

AJANTĀ'S ANTIQUITY:

SOURCES AND PROBLEMS

(Relating to history, epigraphy, and early chronological developments)

Ph.D. Thesis

*Submitted to the M. S. University of Baroda for the degree of Doctor of Philosophy in
art history*

In two volumes

VOL. 1: TEXT

VOL. 2: PLATES

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CERTIFICATE

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is submitted by Rajesh Kumar Singh for the degree of Doctor of Philosophy in art history. The thesis incorporates the results of independent investigations carried out by the candidate himself. All sources used by him have been acknowledged in the 'works cited' section.

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THESIS STRUCTURE

The thesis has two volumes. The first is for the text, tables, and works cited. The second is for the list of figures and the plates for figures.

Volume 1, i.e. the text part is organised in three parts. Part I is titled 'study of certain problematical topics.' Part II is titled 'the fifth-century renaissance begins in circa 461 CE. Part III is titled 'some edifices inaugurated in circa 462 CE'. At the end of Volume 1, tables and works cited are included.

Volume 2, which has the plates begins with the 'list of figures.' The list has only brief descriptions of the figures. The 'plates' part has 235 figures in black and white. These include maps, photographs, ground plans, drawings, and 'print screen' images from computer. Each figure has a caption.

SUMMARY OF VOLUME I

PART I: STUDY OF CERTAIN PROBLEMATIC TOPICS

Part I represents the researcher's position on a number of issues that have been either heavily debated or erroneously percolated in the last two centuries of scholarship on the subject. These are some of the toughest issues that scholars either tend to avoid or are unable to provide a picture of clarity. These are subjects where credible data has either not been collated or have been only analysed in fragmentary values, thus leading to erroneous conclusions. As a result, lots of misconceptions, unfounded notions, and inconsistent categories have circulated and perpetuated in the last century. The issues are so diverse in nature, and they pertain to such different domains of specialisations, that no single scholar yet has been able to investigate them all. Inter-disciplinary background and approach of investigation is required for probing the diverse issues. They involve the disciplines of archaeology, history, sociology, Buddhist canonical studies, epigraphy, iconography, and even critical theory. The present researcher has attempted to enter these domains and investigate each topic as dictated by the material and objectives. This entailed the outright rejection of the trendy and conventional methodologies and the employment of superior inter-disciplinary approach.

**CHAPTER 1: A new introduction to the ancient *saṅghārāma* of
Ajanta**

The new introduction rejects several outdated, fallacious, and misleading notions that are usually the part of introductions in a majority of the published material on the subject. The new introduction includes the current, the latest, and research-based ideas from the fields of epigraphy, textual studies, numismatics, iconography, art history, and archaeological studies. It lays stress on the point of studying Ajanta holistically as an ancient *saṅghārāma* to develop a better understanding of its various features, and not merely in fragments and piecemeal, as has been done so far when the focus is merely on architecture or painting or epigraphy or motifs or iconography.

CHAPTER 2: Nomenclatures for the caves in Ajanta inscriptions

Here, for the first time in Ajanta studies, an insight is presented into the question as to what the edifices were called by the makers of Ajanta. The rationale of the chapter arises from the fact that distorted and misleading conceptions have emerged due to the unchecked usage of the English word 'cave'. Even the use of Indic words, such as '*vihāra*', '*stupa*', '*caitya*', '*caityagrha*', etc. have been highly

inappropriate, misleading, and incorrect as they relate to the case of the Ajanta *saṅghārāma*. The chapter reveals for the first time what the problems are, and how the prevalent usages are incorrect and misleading. Then a solution to the problems is provided by presenting a set of lexicons collected from the Ajanta inscriptions. These lexicons are used in this thesis, because the use of them, once understood in proper perspective, is free from anomalies. They also provide clues to a new understanding about the various layers and contexts of the meanings, and the various modes of the Buddha worship—that is missing from the extant corpus of published literature on the subject. The study of the lexicons exposes the lethargy of the modern historian in probing the ancient scribe's intended meanings and particular contexts of the lexicons when the words were used inter-changeably, and other contexts when the same lexicons denoted a different meaning and intent. The list of the lexicons include the following: *maṇḍapam*, *śaityamandiram*, *stūpavihāram*, *layaṇam*, *upavaraka*, *upāśrayam*, *sugatālaya*, *layaṇam*, *kandarā*, and *śailagrham*. Throughout the pages of this thesis, the researcher has taken recourse to the usage of these lexicons. For example, Caves 16 and 17 with grand shrines are called here *maṇḍapas*, the word used in the inscriptions of these caves. Calling them *vihāra* is not strictly wrong but is surely not specific, and is even

misleading, since Cave 3 too, for example, is called a *vihāra* that has no shrine at all. An entire *saṅghārāma* comprising of several edifices are also called *vihāras*, such is the vast range of the word. Hence, the chapter suggests that such umbrella terms must be avoided in specific contexts.

CHAPTER 3: Teleological, geological, and geographical dimensions of the *śailagṛhas*

This chapter seeks to bridge a major gap in Ajanta studies. Only inadequate and incomprehensive studies have been published so far that probes why after all the rock-cut cave temples were made by the ancient monastics. Little research is done to answer the questions as to why the Western Ghats were chosen for the creation of a majority of the cave-conglomerates; what are the merits the '*śaila-saṅghārāmas*' vis a vis the *saṅghārāmas* created by the use of other media, such as brick, stone, or wood. Because the Buddhists were not the only ones who created rock-cut architecture, even the Vaiṣṇavites, Śaivites, and Jains adopted the rock-cut medium, the questions are probed here in two contexts and levels. One, the generic factors that apply to the various sects and religions. The second is the particular contexts of the Buddhists to probe why they found the rock-cut medium suitable. In other words, an attempt is made here to probe the

raison d'être of the rock-cut medium; more specifically, why the basalt rock type of the Western Ghats was preferred so widely. The chapter also probes into the various geographical and environmental factors. The approach here is different other similar attempts because while earlier studies have only explained the factors of political background, patronage, and trade routes, the issue is probed here from other unexplored angles, namely, the teleology, geology, and geography, which were obviously central to the conception of the *saṅghārāmas*.

CHAPTER 4: The Sātavāhanas and Vākāṭakas: an updated outline

A brief and current historical sketch of the Sātavāhana dynasty is warranted in a current study of the Ajanta *saṅghārāma*. This is because the earlier phase of the *saṅghārāma* was developed at the time when the region, and a large part of India, was being ruled by the Sātavāhana dynasty although there is no record to suggest that the Sātavāhanas patronised any of the activities at Ajanta. They were instrumental in the creation of many rock-cut caves at other sites belonging to the Vaiṣṇava, Śaiva, and Baudha faiths. There is another reason of the study: this thesis rejects the prevalent usage of the term 'Hīnayāna' due to reasons specified in Chapter 6. Therefore, the earlier group of edifices are called here the 'Sātavāhana-period edifices'.

There have been a lot of researches on the Sātavāhanas and our knowledge is still growing. Thus, an updated account has been missing from the literature on Ajanta. Therefore, a recent version by S. Nagaraju is presented here based on the merits of several parameters, e.g. epigraphy, numismatics, purāṇic sources, arts, and architecture.

As regards the Vākāṭakas, it has become a separate field of historical study in recent decades. A proper understanding of the later phase of Ajanta is impossible without taking into account the political background. Hence, this chapter presents the current and the latest views of the scholars on the subject of the Vākāṭaka. The field has seen numerous debates and differing opinions on various finer issues. Thus, it is a difficult issue for any researcher. To present the broader current understanding, the researcher would like to follow the ideas expressed in a recent colloquium of many Vākāṭaka scholars held in Netherlands (Bakker 2004). In that colloquium many new ideas had emerged, and some broader consensus was reached on select topics. Thus, the latest views of various scholars are presented here, which include the views of Bakker, Spink, Shastri, Kulke, Mirashi, among others. An important feature of the chapter is a genealogical table each for the Sātavāhanas and Vākāṭakas.

CHAPTER 5: All together how many *upāśrayas* and *maṇḍapas* are there at Ajanta?

This chapter highlights certain anomalies that are involved in using the English word 'cave'. Questions are raised here about the sweeping generalisations and disqualifications that arise from the usage of some of the most commonly established English terms that actually paints a variety with the same brush, or neglects and fails to indicate the diversities. For example, the chapter questions the logic of placing Cave 3 (hardly more than an unfinished porch) in the same category of Cave 26-complex (an sprawling stupa-temple with many adjuncts), which blunder happens automatically by the use of the word 'cave'. To cite another pair of example, it is hard to explain why the cistern chamber, even if pillared (Cave 18), should be placed in the same category of the two distinct edifices (Caves Upper 6 and Lower 6), which are unfortunately labelled as 'a' two-storied cave, while in reality the two are distinct edifices as revealed by the explorations of Spink and the present researcher (Chapter 18). And, why, at the same time, the other cisterns, too many at the site, should not be counted at all in any study. To cite yet another example, the chapter questions why caves 27 and 25, which are mere adjuncts to Cave 26-temple-complex have been ascribed unique numbers whereas

the two lower adjuncts of the same edifice (Cave 26-complex) are not ascribed any number.

The chapter exposes the inconsistencies, contradictions, and anomalies in early and prevalent scholarship, which arises out of inadequate understanding of the site and incorrect ideas about the plans and inter-relationships of various edifices, and how they were meant to be used by the makers. By such examples, and a table, the chapter indicates how faulty, arbitrary, and misleading the present numbering system is, which aside from the erroneous usage of the English word 'cave' does not provide any clue to how the *saṅghārāma* was planned, envisaged, and used by the makers. The different types and varieties need to be identified and understood.

The chapter lays stress on the need of abandoning the majority of the prevalent nomenclatures as well as for extremely cautious use of the extant numbering system. It vouchsafes for the adoption of the very lexicons used by the makers of Ajanta, as are found in the Ajanta inscriptions.

Ultimately, a new classification for the edifices is presented here. In this classification, there are two main categories. The first category is *upāśraya* (term found in Ajanta Cave 12 inscription, which denoted an edifice for the monks to stay). The term is still used today for Jain monastic residences. These were not temples; they are not intended to

house any worship hall. The chapter introduces a second category: *maṇḍapas*. The term is found in many Ajanta inscriptions. Burgess and Chabra translate the word as 'hall'. However, because Caves 16 and 17 are such halls that have grand Buddha shrines, the word must not be meant simply as a hall. These are halls or pavilions where the Buddha stayed. Further, a place where the Buddha stayed automatically became a place for worship. Thus, the *maṇḍapa* is like the *gandhakuṭis*, the *parṇakuṭis*, where the Buddha often resided. Thus the *maṇḍapa*-temples are different from other kind of temples, the so-called *śaityagr̥has*, which have a nave, a colonnaded ambulatory, a stupa at the back of the nave, and a vaulted ceiling. The present researcher calls the latter as stupa-temples; he also rejects the word *śaityagr̥has*, since modern scholarship has not realised that the word *śaitya* was also used to denote the image of the Buddha, as can be found in Caves 16 and 17 inscriptions. The chapter for the first time explains the point that Caves 16 and 17 are called *stūpavihāram* and *śaityamandiram* in the dedicatory inscriptions of these very caves; notably there is no stupa shrine in these caves, but colossal Buddha image shrines. Thus, the chapter explains that the word *śaitya* denoted the stupa as well as the Buddha image. There was no distinction at all. The

distinctions and qualifications are nothing but the arbitrary and imaginary constructs of the modern historian.

Based on the nomenclatures and lexicons found in Ajanta inscriptions, the chapter re-numerates and recounts the *upāśrayas*, *maṇḍapas*, and cisterns. A table is presented to clarify the issues and classify the caves in new groups.

CHAPTER 6: Interrogating 'Hīnayāna' and 'Mahāyāna'

In addition to the studies of Cohen, Schopen, and Zin in their researches, further evidence and grounds are provided here that call for the rejection of one of the most prevalent yet most misleading terms and categories relating to the Ajanta caves. These are 'Hīnayāna' and 'Mahāyāna,' the terms that have been used so widely, and with such generalisations, that they are taken as established truths and handy catchwords for a majority of authors, tour guides, and educators.

The chapter questions the very grounds on which the constructs of Hīnayāna and Mahāyāna are based. Since the former is a derogatory word, it is the principle reason why the modern scholar should never have adopted the usage. As regards the latter, from the yardstick of the modern scholar, the usage ought to have never been applied to the case of Ajanta. First of all, as Schopen has described, there was a

never a pan-pervasive Mahāyāna across the different regions of ancient India even within the supposed Mahayana period between the first century CE to the fifth century CE. The prevalent Mahayana theory professes the Bodhisattva (and not Gautam Buddha) as central to Mahāyāna; it professed the creation of other deities, e.g. Akṣobhya, Amitābha, Maitreya, Manjushree, Tara, and Vairocana; it created an antithesis against the stupa worship calling it 'lesser' (*hīna*); if these are indeed the yardstick, then by this very token, the same Mahāyāna professors ought never have labelled the second phase of Ajanta as Mahāyāna. For, none of these traits are to be found at Ajanta. Spink's research shows that not a single Bodhisattva was carved or even planned at Ajanta until the last three years of activities at the site. Even when the Bodhisattvas were created, they remain attendants to the Buddha, and are not central at all. Further, stupa was being created till the very last year of activity at the site. Thus, the chapter calls for a review of our understanding of Ajanta, and its Buddhism.

CHAPTER 7: A *saṅghārāma* without the *saṅgha*?

For the first time in Ajanta studies, the issue is raised here about the need to probe the role of the *saṅgha* at Ajanta. The literature on Ajanta is surprisingly silent on this point.

No one has even questioned or probed the presence of the *saṅgha*, which cannot be obviously imagined to have been absent from the site. As a consequence of the spiralling, tail-biting, tendency of modern scholarship, new questions have not emerged leading to some very fallacious notions. For example, the leading subject scholar, Walter M. Spink, even after studying the cave for nearly four decades does not make any mention of the existence of the *saṅgha* at Ajanta. This is baffling, as his eight published volumes in the last ten years do not say anything about it. On the contrary, without any tangible evidence, he ascribes all the credit for the creation of the fifth-century phase of Ajanta to Hariṣeṇa, the contemporary Vākāṭaka king.

This chapter questions this very thesis. In Spink's theory everything was being planned at the royal court (and he produces no direct evidence in support of this). The chapter proposes that the edifices were planned by the *saṅgha* and not the Vākāṭakas. Being one of the components of the *tri-ratna*, the *saṅgha* could not be expected to have been absent from a grand *saṅghārāma* like Ajanta. Circumstantial evidence is provided that alludes to such a possibility.

CHAPTER 8: Some grey areas in fixing the date of the Vākāṭaka phase of the Ajantā caves

This chapter was published in *Kala: The Journal of Indian Art History Congress* (2009). The present is a revised version of the same. This essay is a kind historiography of the dating efforts. This is one essay where the most contentious issues that confront the scholars in dating the second phase of the Ajanta caves are described. As is known, the second phase of Ajanta has seen heated debate among scholars, and no unanimity exist till date. However, the views of Spink have become very popular in recent literature. He has set aside the dating of other scholars, such as Burgess, Yazdani, Ālṭekar, and Mirashi. The views of each scholar, including that of Spink, is presented here.

Thereafter, the views of Spink's critics are presented, that includes Karl Khandālāvālā, Ajay Mitra Shastri, A. P. Jāmkheḍkar, and Brahmānanda Deshpande who questioned Spink's views on various finer details. To each of the criticisms, Spink made pointed replies. After this, the above critics have made no replies. Thus, one group of critics fell silent. Recently, Hans Bakker and Robert Scott Cohen have freshly questioned Spink's ideas on the Vākāṭakas. In response, Spink has made many clarifications as are included in his series of volumes. In the end, the researcher's views are also presented. After due scrutiny of all the different versions of the Vākāṭaka history, and after examining the available corpus

of inscriptions, on-site data, and literary sources, the researcher is able to accept Spink's chronology for the time being, and until a more convincing version is presented by somebody in future.

CHAPTER 9: Ajanta in the Sātavāhana period

This chapter deals with the five edifices of the 3rd-2nd century BCE. The inter-relationships among the five edifices are explored here. Based on the relative locations and antiquity an attempt is made to establish the inter-relationships among the various caves. This is in line with my categorisation of the caves as temples and *upāśrayas* (dwelling halls). The three *upāśrayas*, Caves 12, 13, and 15A were adjuncts to the two temples that have stupas inside them.

The point is explained how in the earlier period the two objectives required different plans and types. A single edifice never fulfilled both the purposes, i.e. of dwelling and worship. Even in the fifth-century phase, the two objectives were initially different, and required different types of edifices. However, around circa 466 CE, the idea of the fusion came and was accepted at the site with so much of excitement that all of the 17 *upāśrayas* were converted into temples-cum-residences. These are called *maṇḍapas* in Ajanta inscriptions. Thus, we are able to see, for example, that

Caves 1, 2, 16, and 17 have provisions for residential cells as well as there are provision for the Buddha shrine.

PART II: THE FIFTH-CENTURY RENAISSANCE BEGINS IN CIRCA 461 CE

Parts II and III deal with the early developments, especially the earliest inaugurated caves, of the fifth-century phase of the Ajanta caves. All the developments of all the edifices, and a systematic account of all their phases of the fifth-century period, which saw to the creation of the majority of the caves (about 22 edifices) cannot be included within the scope of a thesis. Such a detailed study, which is comparable to that of Spink would have to be a lifelong project. No hasty approach is feasible if the edifices are to be studied for probing new issues.

Therefore, the thesis is focussed on the first few years of the site's development in fifth century. Even this proved to be a vast undertaking, as the majority of the fifth-century edifices were begun in the first few years, which is circa 462-463 CE according to Spink. In my scheme of things, these are circa 461-462 CE. The reason of the one-year advancement of the dating is because of Cave 26's astronomical orientation to the sunrise of Āṣāḍha Pūrṇimā and ćaturmāsa. The orientation, in my view, was obtained from *diśā-vidhāna* performed in circa 461 CE.

Thus, Part I describes the developments in circa 461 CE, the year in which the following edifices seem to have begun,

and in this particular order: Caves 8, 26, and 25. Part I begins by explaining how the renaissance would have been planned; how the *saṅghārāma* might have been designed on the drafting table. Spink is a rare scholar who has probed these aspects. However, the data, evidence, and analysis at the disposal of the present researcher brings forth a story of development that is remarkably different from Spink's reconstruction of the chronological development. Thus, on a majority of finer issues, the present researcher cannot agree with Spink's conclusions.

Largely, the contents of Part I seek to add significantly to the domain of knowledge. A vast amount of data, facts, and evidence are documented and analysed that create a fresh corpus in itself. They shall help future research. A sizable portion of the new corpus is noticed and presented for the first time. When analysed in detail, the outcome of the research present a picture of Ajanta that is radically different from the way Ajanta has been generally described hitherto. On many occasions, the researcher has disputed the views of major scholars like Spink. In various contexts and issues the researcher had to refute many observations by Spink.

The story presented here suggests that a majority of the earlier literature on Ajanta never grasped the true picture of

Ajanta. Many of the popular history books and scholarly articles on the subject present such misleading stories and histories of Ajanta that it was found best, in the interest of brevity, not to cite them at all, let alone the question of refutation or repudiation.

In this thesis, in general, almost every sentence and paragraph documents, analyses, and describes a new piece of evidence, datum, and fact for a deductive reconstruction of what happened and how; thus a new story of the developments is presented here. The method and approach is based on the same deductive logic and principles as followed in the noted works by Spink and Schlingloff. An attempt is made to avoid subjective interpretations, as they lack scientific approach. Inductive analysis has been avoided as far as possible.

CHAPTER 10: In the beginning were only two layouts—one for the two temples and another for the *upāśrayas*

This chapter seeks to make a new contribution to the field of study, as no scholar (including Spink) has probed or ventured to explain whether and how the layout of the various edifices were planned simultaneously on the drafting table. During frequent and prolonged fieldworks many features and evidence were noticed that are not mentioned in the works of Spink. Some of notices when analysed with the known corpus of

data and evidence, give rise to a dramatically different account of events and developments on the site. When the researcher interviewed Spink on the new notices and the resultant reconstructions, Spink expressed surprise, and accepted that there are still many features which he seem to have missed.

The present chapter in fact is the sum total of the entire thesis. After the close analysis of the various edifices, features, and developments, a certain picture has emerged regarding how the site must have been planned. This picture is presented in this chapter. A proposal is made here for the first time in the Ajanta studies that the entire renaissance of Ajanta was probably planned by the Buddhist saṅgha in operation in the region. The researcher seeks to disagree with Spink's argument that the planning was done at the royal court of Vākāṭaka Hariṣeṇa.

The chapter makes a suggestion that nearly 19 edifices were initially planned. And, they were planned together by the saṅgha. Each of the edifices were to be patronised by a patron, whether he was a minister, king, merchant, or a monk (muni) with enough resources. A classified table is presented that depicts that only two edifices were initially planned to function as temples. These were Caves 19 and 26; the rest were all *upāśrayas* (residential halls). Next, the suggestion is

made that the two temples had a uniform layout. Even the *upāśrayas* had a common layout. The two layouts are not to be found in Spink's thesis. However, the present thesis meets with Spink's thesis on the subject of the crucial year of circa 466 CE when the present researcher agrees with Spink's radical re-discovery of the fact that all the residential edifices were being re-designed to function as temples, having very different layouts than the temples originally planned.

CHAPTER 11: The first initiated *upāśraya*—Cave 8

The present chapter is rather historiographical with relatively little fresh contribution. The major issue here is to assimilate the different understanding, histories, and features described by earlier scholars. The prevalent view is that Cave 8 is a 'Hinayana' cave. However, in the last two decades, three scholars have come out with a view that the edifice actually belongs to the fifth-century phase of Ajanta. Further, the scholars also suggest that Cave 8 could be very first edifice excavated in the renaissance of Ajanta. The scholars who have proposed this view are: Jadhav, Dhavalikar, and Spink. The present researcher fully endorse the new identification. However, a position of the present scholar seemed necessary on the various details, where the three scholars differ radically from one another.

Therefore, the crux of each of the scholars is presented here as a historiographical survey with the views of each on various crucial points. Thereafter, based on extant evidence and data the merits and demerits of each of the three thesis is evaluated here. Then, the present researcher gives reason why the views of Spink are most acceptable. Ultimately, some additional data, facts, and features are presented to further clarify the picture of the historical circumstances that led to the inception, early developments, and later adaptations to the edifice. The chapter ends with the researcher's view that the edifice was probably initiated in circa 461 CE (Spink's c. 462 CE), and was adapted in circa 466 CE with the addition of a shrine that had the unique provision of a portable Buddha image.

CHAPTER 12: The first initiated temple: Cave 26-complex—the donative inscription

This chapter, published in *Pratnakirtti*, Prof. S. Ritti Felicitation Volume (2012), is a slightly revised version. The aim is here to review and analyse some of the verses from the long dedicatory inscription of Cave 26. Although the inscription was first read and translated in the nineteenth century, and it was re-read and re-edited several times in the last century, its fuller interpretation has never been

attempted. Even in the present study, all the verses have not been analysed. Only a few verses are selected for a detailed scrutiny of what they mean, contain, and imply, a proper understanding of which may drastically alter our view to the understanding of the *saṅghārāma* and its times.

For the first time, an attempt is made here to relate the contents of the inscription with the art, architectural, and iconographic features of the temple. This approach benefits from critical theory. It is an inter-textual study, which seems to yield new results and insights. We learn about the donor and his taste. We also learn about the names of the architects or master artists who saw to the excavation of the edifice on behalf of the donor. The names are Dharmadatta and Bhadrabandhu. It is pointed out that modern historians have overlooked the names of the two individuals thereby undermining the role of individual artists or architects in Ajanta studies in particular, and in the context of Indian art at large. The chapter suggests that Dharmadatta and Bhadrabandhu may be the prime contenders of being ranked the first known "Great Masters" of Indian art.

Chapter 13: Cave 26-complex: early developments

This chapter was published in *South Asian Studies* 28.1 (London: British Association of South Asian Studies and

Routledge 2012), 37-68. It contains new contents, facts, and data. It brings to light many evidence for the first time. It presents a new chronological development of the Cave 26-complex, which is different from the story presented by Spink. The abstract of the article may be reproduced here for the summary of the chapter.

Ajanta's Cave 26-complex seems to hold a special position in the history of Indian rock-cut architecture for many reasons. It was the largest and most elaborate caityagṛha-complex in its time. It transformed Ajanta from just another saṅghārāma of Buddhist India to a catalytic force that engineered the rejuvenation of Indian rock-cut architecture in general and the renaissance of Ajanta in particular. Contrary to the long cherished and still officially held view that it was a late Vākāṭaka phase *caityagṛha*, fresh facts are presented here that support Walter M. Spink's proposition that in terms of chronology it was only the second excavation of the Vākāṭaka period after Cave 8.

It was the first caityagṛha to be built after a gap of two and a half centuries, but it had a rare arrangement of four flanking wings. In due course, further adjuncts were added in the form of large *leṇas* (Caves 21, 23, and 24) - all probably patronised by a single monk named Buddhahadra. The donor's taste is visible in the introduction of many unique

features, some unprecedented, that heralded the era of individualism in Buddhist art and architecture. It dispels the notion that all saṅghārāmas were the handiwork of the *saṅgha* and that individuals had no role to play in the construction of edifices.

The study documents some fresh evidence, and interprets this together with other known data, shedding a new light, in a new context, on the development of the site in general, and the *caityagr̥ha*-complex in particular. In the process, some caves that were largely neglected by existing scholarly studies have also been fruitfully analysed. Since artistic, iconographic, and architectural descriptions have long governed the core of Ajanta studies, an attempt is made here to look at the circumstances and factors that initiated and shaped specific initiatives, the practical problems which were encountered at specific stages of excavations, and the solutions which were implemented.

In the end, two individuals are brought into focus, Dharmadatta and Bhadrabandhu, who were thanked by the donor in his inscription for 'seeing to the execution of the work' on his behalf. They must have been the architects (*sthapatis* or *sutradhāras* who masterminded the grandest rock-cut project known until then. The value of their accomplishment is properly realised when we come to know about the trying

circumstances under which they performed. They may be considered the first known Master Architects of Indian art.

CHAPTER 14: Cave 26-complex: inaugurated on the Dhamma Day (Āṣāḍha Pūrṇimā) of circa 383 Śaka Era, and aligned to the sunrise of the Dhamma Day and the first day of *ċaturmāsa*

This chapter should be read with Chapter 20. Both present new archaeo-astronomical studies of two temples at Ajanta. The present chapter explains Cave 26, while chapter 20 explains Cave 19. The aim is to solve the astronomical riddle first noticed by Walter M. Spink. However, the present study differs drastically with the conclusions of Spink. The bottom-line of the present study is reflected by lengthy title.

The chapter suggests that the planners, those belonging to the *saṅgha*, carefully planned the orientation of the two temples during circa 461 CE. (Cave 29, the third stupa temple of the fifth-century phase, was planned later.) An argument is made here to suggest that the orientations were achieved by the strategic selection of the particular location and elevation on the cliff. Evidence and data are presented to suggest that Cave 26 is astronomically oriented to the sunrise of two important dates in the Buddhist calendar. The first date is Dhamma Day, which falls on Āṣāḍha Purnima. The second

date is the first day of *Āaturmāsa* that falls on the very next day of Dhamma Day. About Cave 19, data and evidence are presented to suggest that the temple is astronomically oriented to felicitate the ending of the *āaturmāsa* (on Kārttika Purnima) as well as to felicitate the next three major *upoṣathas* that fall on the next three *pūrṇimās*.

With a volume of data and measurements presented in many tables the chapter shows how on the Dhamma Day and the first day of the *āaturmāsa* (that falls on the next very day) the rays of the sun, soon after the sunrise on the tableland across and above the cave, enter the nave of the temple through the wide and high *caitya* arch and fall on the stupa. However, due to an error in excavation, the sun rays do not squarely and centrally fall on the stupa. The study endorses Spink's view on a single count: that the error in alignment was attempted to be fixed in later years by slightly wrenching the nave and by slightly moving the stupa forward in the nave. On other details, the study differs from Spink's views.

For clarity, the chapter is divided in two segments: *pūrva-pakṣa* and *uttara-pakṣa*. In *pūrva-pakṣa*, Spink's thesis is presented, which is called here the 'solstice-theory.' Spink suggests that the alignments of the two temples are to the solstices. That Cave 26 is aligned to the sunrise of summer solstice on 21/22 June; and Cave 19 is aligned to the

winter solstice on 21/22 December. He further suggests that the temples were closely (and not perfectly) aligned 'purely by chance'. He suggests that it was the 'close' and 'chance' alignment which was attempted to be brought as close to the perfect alignment as possible, the attempt, which was never successfully achieved. Thereafter, a critique of Spink's thesis is presented where some critical problems in his 'solstice' and 'chance' theories are highlighted. This is followed by a refutation of his theories.

The *uttara-pakṣa* contains a volume of data and facts that are not to be found in Spink corpus of study. The additional corpus of data, evidence, and facts are given in tabular format. Our analysis suggests that the astronomical alignments are actually aimed to felicitate major Buddhist *upoṣathas* and observances in the Buddhist monastic calendar. The first *upoṣatha* is *Aṣāḍha Puja*, also called Dhamma Day. The second important date is the day of the commencement of *śaturmāsa*, pivotal to the life of an ancient *saṅghārāma*.

Using modern tools of research, such as many historical calendars and computer applications for the conversion of historical dates and for learning the moon and sun phases, the dates of *Āṣāḍha Pūrṇimā* in circa 461 CE is found out. This tells us the exact date of the temple's inauguration. The sunrise angle at Ajanta on *Āṣāḍha Pūrṇimā* is the closest to

the angle of the nave. Because Āṣāḍha pūrṇimā at times falls on the date of 21 June, the historian must not be deceived to surmise that the orientation is aimed to summer solstice of the western (modern) calendar. This is the mistake Spink has done.

The basic argument made here is that the makers of Ajanta caves seem to have used the Buddhist Śaka calendar (and not the Julian or Gregorian calendar). This is indicated by the account of Xuanzang that describes the months, seasons, and date of the observance of caturmāsa observed by the 'followers of Tathagata'. With the help of digital astronomical calculators, the present researcher re-created the year calendar for two decades, i.e. 450s and 460s. The year calculator, and moon phases in the Śaka calendar proves that Dhamma Day, each year, fell on the same date, i.e. 14 Āṣāḍha. Its conversion in modern calendar gives different dates ranging from June to July. For these two months, the sunrise angle changes maximum up to 2 degrees. This difference does not make adverse impact to the purpose of the alignment.

The study proves that it is the same *amanta* calendar found typically in the homes of today's Mahrasthrians that was used by the makers of Ajanta. It was the *amanta caitrādi* calendar of the Śālivāhana Śaka Era. And, it is on the *pūrṇimā* of Āṣāḍha of this calendar that the sun, soon after the

sunrise on the table land above the Ghats, touches the stupa of Cave 26.

CHAPTER 15: Cave 25—the ill-fated *upāśraya*

This chapter describes the story of the development of an edifice, which was untouched by earlier scholars, with the exception of Spink. The edifice was regarded insignificant probably due to the apparent lack of carvings, paintings, inscriptions, and sculptures. Spink too had not published his study at the time the initial draft of the chapter was prepared in 2006. Now when Spink's studies have been published in a series of many volumes, little change was required in the original draft. Many features, notices, and data are common in the two studies. However, many facts, features, and data are uniquely presented here. Due to a different corpus of data the conclusions here are naturally different from Spink's. The same is true of the story of development in the two accounts.

The researcher agrees with Spink that Cave 25 is not an independent edifice; that it is an adjunct to Cave 25; that its development is closely and inseparably linked to the development of the neighbouring caves; that this edifice like others underwent many phases of distinct developments. However, the story of development across the phases is different in my account based on some new data and facts.

The present researcher was able to find 5 crucial evidence that are missing from Spink's corpus. These are an old photograph taken by Robert Gill, a ground plan made by Robert Gill, the descriptions of a 'left door' by James Burgess, the on-site traces of the corners of some cells outside the front court; and the lava flow on the ceiling level.

Phase I: The story of the development presented here suggests that the originally faced in the direction of Cave 27; the layout was as modest as Cave 13. The doorway is the same as seen in Gill's photograph. The 'left door' seen in Gill's ground plan was originally the main door.

Phase II: Due to problems, the original layout and even the original orientation was changed. The axis was wrenched 90 degree, and the edifice was made to face the ravine as it does now. The 'left door' fell in disuse. The eastern cells were removed, or attempted to be removed (they were never completely removed, as the extant wall before the front court is the extant remain of the eastern wall of the hall in Phase I). The workers must have faced a trouble due to which the Phase I was scrapped. The floor level was never fully reached, the porch or hall were never fully dug. The earlier eastern walls were never fully removed, before the work halted; or rather was temporarily abandoned. Perhaps the ceiling had

collapsed owing to a layer of lava flow. The edifice laid abandoned for many years, at least four years. In the meantime, Cave 24 was started, and its outer cell (later shrine) was excavated too, which is located right beneath the floor of Cave 25.

Phase III: When the interest was resumed to complete Cave 25, it rather late. The floor could not be fully cut due to the left outer cell of Cave 24. Thus, they attempted to save the ceiling while reaching the expected floor level; they created a monolithic cubical platform on the front court of Cave 25 for this purpose.

Phase IV: The workers decided to excavate the left porch-end cells. Unfortunately, no matter how much the planners tried to salvage the fate of the edifice, another accident happened when the workers, while excavating the left porch end cells, mistakenly broke through the vault of Cave 26 temple. This created a bad hole that was first noted by the presented researcher. After this hole, all work permanently stopped on the edifice. The accident sealed the fate of Cave 25 forever.

PART III: SOME EDIFICES INAUGURATED IN CIRCA 462 CE

Part III includes the stories of the inauguration of many new edifices on the hill. The total number of new edifices that were inaugurated in the following year of development is about 11 to 13. This number is too big to be included in any thesis of detailed study. So, the present scholar has excluded many caves. Only Caves 7, 11, Lower 6, 27, and 19 are included here. For the present researcher's study of caves 16, 17, 1, and 2, see R. K. Singh, *An Introduction to the Ajanta Caves: With the Examples of Six Caves*, Hariṣeṇa Press, Baroda 2012.)

CHAPTER 16: Cave 7—the story behind its eccentric layout

This chapter explains the development of Cave 7, which was neglected in Ajanta studies, save the noteworthy study by Spink. His remarkable research suggests that the edifice was initially planned differently than what is seen today. The original plan was greatly compromised after the site's 'hiatus' period. The initial plan must have been the same common plan that the planners had devised for all the *upāśrayas*. There must have been a standard frontcourt, a pillared porch, and a hall with cells. There was neither any provision of porch-end-vestibules-with-inner-cells nor for the outer cells or shrine on the front court. Even the inner

central shrine must not have been there in the original plan. The only thing that would have been remarkable in the original plan was the provision of the double portico. Spink suggests that the double portico were provided on account of a special status of the edifice. He says that the edifice was planned as the site's administrative office of the Vākāṭakas who were planning everything at the site. The present research disagrees with Spink on this point, since the present thesis suggests that the saṅgha was in charge of the affairs.

Soon after the porch's excavation, a tragedy seems to have struck the edifice. Was the patron no longer available? Did he suddenly die? Why else the idea of the surely planned hall with cells was abandoned? Why else anyone would make the shrine with antechamber on the rear wall of the porch? The shrine itself underwent numerous adaptations as was the case of the porch end vestibules and inner cells.

CHAPTER 17: Cave 11—a researcher's nightmare

Cave 11 too is neglected in Ajanta studies, save the studies by Spink. However, the present study differs significantly from Spink's study. It appears to the present researcher that Spink has missed to notice many remarkable features that tell a different tale.

First the chapter explains why the edifice is located high on the cliff as compared to the adjacent caves; why it appears to be squeezed within the meagre space between the Sātavāhana-period temples, i.e. 10 and 12. An analysis of this alone can tell us a lot about the relative date of the edifices.

Thereafter, the porch, porch pillars, windows, and porch end cells have been analysed in detail. The reasons of the asymmetrical porch-end cells has been probed and explained.

The hall has been studied in details including the interior pillars, rock beams, floor beams, adhiṣṭhānas, cell doorways, steps before cells doorways; they all tell a story. The chapter explains why the hall despite being small has four pillars, and why is this the only edifice on the site where there are no cells on the right interior wall.

New notices are recorded from the porch area that describe a multi-layered but orchestrated mode of development among the present and other edifices on the site. The study suggests that the porch and interior floor was lowered in circa 466 CE when the *upāśraya* was being converted into a temple. These observations are not found in Spink's study.

Ultimately it is suggested that the edifice at some point of time was used like a laboratory where new experiments were carried out. New experiments were also carried out in many other caves, but each has own unique story to tell. The

experiments carried out here are directly linked to the artistic and architectural developments in Caves 16 and 17.

The chapter suggests that the edifice was initially planned with a two-pillared porch. The additional two pillars were added in c. 466 CE, a story seen in many other caves, e.g. caves 4, 5, 16, and 17. The expansion of many edifices in similar fashion is something that Spink has not yet noticed.

Spink has suggested that the shrine when initially planned in circa 466 CE was basically a stupa shrine, which was later converted to Buddha image shrine. Whereas the present chapter suggests exactly the opposite: that it was a Buddha shrine to which a stupa was being added later, in c. 477-78 CE. The addition of a stupa at the back was also being attempted in Cave 1. This indicates that the makers of Ajanta did not distinguish between the image and the stupa; they were one and the same; the fifth-century makers of Ajanta had no distaste for the stupa, a fact that should fly in the face of the modern historian who created artificial constructs of the stupa and image, and 'Hīnayāna' and 'Mahāyāna'.

CHAPTER 18: Cave Lower 6—some puzzles unravelled

Cave Lower 6 also an edifice that is neglected in Ajanta studies, save the studies by Spink. In the present chapter

evidence, facts, and data are presented that are largely already documented by Spink. He has presented a very convincing story of the cave's development.

Yet, there are details where slight deviations from Spink's reconstruction has become mandatory in the present study. Therefore, a new story of development is presented here that should be read with Spink's story to arrive at a comparable picture of how things development here.

Spink's study does not document the evidence of some steps that originally belonged to the flight of stairs that came up to the edifice from the riverbed below. Both Spink and the present researcher agree that Cave Lower 6 might have been fronted by a pillared porch. The present researcher adds, after prolonged analysis, that the staircase might have been damaged when the work was still underway in circa 464 CE. The chapter delivers another new idea that Cave Upper 6 was not at all planned until circa 464 CE. This is learned by the arrangement of the 'constructed' staircase springing from the front right corner of the hall. Might the upper storey had been planned together with the lower storey, a separate, much convenient access for the upper storey would have been devised, and a monolithic staircase would have been excavated rather than the extant 'constructed' version.

It was probably due to the rockslide that damaged the pillared porch of Lower 6 in circa 464 CE, which necessitated the creation of another access to the cave. For this, a tunnelled staircase from the side of Cave 7 was devised, the remains of which are still extant.

As regards the interior the chapter endorses Spink's view that initially there was no provision of pillars in the hall. The large number of pillars, uniquely arranged, were added precisely to support the upper floor. The chapter also agrees with Spink that no shrine was initially planned when the *upāśraya* was first designed on the drafting table. A detailed study of the hall's and shrine's development is then presented.

CHAPTER 19: Cave 27—a revealing yet neglected *maṇḍapa*

Other than the studies of Spink and the present researcher, there does not exist any study of this edifice. It was summarily neglected by the scholars, tourists, as well as the site authorities. This is even indicated by the fact that there is no access for reaching up to the cave. One does not seem to find any sculpture, painting, inscription, or architectural peculiarities. It is even perished considerably in rockslide. However, our study shows that it is one of the

most remarkable edifices at Ajanta for a researcher who wants to know what happened, and why.

The present researcher agrees largely with Spink's story of the cave's development. However, the story presented here uses own corpus of data, facts, and evidence some of which are not to be found in Spink's corpus.

The chapter suggests that the lack of pillars itself suggests early beginning of the hall. Because the edifice is structurally connected to Cave 26, it also adds evidence for the dating of Cave 26, and the late dating of the edifice by Burgess and Khanḍālāvālā automatically get rejected. An important notice is presented in the chapter, which is the extant remains of a pillared-vestibule-with-inner-cell that was never noticed before. It directly proves that there existed a porch on the right wall of which this member existed. The porch is now completely perished. The notice directly helps us to learn about the orientation the edifice, which is not facing the ravine, as it appears today, but faced the direction of Cave 25, just like the lower floor.

Spink first noticed the riddle of the shrine antechamber whose location is deceptive. It seems to indicate that the edifice faces the ravine. Normally the shrines are located on the hall's rear wall. So, it was never suspected that the same is not the case here. Our investigation reveals that the

shrine actually exists on the hall's right wall. Such an exceptional location was compelled due to Cave 28, whose excavation had already begun when the idea of adding the shrine was visualised.

The present researcher has re-created computer graphic images in 3D software to suggest how the cave looked originally. The chapter concludes that the edifice is just another wing of Cave 26-complex. It is actually the upper left wing, one among the total four wings that the temple Cave 26 had.

Chapter 20: Cave 19-complex: inaugurated on the last *pūrṇimā* of *Āturmāsa* (Kārttika Pūrṇimā) in circa 384 Śaka Era, and aligned to the morning sun of the subsequent *upoṣathas*

The long title is self-explanatory. The chapter should be read with Chapter 14, which describes the aspects of the astronomical orientation of Cave 26. The chapters argue that it was the major Buddhist *upoṣathas* and the monastic calendar, regulated by the seasons and inseparably linked to the lifecycle of a *saṅghārāma*, which necessitated the particular astronomical orientations. This thesis, is different from that of Spink, who was the first to notice the astronomical

orientation. However, his conclusions are dubious, which the chapter refutes.

The present researcher disagrees with Spink in all details save only the larger factor of the astronomical orientation. Spink's thesis is that the present temple (Cave 19) is oriented to the sunrise of winter solstice on 21/22 December, while the other temple (Cave 26) is oriented to the sunrise of summer solstice on 21/22 June. For the present researcher, this is absolutely untenable. The chapter presents the reasons why the 'solstice theory' is untenable, and why Spink's conclusions are inductive rather than deductive. It is fashionable among Euro-American scholars to find solstitial angles in ancient monuments around the globe. Unfortunately, the same is not true in the case of Ajanta, as is proved in the present chapter.

The chapter makes a new point that the orientation of the present Cave 19 was carefully planned to receive the sunrise of the winter season. The alignment is simply not for one particular day. Modern calculators for historical dates, eras, calendar conversion, astronomical calculations for sun and moon phases and positions tell reliably when the sunrise happens at the coordinates of the Ajanta caves, and how the sun moves in the sky after the sunrise, and at what angles, on which dates, and months the sun's rays enter the nave. A

table has been prepared for this, which projects most clearly the phenomenon does not happen on just one day. The researcher has prepared many tables and data sheets that inform the measurements, degrees, and angles of the sun in different months, to suggest that it is the whole winter season whose sunrise enters the nave of the temple through the wide and high *śaitya* arch. The phenomenon does not just happens on the solstice day; it happens for full 90 days, ranging from Kārttika to Puṣya Purnima, the fact that Spink has not realised!

Our study shows that the whole dramatic event of the sun's entry in the nave begins from the end of *śaturmāsa*, i.e. from Kārttika Purnima and ends with Puṣya Pūrṇimā. The pūrṇimās are celebrated as major *upoṣathas* by the Buddhists even today, because of the major events in the life of the Buddha happened on pūrṇimās. Kārttika Pūrṇimā marks the end of *Śaturmāsa*. On any day of the next month two important observances and festivals are celebrated. One is the robe offering ceremony and the other is the pratimokka ceremony.

The study reveals that Amanta śaitrādi calendar of the Śālivāhana Śaka Era was used by the ancient makers of Ajanta, the calendar that is still prevalent in Maharashtra. And, it is the pūrṇimās, *upoṣathas*, months, *śaturmāsa*, seasons and dates based on this calendar that the axis of the nave is

astronomically aligned to. The chapter ultimately makes it clear that Spink's 'solstice' and 'chance' theory are inapplicable to the context of Ajanta. That the ancient makers of Ajanta were likely unaware of solstices as mentioned in the Christian (Julian or Gregorian) calendar, as solstices hold no importance in ancient Buddhism.

TABLES

The tables section has 20 tables to illustrate the various points in the various chapters of the three parts of the two volumes.

WORKS CITED

This section includes a list of the works cited in the two volumes. The list does not include any work that is not cited. The style is Turabian Sixth Edition, the preferred international style for dissertations and theses. The thesis has followed the author date system for citations. Footnotes are reserved only for notes, and not for citations.

SUMMARY OF VOLUME II

LIST OF FIGURES

The list of figures are not reproduction of the captions. They are rather summarised versions of the captions for quick and easy reference. They also include credits and acknowledgements to the figures from other sources. Credit is not mentioned when the figure is from the author's personal collection and whose right he holds.

PLATES

The plates section includes maps, ground plans, drawings, conjectural plans, halftones of photographs and computer 3D models, and computer 'print-screen' images. The figures are numbered consecutively in the captions. Some captions are brief, others are descriptive. The descriptive captions provide additional information, and point out specific features related to the discussion in the chapters.

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