian Studies, 1989; repr., 1990); I. C. Glover and P. Bellwood, eds., *Southeast Asia, from Prehistory to History* (London: RoutledgeCurzon, 2004); see also Elizabeth Moore, “Space and Place in Early Burma: A New Look at ‘Pyu Culture,’” *Journal of the Siam Society* 97 (2008): 1–27.

Southeast Asia up to ca. 700 CE (Figure 1) and provide much evidence relevant to this problem. The largest Pyu site, Sri Ksetra (near Pyay), forms the central study of this chapter.

Figure 1: The approximate area of Pyu settlement, ca. 650 km north-south [image adapted from Google Maps by Gabriel Amable].

I wish here, as well, to challenge the view that the possession of a system of Indic writing a) exemplifies Indianization, and b) that writing is *the* criterion for the emergence of a complex society. Coédès famously regarded *Sanskritization* and *Indianization* as interchangeable terms, thus privileging texts over artifacts.⁴ In Burma, too, studies on inscriptions on stone and metal were published on a greater scale than those on archaeology and conservation.⁵ Evidently the written

⁴ Coédès, *Les Etats hindouisés*, 55; George Coédès, *Articles sur le Pays Khmer*, ed. Claude Jacques (Paris: Ecole française d'Extrême-Orient, 1989).

⁵ *Inscriptions of Pagan, Pinya and Ava. Based on the Mahamuni Marble Slabs*, collected by Emil Forchhammer, eds. Taw Sein Ko and Charles Duroiselle (Rangoon: Office of the Government

sources of any ancient society provide precious evidence on which to construct some aspects of its history; in South and Southeast Asia, these are aspects of civil and religious power. The Pyu produced a cluster of inscribed texts – some of them long and of great importance for South and Southeast Asia. Those from ca. 4th–6th centuries CE will be discussed below. On the other hand, it can be noted here that, as far as is known, those written sources provide no information about the growth of irrigation works and their impact on harvests, population growth, and social complexity: the factors, in short, which underpinned Pyu – and many other – civilizations.

2 Regional Archaeological Research in Southeast Asia

It is not by chance that archaeological research in Southeast Asia since the 1980s, with its emphasis on material evidence and environmental contexts, has profoundly challenged the Coëdès hypothesis, firstly through prehistoric research on social and economic stratification as revealed in the rich Bronze and Iron Age burials of mainland Southeast Asia,⁶ secondly through evidence of (often reciprocal) agricultural, commercial, and technological exchanges between parts of India and parts of Southeast Asia many centuries before the appearance of Indic religious thought there,⁷ and thirdly through recent archaeology on sites of early-stage urbanization, notably at Angkor Borei (southern Cambodia); Co Loa (north Vietnam); around Oc-Eo (Mekong Delta); peninsular Thailand and Myanmar; and Halin, Beikthano, and Sri Ksetra in Dry Zone Myanmar.⁸ Long-term indigenous processes

Printer, 1899); *Epigraphia Birmanica; Being Lithic and Other Inscriptions of Burma*, 3 vols. (Rangoon: Government Printing Office, 1919–21); G. H. Luce and Pe Maung Tin, eds., *Inscriptions of Burma, 493–599 B.E. (AD 1131–1237)* (Rangoon: University of Rangoon, Oriental Studies Publications, 1933–56), 5 portfolio volumes printed by Oxford University Press.

6 E.g., C. F. W. Higham, “The Transition from Prehistory to the Historic Period in the Upper Mun Valley,” *International Journal of Historical Archaeology* 2, no. 3 (1998): 235–61; C. F. W. Higham, “The Prehistory of Southeast Asia: A Retrospective View of 40 Years Research,” *Antiquity* 85 (2011): 639–53.

7 Jean Kennedy, “Bananas and People in the Homeland of Genus *Musa*,” *Ethnobotany Research and Applications* 7 (July 2009): 179–197; publications of the Early Rice Project, led by Dorian Fuller, UCL. Bellina, Bérénice, ed. *Khao Sam Kaeo. An Early Port-City between the Indian Ocean and the South China Sea*. Paris, École française d’Extrême-Orient, 2017.

8 Miriam Stark, “Results of the 1995–1996 Archaeological Field Investigations at Angkor Borei, Cambodia,” *Asian Perspectives* 38, no. 1 (1999): 17–36; Miriam Stark et al., “Biocultural Practices

of economic and cultural change have been traced across the region, which suffice to challenge the model of Indian cultural colonization imposed on passive Southeast Asian societies trapped in a late Neolithic, and to demand new inquiries into the real nature of the profound cultural changes that were taking place before any evidence of literacy.

3 Sri Ksetra, the Urban Context of the Yahanda Mound

Sri Ksetra and two other large Pyu sites, Beikthano and Halin (Figure 1),⁹ exemplify an early form of urbanization in Southeast Asia that was to reappear at much later, better-known historical cities. Sri Ksetra is a city of vast spatial extent, enclosing 1.847 ha within its walls, with important extramural neighborhoods on the north, west, and south sides; Beikthano covers 900 ha and Halin ca. 500 ha, both also with extramural areas. In this type of urbanization, space was defined by irrigation works (canals, moats, and reservoirs) of practical and sometimes symbolic significance, in which horticulture and agriculture coexisted with monumental clusters.¹⁰ Since this was urbanization in the Dry Zones of the humid tropics, evidently both the natural and the man-made environments provided the indispensable contexts of all Pyu urban sites, and were of equal significance in the later Dry Zone royal cities of mainland Southeast Asia, such as Angkor, Pagan, Sukhothai, and Ayutthaya. On the other hand, habitation sites long remained elusive at all these sites until the use of LiDAR at Angkor and

during the Transition to History at the Vat Komnou Cemetery, Angkor Borei, Cambodia,” *Asian Perspectives* 56, no. 2, (2017): 12–46; Nam C. Kim, Lai Van Toi, and Trinh Hoang Hiep, “Co Loa; An Investigation of Vietnam’s Ancient Capital,” *Antiquity* 84, no. 326 (2010): 1011–1027; Janice Stargardt, “From the Iron Age to Early Cities at Sri Ksetra and Beikthano, Myanmar,” *Journal of Southeast Asian Studies* 47, no. 3 (October 2016): 341–365; Bérénice Bellina, ed., *Khao Sam Kaeo. An Early Port-City between the Indian Ocean and the South China Sea* (Paris: Ecole française d’Extrême-Orient, 2017).

9 *Nomination Dossier for the Ancient Pyu Cities, to the World Heritage Committee Meeting 2014* (Naypidaw: Ministry of Culture, Department of Archaeology and National Museums, 2013); all three Pyu cities were awarded World Heritage status in June 2014 for urbanization and its wider significance.

10 Stargardt, *The Ancient Pyu*, 45–142; Janice Stargardt, “Le cosmos, les ancêtres et le riz; l’eau dans l’espace urbain des pyus en birmanie,” in *Disciplines croisées, hommages à Bernard-Philippe Groslier*, ed. G. Condominas (Paris: Ecole des Hautes Etudes en Sciences Sociales, 1992), 311–35.

wider areas in Cambodia,¹¹ and the independent discovery of the Yahanda Mound at Sri Ksetra through surface survey and coring.¹²

The archaeological excavations at the Yahanda Mound in Sri Ksetra, presented below,¹³ have recovered datable phases in the record of a nonelite Pyu community that underwent the transition there from the late Iron Age in the last centuries BCE, and participated in stages of urbanized culture on this mound for much of the 1st millennium CE. They created a sacred space for complex funerary rituals from ca. the 1st century BCE culminating in the last cremation burials on the mound in the mid-3rd–5th centuries CE, in direct proximity to their habitations (AMS dates, Table 1). The new Yahanda evidence includes encounters with both Buddhism and Hinduism there on a popular level from ca. mid-/late 4th century until the end of occupation on the mound in the 8th century. From identifiable points in time, Pyu communities at Sri Ksetra practiced both Buddhism and Hinduism, at times with traceable Indic sources of inspiration (synergies), but often adding new features to both traditions, thereby making durable records of their own changing, inclusive culture. In the last part of this chapter, the Yahanda findings will briefly be placed in the wider context of research on elite Buddhist and Hindu culture at Sri Ksetra.

Śrīkṣetra in Sanskrit can be translated in at least two ways: Noble Field or Field of Śrī; its use is attested in a local Prakrit source (Figure 2),¹⁴ a large bronze ring which belonged to a great spiritual leader. It is palaeographically datable to ca. 5th–6th century.

11 Damian Evans et al., “Uncovering Archaeological Landscapes at Angkor Using lidar,” *Proceedings of the National Academy of the United States [PNAS]* 110, no. 31 (July 30, 2013): 12595–12600.

12 Win Kyaing, 2012–14; Win Kyaing and the author, October 2014; Ne Win, Irrigation Department, coring of the mound to 3.40 m, December 2014.

13 Conducted under the ERC project “Beyond Boundaries.” Team members: Win Kyaing, Kyaw Myo Win, Tin May Oo, Myint Aung, Tin Tin Htay, Nyo Nyo Yin Mauk, Yin Nyein Aye, Naw Pauk Wah, and Win Sein, Field School of Archaeology; Janice Stargardt, Gabriel Amable, Sheila Kohring, and Sean Taylor, University of Cambridge.

14 Large bronze ring from Sri Ksetra inscribed in Prakrit, translated and dated by Dr. Lore Sander: *Siri Khetta Maha The*, private collection, Germany. Chinese sources record the name *Shilichadaluo* from the seventh century: Sun Laichen, “Chinese Historical Sources on Burma; A Bibliography of Primary and Secondary Works,” special issue, *The Journal of Burma Studies* 2 (1997): 13.

Table 1: AMS Radiocarbon Dates for the Yahanda Mound.*

SUBMITTER NO.	SERVICES	MATERIAL/ PRETREATMENT	CONVENTIONAL AGE	2SIGMA CALIBRATION	2SIGMA CALIBRATION PDF	STABLEISOTOPE&CN
H59/8/5-6/ 100-10	AMS-Standard delivery	(Charred Material): Acid/ alkali/acid	1610+/-30 BP	Cal AD 390 to 540 (Cal BP 1560 to 1410)		$\delta^{13}C(\text{‰})$ -27.3
H59/ 8/6-7/140	AMS-Micro-sample Analysis; Standard delivery	(Charred Material): Acid/ alkali/acid	1680+/-30 BP	Cal AD 260 to 280 (Cal BP 1690 to 1670) and Cal AD 325 to 420 (Cal BP 1625 to 1530)		$\delta^{13}C(\text{‰})$ -25.7
H59/ 9/8/175	CANCELED					
H59/3/68	AMS-Standard delivery	(Charred Material): Acid/ alkali/acid	1290+/-30 BP	Cal AD 660 to 770 (Cal BP 1290 to 1180)		$\delta^{13}C(\text{‰})$ -27.3

*Dating by Beta Analytics, November 2016, 2 sigma calibration.

Figure 2: Bronze ring from Sri Ksetra. With Prakrit place name for Sri Ksetra, ca. 6th century [author's photo].

Pyu language is thought to be a distant cousin of Myanmar language;¹⁵ both belong to the Tibeto-Burman family of languages. The paucity of bi- or multilingual inscriptions has hampered the translations of Pyu monolingual inscriptions, but it is clear that they became a very literate society, leaving a body of well-inscribed records from the 4th/6th to the 13th century written in Pyu, Prakrit, Pali, and Sanskrit. It is reasonable to assume, from the considerable degree of professional competence and sophistication visible in their earliest surviving inscriptions on durable materials, and the time needed to master three Indic scripts for four languages, including the non-Indic Pyu language, that the origins of Pyu literacy are earlier, possibly in the early 4th century. Major Pyu-language inscriptions have been found at Sri Ksetra, Halin, Myittha, Thandoway, and Pagan. The greatest number of Pyu inscriptions (in all four languages) come from Sri Ksetra, where

¹⁵ See Marc Miyake in Arlo Griffiths, Bob Hudson, Marc Miyake, and Julian Wheatley, "Studies in Pyu Epigraphy, I: State of the Field, Edition and Analysis of the Kan Wet Khaung Gon Inscription, and Inventory of the Corpus," *Bulletin de l'école française d'extrême-orient* 103 (2017): 43–205.

their literary heritage also includes the preservation of the oldest surviving Pali texts in the world (written in Southern Brahmi script on gold, silver, and stone), a long royal genealogical inscription in Pyu (in a different, more ornamented form of Southern Brahmi), and a long royal bilingual inscription in Sanskrit and Pyu (in which the Sanskrit was written in Northern Brahmi and the Pyu gloss in a form of Southern Brahmi), among others.¹⁶ In addition, Pyu numerals and letters stamped into bricks were widely used in their monuments and fortifications at Sri Ksetra and other sites, including Pagan. They provide glimpses of first-millennium Pyu social and economic structures that have yet to be explored. The first part of this chapter will present the evidence on the ancient environmental, economic, and social development that took place at Sri Ksetra *before* the local creation of written records. The second part will present the results of the excavations of the Yahanda Mound; the third part will place Yahanda in the wider context of elite monumental culture at Sri Ksetra, and consider the nature of the early written records and Buddhist art of the Pyu, and what light these sources combined throw on the overarching questions of Indianization, synergies, and creation.

4 Environmental and Hydraulic Conditions at Sri Ksetra

Sri Ksetra is only 5.8 km east of the Ayeyarwadi River but sheltered from it by the Myinbahu Ranges (maximum altitude 161 m above mean sea level).¹⁷ Pyu people seem consistently to have preferred to settle in the Dry Zone of Myanmar in proximity to small, perennial (but highly seasonal) rivers, which they skilfully controlled for irrigation and water storage (Figure 3). Even when apparently located close to the great Ayeyarwadi [Irrawaddy] River (as at Sri Ksetra, early Pagan and

¹⁶ Louis Finot, “Un nouveau document sur le bouddhisme birman,” *Journal Asiatique* 20 (1912): 121–36; Louis Finot, “Le plus ancien témoignage sur l’existence du Canon Pali en Birmanie,” *Journal Asiatique* 21 (1913): 193–5; C. O. Blagden, “The Pyu Inscriptions,” *Epigraphia Indica* 12 (1913–14): 127–32; Lu Pe Win, *Report of the Superintendent Archaeological Survey of Burma 1938–9* (Rangoon: Government Printing Office, 1940); Janice Stargardt, “The Four Oldest Surviving Pali Texts: The Results of the Cambridge Symposium on the Golden Pali Text of Sri Ksetra (Burma), April 1995,” *Journal of the Pali Text Society* 21 (1995): 199–213; Harry Falk, “Die Goldblätter aus Sri Ksetra,” *Wiener Zeitschrift für die Kunde Südasiens* 41 (1997): 53–92; Arlo Griffiths et al., “Studies in Pyu Epigraphy,” 43–205; comments on the scripts, based on Griffiths and Miyake.

¹⁷ The coordinates of Sri Ksetra are 18 48' 32.19"N x 95 17'12.25"E.

Figure 3: Sri Ksetra, Phase 1 of hydraulic works and wall building, ca. 3rd–1st century BCE [map: Janice Stargardt and Gabriel Amable].

old Tagaung), the Pyu were usually exploiting much smaller tributaries for their hydraulic networks. In the development of hydraulic works at Sri Ksetra, the Pyu mastered three difficult slope factors: a very steep slope from the Myinbahu Ranges descended from an average of ca. 140 to 63 m AMSL over the short distance of less than 3 km from the west and southwest of the site and produced a huge water force impacting on the site during and after the wet season; a much more gradual slope from the northeast allowed the Nawin River to flow westwards to join the Ayeyarwadi River at Pyay [Promé], passing close to the north side of the future walled urban area of Sri Ksetra through an easily defensible gap in the Myinbahu Ranges. Finally, a slope toward the south affected all land

outside the urban area on its low eastern side where lay the main storage and redistribution hub, the great East Tank. Within the complex parameters of the slopes, the ancient canal-moat system was constructed to flow in an almost complete circle – a remarkable piece of engineering skill.¹⁸ While most of the Sri Ksetra hydraulic system moved in the auspicious clockwise direction, exceptions were the moats on the south side of the city, flowing a short distance from the east side of the Yahanda gate past the Mu Htaw gate into the East Tank. They were later triplicated to cope with the heavy water force impacting on this part of the city. The inflow of all hydraulic works was on a higher level, the outflow on a lower level, so that all water movements were gravity fed (Figure 4).¹⁹

The ancient Pyu hydraulic works were so accurately inserted into the complex environmental constraints of slope and climate just outlined that major elements still function both above and below ground now.²⁰ Though benefiting from more rain than Beikthano and Halin, Sri Ksetra, with an average of 1,200 mm per annum, is nonetheless inside the Dry Zone and does not receive enough rain to support traditional rain-fed rice types. Gradually the largest and most intensive of the Pyu irrigation systems developed in and around Sri Ksetra.²¹ A close study of the hydraulic system at Beikthano and Sri Ksetra since the 1980s has led the author to two conclusions particularly relevant to this chapter and this volume: firstly, that Pyu hydraulic works belong to the general hydraulic technology practiced in the Dry Zones in Andhra, northern Tamil Nadu, and Sri Lanka, demonstrating synergy in this major aspect of technology,²² and secondly, that in view of the challenges posed by the complex slope factors and rainfall conditions of Sri Ksetra, local experiments with water

18 Bernard-Philippe Groslier, “La Cité hydraulique angkorienne: exploitation ou surexploitation du sol,” *Bulletin de l’école française d’extrême-orient* 66 (1979): 161–202; the hydraulic achievements of the Pyu also deserve attention.

19 See Stargardt, “From the Iron Age to Early Cities” for details on altitudes at specific points of the site re moat- and wall-building at Sri Ksetra.

20 Janice Stargardt, Gabriel Amable, and Bernard Devereux, “Irrigation Is Forever: A Study of Post-Destruction Movement of Water across the Ancient Site of Sri Ksetra, Central Burma,” in *Remote Sensing: A New Tool for Archaeology*, vol. 16, eds. R. Lasaponara and N. Massini (Dordrecht: Springer Verlag, 2012), 247–67.

21 Win Kyaing has traced and mapped a hinterland with hydraulic system and Pyu artifacts extending south to Thegon and a considerable distance to the north.

22 Janice Stargardt, *The Ancient Pyu*, 45–142; Janice Stargardt, “Water for the State or Water for the People? Wittfogel in South and Southeast Asia in the First Millennium,” in *Water Societies and Technologies from the Past and Present*, eds. Y. Zhuang and M. Altaweel (London: UCL Press, 2018), 256–68.

Figure 4: Sri Ksetra, Phase 2 of hydraulic works and walls, ca. 1st–6th century CE [map: Janice Stargardt and Gabriel Amable].

control and soil and rice types must have taken place for some time in this locality to secure the necessary knowledge. The survival of early settlement depended on successful water control to protect the habitation areas and burial terraces from the effects of the powerful runoff from the Myinbahu Ranges during and immediately after the annual rains, from May/June to September, and to store enough water for use in the long dry season from October to May/June.

The earliest evidence of water control found so far is a trench running ca. 3,000 m along the 52 m contour line connecting two water storage tanks, each ca. 550 x 510 m (see Figure 3). This trench was associated with an earthen bund, later with massive brick walls on parts of it. The trench was laid out to capture

the water force from the Myinbahu Range in the wet season and lead it along a curved line to the two storage tanks. In the deepest part, the tanks were 3 m deep.²³ Taking 2 m as their average ancient depth, each tank at 510 x 550 x 2 m had a holding capacity of 560,000 cu m. Their original bases were lined with an impermeable material. They were thus significant achievements. The ovoid shape of the outer walls of Sri Ksetra contrast with the squarish or rectangular walls of Beikthano and Halin. But this early trench shows that already at some time ca. 3rd–1st century BCE, the ancient inhabitants understood that a curved trench and rampart were better able to withstand the strong seasonal water forces sweeping down from the range than straight alignments would have been. We consider that the ovoid alignments of all the external walls and moats of Sri Ksetra evolved initially in response to the challenges posed by the pluvial regime and slope factors peculiar to the site. They involved earth and later brick walls, eventually many stretches of moat-wall duplication and one area of triplication. The irrigated urban landscape may, at the peak of the city's prosperity ca. 6th–8th century, have also approximated to a microcosm of royal power.²⁴

The massive southwestern and western walls of Sri Ksetra, built of fired brick with a brick-lined moat, initiated Phase 2, a more elaborate phase in water control. They ran approximately parallel to the earliest surviving trench, but ca. 550 m closer to the Myinbahu Range, along the 63 m AMSL contour, and now employed the great East Tank as the main water storage and redistribution point (see Figure 4). Through the use of fired bricks in the walls and eventually at least 7 to 8 km of brick-lined moat along the western side of the site, they represented works of resistance, water control, and storage capacity on a greatly increased scale and solidity. But firstly, they clearly grew out of the same accurate knowledge of the local environment embodied in the earlier trench, embankment, and storage tanks. Secondly, they developed slowly and experimentally. Their creation and coordination imply the development of greatly increased resources at Sri Ksetra and a corresponding growth in the socioeconomic complexity of the city and its hinterland. The dimensions of the great East Tank were ca. 2,800 x 1,000 x 2 m = 5,600,000 cu m. The early stages of the brick western walls and moats were probably begun in ca. 2nd century CE as related activities, but both were rebuilt, improved, and extended many times over the centuries thereafter, as can be seen by the variations in the thickness of the walls, the reuse of broken

²³ Coring data Ne Win, Irrigation Department to author in January 2015.

²⁴ Janice Stargardt, "City of the Wheel, City of the Ancestors: Spatial Symbolism in a Pyu Royal City of Burma," *Indo-asiatische Zeitschrift* 6/7 (2002/3): 144–167; also Stargardt, "Le cosmos, les ancêtres et le riz," note 10.

bricks, and the bricks of different sizes. The earliest Pyu bricks at Sri Ksetra and Beikthano correspond to the Mauryan brick size, which had become a norm over much of India by the 2nd–1st century BCE – further evidence of technical synergy long before a religious one.²⁵ The brick western walls were duplicated by at least one earth wall outside the brick-lined moat, and extended around the northern and southern sides of the city to reach the East Tank.²⁶ The last wall to be built at Sri Ksetra was the low, poor-quality brick eastern wall, built in Phase 4, which falls outside the scope of this chapter.

I provisionally date Phase 1 as a gradual, experimental process involving the trench and two tanks from ca. 3rd century BCE to 1st century CE; Phase 2 was the period when the construction of brick walls, canals, some brick-lined moats, and gateways took place at Sri Ksetra. It marks a long period of urban development, from ca. 2nd–5th/6th century CE, and is the main focus of this study. It begins at approximately the same time as extensive ironworking inside the walled city,²⁷ and ends after the appearance of major inscriptions of kings and great spiritual leaders at Sri Ksetra,²⁸ in a context where Buddhism and to some extent Hinduism were already well established. Phase 2 at Sri Ksetra thus starts before, overlaps with the Gupta period in India, and extends into the early post-Gupta period. Their synergies will be further appraised below. Phase 3 (Figure 5) is basically an intensification of the existing network of moats, walls, and canals; it dates to ca. 6th–8th century and marks the peak of prosperity at Sri Ksetra in terms of the extent of the hydraulic system, monumental activity, and the creation of votive art.²⁹ Phase 4 (Figure 6) belongs to a period of regional aridity in mainland Southeast Asia, starting in the 8th and severe by the 9th century. The first three phases of the development of the walled and irrigated urban

25 Cf. A. Ramalakshman, ed., *Andhra Pradesh Archaeology: A Review, 1987–2001* (Hyderabad: Department of Archaeology and Museums, 2002): e.g. West Godavari District and Guntur Districts, 69–77.

26 See note 14 above.

27 Bob Hudson, “A Thousand Years before Pagan: Radiocarbon Dates and Myanmar’s Ancient Cities,” in *Bagan and the World: Early Myanmar and Its Global Connections*, eds. G. Y. Goh, J. N. Miksic, and M. Aung-Thwin (Singapore: ISEAS-Yusof Ishak Institute, 2018), 88–121, figure 6.20, two phases of iron slag, 50–220 CE and 240–390 CE.

28 Stone urns inscribed with royal names and pedestal inscription with two royal names and a royal Guru, summarized below; see also Marc Miyake in “Studies in Pyu Epigraphy.”

29 G. H. Luce, *Phases of Pre-Pagan Burma*, vol. 2 (Oxford: Oxford University Press, 1985), plates 10–49. NB, Luce follows Blagden in assuming urban development at Sri Ksetra began during the 7th century CE.

Figure 5: Sri Ksetra, Phase 3. Intensification of hydraulic works and walls, ca. late 6th–8th century [map: Janice Stargardt and Gabriel Amable].

landscape at Sri Ksetra were long, continuous processes that did not represent sudden changes, whereas Phase 4 did.³⁰

The impact of irrigation water on traditional rice types and secondary crops in and around Sri Ksetra during Phases 1 to 3 would have been, despite short-term incidents, to greatly increase the security and abundance of at least one traditional

³⁰ Janice Stargardt, "Irrigation in South Thailand as a Coping Strategy against Climate Change: Past and Present," in *Environmental and Climate Change in South and Southeast Asia; How Are Local Cultures Coping?* ed. Barbara Schuler (Leiden: E. J. Brill, 2014), 105–37.

Figure 6: Sri Ksetra, Phase 4, contraction of the hydraulic works and construction of the east wall ca. 9th century CE [map: Janice Stargardt and Gabriel Amable].

rice harvest and make possible the cultivation of fruits and other vegetables. The creation, expansion, intensification, and final contraction of the hydraulic system mirror the expansion and contraction of resources and power structures of the city itself. Bricks at Sri Ksetra, from their appearance in ca. 2nd century CE to the end of Phase 3, ca. 8th century, contained great concentrations of rice grains, as well as the usual rice husks for temper. They reflect ritual acts associated with making bricks and terra-cotta sculptures, made possible by the abundance of rice secured by irrigation. Irrigated agriculture must have made a vital contribution to the

prosperity and longevity of the city.³¹ The seed cavities in the fired bricks of Sri Ksetra reveal the cultivation of several rice varieties, among which the slender long grains of *Oryza indica* types dominated.

From their experimental origins in ca. 3rd century BCE, the Sri Ksetra hydraulic system and irrigated agriculture increased in scale and sophistication in parallel with the scale of urbanization *before* the Pyu acquired writing. Pyu texts in Indic scripts, when they appeared, recorded some major cultural changes that had already taken place, but they did not cause the emergence of a complex society nor, so far as is known, did they contain references to the economy. Nor, indeed, did they represent the first significant contacts with parts of India, which took place many centuries earlier in agricultural exchanges, hydraulic and ceramic technology, brickmaking norms, and possibly ironworking. This is externally confirmed by Chinese primary sources of the 1st–2nd century CE that record that commercial relations existed between southwest Yunnan, the *Piaoyue* [the Pyu], and *Yuandu* [parts of India].³²

5 The Yahanda Mound

The Yahanda Mound is at present the only excavated early urban habitation site in Myanmar and rare in Southeast Asia in general as it was a nonelite community. Surveys and excavations took place there from 2014 to 2016, followed by analyses of the finds from 2016 to the present.

Yahanda is the Myanmar form of Pali, *arhant* (Sanskrit *arhat*), meaning a disciple of the Buddha. The mound is located just outside the southern walls of Sri Ksetra, within an important extramural cluster of previously known Pyu features (Figure 7a–7b). Its name derives from the Yahanda Gu, a brick-built Disciples' Meditation Cave, inexpertly restored in 1964 approximately to its Pagan-period form, but it has Pyu-period origins. The Yahanda Lake lies immediately to the

³¹ Data on the impact of irrigation on traditional rice harvests by Tichit for Dry Zone Cambodia are relevant: per 40 kg of traditional rice seeds sown/ha: unirrigated yield ca. 700 kg/ha; with limited irrigation 1000 kg/ha; with good irrigation 1600 kg/ha; cited from Janice Stargardt, *Satingpra 1, The Environmental and Economic Archaeology of South Thailand* (Oxford: BAR; Singapore: ISEAS, 1983), 108.

³² Chang Qu, *Huayang guo zhi* [The Records of the Region in the South of the Hua Mountain], vol. 4, record of the Emperor Ming of the Later Han Dynasty, 58–76 CE; and Chen Shou (233–297 CE), *Sanguo zhi* [History of the Three Kingdoms], cited by Sun Laichen, “Chinese Historical Sources on Burma,” 10–11.

Figure 7a: Sri Ksetra, the Yahanda Mound with excavated areas and urban context [Gabriel Amable and Janice Stargardt].

Figure 7b: Sri Ksetra, the Yahanda Mound, elevations of excavated areas. Locations of burial terraces in HMA59: TP4, 5, 6, 7, 8, 9; wooden floors on pillars: TP1, 2, 3, 4, 8, 9 [Gabriel Amable and Janice Stargardt].

east of the mound; an unnamed canal ran immediately to the west of the mound, and the Yahanda Gateway is just to the north, leading into the walled city.

Some 460 m to the southeast of the Yahanda Mound stands the lofty Bawbawgyi *stūpa*, the highest of the three conical or cylindrical *stūpas* that today mark the outside “corners” of the walled urban landscape of Sri Ksetra: Bawbawgyi, 44 m high; Phayagyi, 36 m high; and Phayamar, ca. 32 m high. All three originated in the Pyu period but have been enlarged many times. Some 380 m south of the Yahanda Mound stand two large Pyu stepped burial terraces, HMA47 and HMA53, respectively,³³ made of compacted earth with brick steps and brick facings. Their surfaces were originally sealed with impermeable materials. Excavations have only removed that covering and revealed the stepped surface layers directly beneath it, which contain groups of cremated burials in terra-cotta urns associated with Buddhist clay sealings in HMA53, and both Buddhist and Hindu clay sealings in HMA 47 (Figure 8).³⁴ Each burial terrace has a single AMS date of mid-1st millennium CE,³⁵ but each possibly has earlier origins in their lower layers that have not yet been excavated. Other unexcavated burial terraces are known to exist in this area, close to the Bawbawgyi *stūpa*.

The site number given to the Yahanda Mound is HMA59 and each pit and layer was also numbered. Thus HMA59/TP5/7 means Yahanda Mound, pit number 5, layer number 7. Figure 7b shows those excavated areas that contained burial terraces. The earliest human activities on the Yahanda Mound revealed so far were funereal, but the numerous iron nails suggest they were associated from an early period with wooden structures, possibly habitations. Burial terraces were found in HMA59/TP4, TP5, TP6, TP7, TP8, and TP9. Only TP1 to TP3 and TP10 did not contain burial terraces or burials. Large iron nails, 3 to 7 cm long, were found in HMA59/8/8-7, HMA59/4/7-6, and HMA59/9/8-7 in association with burials and burial terraces. In addition, all ten pits on the Yahanda Mound contained iron nails from former wooden structures either in that space or close by. The burial terraces at Sri Ksetra were carefully prepared sacred places. Bricks outlined only the later phases of burial terraces at the Yahanda Mound (3rd–5th century), but burials occurred through three lower geological layers, including in the basal layer of the mound which was pale sand. In all burial phases, the soil had been compacted and prepared as a ritual space. Brick steps and facings can be seen in HMA59/TP5-6/7 (Figure 9). Matching steps were

³³ *Inventory of Sites at Sri Ksetra. Annexe IV to the Nomination Dossier to the World Heritage.*

³⁴ See Stargardt, “From the Iron Age to Early Cities,” Figure 6 for Hindu and Buddhist clay sealings from HMA53 and 47.

³⁵ Hudson, “A Thousand Years,” figure 6.20, 106: HMA47, 420–560 CE, and HMA53, 470–650 CE. All locations mentioned in this paragraph are shown on Figures 4 and 5 above.

Figure 8: Sri Ksetra, exposed upper surface of HMA53, a stepped burial terrace of compacted earth with brick facings and steps containing 280 cremated urn burials and Buddhist votive offerings [author's photo].

revealed in HMA59/TP7/7. Although many fragments of urns and iron nails were found in TP5, TP6, and TP7, no actual burials were found, probably owing to the factors mentioned below in relation to the basal layer in HMA59/TP8/9.

Pyu burials were always cremated but containers varied: at the Yahanda Mound, of the fourteen cremation burials excavated, five were found without containers (four in TP8 and one in TP4). Three of these may originally have been wrapped in cloth of which no traces remained; two in TP8 had definitely been placed in wooden bowls that had left a crust in the compacted soil of the burial terrace, although the wood itself had disintegrated (HMA59/TP8/7-8, Figure 10a).

These wooden bowls were of similar diameter and shape to the hemispherical, finely made pottery bowls used as urns in HMA59/TP8/8 and elsewhere as offering bowls, which show the first evidence of Indic ceramic technology, ca. 1st–2nd century CE (Figure 10b).

The lowest of the Yahanda burials (HMA59/TP8/9) are at present undated but, on the basis of their stratified geological context, probably date from ca. the 1st century BCE (Figure 11). They were placed, without surviving container, in the

Figure 9: Sri Ksetra, Yahanda Mound 2014/15 excavations: brick steps and facings of burial terraces, urn sherds and one cremated burial revealed in HMA59/4, 5, 6, and 6a (and in 2015/16, further burial terraces and thirteen additional cremated burials in HMA59/7, 8, and 9) [author's photo].

basal layer of the mound. The annual rise and fall of the water table through this layer dispersed the fragments of bone and carbon.³⁶

The highest of the twelve burials in HMA59/TP8/7 has been dated to 270+/-30 CE (Table 1).³⁷

No Buddhist or Hindu offerings were found in the burial terraces revealed in HMA59/TP4, TP5, TP6, TP7, and TP8 at the Yahanda Mound, but numerous small pottery oil lamps show that rituals were conducted there. Directly above the highest burial in TP8, and touching it, were traces of an ancient wooden floor built on wooden pillars that penetrated into the burial terrace (HMA59/8/6, Figure 11), indicating that the ancient inhabitants of the Yahanda Mound *chose* to preserve the proximity of the living with the dead, as already suggested by the iron nails from older wooden structures found in layer 8 of this pit. Directly above the floor in TP8 in layer HMA59/8/5, dated to 340+/-30,³⁸ occurred the first simple evidence of encounters, on a popular level, with Indic religious motifs – and presumably

³⁶ Regrettably neither AMS nor OSL samples have so far yielded dates for this layer.

³⁷ Beta Analytics, October 2016; dating conducted to 2 sigma range (Table 1).

³⁸ Beta Analytics, October 2016; and Table 1.

Figure 10a: Sri Ksetra, Yahanda Mound, Burial 5 in TP8/8: soil impression of former wooden burial urn in burial terrace, ca. 1st–2nd century CE [author's photo].

Figure 10b: Sri Ksetra, Yahanda Mound, HMA59/8/8-7: small hemispherical red bowl, diam. 11 cm (similar dimensions and shape to wooden bowl in Figure 10a); first evidence of Indic ceramic technology, ca. 1st–2nd century CE [author's photo].

Indian religious thought – in the form of symbols depicted on stamped ceramics (Figure 12 left, right, and below), but no inscriptions. In fact, although the ceramic evidence shows a strong awareness of visual communication through sacred symbols, no evidence of formal literacy was found in the long history of human activity on the Yahanda Mound, ca. 1st century BCE to 8th century CE.

Figure 11: Sri Ksetra, Yahanda Mound, January–February 2016 excavations. Stratigraphy of HMA59/TP8 from bottom upwards: layers 9 to 7, 12 burials in a prepared burial terrace of compacted earth with brick facings in last phase; layer 6, ancient wooden floor and pillar (note rotting of floor and pillar and downward penetration of debris from layer 5 into 7); layers 5 to 3, habitation debris in hardened work surfaces [author's photo].

In two other pits of the Yahanda Mound, cremation burials were found in higher layers than those in TP5, 6, 7, and 8. TP4 and TP9 also contained urn burials directly under an ancient wooden floor. For instance, in HMA59/4/5 a single cremation burial without surviving container was found in compacted earth among an alignment of brickbats delineating the edge of a burial terrace (including the earliest finger-marked brick at the Yahanda Mound). The burial was directly under a decayed pillar with the remains of other pillars, a wooden

Figure 12: Sri Ksetra, Yahanda Mound, stamped ceramics: HMA59/8/5, (top left) just above the floor, a red-ware sherd stamped with śrīvatsa raised dots and wide triangles, mid-/late 4th century; (top right) Buddha on straight-backed throne with raised dots and double row of wide triangles, late 4th–early 5th century CE; (below) collection of sherds stamped with *kalaśa* pots sacred to Buddhism and Hinduism, plus open lotus, dancing man, and stylized conch – note the frames of raised dots and wide triangles, also freehand incised lines, late 4th century [author’s photos].

floor, and successive layers of domestic debris above.³⁹ This burial has been dated to 404+/-21 CE.⁴⁰ This date lies within the calibrated range for the earliest Buddhist and Hindu evidence found in TP8 close by. Although no religious offerings were found with this burial in TP4, its date shows that the Pyu practice

³⁹ Janice Stargardt et al., “Early Urban Archaeology in Southeast Asia: The First Evidence for a Pyu Habitation Site at Sri Ksetra, Myanmar,” *Antiquity* 89, no. 348 (December 2015): <http://antiquity.ac.uk/projgall/stargardt348>. Accessed October 25, 2019.

⁴⁰ Stewart Fallon, Radiocarbon Laboratory, Earth Sciences, Australian National University, March 2016.

of cremating the dead and burying them in proximity to the living survived contact with Indian religious thought on the Yahanda Mound. As we shall see in the third part of this chapter, there is abundant additional evidence that Pyu funereal culture remained a major feature at Sri Ksetra (and Beikthano and Halin) long after the adoption of Buddhism and Hinduism. The striking ability of the Pyu to assimilate Indian religions to their funerary culture led to the emergence of distinctively Pyu traditions of Buddhism and Hinduism.

The last cremation burial on the Yahanda Mound to be discussed demonstrates this. Directly under the ancient floor of HMA/TP9/8-9, a very large, round-bottomed urn was found bearing four *śrīvatsa* stamps equally spaced around its shoulders (Figures 13, 14a, and b). It contained calcined bones and earth. Large sherds of a paddled-ware pot adhered to its body and encased its bas, but were removed for the conservation of the main pot. Again, the soil surrounding this urn showed signs of special compaction, but there were no other structural traces of a burial terrace.

Figure 13: Sri Ksetra, Yahanda Mound, HMA59/9/8-9: large red-ware urn (after conservation) with four *śrīvatsa* symbols stamped around the body; note resemblance to Andhra Iron Age-early Buddhist red wares in raised lines on neck, neck and body shape and ceramic color, mid-5th century [author's photo].

Figure 14a: Yahanda Mound, HMA59/9/8-9, showing stratigraphic location: red-ware urn with four *śrīvatsa* stamps, as found with paddled-ware sherds adhering to body under rotting floor in TP9 (layer 7), [author's photo]; **Figure 14b:** close-up of Figure 14a showing details of large red-ware urn with paddled sherds adhering to body and sitting in paddled-ware base, mid-5th century [author's photo].

6 Encounters with Indian Religious Thought at the Yahanda Mound, Late 4th to 5th Century

The evidence of encounters with Indian religious thought is provided by locally made potsherds stamped with sacred symbols such as *kalaśa* pots and lotus flowers, common to both Buddhism and Hinduism, but also by some motifs that were specifically Buddhist (i.e. images of the Buddha) or specifically Hindu (such as the *śrīvatsa* and stylized conch symbols) (Figure 12). In addition, there were heroic and royal figures, some still not firmly identified (Figure 15). Some stamps may depict the powerful figures the potters saw in procession in the city around them; others probably depict local beliefs and rituals, such as the linked male and female spirit figures with high plumed headdresses [ancestors?], the dancing man, the dancing woman, and man racing bull (Figures 12, 16a, and 16b). The

Figure 15a: Sri Ksetra, Yahanda Mound, HMA59/9/7, directly above the ancient floor: sherd stamp of heroic male nude holding long bow and standard. Image below showing same standard on the other side and arrows protruding behind figure?; stamps separated by double row of wide triangles, ca. late 5th century CE [author's photo].

stamped sherds formed a significant minority among the dense ceramic debris of Yahanda Mound, in which paddled wares predominated (Figure 17). Ceramics (all unglazed) were by far the most numerous artifacts found in the Yahanda excavations, in horizons associated with cooking fires and other domestic activities (HMA59/TP8/5-4, Figure 11). They were deposited on the man-made hardened work surfaces, regarded by others as impenetrable natural geological layers, which were built up over centuries, and occurred in all ten pits of the Yahanda

Figure 15b: Sri Ksetra, Yahanda Mound, HMA59/3/7: stamped sherd with double row of male and female crowned figures wearing heavy earrings and anklets. Images framed by raised dots, with five lines incised freehand above; mid- or late 5th century [author's photo].

excavations and will prove a useful diagnostic feature in the future search for other habitation sites at Sri Ksetra.⁴¹

Evidence such as that provided by the Yahanda stamped ceramics is extremely rare in Southeast Asia: it shows the assimilation of Indic religious motifs (and religious thought) on a popular level, and the use of Indic ceramic techniques to produce images from the indigenous ritual repertoire. Attention (and therefore evidence) in South and Southeast Asia is usually concentrated on the monumental structures and sacred art of court cultures.⁴² Indic ceramic techniques, noted already in the shapes and colors among the hemispherical burial urns and the *śrīvatsa* pot, were reinforced in this phase by the use of carved stamps made of bone or horn and used to create either isolated images (like the *śrīvatsa* in HMA59/TP9) or rows of stamped images in rectangular or square format. Many stamps were framed by rows of raised dots, like those framing both faces of Pyu

⁴¹ Description of the formation of hardened work surfaces in Stargardt et al., "Early Urban Archaeology in Southeast Asia," <http://antiquity.ac.uk/projgall/stargardt348>. Accessed October 25, 2019.

⁴² E.g. John Guy et al., *Lost Kingdoms: Hindu-Buddhist Art of Southeast Asia, 6th – 8th Century* (New York: Metropolitan Museum of Art, 2014), and contributors on Thailand, Cambodia, and Vietnam.

Figure 16a: Sri Ksetra, Yahanda Mound, HMA59/8/4: stamped sherd showing triple row of linked spirit couple (male and female ancestors?) wearing high plumed headdresses and heavy earrings; stamps framed by raised dots, ca. mid- or late 5th century [author's photo].

silver coins. Running rows of wide triangles⁴³ were also used to define registers of stamped surfaces. Stamps were employed mainly on the shoulders of ceramic pots, but one example of a cylindrical urn completely covered by rows of stamps is displayed in the Sri Ksetra Museum (Figure 17).⁴⁴

⁴³ Monica Smith's term for a similar technique found at Sisulpalgarh, personal communication, December 2017.

⁴⁴ Sri Ksetra Museum Catalogue Worksheet: 2013/6/42.

Figure 16b: Sri Ksetra, Yahanda Mound, surface find: stamped sherd showing man with heavy round earrings and raised whip racing humpbacked bull [author's photo].

Although Indian archaeological reports contain many references to “stamped wares” and “impressed wares,” I have not, so far, noted any close relationships between published Indian sites and the major motifs of the stamped wares from Sri Ksetra.⁴⁵ The technique of using stamps themselves, however, is certainly a borrowing from Indic ceramic technology and resemblances can be seen in minor motifs and techniques.⁴⁶ Where the main Buddhist or Hindu motifs are concerned, other media may have served as the means through which knowledge of such major Indian religious symbols spread to the Yahanda potters. Evidence examined below relates to the golden Pali text and the mobility of Buddhist monks between Sri Ksetra and Southeast India. Small decorated artifacts could have traveled with

⁴⁵ I gratefully acknowledge data and photographs provided by Monica Smith, December 2017.

⁴⁶ V. V. Krishna Shastry, *The Proto and Early Historical Cultures of Andhra Pradesh* (Hyderabad: Government of Andhra Pradesh, 1983), figures 21, 22a, and 22b.

Figure 17: Sri Ksetra Museum: cylindrical, slab-formed ceramic urn with three horizontal rows of stamped and incised motifs and four rows of wide triangles; among the stamps are four *śrīvatsas*, three stylized conches, three *kalaśa* pots, three flowers, and three twin fish: h. 19.2 cm, diam. 19.2 cm. Provenance Sri Ksetra, but exact location unknown (photo: Department of Archaeology and National Museums, hereafter DANM).

monks as aids to their teaching and meditation.⁴⁷ Other Indic ceramic techniques adopted by the potters of the Yahanda Mound were the use of bands of incised lines both on the necks of globular pots and on the inner surface of flat dishes. These were produced both freehand and on the wheel, and many of the red-ware cooking and storage pots of the Yahanda Mound have affinities with the red wares of South India's late Iron Age and early Buddhist periods. Medium-texture paddled wares of indigenous Southeast Asian type predominated in all pits and layers of the Yahanda Mound until the 7th century (Figure 18), when they ceded place to the poorly made, coarse ceramics of the late 7th–8th century.

The total weight of ceramics excavated from the Yahanda Mound was 1.3 tons – evidence of the intensity of human activities there. Significant patterns emerge from the Yahanda ceramic tables (not included here for reasons of space): firstly, the period of maximum diversity in ceramic types and greatest sherd weight occurred in the 4th–6th century CE; this was the period of maximum prosperity on the Yahanda Mound, when a total of 1.2 tons of sherds was recovered from the

⁴⁷ For the Pagan period, see the study of how the architecture of the Mahabodhi Temple, Bodhgaya was spread through small-scale models: John Guy, "Pilgrim Souvenirs of Buddhist India," *Burlington Magazine* 133, no. 1059 (June 1991).

Figure 18: Sri Ksetra, Yahanda Mound, TR2/19: typical medium-texture paddled pot used as an urn in this layer, but also commonly used for cooking and storage for centuries, ca. 2nd–7th century CE [author's photo].

limited area excavated. The most productive pit was TP8, from which ca. one-third of the total sherd weight came. This was also the important period for monumental construction in the southern area of the city inside and outside the walls (discussed below). Secondly, paddled ceramic wares of medium texture were numerically dominant, but possibly made in more than one production center.⁴⁸ As noted, paddled wares were multifunctional on the mound, as urns and cooking and storage pots. Thirdly, a small number of sherds were deposited under the floors (excluding urns and oil lamps), compared with the habitation layers above the floors; and fourthly, there was a decline in number and quality of sherds in the highest occupation layers of the Yahanda Mound. As there are no indications of violence in the Sri Ksetra site as a whole, and none on the Yahanda Mound, the main Yahanda community must gradually have moved elsewhere, to another part

⁴⁸ Janice Stargardt et al., *From the Ancestors to the Buddha; Excavations on the Yahanda Mound 2014–16* (London, British Museum Research Publications, forthcoming).

of Sri Ksetra, or to Pagan. The presence of Pyu communities in Pagan is attested by Pyu-style *stūpas* from ca. 6th–7th century;⁴⁹ bricks stamped with Pyu letters and numbers; and from the 12th century, if not before, by Pyu-language inscriptions.⁵⁰ Conversely, Sri Ksetra attained an iconic status in the inscriptions and chronicles of Pagan, and was itself the scene of some monumental building in the Pagan period, often on top of mounds that contain the ruins of Pyu-period monuments.⁵¹

The *śrīvatsa* symbols stamped around the shoulder of the large inner pot from HMA59/TP9/7 (Figures 13, 14a, and 14b) reflect some knowledge of Hinduism in the Yahanda community. In fact, the *śrīvatsa* symbol appeared frequently on the stamped pottery of the Yahanda Mound and other areas at Sri Ksetra (Figure 12, top left; Figure 17). Moreover, the *śrīvatsa* was the symbol on the reverse of all Pyu silver coinage, which was probably the most widespread coin tradition of 1st-millennium mainland Southeast Asia.⁵² Although Buddhist monuments, sculpture, and artifacts were far more numerous than Hindu in Sri Ksetra, from ca. 4/5th–9th century, Hindu symbols – *śrīvatsa*, conch, rising sun, sun and moon, altar, *svastika*, trident, and *vajra* – played a dominant role on both the obverse and reverse sides of Pyu coinage.⁵³ Vaiṣṇavite symbols appeared in a small number of large stone sculptures at Sri Ksetra with possibly royal associations,⁵⁴ and among the Pyu royal names discussed below. The appearance of Buddhist and Hindu artifacts at the Yahanda Mound and more widely in Sri Ksetra from ca. 5th century onwards may be better understood as complementary, rather than rival, elements in a joint tradition of sacrality.⁵⁵ Such a holistic interpretation finds strong support in the syncretic assimilation between the *śrīvatsa* symbols and the urn burial at TP9, the numerous Pyu cremation burials associated with Buddhist

49 Data by Thin Thin Myint, Head of Thermoluminescence Laboratory at the Field School of Archaeology, Pyay; bricks are currently being dated there.

50 Cf. two pillars [Myazedi inscriptions] of the Kubyaukgyi Temple, inscribed in Pali, Mon, Pyu, and Myanmar languages, dated 1112 CE; cf. also Griffiths et al., “Studies in Pyu Epigraphy,” which lists many stamped and incised Pyu bricks.

51 Two major inscriptions of Kyansittha, king of Pagan, found close to Sri Ksetra, later stored in the Shwesandaw *stūpa*, Pyay.

52 Dietrich Mahlo, *The Early Coins of Myanmar/Burma: Messengers from the Past – Pyu, Mon and Candras of Arakan (First Millennium AD)* (Bangkok: White Lotus, 2012), 33–59; Than Htun (Dedaye), *Auspicious Symbols and Ancient Coins of Myanmar* (Kelana Jaya, Malaysia: Ava House, 2007), 81–93.

53 Mahlo, *Early Coins*, 33–59; Niharranjan Ray, *Brahmanical Gods in Burma* (Calcutta University Press, 1932; repr., Bangkok: Orchid Press, 2001), 9.

54 John Guy, “A Warrior-Ruler Stele from Sri Ksetra, Pyu, Burma,” *Journal of the Siam Society* 85 (1997), plates 1–2, 85–94 (stele ca. 4th century).

55 Nicolas Revire, personal communication, 2011.

monuments, and the presence of Buddhist and Hindu clay sealings inside and beside urns in burial terrace HMA47 at Sri Ksetra.⁵⁶

7 The Significance of the Findings at the Yahanda Mound, Sri Ksetra

Adding together all the cremated human burials incidentally or deliberately noted in records of archaeology at Sri Ksetra from 1912 to 2012, at least 4,000 are recorded, including ca. 2,000 from a single burial terrace excavation in 1924 and a minimum of 280 on the top surface alone of burial terrace HMA53.⁵⁷ Many burial terraces have been listed but not yet excavated, thus 4,000 will not remain the total number of burials in and around the city, but they suffice to demonstrate the central importance of funereal rituals in Pyu culture. The burial terraces and habitations excavated at the Yahanda Mound have provided the first stratigraphic record of Pyu culture for ca. 900 years, and the first AMS dates for key points in that sequence; the first evidence of the close relationship between the living and the dead; and the basis for the first ceramic typology and chronology in Myanmar. While the importance of Pyu funereal traditions has been emphasized here, it should also be remembered that only the material aspects of those traditions have been recovered: the creation of sacred burial places,⁵⁸ urns, burials, and oil lamps. The intangible beliefs invested in them – veneration of the ancestors, probably represented by the couples on the ceramic stamps wearing tall plumed headdresses – and the rituals accompanying them (dancing men and women, bull-racing) remain glimpsed but not captured. One conclusion is, however, fully justified from the evidence that has been obtained: that the belief system of the Pyu before their encounters with Indian religions was sufficiently powerful to survive and embrace them.

⁵⁶ Stargardt, “From the Iron Age to Early Cities,” Figure 6; Janice Stargardt, “Death Rituals of the Late Iron Age and Early Buddhism in Central Burma and South-East India: Whose Norms, Whose Practices?” in *Im Dickicht der Gebote; Studien zur Dialektik von Norm und Praxis in der Buddhismus geschichte Asiens*, ed. Peter Schalk, Acta Universitatis Upsaliensis, Historia Religionum 26 (Uppsala: Uppsala Universitet, 2005), 407–33; Pimchanok Pongkasetkan and Stephen A. Murphy, “Transitions from Late Prehistoric to Dvaravati Period Funerary Practices: New Evidence from Dong Mae Nong Muang,” in *Crossing Borders*, vol. 1, eds. Mai Lin Tjoa-Bonatz, Andreas Reinecke, and Dominik Bonatz (Singapore: NUS Press, 2012), 75–89.

⁵⁷ Charles Duroiselle, *Archaeological Survey of Burma, Annual Report of the Superintendent 1923–4* (Rangoon: Government Printing Office, 1925), 25–27.

⁵⁸ Stargardt, *The Ancient Pyu*, 177–90.

8 The Integration of Pyu Funereal Culture, Buddhism, and Hinduism at Sri Ksetra

I shall now place the evidence gained from the Yahanda Mound in the wider context of elite foundations at Sri Ksetra. At Sri Ksetra, a series of early Buddhist *stūpas* can be dated stylistically to the period from the 4/5th to the 6th century, and has visible affinities with Andhra.⁵⁹ They comprise HMA51 (Figure 19), (ca. the 4th–5th century);⁶⁰ the Mathegya *stūpa* (Figure 20a–20b), ca. 6th century; and the

Figure 19: Sri Ksetra, HMA51: a small cylindrical *stūpa*, ca. 5th century, originally with square platform of compacted earth with brick walls, and surrounded by cremated urn burials [photo: DANM].

⁵⁹ V. V. Krishna Sastry, *Culture of Andhra Pradesh*, 132–9; Ramalakshman, *Andhra Pradesh Archaeology*, 31–32; K. R. Subramaniam, *Buddhist Remains in Andhra and the History of Andhra between 225 and 610 AD* (Madras: Asian Educational Services, 1932; repr., New Delhi: Apex Publication Services, 1969).

⁶⁰ Cf. KKG2, 3, and 4 at Beikthano: Aung Thaw, *Excavations at Beikthano* (Rangoon: Ministry of Union Culture, 1968), 16; Stargardt, *The Ancient Pyu*, 322–40.

Figure 20a: Sri Ksetra: the Mathegya stūpa, on the southern wall/moat system, ca. 6th century, surrounded by seventeen cremated urn burials [author's photo].

three great stupas outside the southwest, northwest, and northeast walls of the city: the Bawbawgyi, Phayagyi, and Phayama, respectively. All of them were directly associated with multiple cremated urn burials, while at the same time exhibiting all the features of Buddhist monuments.

No burials were recorded around the largest *stūpa* at Sri Ksetra, but it may never have been excavated down to sterile soil. Certainly, Bawbawgyi is surrounded by Pyu burial terraces containing a large number of cremation burials (e.g., a minimum of 280 in HMA53 alone).⁶¹ Pyu cremation burials were also found in proximity to the other two great *stūpas*, Phayagyi and Phayamar.⁶²

⁶¹ Win Kyaing, personal communication, 2015–7; also HMA47 and HMA10. See also Figures 3–5.

⁶² Thein Lwin excavations, HMA52, near the Phayama *stūpa*.

Figure 20b: Sri Ksetra: urn found at the Mathegya stūpa.

9 The Pyu Literary Heritage at Sri Ksetra

Our task is now to relate the foregoing developments of Pyu urbanized culture to the knowledge of writing at Sri Ksetra. Early literacy there on durable materials dates stylistically to the period between the 4th and 6th century CE.⁶³ To this period belong three inscribed stone urns found close to the Phayagyi stupa and a very large inscribed stone urn found near the Phayahtaung temple. The script used on all these

⁶³ Harry Falk, “Die Goldblätter aus Sri Ksetra.”

urns belongs to the Andhra palaeographic tradition of Southern Brahmi and dates to ca. 5th–6th century CE.⁶⁴ The inscriptions are in Pyu with some words and dates of uncertain meaning, but three royal names were separately recorded on the three Phayagyi urns, while seven or eight names formed a royal genealogy on the Phayahtaung urn inscription. Five of these names end in an Indic heroic epithet, *-vikrama*: H(a)rivikrama, Sūryavikrama, Sihavikrama (Siṃhavikrama), Adityavikrama (Ādityavikrama), and Brithuvikrama (Pṛthuvikrama). If the possession of writing was *the* criterion of civilization, and above all the appearance of Sanskrit language in Southeast Asia was evidence of Indianization, then one would have to conclude that civilization began at Sri Ksetra in ca. 5th–6th century. But the *in situ* material evidence presented above (including dated stratified data from the Yahanda Mound), and supported by Chinese records, reveal significant pre-existing hydraulic, agricultural, and urban development at Sri Ksetra ca. 3rd century BCE–4/5th century CE. What the inscribed stone urns do record is the emergence of kingship at Sri Ksetra and the desire of its kings to associate themselves with the fame of the Guptas, notably with Chandragupta II, who adopted the style *vikramāditya*. This form of Indianization took place in a context quite different from that envisaged by Coédès (1964) and captures synergies between two cultures, not colonization.

From ca. 3rd century onwards, monks, merchants, and court emissaries traveled between several regions of India, Sri Lanka, Central Asia, and Myanmar. The dynamic contexts in which such exchanges took place, however, were not *cultural colonization*. In Sri Ksetra, a literate elite had emerged by the 4th century, consisting probably of both foreign and local Buddhist monks. Inscriptions of Sri Ksetra belonging to the 4th–6th century show the monks had studied two Indic languages and several Indic scripts, and employed them to record the royal urns in Pyu, the golden text in Pali, and Pyu-Pali leaves of silver and gold and a long Pyu-Sanskrit stone inscription.

This long Pyu urn inscription of over 1,100 legible letters undoubtedly holds much information yet to be unraveled (Figure 21a – 21b). Living in the late Gupta, and early post-Gupta, period, the *-vikrama* kings of Sri Ksetra were clearly alert to Gupta fame and associated themselves with it: this too was synergy, not colonization.

⁶⁴ Dr. Lore Sander, Berlin and Dr. Ingo Strauch, Lausanne, personal communication; date also implicit in Griffiths et al., “Studies in Pyu Epigraphy.”

Figure 21a: Sri Ksetra: cylindrical stone urn inscribed with royal genealogy in Pyu language, found near the Phayahtaung Temple, ca. 6th–7th century. National Museum, Yangon [author’s photo].

The last of the elite Buddhist monuments of Sri Ksetra to be considered here is the Khin Ba Mound, excavated 1926–7.⁶⁵ It is situated just inside the southeast walls of Sri Ksetra, 170 m north of the Mathegya *stūpa* discussed above, and 2 km east of the Yahanda Mound.⁶⁶ In it, in 1926, the only undisturbed relic chamber

⁶⁵ Charles Duroiselle, “Excavations at Hmawza,” in *Archaeological Survey of India 1926–7* (Calcutta: Government Printing Office, 1928), 172–81.

⁶⁶ Kyaw Myo Win et al., *Excavations at HMA64 (The Khin Ba Mound), Hmawza Village Tract, Pyay District, Bago Region* (Naypyitaw: Department of Archaeology and National Museums [in Myanmar], 2017).

Figure 21b: Sri Ksetra: close-up view of the ornamental script used to expertly inscribe the Pyu language on the cylindrical stone urn with five-line royal genealogy, ca. 6th century [photo: Marc Miyake].

of the whole city was found.⁶⁷ The two most precious objects in that deposit were a very large, gilded silver reliquary and a golden manuscript comprising twenty leaves of solid gold inscribed with sixty lines of Pali in a perfectly legible condition. The manuscript was held together by strong golden wires passing through crumpled sheets of gold, originally covering wooden end boards, which had disintegrated (Figures 22a and b).

⁶⁷ Janice Stargardt, “The Great Silver Reliquary from Sri Ksetra: Where Early Buddhist Art Meets Early Pali Inscriptions in the Pyu Culture of Burma (Myanmar),” in *Relics and Relic Worship in Early Buddhism: India, Afghanistan, Sri Lanka and Burma*, British Museum Research Publication 218, ed. Janice Stargardt and Michael Willis (London: The British Museum, 2018), 89–105.

Figure 22a: Sri Ksetra: the golden Pali text from the Khin Ba Mound (HMA64), closed [photo from glass plate negatives of DANM, author's collection; color by Philip Stickler].

Figure 22b: Sri Ksetra: the golden Pali text from the Khin Ba Mound (HMA64), open, showing regular three-line inscriptions on eighteen of the twenty gold leaves [photo: DANM].

The golden Pali text has been carefully analyzed by Lu Pe Win and Harry Falk, and dated, palaeographically, by Falk to the period from the 4th–5th

century CE.⁶⁸ This makes it the earliest source of Pali in the world, and is presented briefly here because it documents the historical significance of Pyu literacy in preserving one of the two great Indian traditions of Buddhism: the Pali-based tradition.

10 Conclusion

The two principal objects of the Khin Ba relic chamber, the golden Pali text and the great silver reliquary (Figure 23), preserve the earliest Pali inscriptions in the world. In the 6th century, Pali inscriptions appeared at Dvaravati sites in Thailand, sometimes from the same texts as those cited by the Pyu.⁶⁹ Consider the historical consequences – for Sri Lanka, Thailand, Laos, and later Cambodia – of the fact that the monks of Sri Ksetra adhered mainly to the Pali traditions of Buddhism at a time when, in India, Sanskrit was playing an increasingly important role,⁷⁰ even despite the fact that they knew Sanskrit. The great silver reliquary testifies to the deep attachment of the Pyu to Buddhism, which they had received from both Gupta and Andhra India; its inscriptions contribute to the Pyu Pali records, and above all, it exhibits the *creative* way the Pyu selectively adopted, adapted, and recreated rich Indian textual-artistic traditions. It is not known whether cremation burials were installed around the foundations of the Khin Ba *stūpa* platform, as at other Pyu *stūpas*, but fragments of burial urns were among the ceramics found there.⁷¹

The evidence presented here shows that technological contacts between specific parts of India and Pyu settlements at the future site of Sri Ksetra

68 Lu Pe Win, *Report of the Superintendent*; Janice Stargardt, “The Four Oldest Surviving Pali Texts,” 199–213; Oskar von Hinüber, *A Handbook of Pali Literature. Indian Philology and South Asian Studies*, vol. 2 (Berlin: Walter de Gruyter, 1996), 205, note 737; Harry Falk, “Die Goldblätter aus Sri Ksetra”; Janice Stargardt, *Tracing Thought through Things: The Oldest Pali Texts and the Early Buddhist Archaeology of India and Burma. 7th Gonda Lecture* (Amsterdam: Monograph of the Royal Netherlands Academy of Arts and Sciences, 2000), Appendix, Contents of the relic chamber.

69 Peter Skilling, “The Advent of Theravada Buddhism to Mainland South-East Asia,” *Journal of the International Association of Buddhist Studies* 20, vol. 1 (1997): 93–108; and correspondence with the author, 2018.

70 Johannes Bronkhorst, *Buddhism in the Shadow of Brahmanism*, *Handbook of Oriental Studies* 2/24 (Leiden: E. J. Brill, 2011); Vincent Eltschinger, “Why Did the Buddhists Adopt Sanskrit?” *Open Linguistics* 3 (2017): 308–326.

71 Kyaw Myo Win et al., *Excavations at HMA64*, 60 (illustration).

Figure 23: Sri Ksetra: the great silver reliquary from the Khin Ba relic chamber, HMA64, 1.2 m x 1.2 m, ca. 6th century [image of its original form created by Vicky Herring and the author, 2018]: the broken branches and leaves of the bodhi tree were found scattered among the objects in the Khin Ba relic chamber. This splendid object had no prototype elsewhere in the Buddhist world.

stretched back into the Iron Age, from before ca. 3rd century BCE. They embraced principles and techniques of hydraulic works, exchanges of crop plants in both directions, methods of ceramic production, norms of brick manufacture, and possibly ironworking. Into this pre-existing network linking many points in a mobile world, the phenomena of Indianization as conventionally understood – the appearance of Indic sacred languages, writing, religions, architecture, and art – appeared in traceable form only seven or eight centuries later. This chapter documents and dates some of the features of a complex society and economy that had emerged beforehand at Sri Ksetra. In conclusion, it emphasizes the enormous time lag between established technological contacts of the Pyu with India and their adoption and adaptation of Indic writing and religious culture; it points to the considerable agency of the rulers of Sri Ksetra between ca. 3rd and 5th/6th centuries CE, which prompted the selective assimilation and integration of Indic religious culture into their pre-existing beliefs with enduring, enriching

results. Without the evidence of the Yahanda Mound excavations, there would be no stratified sequence of Pyu culture for almost a millennium; the penetration of Buddhist and Hindu religious elements into a nonelite Pyu culture by the late 4th/5th century would all remain unknown. Yahanda has also shown that for centuries before then, the Pyu had been creating sacred spaces for their dead and conducting rituals there. After the 4th/5th century, the Yahanda potters employed techniques of ceramic decoration newly acquired from craftsmen of southeast and possibly northeast India to capture their world in new and vivid ways. Beside the standardized Buddha images and Buddhist/Hindu symbols, the human or divine figures depicted on the Yahanda pottery have no counterparts in the sculptures generated by court circles in South or Southeast Asia. Their vivacious stamped images of a world viewed from below recall the powerful ancestor figures with plumed headdresses depicted on Dongson bronze drums, or the three-dimensional tableaux on the bronze drums of Dian, in Yunnan. In the wider context of South and Southeast Asia, Sri Ksetra produced a unique combination of images of the mid-first millennium world: viewed from the court and from the Yahanda Mound, they created, by means of techniques adopted from Indian artists, things at once familiar and new.

Bibliography

- Bellina, Bérénice, ed. *Khao Sam Kaeo. An Early Port-City between the Indian Ocean and the South China Sea*. Paris, École française d'Extrême-Orient, 2017.
- Blagden, C. O. "The Pyu Inscriptions." *Epigraphia Indica* 12 (1913–14): 127–132.
- Cœdès, George. *Les états hindouisés d'Indochine et d'Indonésie*, rev. ed. Paris: Boccard, 1964.
- Cœdès, George. *Articles sur le Pays Khmer*. Edited by C. Jacques. Paris: École française d'Extrême-Orient, 1989.
- Evans, Damian H., Roland J. Fletcher, Christophe Pottier, Jean-Baptiste Chevance, Dominique Soutif, Boun Suy Tan, Sokrithy Im, et al., "Uncovering Archaeological Landscapes at Angkor using lidar," *Proceedings of the National Academy of the United States [PNAS]* 110, no. 31 (July 30, 2013): 12595–12600.
- Falk, Harry. "Die Goldblätter aus Sri Ksetra." *Wiener Zeitschrift für die Kunde Südasiens* 41 (1997): 53–92.
- Finot, Louis. "Un nouveau document sur le bouddhisme birman." *Journal Asiatique* 20 (1912): 121–36.
- Finot, Louis. "Le plus ancien témoignage sur l'existence du Canon Pali en Birmanie", *Journal Asiatique* 21 (1913): 193–5.
- Glover, I. C. *Early Trade between India and Southeast Asia: A Link in the Development of a World Trading System*. Occasional Paper 16. Hull: University of Hull Centre for South-East Asian Studies, 1989; repr., 1990.

- Glover, I. and P. Bellwood, eds. *Southeast Asia, from Prehistory to History*. London: RoutledgeCurzon, 2004.
- Goh, G. Y., J. N. Miksic, and M. Aung-Thwin (eds.). *Bagan and the World: Early Myanmar and Its Global Connections*. Singapore: ISEAS-Yusof Ishak Institute, 2018.
- Griffiths, Arlo, Bob Hudson, Marc Miyake, and Julian Wheatley. "Studies in Pyu Epigraphy, I: State of the Field, Edition and Analysis of the Kan Wet Khaung Gon Inscription, and Inventory of the Corpus." *Bulletin de l'école française d'extrême-orient* 103 (2017): 43–205.
- Groslier, Bernard-Philippe. "La Cité hydraulique angkorienne: exploitation ou surexploitation du sol." *Bulletin de l'école française d'extrême-orient* 66 (1979): 161–202.
- Guy, John. "Pilgrim Souvenirs of Buddhist India." *Burlington Magazine* 133, no. 1059 (June 1991).
- Guy, John, ed. *Lost Kingdoms: Hindu-Buddhist Art of Southeast Asia, 6th–8th Century*. New York: Metropolitan Museum of Art, 2014.
- Higham, C. F. W. "The Transition from Prehistory to the Historic Period in the Upper Mun Valley." *International Journal of Historical Archaeology* 2, no. 3 (1998): 235–61.
- Higham, C. F. W. "The Prehistory of Southeast Asia: A Retrospective View of 40 Years Research." *Antiquity* 85 (2011): 639–53.
- Higham, C. F. W. and Tracey L.-D. Lu. "The Origins and Dispersal of Rice Cultivation." *Antiquity* 72, no. 278 (1998): 867–877.
- Hinüber, Oskar von. *A Handbook of Pali Literature. Indian Philology and South Asian Studies*. Vol. 2 (Berlin: Walter de Gruyter, 1996).
- Hudson, Bob. "A Thousand Years before Pagan: Radiocarbon Dates and Myanmar's Ancient Cities." In *Bagan and the World: Early Myanmar and Its Global Connections*, edited by G. Y. Goh, J. N. Miksic, and M. Aung-Thwin, 88–121. Singapore: ISEAS-Yusof Ishak Institute, 2018.
- Ikehara-Quebral, Rona, Miriam Stark, William Belcher, Voeun Vuthy, John Krigbaum, R. Alexander Bentley, Michele Douglas, and Michael Pietruszewsky. "Biocultural Practices during the Transition to History at the Vat Komnou Cemetery, Angkor Borei, Cambodia." *Asian Perspectives* 56, no. 2, (2017): 12–46.
- Inscriptions of Pagan, Pinya and Ava. Based on the Mahamuni Marble Slabs*. Collected by Emil Forchhammer; edited by Taw Sein Ko and Charles Duroiselle. Rangoon: Office of the Government Printer, 1899.
- Inventory of Sites at Sri Ksetra. Annexe IV to the Nomination Dossier to the World Heritage Committee Meeting*. Nay Pyi Daw: Ministry of Union Culture, Department of Archaeology and National Museums, 2013.
- Kennedy, J. "Bananas and People in the Homeland of Genus Musa." *Ethnobotany Research and Applications* 7 (July 2009): 179–197.
- Kim, Nam C., Lai Van Toi, and Trinh Hoang Hiep. "Co Loa; An Investigation of Vietnam's Ancient Capital." *Antiquity* 84, no. 326 (December 2010): 1011–1027.
- Krishna Shastry, V. V. *The Proto and Early Historical Cultures of Andhra Pradesh*. Hyderabad: Government of Andhra Pradesh, 1983.
- Lu Pe Win, *Report of the Superintendent Archaeological Survey of Burma 1938–9*. Rangoon: Government Printing Office, 1940.
- Luce, G. H. *Phases of Pre-Pagan Burma*. 2 vols. Oxford: Oxford University Press, 1985.

- Mahlo, Dietrich. *The Early Coins of Myanmar/Burma: Messengers from the Past – Pyu, Mon and Candras of Arakan (First Millennium AD)*. Bangkok: White Lotus, 2012.
- Majumdar, R. C. *Hindu Colonies in the Far East*. Dhaka: K. L. Mukhopadhyay, 1963.
- Moore, Elizabeth. "Space and Place in Early Burma: A New Look at 'Pyu Culture.'" *Journal of the Siam Society* 97 (2008): 1–27.
- Nomination Dossier for the Ancient Pyu Cities, to the World Heritage Committee Meeting 2014*. Naypidaw: Ministry of Culture, 2013.
- Ramalakshman, A., ed. *Andhra Pradesh Archaeology, A Review 1987–2001*. Hyderabad: Department of Archaeology and Museums, 2002.
- Skilling, Peter. "The Advent of Theravada Buddhism to Mainland South-East Asia." *Journal of the International Association of Buddhist Studies* 20, vol. 1 (1997): 93–108.
- Stargardt, Janice. *Satingpra 1, The Environmental and Economic Archaeology of South Thailand*. Oxford: BAR; Singapore: ISEAS, 1983.
- Stargardt, Janice. *The Ancient Pyu of Burma*. Vol. 1, *Early Pyu Cities in a Man-Made Landscape*. Cambridge: PACSEA; Singapore: ISEAS, 1990.
- Stargardt, Janice. "Le cosmos, les ancêtres et le riz; l'eau dans l'espace urbain des pyus en birmanie." In *Disciplines croisées, hommages à Bernard-Philippe Groslier*, edited by G. Condominas, 311–35. Paris: Ecole des Hautes Etudes en Sciences Sociales, 1992.
- Stargardt, Janice. "The Four Oldest Surviving Pali Texts: The Results of the Cambridge Symposium on the Golden Pali Text of Sri Ksetra (Burma), April 1995." *Journal of the Pali Text Society* 21 (1995): 199–213.
- Stargardt, Janice. *Tracing Thought through Things: The Oldest Pali Texts and the Early Buddhist Archaeology of India and Burma*. 7th Gonda Lecture. Amsterdam: Monograph of the Royal Netherlands Academy of Arts and Sciences, 2000.
- Stargardt, Janice. "City of the Wheel, City of the Ancestors: Spatial Symbolism in a Pyu Royal City of Burma." *Indo-asiatische Zeitschrift* 6/7 (2002/3): 144–167.
- Stargardt, Janice. "Irrigation in South Thailand as a Coping Strategy against Climate Change: Past and Present." In *Environmental and Climate Change in South and Southeast Asia; How Are Local Cultures Coping?*, edited by Barbara Schuler, 105–37. Leiden: E. J. Brill, 2014.
- Stargardt, Janice. "From the Iron Age to Early Cities at Sri Ksetra and Beikthano, Myanmar." *Journal of Southeast Asian Studies* 47, no. 3 (October 2016): 341–365.
- Stargardt, Janice. "Water for the State or Water for the People? Wittfogel in South and Southeast Asia in the First Millennium." In *Water Societies and Technologies from the Past and Present*, edited by Y. Zhuang and M. Altaaweel, 256–68. London: UCL Press, 2018.
- Stargardt, Janice, Gabriel Amable, and Bernard Devereux. "Irrigation Is Forever: A Study of Post-Destruction Movement of Water across the Ancient Site of Sri Ksetra, Central Burma." In *Remote Sensing: A New Tool for Archaeology*, vol. 16, edited by R. Lasaponara and N. Massini, 247–67. Dordrecht: Springer Verlag, 2012.
- Stargardt, Janice, Gabriel Amable, Sheila Kohring, Sean Taylor, Stewart Fallon, Win Kyaing, Tin May Oo, et al. "Early Urban Archaeology in Southeast Asia: The First Evidence for a Pyu Habitation Site at Sri Ksetra, Myanmar." *Antiquity* 89, no. 348 (December 2015). Accessed October 25, 2019. <http://antiquity.ac.uk/projgall/stargardt348>.
- Stark, Miriam. "Results of the 1995–1996 Archaeological Field Investigations at Angkor Borei, Cambodia." *Asian Perspectives* 38, no. 1 (1999): 17–36.

- Sun Laichen, "Chinese Historical Sources on Burma; A Bibliography of Primary and Secondary Works." Special issue, *The Journal of Burma Studies* 2 (1997).
- Taw Sein Ko and Charles Duroiselle (eds.). *Epigraphia Birmanica; Being Lithic and Other of Burma*. 3 vols. Rangoon: Government Printing Office, 1919–21.
- Than Htun (Dedaye). *Auspicious Symbols and Ancient Coins of Myanmar*. Kelana Jaya, Malaysia: Ava House, 2007.