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ANTIQUITY OF INDIAN BOARD GAMES - A NEW APPROACH

by C. Panduranga Bhatta*

Sir William Jones, H.J.R. Murray, Richard Eales, P. Thieme, Van der Linde, A.A. Macdonell, Egbert Meissenburg, Andreas Bock-Raming, and many other celebrated scholars have contributed richly towards the history of chess. Their researches led to the following conclusions; (1) Chess is a descendant of an Indian game transmitted to the West in the shape it had assumed in the seventh century A.D. (Murray 1913), (2) Chess was the invention of some Hindu who devised a game of war with the astāpada board as his field of battle,¹ (3) Chess was the result of a prolonged evolution which is difficult to trace (Thieme 1962:216).

Whether the board game called astāpada was known to the Vedas, the Rāmāyana^{**}, the Mahābhārata, forms a very interesting topic for discussion. The history of astāpada may also throw some light on the date of these celebrated words. Researches into the various aspects of board games may help us to solve some unsolved problems connected with the Mahābhārata, such as the date of Kālidāsa, besides helping us to fix the dates of certain lexicographers.

The Vedic people used to play dice using Vibhīītaka nuts. It seems that boards were used for dice-play only in the latter period. The Sanskrit words for the boards are astāpada, dasapada, dyūtaphalaka, and ākarṣaphalaka. The words irina, and adhidevana used in the Vedas and Brāhmanas refer to places on which the dice are thrown (Bhatta 1984:69).

I. Board games in the Mahābhārata

It may be pointed out here that the Mahābhārata does not contain any direct evidence about caturanga. What we learn from this work about any board game is about the ahṣa or akṣadyūta or the so-called dice. The game described in the Mahābhārata resembles the akṣakrīdā of the Vedic period. The story of Nala further strengthens this assumption as it refers to the Vibhītaka tree. The quickness with which Sakuni was winning the game clearly indicates that the game played was akṣakrīdā and not caturanga. The declaration of victory seems to take some more time in the game of draughts and caturanga, as it depends on the clever movement of pieces on the board in accordance with the fall of dice. But the commentator Nīlakantha explains at certain places the terms found in the great epic as being connected with some game like draughts. While explaining a verse of the Virātaparva he says that the word phala used there refers to some container for rattling the dice.² According to him the dice are to be rattled in a vessel before throwing them down and the pieces (sāris) are to be moved on the

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¹ Tylor: War in Ancient India.

^{**} The author is not responsible for the absence of diacritical marks in the Sanskrit texts. (de Voogt, Ed.)

² See his commentary on the Mahābhārata, Sabhā, 56.3.

board according to the fall of dice. But his interpretation is not supported by other evidence found in the same epic.

A relationship between the four fold division of the army and the game of chess is often pointed out. Professor V.R.R. Dikshitar (1944) states that references to the game of chess are common in the literature but the term caturanga is met with only in the epics and hence he comes to the conclusion that 'the principle of chess supplied ideas to the progressive development of the modes and constituents of the army.' But his contention is difficult to prove. His statement is that the use of the word astapada found in the Rāmāyana cannot be definitely associated with the game of chess. There is no doubt about the fact that Ancient India possessed the classical four-fold of chariots, elephants, horsemen, and infantry, collectively known as the caturanagabala.³

According to Dikshitar (1944), the organisation of the Indian army which came to be known as caturanga in both epic Sanskrit and Pali literature was based on the ancient game. He also adds that a symmetrical arrangement of the different forces and its advantages must have been taken from chess. Finally he says that we meet with the term caturanga, a four-fold force, only in epic literature and not in the earlier Vedic literature. According to him the Vedic works are full of references to the game of chess. Therefore, he comes to the conclusion that the principles of chess supplied ideas to the progressive development of the modes and constituents of the army and not vice versa.

It can be argued that it is in the four-fold force that supplied the motive for the game and not vice versa. In this connection it would be interesting to consider the disposition of the army, or order of battle, called vyuha in Sanskrit literature. This belongs to the province of tactics, while in the plan of war is strategy. Arthasāstra of Kautilya (c.324 - 300 B.C.) mentions Sama, Visama, Hasti, Rathi, Asva and Patti Vyuhas. The different dispositions of army under the mandala classification are Sarvatomukha (capable of turning in all directions) Sarvatobhadra (auspicious) etc.

The application of these arrays is practically illustrated in the great Mahābhārata Seeing himself numerically inferior but backed by superior strategy and battle. experience, Yudhisthire advises Arjuna to form a pin-like array as it was decisive in battles where a few had to fight against many.⁴ We have references to the savatobhadra array of Bīşma's army.⁵ In times of necessity, armies used to have various formations like Sarvatobhadra , Cakrabandha, and Murajabandha.6

It is interesting to note here that one of the opening positions described in the Manasollasa of Somesvara (12th century.A.D.) is gomūtra, which literally means 'the cow's urination', and this word in the context of warfare means that part of the army which is arranged in a zigzag line (Bock-Raming 1994:19). This establishes the clear connection between war and the game of chess. It also helps us to conclude that these vyūhas are first used in connection with battle. It is significant to note that in the Mahābhārata and in the Arthasāstra these words are used only to refer to military arrays and not in the sense of chess positions.

Kautilya had placed gambling under a separate officer known as the superintendant of gambling who was to centralize gambling in the public gaming house. According to Kautilya gambling masters must hire the players gambling equipment such as dice, cowries, ivory rollers and leather cups.7 There is no reference to board or games - men in the list provided by Kautilya, which again strengthens the view that no board game existed at the time of Kautilya.

⁵ Ibid, X.3

⁶ V.V.R. Dikshitar, op.cit. p.270

⁷ Arthasāstra, 3.20. 1,2,7,8,10-11, and 13.

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8 Mahābhārata, Sabhā, 56.

 $^{^3}$ Arthasāstra, p.140

⁴ Mahābhārata, Bhīsmaparva, 20.18

⁹ Ibid. Dronaparva, 130.20

¹⁰ Ibid. Karnaparva, 74.15

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officer known as the e public gaming house. mbling equipment such rence to board or games the view that no board The two most important words related to the game of chess, namely astāpada and caturanga, are not used, in the sense of chess, in the epics at all. In the Rāmāyana (1.5.12), while describing the town planning of Ayodhyā, Vālmīki says that the capital's layout was in the form of an astāpada. The commentator Tilaka explains astāpada as dyūtaphalaka or chess board. But another commentator, namely Mādhava Yogi (1700 A.D.) in his commentary called Amrtakataka, explains astāpada as gold. According to him the capital was decorated with golden ornaments. The contradiction existing between commentators is remarkable because the word astāpada occurs only once in the epic. We have reference to the word astāpada only in the Harivamsa (II.61.21-54), which is a supplemental to the Mahābhārata. It is rather surprising that the voluminous epic Mahābhārata has no reference to this very significant word its body proper.

The game of dice is compared to a battle at many places in the Mahābhārata, but no reference is made either to Sāras (pieces) or to astāpada (board). At one place the battle-car is compared with the dicing place, the bow with glaha, the bow-string with the skill in dicing, and the arrows with the dice.⁸ At another place Drona compares the army with durodara and the arrows with the dice. Here, the comparison is made between senā and durodara. As a battle is fought with the army, so with the durodara is a game played.⁹ Arjuna elsewhere compares his bow Gāndīva with durodara, his battle-car with the dicing place and his arrows with Glahas.¹⁰ In all these instances no reference is made either to caturanga or to astāpada, even though caturanga is also a war game.

The word caturanga literally means having four members. Later it came to denote a complete army consisting of elephants, chariots, cavalry, and infantry. Even though the word caturanga is found both in the Rgveda and in the Satapatha Brāhmana, it is only used there in the sense of 'one having four limbs or parts' and it does not refer to any game.¹¹ The caturanga is used in the Rāmāyana (I-69-3) in the sense of an army consisting of four parts. The term caturanga-bala, and allusions to the chariots, the elephants, the horses and the foot soldiers as constituting the army, are profusely available in the Rāmāyana (1-18-10; 1-49.11.12). But, there is not a single instance in which this word is used in connection with any game.

There are many myths attributing chess to the wife of Rāvana or to the wife of Pāndavas, averring that either of these ladies invented the game to while away time in imitation of the battle which their husbands were fighting. V.D. Pandit (1989:29) heavily depends on the myth according to which Mandodari, the queen of King Rāvana of Lankā, invented chess to amuse her warring husband. He has used this myth to prove early existence of chess. According to one myth current in South India the game of chess was invented by Draupadī, the wife of the Pāndavas, who played it with her friends in the harem, imitating the actual war being waged by her husbands with the Kauravas.

Since there is no reference to any board game either in the Rāmāyana or in the Mahābhārata it can be safely concluded that the invention of this game cannot be attributed to Mandodari, and Draupadī as found in the myths.¹² A re-examination of games and their rules and regulations may help us to decide the genuine portions of ancient works like the Mahābhārata.

Professor G.H. Bhatt considers the entire episode of Draupadī Vastrāpaharana found in the Mahābhārata (Sabhā 68) as an interpolation. Dr.V.Raghavan argued that it is not an interpolation because according to him there is no game of dice without the forcible snatching away of the clothes of the defeated or the defeated themselves casting

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⁸ Mahābhārata, Sabhā, 56.3

⁹ Ibid. Dronaparva, 130.20

¹⁰ Ibid. Karnaparva, 74.15

¹¹ Rgveda, II.92-2 Satapatha Brāhmana XIII

¹² Chatrang namak attributes the invention of chess to a sage.

off their second garments (uttarīyas) as an act of submission (Bhatta 1984:97-98). He refers to the episode of Nala where Nala, after complete defeat, leaves with a single garment and later the dice come again as birds and deprive him of even the remaining part of his garment. But on the basis of references to the game of dice found in classical Sanskrit literature and the Buddhist Jātaka Tales it is difficult to accept Dr.V. Raghavan's opinion that the forceful removal of clothes of a defeated person was part and parcel of the game of dice. Though the society described in the Mrichakatika of Sūdraka and the Dasakumāracarita of Dandin does not show any high standard of morality, we have no reference to a defeated person being forcibly disrobed. Perhaps the loser giving up his second cloth (uttarīya) might have been a general practice, though its literal application in the case of Draupadī, trying to disrobe her in public, could never have been in vogue.

II. Board games and Kalidasa

One of the serious tasks facing Sanskrit scholarship in the early days was to sift the genuine from the spurious ascription of literary works. Such sifting still continues in the case of works and stray verses attributed to Kālidāsa.

Harikrishna's encyclopaedic work called Brhajjyotisārnava (1900:6.20) has six parts. In the twentieth chapter of the sixth part, called krīdākausalya, the author quotes two verses as that of Kālidāsa. An attempt has been made here to prove the spurious nature of these two verses on the basis of the antiquity of chess. First of all these two verses are not found in any of the known works of the famous Kālidāsa, the author of the Abhijfānasākuntala. The verses quoted by Harikrishna are given below in translation:

1. O Lotus-eyed Lady! In this game there are two kings, two ministers, four each of elephants, horses and camels and sixteen footmen in all. I shall tell you the position of all these (powers), their movements in the sixty four squares, and how they fight and kill the opponent in the battle field (i.e. the chess-board).

2. O Beautiful Lady! The elephants stand at the four corners, in the next adjacent squares the horses, and camels and in the two central squares the minister and king; in front of these in the adjacent row stand the footmen (pawns) eight on either side.

It should be noted here that in these two verses the camel is mentioned in the place of chariots. This evidently proves that Kālidāsa whom Harikrishna has quoted belongs to later times. Caturanga probably originated on the analogy of the four parts of a king's army in ancient days in India which consisted of elephants, horses, chariots, and footmen. Camels never formed a part of an Ancient Indian army. It is worth noting here that when chess was first introduced to Persia it had the chariot as one of its constituents and not the camel. Mānasollāsa of Somesvara give a very systematic and elaborate account of the rules of two-handed chess as it was known in South India at the beginning of the 12th century A.D.

Andreas Bock-Raming (1994:20) who made a study of this text says that Mānasollāsa does not show the slightest evidence that words or expressions from the Arabic language have crept in, as is the case with later Indian texts on chess. For our purpose it is important to note that Mānasollāsa mentions only chariot and not camel.

Kālidāsa does not mention Caturanga even though he mentions four divisions of the army.¹³ In his words we do not find any reference to astāpada either, which again

¹³ Raghuvamsa, IV.29,30,40,62,71,82,85.

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¹⁴ Mirahi and Navlek

¹⁵ R.G. Bhandarkar:

¹⁶ V.V. Mirashi, op.c

¹⁷ M.K. Dhavalikar:

¹⁸ Mahābhārata, edited

¹⁹ A.M. Shastri: Indi

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proves that no board game existed in the period of Kālidāsa. This assertion in turn helps us to reject certain verses attributed to Kālidāsa.

III. Lexicographers and board games

The date of Amarakosa has always been a perplexing problem to the scholars and, in spite of the efforts of renowned scholars like Colebrooke, Wilson and others, no certainty of age has yet been ascribed to Amarasimha. He was regarded by tradition as one of the nine jewels at the court of King Vikramāditya whose identity is still obscure to us.¹⁴ A verse in the Jyotirvidābharana (22.10) states that its author was Kālidāsa who was one of the nine jewels of King Vikramāditya's court. But its faulty diction and pedestrian language cannot be accepted as coming from the author of the Sākuntala. Thus the evidence which makes Amarasimha. a contemporary of Kālidāsa loses all value.

Another interesting piece of evidence in this regard is that of the reference to Vināyaka in the work of Amarasimha which is absent in the works of Kālidāsa. Amarakosa gives seven synonyms of Vināyaka . They are Vighnarāja, dvaimātura. ganādhipa, ekadanta, heramba, lambodara, and gajānana. R.G. Bhandarkar states that the god Ganapati Vināyaka was introduced about the sixth c.A.D.¹⁵ The name dvaimātura found in the verse of Amarakosa shows that Gajānana was regarded not only as a god but also as an adopted son of Parvati in the time of the Amarakosa. This points to a later stage in the mythological conception about him.¹⁶ The earliest dated image of Ganesa, known till now, is said to be the one in the rock-cut temple at Kung-hsien in China. It is assigned to 531 A.D.17 The god Gajānana gradually gained recognition at the close of the sixth century A.D. He does not find any mention as a god in some works composed in the seventh century A.D. Magha, the author of Sisupalavadha (I.60), refers to this deity only once. Bhavabhūti mentions him only as gana of Siva, not as son of Siva and Parvati. The mythology that makes him a son of two mothers was not then developed. It must have taken about a century to develop. Therefore Professor V.V. Mirashi places Amarasimha in the first half of the ninth century A.D. According to Professor V.S. Suktthankar the popular story about Ganesa acting as the scribe of Vyāsa found in the Mahābhārata is an interpolation because he states; 'only a very late interpolation in some inferior Devanagari manuscript speaks of the text as having been written down by Ganesa to the direction of Vyāsa, a fantastic story that we may ignore with easy conscience.'18 The verse describing Ganesa's iconography in Varāhamira's Brhatsamhitā is proved to be an interpolation. ¹⁹

While referring to the game of dice Amarakosa refers to two significant words namely parināya and astāpada; parināyastu sārīnām samantānnayane'striyām (II.10.45) astāpadam sāriphalam (II.10.46). Thus according to him astāpada means a board used in the game and parināya means moving the pieces (according to throws of the dice). Amarakosa defines the four parts of the army under the word caturanga but it does not refer to any game of that name. This also proves that astāpada is earlier than caturanga . This study once again negates the contemporaniety of Kālidāsa and Amarashimha.

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¹⁴ Mirahi and Navlekar, Kālidāsa, p.25.

¹⁵ R.G. Bhandarkar: Vaisnavism, Saivism and other Miñor Religions. p.212

¹⁶ V.V. Mirashi, op.cit. p. 52.

¹⁷ M.K. Dhavalikar: Ganesa beyond the Indian frontiers. Vivekanada Comm. vol. p.1-4.

¹⁸ Mahābhārata, edited by him Vol I prolegomena.

¹⁹ A.M. Shastri: India as seen in the Brhatsamhita of Varahamihira. p.148.

The Amarakosa, though the most popular of all the Sanskrit lexicons, is not the first of its kind. Professor V.V. Mirashi argued that Dhanañjaya (c.750-800 A.D.), the author of Nāmamālā, flourished before Amarasimha. Unlike Amarasimha, Dhanañjava jumbles together all the words without any classification and he nowhere gives the genders of the vocables. Significantly there is no reference to Vināyaka in the lexicon of Dhanañjaya even though he mentions Guha, alias Skanda, who is considered to be the brother of Vinayaka. As we have already pointed out the cult of Ganesa is post Kālidāsa, whereas Skanda can be traced to centuries preceding the Christian era in the Rāmāyana (I.36.18-19) and the Mahābhārata. Dhanañjaya assigns the meaning of gold to the word astāpada and hence it can be said that he lived in a period in which the word astāpada was not popularly associated with any board game at all. Other words related to the board game, like Sāra (piece) and parināya movement of the piece found in the Amarakosa, are also absent in Dhanañjaya's lexicon. This also strengthens the argument of Professor V.V. Mirashi who places Dhanañjaya before Amarasimha. Thus a discussion related to the antiquity and exact sense of the words related to board games is also helpful in fixing the dates of lexicons.

Halāyudha, the author of the Abhidhāna-ratnamālā, is said to have flourished in the middle of the tenth century A.D. R.G. Bhandarkar identified him with the author of the Kavirahasya, a grammatical work written in honour of King Krsna III (c.A.D. 940-56) of the Rāṣṭrakūṭa family.²⁰ Mrtasañjīvanī, a commentary on the chandaḥsūtras of Pingala, is also attributed to him by R.G. Bhandarkar. It must be noted here that Aufrecht regards two Halāyudhas as quite distinct and separate persons; while in the India Office Catalogue the authors of the Abhidhāna-ratnamālā and the Kavirahasya are regarded as identical while the author of Mrtasañjīvanī is seen as a different person.²¹

Th. Aufrecht expressed the view that these two authors may, perhaps, be identified chiefly on account of the many artificial metres used in the Abhidhānaratnamālā, which no other lexicographer has taken the liberty of employing for such a dry subject as a string of synonyms.²²

In his commentary Mrtasañjīvanī on Pingala's chandahsūtra Halāyudha refers to caturanga and a game board with sixty four squares.²³ This was considered to be a reference to chess.²⁴ But there is no reference in the Abhidhānaratnamālā either to caturanga or to astāpada (a board with sixty four squares). There is no allusion to the lexicon in the work Mrtasañjīvanī. These two instances help us to reject the common identity of the authors of these two works as is given in the India Office Catalogue.

IV. Sixty four arts and the board game

In the Kāmāsūtra (I.3-14) of Vātsyāyana mention is made of the sixty four arts (catuņsasthi kalas). A courtesan (ganikā) well versed in these arts is said to be respected in society as well as at the royal court. A courtesan was invited to amuse in the assemblies known as gosthī. Bānabhatta mentions such gosthīs in his personal account prefixed to his Harsacarita. Among the forms of entertainment provided in these assemblies there were, besides the game of dice, such literary sports as prahelikā, bindumatī, and samasyāpūrti. The most well-known list of the sixty-four arts is that given by Vātsyāyana in his Kāmāsūtra (I.3.16). Jayamangala on Kāmāsūtra under

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²⁰ Abhidhanaratnamālā Tīkā, edited by A. Venkata Rao and H. Seshaiangar, Intro, p.26-28.

²¹ Report in search of Manuscripts for 1883-84, p.9.

²² Halāyudha's Abhidh ānaratnamālā, edited by him p.V.

²³ Mrtasanj īvanī on Ping<u>h</u>ala 's Chhandahsūtra, I.3.

²⁴ Journal of the Royal Asiatic Society, 1896:122.

²⁵ Proceedings of the I

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I.3.15 gives another list. He makes a three-fold classification into twenty four $K\bar{a}m\bar{a}srayakalas$, twenty dyūtāsrayakalas (fifteen Sajīvas and five Nirjīvas) and twenty kalas related to love. The Jayamangala states that, as different from Vātsyāyana's $K\bar{a}mas\bar{u}tra$, there is another treatise where these sixty four kalas given by him are given under the name Mūla kalas; sāstrāntare catuşasthirmūlakalā uktāh. Unfortunately this work has not come down to us. The exact nature of twenty divisions of dice and chess details given by Jayamangala are not clear to us. There is also no clear text which gives us meanings of the distinction of these gambling arts into Sajīva and Nirjīva. Sajīva seems to be betting in which living beings are involved. Further research may throw more light on the art of dice-play mentioned as one of the sixty-four arts. The Kāmasūtra of Vātsyāyana refers to what is called ākarsakrīdā. But the exact connotation of this term is not known. Some scholars are of the opinion that ākarṣakrīdā and ākarṣaphalaka. On the basis of this Tridibnath Ray considers ākarṣakrīdā to be different from ākṣakrīda.²⁵ Thus it may be concluded that the dice-play mentioned as bard game.

V. Sanskrit poetry and board games

It is of some interest to chess historians to study the development of certain features of Sanskrit poetry. It must be noted in this context that the later Sanskrit poets revelled in the display of erudition, of mastery over words and in verbal acrobatics. In the history of Sanskrit literature this is a period of decadence. As a matter of fact, renowned literary critics and theorists have pointed out that poetry which has charm only of words and patterned arrangements of words, and of the manufactured ornaments of rhetorical figures, is of a very low order.²⁶

The bandhas or the astonishing feats of verbal jugglery seems to have originated from the art of arraying armies in different forms in the battle-field. As seen earlier Arthsāstra (X.6) of Kautilya describes in detail the various arrays into which the army used to be formed. Dandin is the first critic who recognised these arrays as being used for poetry. He mentions the Gomutrikā, Ardhabramaka, and Sarvatobhadra and their characteristics in his Kāvyādarsa (III.80). The bandha called Sarvatobhadra consists of sixty four squares, in eight rows of eight squares each. Rudrata in his Kāvyālankāra (V.2) describes some more acrostics (citrakāvyas which are also a sort of metrical puzzles. They are to be read in accordance with the move of particular pieces.) Thus there is a connection between Sanskrit poetry and board games which may be exploited to understand both.

VI. Archaeology and board games

In pre-historic India board games were known. Mr Mackay is of the opinion that the dice discovered in Mohenjadaro were quite possibly used in conjunction with board-games.²⁷ It is difficult to say whether the board games which appear to have been played by the Mohenjadaro people were in any way connected with the game of caturanga. But it is worth noting that the dice discovered in the Indus Valley is cube-sized and has on it marks of 1,2,3,4,5, and 6. These marks are made not by numerals but by small ring-

²⁵ Proceedings of the Indian Historical Congress, 1939:241f.

²⁶ Mammata's K ävyaprakäsa, I.5.

²⁷ The Indus Civilization. p.179.

marks. In dice connected with caturanga similar marks are to be used for indicating 1,2,3,4,5, and 6. Traces of game boards on some of the basement slabs and ghat steps are found both in religious and secular buildings at Nagarjunakonda in Andhra Pradesh. Many game boards have also been discovered at bathing and burning-ghat areas, and at a Mandapa connected to a four-spoked stūpa. Most of the game boards discovered here consist of eight rows having eight squares in each row. Evidently this is meant for playing attapada (astāpada). ²⁸

Figure nine in plate XLV of the stupe of Bharhut is named Chitupāda sile. Scholars consider this as the picture of a board of 36 squares, along with what appear to be seven dice or coins. According to Professor Alexander Cunningham the scene represented in this sculpture shows two parties of two men playing some game like draughts. This scene is significant as it throws light on the number of players involved in the game.

A medallion from the Amarāvati rail in the British Museum gives an excellent picture of the harem (avarodha) of a prince where, in the vicinity of the prince who is engaged in pacifying his wife, a group of ladies is deeply occupied in a game of dice (akṣa) (Sivaramamurthy 1970:41). The bas-reliefs of Bayon depicts two men enjoying a quiet game of some ancient form of chess.

The world famous Kailash temple at Ellora was constructed by the Rāṣṭrakūṭa King Krṣna I (756-774 A.D.). On the Southern wall of cave no.14 there are Saiva sculptures. They include Siva and Pārvatī playing a board game. It may be said that these sculptures are influenced by the descriptions of Siva's play with Pārvatī found in the Purānas and other works. In the sculpture found in cave no.16 Siva and Pārvatī are depicted as engaged in an argument as to who should play next. In another sculpture found in the cave no 21 Siva is depicted as persuading a reluctant Pārvatī to play one more game.

Thus, a study of references to implements associated with board games namely, board, pieces, and dice found in Sanskrit literature from the Vedas till Somesvara (12th c.A.D.) throws sufficient light on some unsolved problems of Sanskrit literature. It can be firmly believed that no board game existed during the time of Vedas, Rāmāyana, Mahābhārata and Kālidāsa. This theory in turn can help us in deciding the genuine work of celebrated authors like Kālidāsa. The replacement of the traditional chariot by camel and boat can also throw sufficient light in this regard. References to two-handed board games are available in plenty in literature and sculptures and hence it may be concluded that two-handed chess precedes the four-handed chess, as is believed by many chess historians. On the basis of the references available in the Rāmāyana, Mahābhārata and Kālidāsa, it can be safely said that the four-fold force (caturanga) supplied the motive for the game and not vice versa as is argued by V.R.R. Dikshitar.

As the game of dice is included in the sixty four arts mentioned by Vātsyāyana further researches in this regard may be helpful in solving the problems connected with the early history of chess. A study of Sanskrit vocabularies such as <code>astāpada</code>, <code>sāra</code>, and <code>parināya</code> found in various lexicons, helps in this as well as elucidating the antiquity of certain board games played in India. Thus it may be concluded by saying that the research regarding the antiquity of board games is relevant not only to the game historians but also to Sanskritists.

²⁸ Orissa Historical Research Journal. 1962:X.no 1 and 2.

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