

**Pawns And Pieces:
Towards The Prehistory Of Chess**

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The prehistory of chess is controversial matter, with several different theories attempting to reconstruct and explain its development up to the first known written sources. This paper will give another such reconstruction and explanation, one which I believe fares better than the rest. In it, I follow several lines of thought that have been stressed in recent literature. First is the idea that the structure of ancient chess, formed by the various movements of its playing-pieces, must be deeply understood and compared to other contemporaneous games. Second is the idea that we must also understand the deep structure of these other games just as well, if we are to grasp the connections between them. Third is the idea that we must be aware of broader cultural movements in the eras we are investigating, if we are to understand the cultural atmosphere in which chess arose.

With these principles in mind, I will first investigate a game of classical Greece. From there, the scene will move towards central Asia and India, and a set of games traditional to that region. Both of these, I will argue, contributed to the formation of the ancient chess game (chaturang) which is first mentioned in writing in India and Persia at the turn of the seventh century AD. They did so by combining into one game, which was the proto-chess proposed by historians as the theoretical ancestor of chaturang.

The fault-line of this combination, or collision, is still seen today in the division between Pawns and the rest of the modern chesspieces. A staple of modern chess theory since Philidor has been the notion that Pawns are simply very different in character, a completely separate sort of thing from the major and minor pieces. Their short move, inability to move backwards, and the large number of them on the board give the Pawns a nature all their own. Once this feeling is really grasped, deeply and intuitively, one can begin to understand the point of this paper: that chess is a hybrid game preserving the undifferentiated footsoldiers of the Greek game and adding to them a new element – a set of variegated pieces – to form a complete army.

Before venturing any further it is good to be reminded just how murky and dark an area we are in. The literary evidence we are able to consult is scarce to nonexistent. We have a few fragments of texts, none of them anywhere near comprehensive, and some of them inconsistent. Therefore, to hope for any obvious conclusions is in vain. Nonetheless, we have a responsibility to step forward and make attempts at reasonable theories, based upon sound critical judgment. We must make these attempts to explain and understand, even though we take the risk of being wrong. I think we can make a good case using the circumstantial evidence we have – but we must not forget that it is circumstantial, and that this theory involves a good deal of unavoidable speculative reconstruction.

1. Petteia/Poleis

From the fifth century BC onwards, there are references in Greek literature to something named petteia, which was apparently a general term for certain similar board games. One of them in particular was named Poleis, "cities". The ancients, however, spoke more often of "petteia" in general rather than Poleis, and so I allow myself the

liberty of following their usage as it is found. In any case, the game was so popular that Plato and Aristotle referred to it in order to illustrate philosophical points. They speak as though their readers would already understand *petteia* and its play, when they use it as an illustration.

Summing up what we know: *Poleis* was a board game for two players, with many playing pieces, played upon a board having squares. The method of capture consisted in surrounding one man by two enemy men. This much can be gathered from the writings of the Roman antiquary Pollux.¹ It is a good start. I want to give three arguments which may help to further reconstruct *Poleis*, and which also, I hope, suggest the similarity of *petteia*/*Poleis* pieces to the Pawns of chess.

The first argument relies on a sentence found in Plato (*Republic* 487b), wherein Socrates' victims, cornered by his arguments, are compared to "bad *petteia* players, who are finally cornered and made unable to move by clever ones."² It appears from this that the game was lost by the poorer player being stalemated, since Plato says "finally" (*tel eutwatej*), suggesting an ending. It may not have been the only way to lose (having all of one's pieces captured might be another), but it was at least one. I believe this passage also suggests that *petteia* pieces were often found together in massed groups. If they had been individuals scattered far apart all over the board during the course of play, then it would be nearly impossible for the victor to surround them all and render them immobile, no matter how clever he might be. It simply becomes a logical impossibility. Pieces are more likely to be blockaded, the closer they are bunched up together. Thus, I believe this was common in the game.

This is also suggested by the fact that *weak* players tend to fall victim to being blockaded. One characteristic of *weak* players in all strategic games is that they have a habit of drifting along without really doing anything constructive. They let bad things happen without doing anything to stop those bad things, because they generally don't realize that they are happening. Their position at the end of the game often resembles their position at the beginning of the game, since they haven't done anything co-ordinated or constructive during the course of it. Therefore, I think that Plato's *weak petteia* players are ones who begin with bunched-up pieces (perhaps because of a starting position), and allow the pieces to be surrounded because they do not actively un-bunch them in the

¹ H. Lamer gives an excellent and thorough presentation of the source literature for Greek and Roman board games in *Realencyklopädie des classischen Altertums* XIII 2, Stuttgart, 1927 in the entry "Lusoria Tabula". Roland G. Austin goes over some of the same ground in "Greek Board Games", *Antiquity*, vol. 14, Sep 1940, pp. 257-271 and provides some interpretative comments. Austin is available on the Internet: <http://www.ahs.uwaterloo.ca/~museum/Archive/Austin>

² Translation in Austin *op.cit.* p. 261

α) | αλγαρ τοιοδε τι παλξουσιν οι(α)κoubntej eka|stote a|nun | egeij: hgouantai di' apeirian tou-
erwtan kailapokrihesqai upol tou= | ogou par' ekaston tole|rwthma smikron paragomenoi,
agroisqetwn twn smikron epitel euthj twn | ogwn mega to|sfal ma kail ehantion toij prwtoij
ahafaihesqai, kail w|sper upol twn petteubin deinwn oi(mh)tel eutwatej apokl eibntai kailouk
ekousin o|ti ferwsin, outw kail sfej tel eutwatej apokl eiesqai kailouk ekein o|ti | egwsin upol
petteiaj au|tauthj tinoj eteraj, ouk eh yhfioij a) | ' eh | ogoij:

proper way, or at all. In any case, this passage indicates that massed groups of pieces were probably a common occurrence in petteia – just as the Pawns are grouped together to start a game of chess.

A second textual argument for the idea that petteia featured groups of pieces comes from a sentence of Aristotle (*Politics* 1253a). In it, a cityless man is compared to an isolated piece in a game of "pettoi".³ A cityless man is an unfortunate thing to be in Aristotle, and so it is in petteia as well. A piece far away from the others is vulnerable to capture, and cannot capture anything at all by itself. Hence it ought to be avoided as much as possible by keeping one's pieces together – without, of course, keeping them together so much that they are vulnerable to blockade. Thus, a good strategic player will often have his pieces together in flexible, agile groups. Again, I suggest that these groups in fact resembled the pawn-lines of modern chess.

The third argument is purely structural, instead of textual. It concerns the methods of capture, both of the modern Pawn and the ancient Poleis piece. Consider the familiar (and awfully curious) Pawn's capture: one square forward and one to the side, i.e. one square diagonally. Note also that the Pawn, uniquely among chessmen, does not capture as it moves. This method of capture has been characteristic of the Pawn from its very first detailed descriptions by the Arabs. It is very ancient, and therefore perhaps somehow fundamental to the Pawn's nature. Now, consider the method of capture noted by Pollux, combined with two reasonable assumptions: that the opposing armies generally moved towards each other, and that each piece moved only one square orthogonally. The first assumption is made plausible by the entire concept of having two "opposing armies" on a battlefield. This is a natural type of arrangement for a war-game.

The second assumption is made plausible by the very notion of "footsoldiers". They don't usually move quickly, so one square is a natural move for such a piece. Also, any longer a move tends to result in a less playable game. Furthermore, Ulrich Schädler has suggested just such a move in his reconstruction of *Latrunculi*, a Roman game thought to be related to *Poleis*.⁴

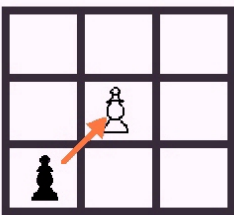
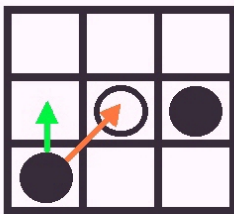


Figure 1

Figure 1 shows that the net effect of a *Poleis* stone stepping forward to capture its enemy is identical with the net effect of a Pawn's capture. The piece one square diagonally forward is removed. My intuition is that there must be some reason for this structural co-incidence, one that also explains the very odd capture of the Pawn. The most logical explanation would be that the modern Pawn is a direct descendant of the *Poleis* piece.

³ ἐκ τούτων οὐκ ἀφανερὸν ὅτι τῶν φύσει ἡ(πολιτικῆ) ἐστὶν, καὶ ὅτι ο(ἀναρχῶν) φύσει πολιτικῆς ζωῆς, καὶ ο(ἀπολιτικῆ) διαφύσιν καὶ ο(ἀναρχῶν) διαφύσιν ἡ(πολιτικῆ) φαυλοῦς ἐστίν, ἡ(κρίτων) ἀναρχῶν: ὡς περὶ καὶ ο(ὁμοῦ) ὁμοῦ ὁμοῦ ἀφρητῶν ἀγέμειστον ἀγέμειστον: ἀπὸ γὰρ φύσει τοιούτων καὶ ο(πολιτικῆ) ἐπισημῆς, ἀπὸ περὶ ἀζύκων ὡς περὶ ἐν πεττοῖς.

⁴ Ulrich Schädler, "Latrunculi – ein verlorenes strategisches Brettspiel der Römer" in *Homo Ludens* IV, München/Salzburg, 1994, p. 56

The structural and textual points stressed above give rise to some fairly good arguments for the conclusion that chess is in some way a descendant of petteia/Poleis. Another, cultural, argument arises when we consider that Greek culture as a whole moved eastwards into Asia in classical times. Asia – the place where we hear the very first certain references to a game recognizable to us as chess; the place where we find the first playing-pieces of a kind recognizable to us as chessmen.

Right around where Afghanistan lies today, there once used to be an island of Greek culture far away from the mainland. Alexander the Great had conquered the entire Near East, before he died in 323 BC. But he and his armies both stayed in these faraway lands, never to return. Alexander died in Babylon. His disbanded troops became colonists, in the cities that Alexander had founded all over his lands. There were dozens of cities (mostly named Alexandria) containing temples and agoras and every feature of Hellenistic culture one would expect to find. It was Greece away from Greece. Colonies were, after all, nothing new to the Greeks, as shown by the thriving settlements in Sicily and Italy.

These Asian colonies gradually became independent as their own governors took power and created independent states of their own.⁵ The most important of these states was Bactria. In 246 BC, its governor organized the Greek Central Asian possessions into an independent kingdom, which went on to gain great wealth and power because of its fertile soil. Bactria was so prosperous and powerful that it survived long after the Parthian Empire had risen in Iran, cutting the Bactrian Greeks off from the Mediterranean shores and making Bactria a cultural island unto itself.

But it was very definitely a Greek cultural island. Greek was the lingua franca of the region, and drachmai were its common currency. The plays of Menander were performed in Ai Khanum. There was also a copy of the Delphic Maxims, 150 aphorisms originally kept on permanent display at the sanctuary of Apollo at Delphi. If all this, then why not petteia?

It would seem unnatural to deny the game was there. No physical evidence of it has been found in Asia, but it can hardly not have been just as important in Bactrian Greek society as it had been in Athenian Greek society. The sheer scale of the Greek cultural movement is one argument for the presence of petteia in Asia. A second (though tentative) argument comes from a Persian story of the poet Firdausi, writing near AD 1000, long after the Bactrian state had faded away in the first century BC. One passage describes a game with a method of capture identical to that of Poleis. The exact nature of this game is unclear, but Firdausi's description of capture renders it possible that knowledge of Poleis (or perhaps a descendant of it) had survived to such a late date.⁶

⁵ The following is largely taken from: P. Bernard, "The Greek Kingdoms of Central Asia", in *History of Civilizations of Central Asia, vol. 2: The Development of Sedentary and Nomadic Civilizations, 700 BC to AD 250*, eds. A.H. Dani and V.M. Masson, Paris UNESCO, 1992.

⁶ Ulrich Schädler suggests that the game seems to have been well known at this time, in "Little Greek Dogs in the East", a paper presented at the Colloquium Board Games in Academia IV, Fribourg, April 2001.

This historical lesson is extremely important, because it is precisely in the lands once part of Bactria where we will see the first surviving specimens of what we now know is chess. But before going there, we still need to fill a blank in the pre-history of the game.

2. Pieces

If chess is a hybrid of Pawns and pieces, and we have explained the origin of the Pawns, then that still leaves the pieces. And indeed, this has been a far greater problem for the historians. Our first literary references to the game arrive near 600 AD with it already complete, having the same pieces and moves that it would keep all through the Middle Ages and into the early Renaissance. With the Pawns, at least there is some sort of predecessor one can logically point to. With the pieces, there is nothing. It is as if they appeared out of thin air.

They had to come from somewhere of course, and there are nowadays several theories making the rounds attempting to explain their origin. I would like to present another theory. It is both historically and structurally plausible, and can be backed up with both kinds of argumentation.

I would like to begin this account with a schematic presentation of its structural aspect, deferring for the moment matters of chronology. To begin, we first need to look back to the researches of the great H.J.R. Murray. In his 1913 magnum opus, *A History of Chess*, Murray devotes a good deal of attention to the ancient Indian gambling race-games, as he believes them to be the pre-cursor of chess. These games were played with dice, and square boards of 10x10, 8x8, or smaller. The whole point of them is generally to move one's pieces from the edge of the board, along a circuitous path through the board towards its centre, in accordance with throws of the dice. If one's piece arrives on the same square as an opponent's piece, then the opposing piece is captured, or forced to start again.

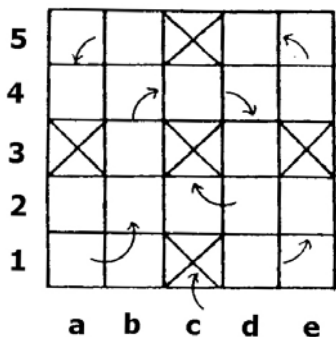


Figure 2
Siga board
adapted from Murray (1913)

Consider one such game. Murray notes it as having the name Siga as well as the name Saturankam, and that it was played in southern India and Sri Lanka up to the early 20th century.⁷ The board is illustrated at left, along with the movement of the pieces. Consider a piece lying on the square b2. Let us suppose the player rolls a 3 with his dice. The piece moves b2-c4. Is this not the move of the Knight? Let us instead suppose he rolls 4, and the piece moves b2-d4. Here we have the move of the ancient Elephant. All of the other major and minor pieces are easily suggested this way. The move a5-a1 is the Chariot's move, and a2-b1 (or a2-b3) is the Firzan. What could be simpler?

⁷ H.J.R. Murray, *A History of Chess*, Oxford, Clarendon Press, 1913, p. 39

Each player can have up to four pieces on the board at the same time, making a total of eight. Considering how constricted the board is, having only 25 squares, the game will quickly become crowded and may stop resembling a race game at all. Instead, there will be many pieces moving sideways, diagonally, in all sorts of directions, with many captures. It will perhaps come to resemble a miniature game of chess with pieces only, the moves being decided by a throw of the dice. Even though the pieces continue to be, strictly speaking, undifferentiated playing-counters, the net effect is that they have all sorts of different moves under different circumstances.

My suggestion is that this general *type* of process was the inspiration for the differentiated playing-pieces found in chess. No drastic mutation of the racing-move was thus required for it, since the moves were already present in the existing game the entire time. My thesis is that the "differentiated" pieces in the Indian race-game were added to the Poleis game, and gave us, substantially, chess as it was to be for a thousand and more years.

For this to happen, there would most likely have had to be an intermediate step beforehand. Ancient Indian game-players would need to have begun thinking of the pseudo-differentiated race-game pieces as in fact being differentiated war-game pieces. Had they not conceived of the pieces in this way, then they would not have been able to import them as individual entities into Poleis. Thus there would likely have to be an intermediate game which really was a type of miniature chess with pieces only.

At this point it might be objected that we have no historical evidence for such an evolutionary step. It suits historical facts to a theory rather than the other way around. To this objection, I would respond that the theoretical intermediate war-game has at least intuitive support, based upon observing the movements of pieces. We can see how it could be a very likely and natural thing to happen, even if we ignore the theory of its connection to chess. Thus, I think that this postulated intermediate game is more likely to have really happened, and less vulnerable to any such objection because of this consideration.

But there are many other problems of chronology. Murray was rather too hasty in supposing that spiral race-games were played as early as the first millennium BC. Murray's suggestion is a theory, but he later came to write as though it were demonstrable fact. Therefore, we too should not be overly hasty in leaping over entire millennia, which we would have to do in proposing Siga as a direct contributor to proto-chess.

I will now present a modified version of this basic theory, which I believe is more plausible historically, along with several reasons why I think it to be so. Consider the Indian game of Chaupur. It is another race-game, with a similar idea to it. Pieces race around a board, towards a destination at its centre.⁸ This board is illustrated in Figure 3 (following page). Notice that the "geometrical" theory of the origin of chesspieces can work just as well on a Chaupur-like board, in the places where the race-pieces turn

⁸ *ibid*, p. 38

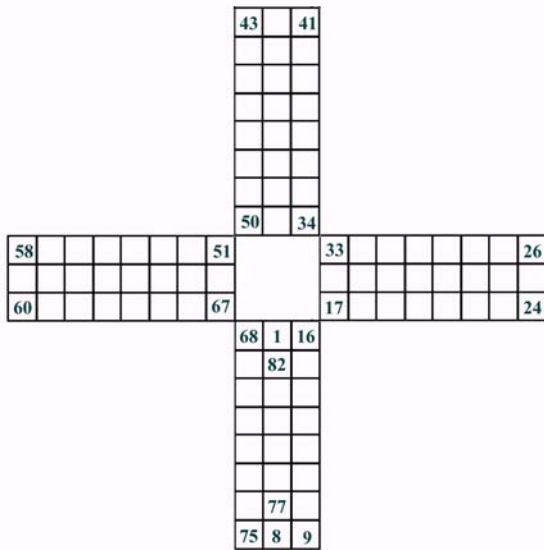


Figure 3
Chaupur board and movement

corners. In fact, it works with any race-game where there is an element of changing direction, of turning corners. It may be even more plausible on a Chaupur-like board, in light of the fact that none of the ancient slant-moving chesspieces move more than two files to the side. The Elephant moves two files, the Knight one and the Firzan one. This fact is entirely consistent with a scenario in which the original board was only three files wide.

In any case, Chaupur was popular in India at roughly the same time as Siga – that is, roughly AD 1500. But it can be argued that Chaupur has a much older historical pedigree, old enough to have possibly come into contact with the Bactrian Greek players of Polis. I now want to argue just this.

What is today called The Royal Game of Ur is known to be very ancient, going back four millennia to the Sumerians.⁹ It is also a race game, played on a modified 3x8 board, with a similar goal: to travel through the board and bear all of one's pieces off its edge (Figure 4). The exact path is unknown, although there have been several attempted

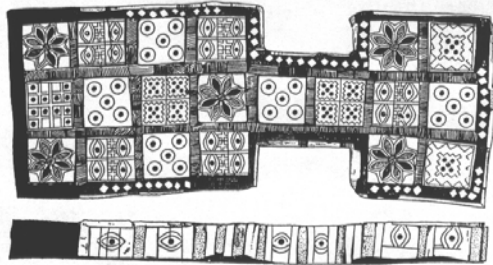


Figure 4
board from royal graves at Ur
from Murray (1952)

reconstructions. Look again at the Chaupur board in Figure 3. It certainly looks as though it is only four 3x8 boards joined together at the end. Chaupur boards also have specially marked squares, as does the Royal Game. In addition to the other similarities, these considerations make it at least plausible that Chaupur is in some way a descendant of the Royal Game. If this is so, then it would push back considerably the possible dates for Chaupur-like games.

There are other points of support for this idea. A board very similar to the Ur board and from roughly the same date has been found at Shar-i Sokhta, 1000 km to the east, near the southeast corner of what is today Iran.¹⁰ This puts the game in close geographical proximity to the Indus valley, cradle of early Indian civilization.

⁹ C. Leonard Woolley, *Ur Excavations, Vol. II: The Royal Cemetery*, 1934, Publications of the Joint Expeditions of the British Museum and of the Museum of the University of Pennsylvania to Mesopotamia. Illustration is taken from H.J.R. Murray, *A History of Board Games other than Chess*, 1952, Oxford University Press, p. 20

¹⁰ M. Piperno and S. Salvatori, "Evidence of Western Cultural Connections from a Phase 3 Group of Graves at Shar-I Sokhta", in: *Mesopotamien und seine Nachbarn*. Berlin, Dietrich Reimer Verlag, 1987.

On the Indian side, some textual support can be found in the Indian references to board games, dating as early as the dawn of the first millennium AD. These references are very fragmentary and do not mention Chaupur by name. Typical is this extract, dating from about 150 BC to the first century AD, taken from the *Mahabhashya* by Patanjali, a commentary on the work of the great Indian linguist Panini. In it, he seems to define the word “ayanayina”:

“Ayanayina: to move to the ayanaya. But we do not know what is aya, and what is anaya. The aya moves to the right, the anaya moves to the left. If the squares (pada) of the man going to the right and left are not held by the enemy, it is ayanaya. The man which is to move to the ayanaya is called ayanayina”¹¹

One can see how unclear it is. We can only gather from the word “pada” that there is *some* sort of game being discussed here, with moving pieces. Renate Syed believes that these references were to a backgammon-like game called Shaara, and states:

“The earliest accounts of the shaara game, from texts dating between the second century BC and the 6th century AD are fragmentary, but they do at least contain the information that shaara is a game of movement, in which the stones, only being allowed to move forward, first traverse the opponent’s half of the board and then one’s own half. It is a fight game, the aim being to “pursue” the adversary figures and to “kill” them, to play them off the board. It is significant that even in the earliest texts the figures of one colour may only move clockwise, the other colour only anti-clockwise... Visual representations from India depict the shaara game; an important relief from the year 530 AD shows the god Shiva and his wife playing shaara, but the game is also illustrated in the paintings in Ajanta, dating from the last quarter of the fifth century.”¹²

In any case, I mention these supports in order to make plausible the idea that Chaupur-like games may have been present for quite some time in India – at least far enough back in time to have possibly met with a genuine Bactrian Greek.

This is where we return to the hybrid Indian-Greek theory of chess origins. The above chronological proposals about Indian race games are ultimately meant to suggest the historical plausibility of this theory. There is even more support for this account of chess origins, because it matches other historical facts as well. We know, for example, that Indian and Greek cultures mixed with each other on a grander scale, in post-Alexandrian Asia. As so often happens with immigrant cultures, the Greeks adapted to the local Indian and Iranian societies in the second and first centuries BC.¹³ They

¹¹ Murray (1913), p. 38, quoting Weber.

¹² Renate Syed, “On the Indian Origin of Backgammon”, paper presented at the Colloquium Board Games in Academia IV, Fribourg, April 2001. Text is from the abstract.

¹³ The following draws from P. Bernard, *op. cit.*, and Malcolm Colledge, “Greek and non-Greek Interaction in the Art and Architecture of the Hellenistic East”, in: *Hellenism in the East: The Interaction of Greek and non-Greek Civilizations from Syria to Central Asia after Alexander*, eds. Amelie Kuhrt and Susan Sherwin, London, Duckworth, 1987, pp. 134-162

began to lose their purely Greek character. Some of the most vivid evidence of this comes from the coinage minted in the region. It was bilingual. These coins, minted in northwest India after it had been conquered by the Graeco-Bactrian kings, began to appear around 180 BC and remained in constant circulation until the very last Indo-Greek king was overrun by Central Asian nomads around 50 BC. One side of the coin was Greek and the other was a translation into Prakrit, the local Indian language. The most common denomination was the drachm, but it was also minted in the square shape of ancient Indian coins. This was a perfect fusion of two cultural forms, and symbolizes the joining together of Greek and Indian in art, language, and religion. All of these took on a hybrid nature during this time, to greater or lesser extents. The art historians in particular have given a name to this Indo-Greek blend of styles, which brought together Greek realism as shown in its classical statuary, with eastern cultural referents such as the growing Buddhist faith. The Gandharan school of art, based around what is now Kandahar, is a well-studied chapter in the history of eastern art.

Since the Indo-Greeks were able to bring together two cultures in their artwork, their language, their religion, their entire way of life, then they must have been able to bring together Greek and Indian in their games-play. If our historical reconstructions are correct, then both Greek and Indian games would have been intimately familiar to them, just as these games were to their parent cultures. It is a natural urge for gamers to want to combine things – just think of any number of modern chess variants that have been created by importing fairy-pieces from some other game. Ancient gamers were just as adept at this as modern ones, in search of something that might be more fun and interesting to play. It was this curiosity, inventiveness, and sophistication that eventually led to the pastime which survives today as modern chess.