

Origins of Chess **Protochess, 400 B.C. to 400 A.D.**

by G. Ferlito and A. Sanvito

FROM: *The Pergamon Chess Monthly* September 1990 Volume 55 No. 6

The game of chess, as we know it, emerged in the North West of ancient India around 600 A.D. (1) According to some scholars, the game of chess reached Persia at the time of King Khusrau Nushirwan (531/578 A.D.), though some others suggest a later date around the time of King Khusrau II Parwiz (590/628 A.D.) (2) Reading from the old texts written in Pahlavic, the game was originally known as "chatrang". With the invasion of Persia by the Arabs (634/651 A.D.), the game's name became "shatranj" because the phonetic sounds of "ch" and "g" do not exist in Arabic language. The game spread towards the Mediterranean coast of Africa with the Islamic wave of military expansion and then crossed over to Europe. However, other alternative routes to some parts of Europe may have been used by other populations who were playing the game.

At the moment, this "Indian, Persian, Islamic" theory on the origin of the game is accepted by the majority of scholars, though it is fair to mention here the work of J. Needham and others who suggested that the historical chess of seventh century India was descended from a divinatory game (or ritual) in China. (3)

On chess theories, the most exhaustive account founded on deep learning and many years' studies is the *A History of Chess* by the English scholar, H.J.R. Murray. In his work, Murray quoted with approval a remark made by the American scholar, D.W. Fiske in 1900: "Before the seventh century of our era, the existence of chess in any land is not demonstrable by a single shred of contemporary or trustworthy documentary evidence.... Down to that date, it is all impenetrable darkness."

From *Chatrang Namak*, (4) the most important of Pahlavic texts, we learn that chess in ancient India was a war game and its name was 'chaturanga'. In Sanskrit texts, a number of references are made to the game or even to terms associated with it. The Indian romance *Vasavadatta* by Subandhu (late 6th or early 7th century A.D.) may have the first reference though it is not clear. Better than Indian poem *Harshacharita* by Bana (early 7th century A.D.). In this poem, the words of "chaturanga" and "ashtapada" are mentioned together. (5)

The name of "chaturanga" has a double meaning: the game of chess and a term referring to the four parts which formed the typical Indian army (infantry, chariots, cavalry, elephants). The name "ashtapada" is used for a board of 64 squares which according to the current theory would then become the chessboard for "chaturanga". Through linguistic analysis this conclusion has been reached.

Professor R. Eales writes in his book: "Before the year 600 A.D., there is only archaeology and conjecture...." (6) and later he adds that archaeology is "of little use in studying the origin of chess because so few very early pieces survive. Even when promising objects are discovered, it is almost impossible to prove that they are true chess pieces and not just figurines." In our opinion, however, it is only through archaeological findings that we may eventually find the answer to the origin of chess. Our faith in future archaeological findings is supported by numerous discoveries made during the last 60 years. We refer to the 400 or more chess pieces found in various parts of Old Russia (from 900 to 1600 A.D.), (7) as well as to the Venafro's chess pieces (figure left) (8) and to those of Nashipur which have been dated around 900 A.D. (9) and to the many other Islamic and European chess pieces found in various locations.

Up to now, we had to rely on the experiences of the archaeologists for recognizing and dating the artifacts which resembled chess pieces. When the assessment of the pieces have contrasted with the current theory on chess origin, these archaeological findings have been strongly contested. Take as an example the two Uzbeki's (10) which are dispute as being chess pieces, or the 18 pieces of Venafro now challenged for their dating, rather than as chess pieces, or the recently discussed artifacts of Lothal mentioned in the last issue of *The Chess Collector*. (11)

We thought worthwhile in this contest to try to suggest some guidelines for an archeologist to use in the event of a fortunate and much welcomed finding of protochess pieces.

In the 1850's, the eminent Dr. Lightfoot of Cambridge University, on the basis of his study of the *Book of Genesis*, proclaimed that the world had been created on October 23rd, 4004 B.C. at the civilized hour of 9:00 A.M. (12)

We do not expect, alas, to be so equally precise on the date of the "creation" or "development" of chess, but we hope to give some assistance with indicating a probable period within which the birth of chess may have taken place. If we are convincing, these temporal guidelines could be kept in mind by archaeologists should they find artifacts which have a possible resemblance to chess pieces.

At this point, we may quote H.J.R. Murray that "the date when it occurred to some Indian to represent the chaturanga and its evolutions in a game cannot be fixed, though naturally, it cannot be earlier than the organization of the army on which it is based." We like to add here, that probably the game cannot have been devised in a period in which at least one of the four military parts of the army symbolized in the game was already discarded as obsolete in war terms.

Today, if a simulated game of war were to be invented, it would seem unlikely that the inventor would mix obsolete armaments with the latest technological ones, like crossbows against tanks, ball cannons against helicopters. Each epoch has its typical armaments. The chess game has military symbols which are peculiar to a certain period in the history of warfare. Of course, the game of chess, once developed, managed to stay in existence and, indeed, to flourish in spite of the historical aging of the original military symbols, by virtue of its intrinsic intellectual vitality.

We shall give a brief outline of military symbols used in chess in order to establish the temporal limits in which the invention of the game may have taken place. The symbols were: infantry, chariots, cavalry, elephants.

Military history, as we know it today, actually starts in the third millennium B.C. in Mesopotamia with the Sumerians.

Interesting, from a point of view of military history, are two Sumerian testimonies brought to life by archaeologists in the first half of this century: a rectangular object originally of wood, decorated with stone and shell mosaic, 'The standard of Ur' (Babylonia c. 2500 B.C.) and today at the British Museum, and an engraved column called "Stele of the Vultures" of the same epoch and today at the Louvre.

The first shows the Sumerian army going into battle: chariots and infantry are realistically pictured. The infantry is heavily armed (copper helmets and axes) and lightly armed (without cloak, wielding axes or short spears). The chariots are drawn by two wild asses (onagers) and carrying two men of whom one is the driver and the other a warrior who flings light javelins. The second evidence shows the infantry arranged in phalanx formation anticipating by 2000 years the Greek phalanx which won Alexander the Great his victories.

For 18 centuries, the armies will be fundamentally based on infantry and chariotry. The chariots underwent technological innovations of remarkable nature when the horse eventually replaced the onager. It seems probably that people living in the Steppes southeast of Europe around 2500/2000 B.C. imported domesticated onagers from Mesopotamia. They then started to domesticate horses which roamed in great number as wild animals in their territories. It is only around 1700 B.C. that horses were used in war as the 'engine' of the chariot. (13) The Hittites, people of Indo-European language and based in Anatolia where they flourished for 500 years (1700/1200 B.C.) improved the Sumerian chariot and brought this section of the army to a high degree of efficiency by an elaborate system of horse training and by the introduction of a third member of the chariot's crew. (14)

The Egyptian made improvements of the chariot maneuverability: each car contained two warriors, comrades of equal rank.

Many centuries passed before new ideas developed for a different use of the horse in war. It is only with the Assyrian King Ashurnasirpal II (883/859 B.C.) that a new type of warfare is experimented: the mounted troops. It is not yet the mounted cavalry which will be developed and used by another Assyrian King Sargon II (721/705 B.C.). (15)

It is in that period that three military parts (infantry, chariotry, cavalry) are used in an army together for the first time.

The use of elephants in war originated in India. There are mentioned in the Buddhists texts of the VI century B.C. (16). It could be that elephants were used even before in war. There is a reference in *Rig Veda* (a magnificent collection of 1028 Sanskrit liturgical hymns composed in India around 1500/1200 B.C.) to two elephants bending their heads and rushing together against the enemy. (17) In India, chariots and infantry together with cavalry and elephants, are mentioned in the epic poems *Mahabharata* and *Ramayana* which cover a period of 600 years (300 B.C. to 300 A.D.). (18) According to Greek historians, the Indian King Porus, who met the army of Alexander in 326 B.C. at Hydaspes, was at the head of 50,000 men (infantry), 1,000 chariots, 130 elephants and 3,000 horses (cavalry). (19) This testimony proves that at the time the four divisions of an Indian army were already in use. This type of Indian army was called "chaturanga" from "chatur" = four and "anga" = member.

The Indian sculptures of Sanchi, Stupa I, made by artists of the first century A.D. for celebrating the achievements of the King Asoka Maurya (269/227 B.C.) well represent this type of army. It can be assumed that, at the time, the artists were taking contemporary chariots as models. (20)

These chariots were drawn by four horses and carried six men. They could not move fast. In India, the chariot, as a vehicle of war, began to be disused, to a certain extent, soon after the commencement of the Christian era. However, it survived as a part of the Indian armies down to 300/400 A.D. By Gupta Times (320/500 A.D.) the chariot was little more than a means of transport. Its disappearance as a fighting force is gradual. It seems, however, that the chariots were completely discarded by 700 A.D. from any Indian army. (21)

So, from a strictly military point of view, the chronology would suggest that the invention of protochess may have taken place between 700 B.C. and 700 A.D. However, if we assume, as probable ground of a protochess game, the vast territory comprising India, Pakistan, Afghanistan and in more general terms, Central Asia, the time limits could be restricted from 400/300 B.C. to 300/400 A.D. because mainly during this period of time were the four divisions of the Indian army used together.

This temporal guideline, however is not, and should not be the only guide for the archaeologist because, if this framework becomes mechanically used, it implies, for instance, that the old Egyptian game of Senet (c. 1300 B.C.) could not be considered a protochess game because it falls too far outside the limits we have suggested, but the old Roman game found at Hercolaneum may be a protochess game because its dating is c. 100 B.C./100 A.D. This is not so. These two types of games were "tabula" games (board games) in use among Egyptians and Romans. It is, therefore, necessary to add to the above-mentioned temporal and geographic suggestions an indication of the possible shape of the pieces. We do not have any description of pieces used in "chaturanga" or in "ashtapada".

We do not know if the pieces depicted the military symbols in a realistic way or were stylized or abstract or shaped for display or play purposes in a variety of styles. We think that the protochess pieces were at least of four different figures that may have justified four distinct types of movements, typical of a chess game played either with or without dice. With regard to the shape of pieces, the history of chessmen has shown us that ornamental pieces have always been in use for display, whereas simple and stylized shapes have been employed for actual play. The findings of Afrosiab (22) are decorative and ornamental, where the Nashipur (23) pieces are stylized. Both are c. IX century A.D. and they support or view. It is, therefore,

possible and probable that even the protochess pieces may have similar appearances. Even the ancient 'tabula' pieces may have influenced the protochess shapes.

To summarize: we suggest that three elements need to be considered together when confronting early artifacts:

1. timing between 400/300 B.C. and 300/400 A.D., when the four divisions of an Indian army were active together.
2. Probable geographic area as mentioned above.
3. The shape of the pieces corresponding to the four divisions (infantry, chariots, cavalry, elephants) which could be abstract or realistic.

It is comforting to note, that if around 600/700 A.D. a game, chess, arrives to inspire the creation of fanciful poems (24) and the birth of numerous legends, (25) this signifies that the game was already popular and so widespread that it leads one to believe that the game of chess could have been played a long time before.

If this is so, then in some unknown place, maybe even in a sunken ship or the bottom of a sea, ancient pieces, used for playing a protochess game, are probably still to be discovered. We hope that one day an archaeologist will find them and give us all great joy.

References

1. The modern theory on the origin of chess is mainly based on the works of Van der Linde, Von der Lasa and consolidated in the fundamental *A History of Chess*, Oxford, 1913, by H.J.R. Murray.
2. Bidev P., "How Old is Chess", *British Chess Magazine*, 1987, 214/217.
3. Needham J., *Science and Civilization in China*, Cambridge, 1962, p. 314/334.
4. The oldest references to the chess game are found in three Pahlavic texts: *Vicarism i Chatrang*, *Karna mak Artaxer i Pabakan*, *E retak u kuvatan i Husrav*. The first, the most important, is commonly known as *Chatrang Namak*.
5. Sanvito A., "Testimonianze trascurate", *L'Italia Sacchistica*, 1988, p. 376.
6. Eales R., *Chess, the History of the Game*, London, 1985, p. 19.
7. Linder I., *Chess in Old Russia*, Zurich, 1979.
8. Sanvito A., "Venafro Chessmen", *British Chess Magazine*, 1988, p. 534.
9. Wilkinson C., McNab Dennis J., *Chess: East and West, Past and Present*, New York, 1968.
10. Turgonow B., "Die Figuren von Dalwerzin Tepe", *Schach Wissenschaftliche Forschungen*, 1975, p. 135/137.
11. Whyld K., "Quotes & Queries" no. 4834, *British Chess Magazine*, December 1989.
12. Wenke R.J., *Patterns in Prehistory*, New York, 1984, p. 6
13. Azzaroli A., *Il cavallo nella storia antica*, Milano, 1975, p. 10. [Editorial Note: recent evidence suggests that man domesticated the horse for use as pack animal and for pulling wheeled vehicles as early as 4000 B.C., and for riding by at least 3000 B.C., see, e.g., <http://www.discoveringarchaeology.com/articles/121900-horses.shtml>] (Dead link). Pushing back the date range during which man domesticated the horse might

correspondingly push back the dates for the development of the war chariot; according to Robert Drews "The Coming of the Greeks", Princeton University Press 1988, the light spoked wheel was invented in Armenia [western Anatolia] between 1900-1800 B.C. which gave rise soon thereafter to the development of the light war chariot, used extensively by the Egyptians in their successful sorties; prior to that time, the wheels of war chariots were cumbersome affairs, not suited to rapid travel over flat terrain.]

14. Gurney O. R., "The Hittites", *Encyclopedia of Ancient Civilizations*, London, 1980, p. 115.
15. Ferrill A., *The Origin of War, From the Stone Age to Alexander the Great*, Londi, 1985, p. 73; 83.
16. Basham A.L., *The Wonder That Was India*, London, 1954, p. 129.
17. Dikshitar V.R.R., *War in Ancient India*, London, 1944, p. 167.
18. O'Flaherty W.D., "Hinduism", *Encyclopedia of Ancient Civilizations*, London, 1980, p. 194.
19. McRindle, *Ancient India as Described in Classical Literature*, London, 1901.
20. Sparreboom M., *Chariots in the Veda*, Leiden, 1985, p. 118.
21. Chakravarti P.C., *The Art of War in Ancient India*, Ramna, Dacca, 1941.
22. Linder I., *ibid.* See Note 7, p. 24.
23. See Note 9.
24. See Note 4.
25. Davidson H., *A Short History of Chess*, New York, 1949