Historical Geography and Urbanization in Ancient Arakan

The archaeological landscape of the old capitals up to 1400 AD

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A rakan, situated in the western part of Myanmar, is a region whose geographical situation tends to isolate it from the cradle of Burmese civilization. But archaeological evidence shows that it played a role in the ancient relations between India and Southeast Asia due to its situation at the boundary of these two major regions (Fig. 1). Early on, Arakan was integrated into the indianized world while its population developed under the influence of Indian civilization.

Since the first millennium AD, Arakan was a frontier region between Southeast Asia and India that could be reached by land and sea. The archaeological data are limited in what they indicate, but art and architectural remains suggest that, as in the rest of mainland Southeast Asia, the adaptation of Indian influences was a key element of ancient Arakanese culture. As trade with the neighbouring areas increased in the early centuries of the first millennium AD, urban centres developed and more complex social structures evolved in the Kaladan valley, the foremost region of urban development in Arakan (Fig. 2).

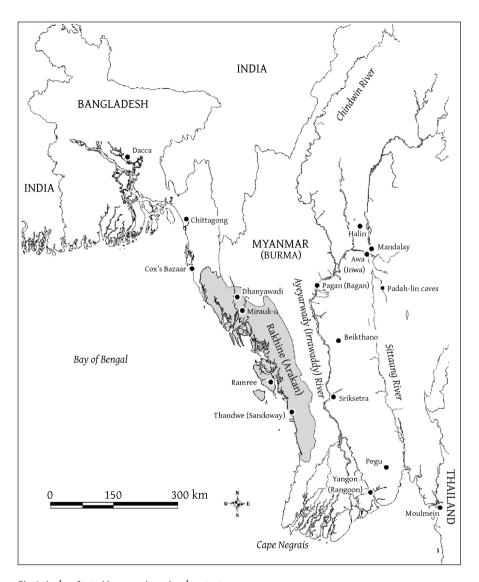


Fig. 1. Arakan State, Myanmar, in regional context

The first millennium: Dhanyawadi and Vesali (fourth to tenth century AD)

The earliest site known is the city of Dhanyawadi¹ lying upstream at a distance of ninety-seven kilometres from the sea. Situated on the route from the northern hills region to the Bay of Bengal, Dhanyawadi was a commercial centre in ancient times. The highly venerated Mahāmuni statue probably became a major Buddhist pilgrimage site of Southeast Asia. The statue was allegedly coveted by the kings of neighbouring regions. Its iconographic style closely connects to Gupta art, although no direct connection with any Indian school can be demonstrated. It is possible that the local sculptors utilized Indian texts from which they made their own interpretation of the iconography (Gutman 2001b, 12-13).

Around the sixth century the centre of political power moved to Vesali², an urban site lying 26 kilometres south of Dhanyawadi, Buddhism spread throughout the Vesali period as shown by numerous yedhammā inscriptions written in Sankrit, Pāli or a mix of both (San Tha Aung 1974; Gutman 1976), The colossal Vesali Buddha image (seventeen feet in height) reveals the flourishing of Buddhism in early Vesali, King Vīra Candra of Vesali is said to have erected one hundred Buddha stupas "which were the ornaments" of the Buddhist world (San Tha Aung 1974, 107), Besides Buddhism, brahmanic rituals flourished at the court. The statue of a massive crouching bull was discovered in the centre of a brick building (Nyunt Han 1984). We may assume that this bull statue was part of a royal ritual. The bull also appears on the face of a series of coins bearing the Sanskrit name of this king. On the reverse, the coins bear the srivatsa symbolising the function of the king as the guarantor of prosperity. This symbol is also found on contemporary coins in the Pyu cities of Myanmar, in Thailand and in southern Vietnam, indicating a shared Southeast Asian numismatic style, Coins struck in East Bengal copied the Vesali coins raising the question of the relations between these neighbouring regions (MacDowall 1960; Mukherjee 1975; Mitchiner 2000). According to Mukherjee, the silver coins issued from Harikela⁸ were related stylistically, typologically and metrologically to the coins of the Candra dynasty of Arakan (Mukherjee 1975). Harikela was most likely situated in the Chittagong area bordering Arakan whose coinage must have inspired the coinage of East Bengal (Khan 1999, 15; Chakrabarti 2001, 168-169). Some authors hypothesize that Sūriya Candra, a Vesali king of the mid-seventh century, fled to East Bengal and founded a new Candra dynasty in Harikela after a dynastic break-down in Vesali. The omission

The periodization of Dhanyawadi is based on Pamela Gutman's tentative assignment (Gutman 1976; Gutman 2001a; Gutman 2005)

Johnston's alternately dates Vesali to the fourth century AD (Johnston 1944). This tentative date of Vesali is from Pamela Gutman (Gutman 1976; Gutman 2001a).

Sylhet-Comilla-Chittagong region, Bangladesh. For discussion on the location of Harikela,
 See: Alam 1976, 10-15 and Mukherjee 1975, 115-119.

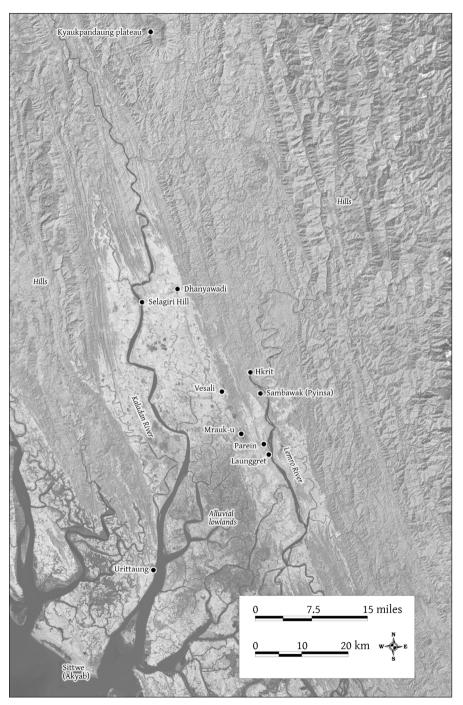


Fig. 2. Location of the old settlements of Arakan mentioned in the text, plus some major landmarks (LandSat 2000 satellite image, from Hudson 2005)

of his name from the eighth century Ananda Candra inscription at Mrauk-U may be interpreted as a confirmation of this hypothesis. For Chowdhury a reason for the absence of Suriya Candra's name in the inscription might be Ananda Candra's desire to establish a clean, unbroken dynastic succession from his ancestors, where the presence of Sūriya Candra's name would have been unacceptable (Chowdhury 1996, 38). Interestingly, the inscribed metal vase of a Harikela ruler (now at the Bangladesh National Museum), gives the names of land donors to Buddhist monasteries in the Harikela region, and is dated in the Arakanese <code>sakkarāj</code> era corresponding to 715 AD. It is noteworthy that this particular date ties rather well to the hypothetical date of the arrival of Sūriya Candra in East Bengal and Harikela coins (Chowdhury 1996, 39). Chowdhury's argument thus reinforces the claim of strong cultural and political relations between Harikela and Arakan.

Dhammavijaya, a late seventh century king of Vesali is considered by R. Mitchiner (Mitchiner 2000, 42–43) as the ruler of both Arakan and Harikela because of the remarkable number of identical coins discovered in Harikela and Samatata (also situated in East Bengal). But only two coins bearing his names were found in Arakan. I would suggest that Dhammavijaya was a descendant of Suriya Candra, who ruled first at Harikela and later re-conquered the throne of Vesali. The dynastic list of Mahāvīra and his successors as mentioned in the Ananda Candra inscription shows that before the reign of Dhammavijaya, the rulers of Vesali did not use dynastic names such as Candra or Vijaya⁵. It is only with Dhammavijaya that the titles of the Vesali rulers refer once more to the "family-name." It is plausible that this sudden change of rulers' names in Vesali points to the restoration of the former Candra line of Vesali in Arakan. While the coins of Dhammavijaya's successors in Arakan bear titles like the former Candra dynasty⁷, the Candra kings of Harikela merely referred to the kingdom's name⁸. The succession of the Vesali kings after Ananda Candra, the eighth century ruler, is poorly known as the dynastic list as given on the eponymous inscrip-

^{4.} Maung Pru and Chowdhury suggest that Mahāvīra, a ruler of Pūrenpūra, took power in Arakan after the death of Driti Candra while his successor Sūriya Candra fled to Bengal (Maung Pru 1994, 41-48; Chowdhury 1996, 38). Sūriya Candra's name is not mentioned in the Ananda Candra Inscription, but a silver coin bearing his name was found in Arakan and matches with the time of the dynastic break-down (San Tha Aung 1975, Fig. 26; Gutman 1976, Plate XXXVIII). Following this hypothesis, Mahā Vīra's successors ruled in Arakan for almost sixty-five years until descendants of the former Candra rulers retook the power (San Tha Aung 1975, 171; cf. Gutman 1976, 171-172).

^{5.} Mahā Vīra, Vrayajap, Sevińreń, Dharmmasūra, Virasatti (San Tha Aung 1975, 171).

Dhamma Vijaya, Narendra Vijaya, Dhamma Candra, Ananda Candra (San Tha Aung 1975, 171).

For the coins of Dhamma Vijaya and Dhamma Candra (seventh century AD), see San Tha Aung 1975, Fig. 22.

^{8.} For the Harikela coins, see Mitchiner 2000, 65-70.

tion ends with his name. From the inscription at the northern face of the Shitthaung pillar, we know that a Simghavikramasura and a Srī Simghagandapatisura Candra ruled in Arakan in the tenth or eleventh century (Gutman 1976, 70). The latter name is confirmed by two coins from the Kywede hoard bearing the name Srī Simghaganda Candra (San Tha Aung 1975, Fig. 28). Candra kings also continued to rule in Harikela. The Candra rulers in Harikela were Purna Candra, Suvaraṇa Candra, Trailokya Candra (tenth century), Sri Candra (tenth century), Kalyana Candra (tenth century), Ladaha Candra (eleventh century), and Govinda Candra (eleventh century) (Alam 1976, 13). The appearance of the name "Govinda Candra" in the northern face inscription of the Shitthaung pillar indicates ongoing political relations between Arakan and Harikela to have been likely (Gutman 1976, 71).

TABLE 1. VESALI KINGS (SIXTH TO EIGTH CENTURY)2

No.	Name of King	Length of Reign	Sircar's Tentative Assignment
1	Nīti Candra	55	520
2	Vīra Candra	3	575
3	Prīti Candra	12	578
4	Prthvī Candra	7	590
5	Driti Candra	3	597
1	Mahā Vīra	12	600
2	Vrayajap	12	612
3	Sevinren	12	624
4	Dharmmasûra	13	636
5	Vjrasatti	16	649
6	Dhamma Vijaya	36	665
7	Narendra Vijaya	3	701
8	Dhamma Candra	16	704
9	Ananda Candra	9	720

^a Gutman 1976, 42; San Tha Aung 1975, 171. Candra kings predating the sixth century AD have not been included.

TABLE 2. VESALI KINGS (TENTH TO ELEVENTH CENTURY)

No.	Name of King	Length of Reign	Gutman's Tentative Assignment
1	Simghavikramasura [Candra]	?	Tenth/eleventh century
2	Srī Simghagandapatisura Candra	?	Tenth/eleventh century

No.	Name of King	Length of Reign	Alam's Tentative Assignment
1	Purna Candra	?	?
2	Suvarana Candra	?	?
3	Trailokya Candra	20/29	900
4	Sri Candra	55/46	920/929
5	Kalyana Candra	25	975
6	Ladaha Candra	20	1000
7	Govinda Candra	30	1020

^a Alam 1976, 13.

The epigraphic evidence for the political relations between Arakan and East Bengal between the mid-seventh century and early eleventh century provides historians with critical data to check the later chronicle accounts. The chronicles may overstretch the facts when they claim that Bengal was conquered by the Vesali kings, but their account hints at the political and cultural interaction between the two regions (Nga Mè 1844, 147; Candamala 1931, 288; 293).

Site characteristics of Dhanyawadi and Vesali

The ancient cities were situated in the alluvial flood plains of Arakan's major river valley areas. Of Arakan's four major rivers—the Naaf, Mayu, Kaladan and Lemro—the last two figure prominently in historical geography. In the Kaladan and Lemro valleys, the hills often stand out as low ridges above the flood plain. Close to the sea, the flood plains of the Kaladan and Lemro form a single deltaic plain having much tillable land (Thin Kyi 1970). While the alluvial plains offered fertile land for cultivation, shifting cultivation (taungya; $to\bar{n}$ - $y\bar{a}$) could be practised on the slopes of the hills that were covered with typical rain forest vegetation.

The ancient cities were located on the western side of the ridge separating the Kaladan and the Lemro river valleys. The sites of Dhanyawadi and Vesali, which lie twenty-six kilometers apart, were built on the well-drained foot of the ridge of hills. This characteristic situation of the ancient cities of Arakan combined the advantages offered by the hills and the lowlands (Donovan *et al.* 1998). As these ridges are of early tertiary age, they offered a supply of sandstone for building purposes such as city walls and religious building structures (Thin Kyi 1970, 3). The ridges might also have served as natural protective barriers. The height of the ridge runs from 366 meters north of Dhanyawadi to 122 meters near Vesali.

The common people probably lived inside the outer walled areas while the social elite stayed in the inner city (Figs. 3 and 4). Hydraulic works situated outside the city provided Dhanyawadi and Vesali with water for agricultural purposes and

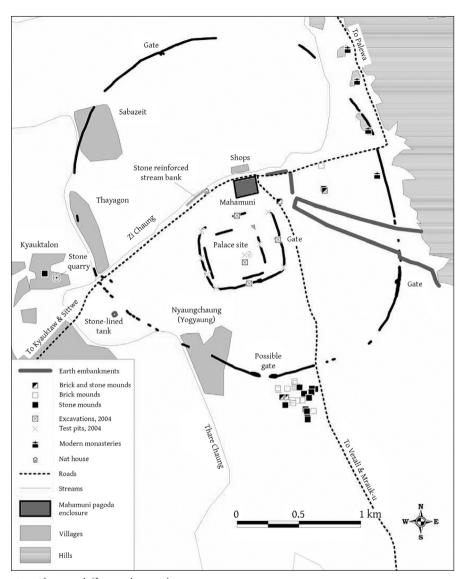


Fig. 3. Dhanyawadi (from Hudson 2005)

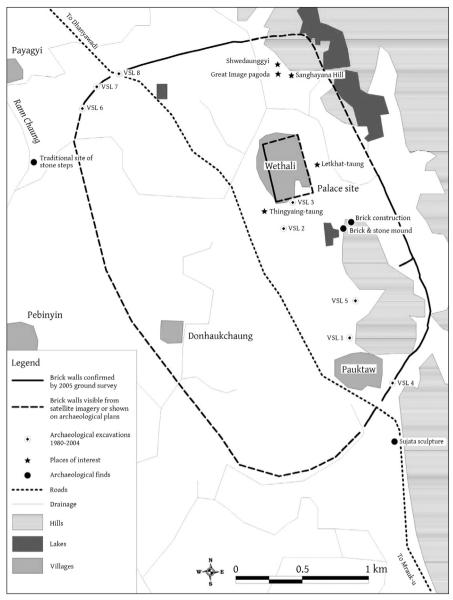


Fig. 4. Vesali (from Hudson 2005)

fed the water tanks near the residential area. While rain was scarce for about half the year, the quantity of water obtained during the monsoon season was substantial. Therefore, the rainwater that could be stored in the reservoirs allowed rice cultivation even during the dry season. Urban development and the waterworks could thus ensure food sufficiency.

Dhanyawadi and Vesali were contemporary of the neighbouring Pyu cities in the Irrawaddy valley and besides a number of obvious differences, they share a number of common features. With their outer and inner city areas and their walls built of bricks, the urban outlay and the building structures of Pyu and Arakanese cities resemble each other. Though they were both established near hill ridges and close to secondary streams, Pyu and Arakanese cities faced very different climatic and site conditions.

The Arakanese cities of the first millennium were situated in the coastal region while the Pyu cities were situated in the central dry zone of the Irrawaddy valley. The Arakanese cities lay on the windward side of the Arakan Yoma Mountain range and received about 500 centimetres of rain per year while the Pyu cities on the leeward side got only from 90 to 150 centimetres.

Beikthanoe is located thirty-two kilometers east of the Irrawaddy and there is a 229 meter high ridge situated between the river and the city. Sri Ksetra is situated eight kilometers east of the Irrawaddy. A ridge runs at a height of 137 meters between the river and the city. Halin, too, is separated from the Irrawaddy by the same kind of ridge (Tun Shwe 2006, 6). In Arakan, there were no ridges between the river and the cities. The Kaladan runs in a north-south direction on the western side of the cities while the hill ridges are located towards the east.

With its oval shaped plan, Dhanyawadi resembles Sri Ksetra. But it is only half as large. The outer wall encloses an area of 557 hectares, comparable to Beikthanoe, Halin or Maingmaw in Upper Myanmar. With its 604 hectares, the urban area of Vesali was slightly larger than Beikthanoe but smaller than Halin (cf. Aung Thaw et al. 1993; Aung Myint 1998). Like in Halin and Sri Ksetra, most of the population were agriculturists who would have worked fields that lay inside the walled outer city area. Effective control of the city, however, would have extended to the valley and the lower ridges, supporting a mixed wet-rice and shifting cultivation, with local chiefs paying allegiance to the king (Gutman 1976, 19). At Dhanyawadi and Vesali, inwardcurving gates were recently excavated by the Archaeology Department (Hudson et al. 2005). The structures are similar to the curved brick corridor gates excavated at Halin, Beikthanoe and Sriksetra (Kyaw Zan 2004). Water tanks are situated on four sides of Dhanyawadi's inner city. The southern tank is now silted over. A larger tank in the east, located along the inner moat, might have supplied the water for the palace complex (Gutman 1976, 19). This arrangement recalls the many tanks and canals seen on aerial photos of Sri Ksetra (Berliet 2006, 2).

The masonry work of well-laid courses of bricks in Dhanyawadi is dissimilar from Vesali and the Pyu cities where the walls are fringed with good bricks on both sides while the core is filled with broken pieces of bricks (cf. Aung Thaw *et al.* 1993).

Clusters of brick and stone platforms appear as low mounds on the ground outside the southern outer city wall of Dhanyawadi. Many of them are preserved to this day as corners of the rice fields (Hudson 2005, 2). Mounds or structures known as "pyu-taik" (pyu tuik) also exist outside of the southern outer wall of Sri Ksetra (Stargardt 1990, Fig. 20). The location of the mounds in Dhanyawadi is similar to those of Sri Ksetra. Finally one may note that the thickness of Vesali's southern city wall is the same as that of Sri Ksetra (Nyunt Han 1986, 17; Kyi Khin 2004, 4-6).

Like in other early Southeast Asian cities, the remains of Buddhist and Brahmanic sculptural art show that the ancient Arakanese cities underwent a strong cultural impact from neighbouring India. In this context, the relations between Pyu and Arakanese cities are a matter of particular interest. A Pyu inscription was found in Sandoway (Gutman 1976, 111) and a Pāli inscription bearing Pyu characters was discovered in MraukU in Arakan (Gutman 1976, 114). It has been suggested that Pyu lived in the Sandoway area in southern Arakan (Than Tun 2004, 102; Than Tun 2006, 98). Arakanese and Pyu coins are similar (Than Tun 2004, 108; Than Tun 2006, 214). The trade route from Funan to India touched the Pyu cities of Beikthanoe, Sri Ksetra, Halin as well as Vesali in Arakan.

Lemro Valley Cities (eleventh century to 1430 AD)

Vesali was succeeded by a series of smaller cities—namely, Sambawak, Pyinsa, Parein, Hkrit, Nareinzara Toungoo and Launggret—which flourished from the eleventh century in the Lemro River valley. Our knowledge of this so-called "Lemro period" largely depends on Arakanese and Burmese chronicles, on yet little-known manuscript sources, on Buddhist art and on a small range of epigraphic data. The name "Ārakkhadesa" referring to the land of Arakan is first found on the northern face of the eleventh century Shitthaung pillar inscription (Gutman 1976, 2). The ethnonym "Arakanese" (Rakhaing, Rakhuin) first appeared in a Bagan inscription dated 1197 AD (Gutman 1976, 17. f.n.). The expression "kingdom of Arakan" (Rakhaing naing-ngan; Rakhuin nuin-nam) appears for the first time in an inscription dated 1356 AD (Oo Tha Tun n.d.). While we can only speculate on the ethnic identity of the people who founded Dhanyawadi and Vesali, the occurrence of the ethnonym of the Rakhaing in the inscriptions provides a clear indication of the ethno-linguistic identity of the inhabitants of the country. It also marks a break with the earlier period when inscriptions were exclusively written in Pāli or Sanskrit.

Following the chronicled account of succeeding capitals, the first displacement of the capital from the Kaladan valley to the Lemro valley was carried out with the founding of Sambawak and Pyinsa. From there, the capital moved to Parein. Later the seat of political power shifted for ten years further north to Hkrit. The site of

Sambawak was then reoccupied, followed by Nareinzara Toungoo. Launggret had a longer lease of life. It became capital in the thirteenth century and was dethroned only in 1430 AD with the foundation of Mrauk-U.

The cities of Sambawak, Pyinsa, Parein, Launggret and Hkrit occupied the lowlands west of the Lemro River while Nareinzara Toungoo lay on the eastern bank. All cities were situated close to the hill ridge. They were smaller than Dhanyawadi and Vesali and their walls and moats have mostly disappeared in the course of time. A common characteristic of the Lemro valley cities was the construction of earth embankments. These were more likely earth banks used for hydraulic purposes than earth ramparts serving a defence purpose. Situated at a distance from the foot of the ridge, the earth embankments were possibly raised by the people of the time in order to make the land cultivable and safe from floods (see O'Reilly 2006).

As the Lemro period runs parallel to the rise and the apogee of the Myanmar kingdom of Bagan (eleventh to thirteenth century), questions do naturally arise regarding the relations between Arakan and the Irrawaddy valley. On the east side of the Lemro where the river approaches the hills, there was a land route leading over the Arakan Yoma mountain range towards the Irrawaddy valley. This route was probably used for many centuries, although reliable evidence on Arakan-Burma relations is scarce. While ethnic groups such as Mon, Shan, Kadu or Indians are mentioned many times in the Bagan inscriptions, "Arakanese" show up rarely. In five instances, persons referred to as "Mr Arakan" (Nga Rakhaing, Na Rakhuin) appear in a list of slaves dedicated to a temple. The presence of Arakanese in Bagan is also notable in a 1299 inscription when Queen Amiphaya Saw made a large donation to the monastery of Hsu-taung-pyi. This happened at a time when the decline of Bagan as a political power had already begun. Some of the bondsmen that she donated originally belonged to two Arakanese owners referred to as Rakhaing ahlu tagar, i.e. meritorious donors (Rakhuin a-lhū-takā:) (Frasch 2002, 70; Than Tun 1969, 186).

Arakan and the Irrawaddy valley

Many scholars have interpreted the record of the Burmese chronicles in the sense that Arakan was controlled during the Lemro period by the kings of Bagan (Collis 1925, 38; Harvey 1925, 45, 138; BPHM 1970, 385; Thin Kyi 1970, 8; Raymond 1995, 476; Gutman 2001b, 13; Berliet 2004, 213). Other scholars have argued against this interpretation ((Than Tun 1969, 139; Than Tun 1975) or have been reluctant to accept the traditional view (Leider 2004, 549). It is true that the latest Arakanese chronicles also follow the Burmese chronicle account. But the Bagan hegemony is definitely a question of further investigation. According to the chronicled account, King Anawratha of Bagan attempted to invade Arakan (Nga Mè 1844, 161). Later King Alaungsithu is said to have restored the Arakanese Prince Letyar-Min-nan on the throne of Arakan (Mhannan Yazawin 1993, 297-8; Nga Mè 1844, 172; Candamala 1931, 317).

Arakan may have been a vital zone for Bagan in its communications with Bengal and India. Patikkara, a chiefdom in southeast Bengal, appears in Bagan politics at several occasions. The chronicles mention that the kings of Pattikara gave daughters in marriage to Bagan kings, which may suggest that they temporarily acknowledged the suzerainty of the Bagan kingdom. Similarly, the later chroniclers may have deliberately intended to create the impression that Arakan was a tributary state and that the kings were sending princesses to the Bagan court as a kind of tribute (Frasch 2002, 69).

Two inscriptions mention the conquest of Macchagiri (Fish Mountain) by King Alaungsithu presumably in the late eleventh century. Macchagiri is identified as the region of the Thets (*Sak*) located somewhere in the northern Arakan Hills. Unfortunately both inscriptions are copies made in the late eighteenth century and their dates (1066 and 1096 AD) do not match with the regnal dates of Alaungsithu⁹ (Frasch 2002, 70 footnote 47). A century later, King Narapatisithu's Dhammayazika inscription lists Macchagiri among the places conquered by Bagan (Frasch 2002, 70). But the late Burmese epigraphist Than Tun refused to identify Macchagiri with Arakan (Than Tun 1969, 139). As there is nowhere a direct reference to the conquest of Arakan to be found either in the inscriptions or in the chronicles, the case for Bagan's hegemony over Arakan is weak. It is thus more likely that Arakan enjoyed autonomy during the Bagan period (Frasch 2002, 71).

Other political, religious and economic indicators bolster the argument in favour of an independent polity in Arakan during the Bagan period. Contemporary Arakanese inscriptions contain expressions such as "Arakanese king" (Rakhaing Min, Rakhuin man:), "kingdom of Arakan" (Rakhaing naing-ngan, Rakhuin nuin-nam), and "land of Arakan" (Rakhaing pray, Rakhuin pran). Recent research has also shown that Arakan had a distinguished historiographic tradition, with works predating the eighteenth century (Leider 2005). More than a dozen Arakanese chronicles claim an uninterrupted succession of Arakanese rulers. The proclaimed intention of the chronicle writers was to demonstrate the continuity of royal lineages and thus underscore that the kingdom of Arakan was independent. Arakanese chronicles claim that King Min-Htee (thirteenth-fourteenth century) conquered Thayet in the Irrawaddy valley (BPHM 1970, 385). Unlike the rulers of Vesali, the Lemro period kings did not produce coins. The economic foundations of Arakan show a number of similarities with the situation in Lower Myanmar.

Finally, a point can be made with regard to Arakan's religious history and more particularly to the prestigious Mahamuni shrine at Dhanyawadi. When the kingdom of Bagan became the most important religious centre of Theravada Buddhism in the

^{9.} For the Harikela coins, see Mitchiner 2000, 65-70.

^{10.} Maha-htee Crocodile Rock inscription (Arakan), dated 1356 AD. It can be seen in situ. For a transcription, see Oo Tha Tun n.d.

twelfth and thirteenth centuries, a kind of competition arose between the two kingdoms of Arakan and Myanmar. The Mahāmuni image does not occur among the numerous relics and shrines that were obtained by Bagan kings, according to the Burmese chronicles. The silence of Burmese sources about the Mahāmuni rather suggests the existence of an autonomous Arakan (Frasch 2002, 72). The history of the Mahāmuni statue (phaya-thamaing, *bhurā: samuin:*) underlines its superiority vis-à-vis sacred shrines and temples at Bagan (Forchhammer 1891, 1-9). In this context, Arakanese and Burmese accounts of King Anawratha's and King Alaungsithu's invasions could be interpreted in the way of pilgrimages to repair and renovate the temple (Chan Htwan Oung 1912, 262-265). Traditions about the intention of Anawratha to glorify the Mahāmuni challenge the religious supremacy of Bagan (Frasch 2002, 72).

The existence of religious ties between Sri Lanka and Arakan points to a distinct Arakanese monastic history. Evidence of these early relations is corroborated by an inscription of 1211, recording that a relic of the Buddha from Sri Lanka was enshrined in Arakan. Around this time, a group of Burmese monks returned from Sri Lanka to Bagan where they had taken part in a reform of the monastic order (Frasch 2002, 73). The expression "Singha king" (Thein-kho-min, Singhui-man) is also found in an inscription of 1356. So it can be assumed that there was religious exchange between Sri Lanka and Arakan that happened independently of Sri Lanka-Bagan relations. The Min Razagree Satan (Man: Rājākrī: cātam:), an early seventeenth century chronicle from Arakan also mentions several early contacts with Sri Lanka.

As we have stated above, *ye dhammā* inscriptions bearing the "Buddhist creed" were discovered all over the territory of Arakan. Together with early Buddhist sculpture, they testify to the flourishing of Buddhism in the first millennium. While Arakan kept its political autonomy, Bagan's cultural impact is undeniable. The Buddhist art of the eleventh and twelfth centuries was strongly influenced by the art of Bagan (Gutman 2001b, 13).

Comparative perspectives

As this essay has tried to provide an overview of Arakan's early urbanization, we may briefly summarize our findings. The appearance of cities in Arakan was based on an increase of population linked to the emergence of rice production in a fertile environment. The urbanization of this territory took place in Arakan's heartland and reflects to some extent an agrarian "revolution." Starting with the fourth century AD,

^{11.} Tha-htay Nga Pyaung Inscription, now situated at Mahāmuni Museum, Kyauktaw, Arakan (for transcription, see Oo Tha Tun n.d.). The Ananda Candra Inscription (c. 729 AD) from MraukU, Arakan also mentioned religious contacts with a country supposed to be Sri Lanka (see Gutman 1998, 108).

^{12.} Crocodile Rock inscription, l. 3.

^{13.} For discussion of religious exchange between Arakan and Sri Lanka, see Leider 2006.

rice cultivation was practised inside the walled cities of Dhanyawadi and Vesali, just like in the Pyu cities of the Irrawaddy valley. Water management by water tanks and creeks flowing inside the city area was part of the urban planning.

The early political and territorial organization of Arakan suggests the existence of a "city-state" with its focal point the walled city. It is reasonable to assume that the walls and moats were constructed following an Indian urban concept. In some cases, walls and moats fulfilled an agricultural function. The urban structure with the inner citadel translates a clear sense of social hierarchy. However, as the influence of Vesali spread to the regions of North and South Arakan as well as to East Bengal, one may wonder if Vesali was not a kingdom rather than a mere city-state, as it held sway over subdued neighbouring areas.

Aerial photographs of the cultivated surfaces testify to food self-sufficiency. Trade is equally well attested to by excavations and explained in the context of a double exploitation of land and sea resources. The ancient Arakanese cities were river ports that could drain the agricultural resources of the hinterland and derive income from maritime exchange. They also had a redistributive function: channelling food products inside the country.

After the eleventh century, a succession of smaller cities flourished in the Lemro valley. While Dhanyawadi and Vesali had connections with the contemporary cities of the Pyu and with India, the Lemro valley cities had ties with the kingdom of Bagan. Trade would have burgeoned between Bagan and Arakan using the land routes. During the Lemro period, Arakan began to use the Mon/Burmese script of Bagan instead of the Gupta/Nāgarī scripts used in the earlier Dhanyawadi/Vesali period. Lemro kings stopped producing coins, and it was only at the end of the fifteenth century that coinage re-appeared in Arakan. Bagan's influence is perceptible during the period of Lemro, but the kingdom maintained its political autonomy throughout the Bagan period.

A comparative approach to Pyu, Mon, early Burmese and Arakanese urban sites reveals a striking parallelism between the urban sites founded in Arakan and those of the Irrawaddy valley, and it throws new light on our data. The similarity of sites, locations, and building materials in the settlement areas of ancient Pyu and in Arakan is remarkable. The use of earth embankments in the Lemro cities recalls the early cities of the Mon kingdom of Lower Myanmar. The proximity of the city to the major river is a feature shared by early Bagan and the Lemro urban sites.

Further excavations and ground surveys are essential to confirm some of the assumptions made in this paper. As my present work deals with the organization of the territory in Arakan during the early period, the new information that has been gathered is a stepping stone towards further studies.

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Aséanie 20 | 2007

Kyaw Minn Htin

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