## Chaturanga Through the Ages: a Game of Elephants, Generals, and Madwomen

The turn based strategy game is a time honored format of competition which has been enjoyed for millenia, and through those millenia there have been no more iconic, influential, or widespread games of this genre than those of the Chaturanga family. Played by king and pauper alike, this family of games has always been greatly respected and deeply cherished by every culture it has touched. In those instances where a version has fallen out of style, it is almost always because of the rising popularity of another game of the same family, and more often than not it will be periodically revived every couple hundred years in small pockets of enthusiasts.

In this work I have attempted to provide an overview of the games of the Chaturanga family as they moved through history, interacting with, influencing and being influenced by the many cultures they touched as they grew, evolved, and entranced. As such, I have provided my entries in as chronological an order as the uncertainties of millenia-old accounts will allow.


## Chaturanga - Four Arms $5^{\text {th }}$ Century CE

The name Chaturanga comes from a compound of the Sanskrit catuh (four) and anga (arm) and is often poetically synonymous with "army". The original usage comes from the Mahabharata, in which it refers to the four major divisions of the army, these being the infantry, chariots, cavalry, and elephants. The passage specifically speaks of a military formation called an 'akshauhini' consisting of

218,700 units, these being 21,870 chariots and as many elephants, 65,610 horses, and 109,350 infantry ${ }^{1}$ the ratio between chariots, elephants, horses, and infantry being 1:1:3:5. The first known explicit literary reference made to Chaturanga appears in the seventh century CE in the biography of Emperor Harshacharita of India, well after Chaturanga had already begun to spread, but it is likely that the game itself had been developed and played for over a century before it and its variants began to move interregionally to any significant extent. While the game known as Chaturanga reached its more or less 'official' form in the $5^{\text {th }}$ and $6^{\text {th }}$ centuries, the chess historians Gerhard Josten and Isaak Linder maintain that the origins of Chaturanga can be traced back to the Kushan Empire in what is now Afghanistan c. 50 BCE - 200 CE.

Chaturanga is played on an ashtapada ${ }^{2}$ (shown above)- a board of squares on an $8 \times 8$ grid which was originally made for a race game of the same name. The characteristic " $X$ " marks at the middle and perimeter of the board are not actually used in Chaturanga at all, but are necessary in order to play ashtapada. The original rules for Chaturanga are technically unknown as there are no known detailed firsthand accounts of the game, but chess historians have managed to piece together the most likely rules from references found in various Sanskrit works and later secondary sources. The foremost published works on the subject agree on most aspects of play, but there seems to be a fair amount of disagreement as to the original movement of the gaja (elephant), in part due to its movement having been revised over time to increase its usefulness. It has been suggested that H. J. R. Murray's account is the most widely accepted as the other notable accounts which deviate from Murray's do so on grounds unrelated to one another, and agree with Murray on the points which the others contend. As such, the Murray account is presented below, followed by a discussion of the deviating opinions.

## Summary of Play

The pieces are arranged on the ashpada as shown, although the specific position of the king and minister is arbitrary as long as they occupy the two middle positions with king facing king and minister facing minister. The white pieces move first, and players take turns moving pieces as per the movement rules specific to those pieces (see below). Players may remove opposing pieces from play by moving their own pieces into the squares they occupy. The game is won either by positioning the board such that the opposing raja is both threatened and unable to avoid capture ${ }^{3}$, or by capturing all of the other opposing pieces ${ }^{4}$ without them doing the same to the player in the following move. It was also noted that a stalemate (in which a player is unable to move without placing their king in a threatened position) was considered a victory for the stalemated player- not the player who delivered the stalemate. While this rule is known to have been widely used in India, it is unclear as to whether it was part of the original rule set or an addition which arose later on.

## Piece Movement

Raja (King) - The raja may move one square in any direction, but only to an unthreatened position.
Mantri (Minister) - The mantri may move to any diagonally adjacent space.

[^0]The Gaja (Elephant) - The gaja may move two spaces at a time diagonally, ignoring any obstacles in the intervening space.

The Ashwa (Horse) - The ashwa, like the gaja, is a jumping piece; it moves one square along one orthogonal axis, and two squares along the other, arriving at the opposite square of a $2 x 3$ rectangle having ignored any pieces in the intervening squares.

The Ratha (Chariot) - The ratha may move across any number of empty squares orthogonally.
The Padati (Foot-soldier) - The padati may move only toward the opposite side of the board, diagonally when attacking, and orthogonally when moving to an empty space. Upon reaching the other side of the board, a padati is promoted to a mantri.

## Notable Disagreements with the Murray Account

The 1968 account of the game given by John Gollon places the mantri opposite the opposing raja and vice versa, which fundamentally changes the dynamic of the mantri; this change would place the mantri on the same sets of diagonals as one another, whereas the Murray account positions them such that they cannot interact with one another. Gollon also asserted that padati could only promote to the type of piece which originally occupied the promotion square, and could only move to a promotion square if there was a captured piece from their army ready to replace them with. This system of promotion has the side-effect of rendering those squares in which the rajas start the game inaccessible to padati.

According to Henry A. Davidson, the idea of saying "shah" when threatening the opposing raja/shah/king and "shah mat" when their capture was inescapable were introduced by the Persians when the game was adopted there and evolved into Shatranj. As such, Davidson argues that the game would have progressed until the raja was actually captured and that since such concepts would not yet have been introduced, there would be no prohibition against moving one's raja into a threatened position- meaning that any rules regarding stalemates would have been introduced through Persian influence and would not have been present in the original rule set.

The gaja's movement has also been a point of disagreement among scholars; it is believed that one of the three major regional movement patterns would have preceded the other two, but there is disagreement as to the order in which they appeared. In Southeast Asia, it became popular for the gaja to move one space in any diagonal direction, or one space forward orthogonally; in India the gaja would be moved two squares orthogonally, ignoring obstacles; and in Persia and the Occident the gaja was moved as in India except diagonally. Murray described the chronology he was able to piece together of the gaja's movement in his book 'A History of Chess' (1913) as follows: "The strength of the chess Elephant, however, was glaringly inadequate, and so we find at a later date Indian attempts to strengthen the Elephant's move. One attempt, recorded c. A.D. 850, gives the Elephant a leap over a non-diagonal adjacent square into the one beyond - the complement of the original move which increased its strength about 50 per cent. A second attempt was more durable; it is first mentioned by Rudrata (ante 900), again by al-Beruni (1030), and exists today in the chess of Further India. It gives the Elephant a move to any adjacent diagonal square or to the square immediately in advance: this nearly trebled the value of the piece."5

5 H. J. R. Murray, A History of Chess (1913)


## Chaturaji - Four Kings $6^{\text {th }}$ Century

First described in detail in the c. 1030 CE book 'India' by al-Biruni, Chaturaji's relationship with Chaturanga has been the subject of some debate amongst game scholars. Hiram Cox, and later Duncan Forbes hypothesized that Chaturaji was a predecessor of Chaturanga in what came to be referred to as the Cox-Forbes Theory. Captain Cox had based much of his conclusion on a passage which referenced a game matching Chaturaji's description from the Bhavishya Purana, one of the 18 major works of Purana Hinduism, and his belief that the Bhavishya Purana was written c. 3000 BCE lead him to the conclusion that it was the predecessor of Chaturanga. Further supporting this hypothesis the Virata Parva, one of the books of The Mahabarata (written between 900 BCE and 400 CE ), contains a passage which seems to refer to Chaturaji in which one of the poem's protagonists says "Presenting myself as a Brahmana, Kanka by name, skilled in dice and fond of play, I shall become a courtier of that highsouled king. And moving upon chess-boards beautiful pawns made of ivory, of blue and yellow and red and white hue, by throws of black and red dice. I shall entertain the king with his courtiers and
friends ${ }^{" 678}$. The Cox-Forbes theory has since been widely rejected however, due to numerous inconsistencies. Most notably, the earliest of the Puranas ${ }^{9}$ are now thought to have been written no earlier than the fifth century CE, and the text which Forbes cited was not nearly as old as he thought it was, nor did it actually say what he thought it did. Modern chess historians believe that Chaturanga was developed during the fifth and sixth centuries CE, and Chaturaji developed out of it in the centuries thereafter.

Chaturaji was reportedly still played in India at the end of the $19^{\text {th }}$ century, but has since largely fallen out of popularity. The cursory research I have been able to give the matter suggests that the variants of Chaturaji are numerous, and are for the most part amendments and embellishments of an original rule set which was last used long enough ago that it is quite difficult to find sources which agree; many such sources having been more concerned with presenting an enjoyable game than with presenting the earliest known rules, and therefor having been unconcerned with making note of their deviations. Working from as many sources as I could easily access and the assumption that the original Chaturaji would have been less removed from Chaturanga than its later (and presumably more complex) variants, I have compiled a set of rules below which I feel best represent our understanding of how the original Chaturaji might have been played. I have endeavored to limit my speculation as much as possible and label it accordingly where it appears, but while I feel this can be considered generally representative of the original game it should neither be taken as a definitive assessment nor as the most enjoyable variant. As is usually the case in the evolution of games, subsequent variants sought to correct for perceived shortcomings or to improve upon the existing game, as such it should be unsurprising should it be found that one or more of the more modern variants of Chaturaji provide a more enjoyable gaming experience than the rules presented below which have been compiled in haste, and selected primarily on grounds of maximum attributable age.

## Summary of Play

Proceeding clockwise, players take turns casting a pair of four sided dice and moving their pieces on the board according to the table on the right. As in all variants of Chaturanga, players may capture opposing pieces by moving their own pieces onto the squares they occupy; though in Chaturaji the play continues until all opposing pieces are captured; the winner is determined by a score derived from the captured pieces (see below). It has been suggested that Chaturaji was

| Die value | Piece |
| :---: | :--- |
| 2 | boat |
| 3 | knight |
| 4 | elephant |
| 5 | pawn or king | originally played in pairs, the North and South players playing against the East and West, and several modern variants are played this way. I was unable to find a consensus as to whether Chaturaji would have been played in pairs, but based on the presence of a common scoring mechanic that would implicate all three other rajas on the board as being adversarial, the rules I have provided here do not incorporate teams; though they also do not prevent players from forming loose alliances during play. It seems likely that multiple games of Chaturaji would be played in succession, and that player's scores would be persistent throughout the session.

[^1]
## Piece Movement

Each die indicates one piece to be moved as indicated in figure 1. Each die's move is considered independently; meaning that in the case of rolling two fours either two pawns may be moved on a turn, one pawn may be moved twice, or either of the preceding cases may occur substituting a king for one of the pawns. A player may opt to forgo moving a piece if they so choose, and any dice which indicate a piece which cannot be moved simply do not result in the movement of a piece.

Padati - The padati moves as it does in Chaturanga: only toward the other side of the board, directly when moving and diagonally when attacking. In Chaturaji, padati which reach the $8^{\text {th }}$ square may promote to any piece which the player has lost, but may not promote to a piece which they still have on the board. A padati may only promote to the piece which started play in the square opposite the promotion square it occupies, and may promote to a raja just like any other piece if all aforementioned requirements are met.

Boat - The boat/ship (I am unsure as to the original name) moves 2 squares diagonally in any direction, ignoring obstacles. Should the four boats ever be positioned such that each is adjacent to the other three (collectively occupying a $2 x 2$ square), the player who completes this board formation captures the other three boats in what is called a "triumph of the boat".

Gaja - The gaja (elephant) in Chaturaji moves in the manner of the ratha in Chaturanga; horizontally and vertically through any number of unoccupied squares. It is interesting to note that this movement pattern is uncharacteristic of the movement of the elephant piece in most variations of Chaturanga, the elephant's movements generally being diagonal and therefor more akin to those of the alfil in Shatranj or Xiangqi.

Ashva - The ashva (horse) moves as it does in Chaturanga, moving one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Raja - The raja moves exactly as it does in almost all forms of Chaturanga, one square in any direction. As noted above the loss of the raja does not signify the end of the game, and the raja may be restored via pawn promotion.

## Scoring

The winner of Chaturaji is determined by points awarded for pieces captured as shown on the right. Note that a player who captures all three opposing rajas is awarded 54 additional points, this being the sum total of the point values of the pieces in all three opposing armies. This strongly suggests a game that would have often been played multiple rounds to a session, the player's scores persisting between rounds. My limited research thus far has been unable to determine if points are scored as pieces are captured or at the end of the game, which is obviously vitally important to certain

| Piece | Points |
| :--- | :---: |
| pawn | 1 |
| boat | 2 |
| knight | 3 |
| elephant | 4 |
| king | 5 | strategies as it effects the value and implications of pawn promotions- especially in light of the additional points awarded for having captured all opposing rajas. My personal inclination is that tallying the score at the end would provide a more enjoyable gaming experience, as players would be forced to account for the additional dynamic of enemy pawn promotions effectively reducing their potential score, but this is entirely speculative on my part- at this time I have found no verifiable

sources for how the scoring mechanic was originally applied.

## Shatranj <br> $6^{\text {th }}$ century

Chaturanga first appeared in Persia fairly soon after it began to reach wide popularity in India; the Madayan i Chatrang ${ }^{10}$ even relates a story about the Sassanid king Khosrau I having received a set of pieces carved from rubies and emeralds as a gift during his reign in the mid- $6^{\text {th }}$ century. As one might expect, the name Shatranj derives from Chaturanga; in middle Persian it was called Chatrang having lost the 'u' and 'a' sounds to syncope and apocope ${ }^{11}$ respectively, and the hard 'g' at the end has since softened.

Shatranj is the version of Chaturanga that was first introduced into the Occident, having spread west as a result of the Muslim conquest of Persia in the $7^{\text {th }}$ century and subsequently coming to Europe by way of Greece and Spain. It is also likely that there was an exchange of ideas between the players of Shatranj and the players of related games further east, though it seems that Chaturanga had already been introduced to China before Shatranj was a codified game. Shatranj became very popular in the ensuing centuries and from the $8^{\text {th }}$ on there is a considerable body of works describing its strategy, tactics, and puzzles. By the late $10^{\text {th }}$ century the idea of using darker and lighter squares on the board was being used in both Shatranj and its proto-chess variants in Europe.

## Summary of Play

The pieces are arranged on the board as they are in Chaturanga, though it doesn't matter whether the shah is on a player's right or left as long as the two shahs are in the same file. The white pieces move first, and players take turns moving pieces as per the movement rules specific to those pieces (see below). Players may remove opposing pieces from play by moving their own pieces into the squares they occupy. The game is won either by positioning the board such that the opposing shah is both threatened and unable to avoid capture, or by baring the shah while avoiding being bared by the following move, which is considered a draw (except in Medina, where it was considered a victory for the last player to take a piece). In the event of a stalemate, the last player to move is the winner. When moving such that they directly threaten the opposing shah, players are to announce it by saying "shah", and declare that there is no remedy for the situation by announcing that the shah is dead ("shah mat")in Europe these calls became 'check' and 'checkmate'.

## Piece Movement

Shah (King) - The shah moves one square in any direction.
Fers (Councilor) - Also called the wazir (adwisor), this piece moves one square diagonally at a time.

10 "Book of Chess", written c. 620 CE
11 The loss of vowel sounds in the middle and at the end of a word over time

Rokh (Chariot) - The rokh moves along any number of unoccupied squares orthogonally.
Pil (Elephant) - Also called alfil, a compound of the Arabic "al-pil" ("the elephant"), the pil moves exactly two squares diagonally at a time, jumping over the intervening square. Note that as it did in Chaturanga this limits a given pil to $1 / 8$ of the squares on the board; this limitation lead many variants in attempts to rebalance the pil, eventually giving rise to the bishop in chess.

Asb (Horse) - The asb moves as does the ashwa in Chaturanga; one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Sarbaz (Foot Soldier) - A sarbaz may move only toward the opposite side of the board, diagonally when attacking, and orthogonally when moving to an empty space. Upon reaching the other side of the board, a pawn is promoted to a fers.


## Xiangqi - The Elephant Game

## Contested dates of origin

Xiangqi gets its name from 'xiang' (elephant) and 'qi' (strategy game). In ancient Chinese literature, there are five hypotheses as to the origins of Xiangqi which would have it first played anywhere from 2737 BCE to 589 CE, but a certain amount of the confusion seems to stem from the characters xiang and qi having first been applied in poetic reference to other, minimally related games.

I have thus far been unable to find adequate sources to say this with certainty, but it seems from various passages in ancient Chinese poetry that very the beginnings of Xiangqi may well have been considerably earlier than the introduction of Shatranj, and possibly even that of Chaturanga, but it Xiangqi does not bear as much resemblance to its likely predecessors as it does to Shatranj, and texts which make reference to it are considerably less likely to bear resemblance to modern Xiangqi until after the introduction of Shatranj to the region sometime during the $6^{\text {th }}$ century. It has also been hypothesized that as the character for 'elephant' is the same as its homophone 'figure', the game that is now called Xiangqi may well have assumed the name and board of an otherwise unrelated game based on astrology that is known to have been played before the $5^{\text {th }}$ century, 'figure' being a term used to refer to constellations.

The pieces used in Xiangqi have always been wooden disks with their various names carved into their faces. The pieces were not differentiated by color; to distinguish between pieces the two sets were given different but similar-looking names for each piece- this has the added benefit of sending game scholars and enthusiasts who can't read Chinese characters into hysterical fits of frustration ${ }^{12}$. For the sake of simplicity (and quite possibly sanity) it has become more common to color one army red and the other black, though the pieces continue to have different names depending on their allegiance.

The game of Xiangqi is played on the intersections of the lines on its board as opposed to the spaces between the lines as seen in Chaturanga; these intersections are called points. The board is nine lines wide and ten lines long. Centered at the first to third and eighth to tenth ranks of the board are two zones, each being 3 points by 3 points and marked by a pair of diagonal lines connecting the opposite corners of the area. Each of these is called a gong (palace). Between the $5^{\text {th }}$ and $6^{\text {th }}$ ranks of the board is an area where the points are not connected by lines; this is called hé (river).

Note that due to the piece naming system used in Xiangqi, this article uses the occidental chess term "royal pieces" when referring both to the jiang (general) and shuai (marshal) at the same time.

## Summary of Play

Pieces are arrayed on the board as shown above ${ }^{13}$. Different texts disagree as to whether red or black moves first, and many texts refer to the players as 'north' and 'south' instead. The most obvious source for this confusion is the peculiarities of piece differentiation noted above, despite the general convention of the jiang's army being red and the shuai's being black. Regardless, once it is established which player moves first, players take turns selecting and moving one of their pieces from the point it occupies to a point to which it could legally be moved based on the movement rules governing that piece. Pieces are not allowed to pass through occupied points during their movement, with the exception of the pao (catapult/cannon) when it attacks.

As in all other forms of Chaturanga, a player may capture opposing pieces by moving a piece onto the point (or square) they occupy. Similarly, the game ends when one side captures the other's royal piece, or when the player whose turn it is has no legal moves left. In Xiangqi, such stalemates are considered a defeat for the player who can't move. As in Shatranj, players announce when they have put the opposing royal piece in danger, royal pieces may not be moved into danger, and the game is played to a checkmate.

12 International sets are also available.
13 Diagram courtesy of wikipedia

Because it is slightly more possible to force an opponent into an infinite repetition of moves through checking and chasing their royal piece in Xiangqi than in most other forms of Chaturanga, Xiangqi has a set of rules to address the issue ${ }^{14}$. A side which checks it's opponent more than three times in a row using the same pieces and board positions loses, as does a side which forces a piece to move repetitively by moving one of its pieces repetitively. A general rule of thumb for these rules is that any cases of repetition favor the reactive side as opposed to the instigator.

If both sides are no longer capable of achieving a checkmate or stalemate, the game ends in a draw.

## Piece Movement

Most of the pieces' names are homophonic with their counterparts, and that romanizations of languages generally seek to capture the correct sound rather than the nuances of spelling; consequently, although their names are written differently in Chinese characters they are spelled the same in Roman characters. For a better understanding of why the pieces bear the names and characters they do, the article at http://www.chessvariants.com/xiangqi.html offers limited but succinct and easily understood explanations of the characters and names of the pieces; for brevity's sake I do not go into any great detail on that subject here, but recommend the aforementioned article as a good place to begin for anyone who is interested in a basic understanding of the characters. I would however, note that in many cases the secondary character is simply a character made from combining the original character with the character for 'person'.

Jiàng/Shuài (General/Marshal) - The royal pieces in Xiangqi may only move one point orthogonally, and may not leave the gong. The royal pieces may never be allowed to 'see' one another; that is- they may never occupy the same file if there are no pieces between them. Technically, this is enforced by what is called the 'flying general' rule; as a move a royal piece may move as far as it wants orthogonally over unoccupied points as long as the move results in the capture of the opposing royal.

Shì/Shì (Scholar) - Like the mantri and the fers, the shì may move one point diagonally. The shì however, is also incapable of leaving the gong; the diagonal lines which mark the gong also mark the only 5 points which the shì may occupy.

Xiàng/Xiàng (Minister/Elephant) - The xiàng moves 2 points diagonally, and may be obstructed by a piece on the intervening point. Further, the xiàng may not cross the hé, and therefor is limited to only 7 points on the board.

Ma/Mà (Horse) - Like the ashva of Chaturanga, the mà moves to the opposite point in a $2 \times 3$ rectangle. Unlike the ashva however, the mà does not jump over intervening pieces and may therefor be blocked in its movement. It is therefor important to remember that the mà moves first one point orthogonally, and then one point diagonally away from its point of origin; the ma may never opt to move diagonally first.
$\boldsymbol{J u / J u}$ (Chariot) - The Ju may move across any number of unoccupied spaces orthogonally.
Páo/Páo (Cannon/Catapult) - When not capturing a piece, the páo may move any number of
14 While it's true that most forms of Chaturanga have some means of deterring repeating board positions, it is Xianqi which addresses the problem most thoroughly.
unobstructed squares orthogonally; when capturing however, the páo must move orthogonally past one and only one intervening piece, landing on another piece behind it; this piece is called a 'screen', and may be from either faction. Any number of unoccupied points may be moved through on either side of the screen.

Bing/Zú (Soldier) - The padati of Xiangqi, the bing and zú pieces begin play both moving and capturing by advancing one square orthogonally. Once they have crossed the hé to the other side of the board, they may move and capture in any of the orthogonal directions except backward. This is the only form of 'promotion' in Xiangqi.

## Shatar and Hiashatar <br> $7^{\text {th }}$ century?

Due to time constraints and obscurity of the subject matter, I have been unable to find sufficient source material to describe Shatar or its place in history with any degree of confidence, but it would be remiss not to mention it. The name Shatar is a Mongolian derivation of Shatranj, as is the game itself. Shatar and Hiashatar (big-shatar) are played on $8 \times 8$ and 10x10 boards respectively and are very similar to Shatranj, but have various distinctions in terms of piece movement. Shatar is apparently very culturally significant to Mongolia, even having certain associated social conventions.

## Sittuyin

 $8^{\text {th }}$ Century

Sittuyin is a Burmese game which descends directly from Chaturanga, which arrived in Burma during the $7^{\text {th }}$ and $8^{\text {th }}$ centuries and apparently continues to hold popularity in the northern regions of the country. The board is 8 squares by 8 squares and has diagonal lines running across it from corner to
corner, called sit-ke-myin (general's lines).

## Summary of Play

When the game begins the only pieces on the board are the nè, as shown. Pieces are red and black respectively, and red plays first. At the beginning of play, players take turns adding pieces to their side of the board as they see fit, except that Yahhta must be deployed to the first rank. This phase of play is called sit-tee (troop deployment). In official tournaments, a curtain is used to prevent the players from seeing their opponent's deployment during this phase.

After deployment, the game proceeds in the same manner as Chaturanga, the players taking turns moving their pieces with the goal of capturing each other's min-gyi. Stalemates are drawn. In an interesting evolution, the sit-ke-myin act as the promotion squares for the nè. Nè may either promote to a sit-ke upon reaching a square through which the sit-ke-myin passes, or a nè which is already on such a square may opt to promote instead of moving, however- a side may only ever have one sit-ke; nè may not promote unless the side currently does not have one.

## Piece Movement

Min-gyi (king) - Like the raja, the min-gyi may move one square in any direction.
Sit-ke (General) - Like the mantri, the sit-ke may move one square diagonally
Sin (Elephant) - The sin uses the elephant movement style common to Southeast Asia; it may move one square diagonally or one square orthogonally forward.

Myin (Horse) - Like the ashwa, the myin moves one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Yahhta (Chariot) - Like the ratha, the yahhta may move across any number of empty squares orthogonally.

Nè (Feudal Lord) - The nè moves in the same manner as the padati, but promotes on squares marked by the sit-ke-myin, as noted above.


## Shatranj al-Muddawara

$10^{\text {th }}$ century
"Al-Muddawara" means circular, which is a fairly apt name for this rather surprising offshoot. Also called Shatranj ar-Rumiya (Roman or Byzantine Chess), this variant has been reportedly played since the $10^{\text {th }}$ century, and an in-depth description appears in one of the works of Amuli in 1325. The circular board is made up of four concentric rings, each split into 16 spaces. Pieces are set up in files of four as shown above, with the pawns comprising the outermost part of the formation.

The game is played exactly as Shatranj is, with the exceptions that pawns face either clockwise or counterclockwise based on where they start in the formation (the left file facing and moving clockwise and the right running counter), there is no promotion as there is no back row, and should two pawns from the same side move into a position such that they are blocking one another's movement the opponent may remove both pawns from play- this does not count as a move.


## Shogi <br> $11^{\text {th }}$ century

It is unclear exactly when or how Shogi arrived in Japan. The earliest generally accepted mention of Shogi is Fujiwara Akihira's 'Shin Saru Gakuki' (1058-1064). The game has evolved and had many permutations over the centuries. In the 1200s, there were two prevalent forms, Sho-Shogi (Small Shogi), and Dai-Shogi (Large Shogi) ${ }^{1516}$, Chu-Shogi (Medium Shogi) having been developed a couple centuries later. It is Sho-Shogi which went on to become the modern Shogi that is played today. There is no clear evidence as to when the drop rule which makes Shogi so distictive was introduced, but it appears it had not yet been introduced in the Sho-Shogi of the 1200s, as baring the opposing general was considered a victory at the time. Shogi pieces are neither colored nor otherwise differentiated. They are pointed however, and players keep track of the ownership of pieces by the direction they face.

## Summary of Play

The pieces are arranged on the $9 \times 9$ board as shown ${ }^{17}$. The person who moves first is called

[^2]'Sente', and the other 'Gote' ${ }^{18}$. Players take turns moving their pieces, attempting to checkmate the opposing general. As with all variants of Chaturanga, players capture pieces by moving their own pieces to the square they occupy. Unlike most other variants however, pieces which are captured are held in reserve and may be returned (dropped) to any unoccupied square unpromoted side up, and facing the opposing side; this takes the place of a move. Drops may be anywhere on the board but do not count as the piece 'moving', and therefor do not trigger a promotion. Players may not drop pieces onto squares from which they would be unable to move ${ }^{19}$, nor may a fuhyō be dropped such that it would deliver a mate. Additionally, there may only ever be one fuhyō per side per file; a fuhyō may only be dropped into a file in which its side does not already have a fuhyō.

When any piece either moves into, out of, or through the $7^{\text {th }}, 8^{\text {th }}$, and $9^{\text {th }}$ ranks of the board that piece may be promoted, though it does not have to unless it would otherwise be unable to move. The $\bar{o} s h o \overline{0}, ~ g y o k u s h \bar{o}$, and kinshō do not promote; when the hisha or kakugyō are promoted they gain the ability to move one square in the direction they could not before; when any other piece is promoted, it moves as though it were a kinshō.

## Piece Movement

Oshō/Gyokushō (King General/Jeweled General) - As with most royal pieces, these may move one square at a time in any direction.

Hisha (Flying Chariot) - The hisha is the ratha of the game; it may move over any number of unoccupied squares orthogonally.

Ryūō (Dragon King) - The promoted form of the hisha, the ryūō may move one square diagonally, or any number of unoccupied squares orthogonally.

Kakugyō (Angle Mover) - The kakugyō may move any number of squares diagonally.
Ryūma (Dragon Horse) - The promoted form of the kakugyō, the ryūma may move one space orthogonally, or any number of squares diagonally.

Kinshō (Gold General) - The kinshō may move one square orthogonally, or may move one square forward diagonally.

Ginshō (Silver General) - The ginshō may move one square diagonally, or may move one square forward orthogonally. Note that as this means that the ginshō has two options for backward movement to the kinshō's one, it is sometimes preferable to opt not to promote it.

Narigin (Promoted Silver) - See kinshō.
Keima (Cassia Horse) - The keima moves two squares orthogonally forward and one to the right or left. Note that this means that a keima will only ever have a maximum of 2 options of where to move.

Narikei (Promoted Cassia) - See kinshō.
18 Lit. "Person who moves first/second"
19 Like placing a kyōsha, keima, or fuhyō on the $9^{\text {th }}$ rank, for example.

Kyōsha (Incense Chariot) - The kyōsha may move any number of unoccupied squares orthogonally forward.

Narikyō (Promoted Incense) - See kinshō.
Fuhyō (Foot Soldier) - The fuhyō may move one square orthogonally forward.
Tokin (Reaches Gold) - See kinshō.


## Ouk Chatrang and Makruk

$<12^{\text {th }}$ century
Ouk Chatrang is a direct descendant of Shatranj- probably sometime before the final consonant of the name was softened. Often just called Ouk, this game originates in Cambodia, it underwent minimal changes when it was learned from the Cambodians by the Thai and became Makruk, a game which still enjoys popularity today with an estimated two million players in Thailand alone. Note that names for pieces are given in Thai as I am unsure as to the Cambodian names, and have pluralized
parenthetically because I am unfamiliar with Thai conventions of pluralization.

## Summary of play for Ouk Chatrang

Ouk Chatrang is played very much like Chaturanga or Shatranj, players taking turns moving pieces in hopes of checkmating the opposing khun. It is played on an $8 \times 8$ board with the pieces starting as shown. Interestingly, bia(s) promote at the $6^{\text {th }}$ rank rather than the $8^{\text {th }}$, suggesting this as a possible intermediate link between the Persian Shatranj and Japanese Shogi, which also uses the $6^{\text {th }}$ rank for promotions.

When neither side has any remaining bia(s), the disadvantaged player may begin counting moves they make them. The player may choose to stop or restart the count at any point, but if they reach 64 the game ends in a draw. If the disadvantaged player delivers a mate without having stopped counting, the game ends in a draw. When a side loses its last non-royal piece, the count may also be started or restarted with a new target number which is dependent on the pieces remaining in the advantaged army as shown in below.

If the advantaged side has...

- 2 ruea(s): 8
- 1 ruea : 16
- No ruea(s), but 2 khon(s): 22
- No ruea(s), and only one khon: 44
- No ruea(s) or khon(s), but two ma(s): 32
- All other cases: 64

The count may be stopped or restarted at any time by the disadvantaged player.

## Piece Movement

Khun (Lord) - As in Chaturanga, the Khun may move one square in any direction. Additionally however, if the khun has not yet moved, no pieces have yet been captured, and the khun is not threatened, it may be moved in the manner of a ma for its first move.

Met (Seed) - The met moves as the mantri does; one square at a time diagonally. Additionally, if it has not yet moved and no pieces have been captured, it may advance two squares orthogonally as its first move.

Khon (Noble) - The khon is Ouk's version of the gaja. It moves one square diagonally or one square forward orthogonally.

Ma (Horse) - The ma moves in the same manner as the ashwa; one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Ruea (Boat) - The ratha by any name remains the same in every version of chaturanga; it moves orthogonally across any number of unoccupied squares.

Bia/Bia-ngai (Cowry Shell/Inverted Cowry Shell) - A bia moves in the same manner as padati- moving one square forward orthogonally and attacking one square forward diagonally. Upon reaching the $6^{\text {th }}$ rank, a bia is promoted to a bia-ngai, which moves as met(s) do.

## Distinctions of Makruk

Makruk is almost entirely identical to Ouk, except it does not include the special early-game movement rules for the khun and met. It is otherwise the same.


## San-guo-qi - Three Kingdoms Chess

$12^{\text {th }}$ century or $17^{\text {th }}$ century
San-guo-qi is a variant of Xiangqi for 3 players, and representing the war of the Three
Kingdoms period, which took place from 221 - 264 CE. The origins of San-guo-qi itself are the subject of dispute, as the original texts which described the game are lost. As such, scholars agree that San-guo-qi likely originated during the Southern Song Dynasty (1127-1279CE) or during the earlier years of the Qing Dynasty (1644-1911 CE). It would have been quite early in the Qing dynasty however, as
one of the successors to San-guo-qi (San-yuo-qi, or 'Three Friends Chess') was invented by Zheng Jinde, who lived from 1661 to 1722 CE.

As it is representative of the Three Kingdoms era, the armies of San-guo-qi represent the kingdoms of Wèi (usually represented with blue pieces), Shu (Red), and Wú (Green) respectively. The Wú army also has unique characters for its xiang, pao, and yong (the green version of the bing/zú). In San-guo-qi sets, the royal pieces are marked with the letter of their kingdom.

The San-guo-qi board is more or less 3 halves of a Xiangqi board angled such that they can share half of their border with each of the others, and joined at the middle by a triangle where the rivers meet.

## Summary of Play

Pieces are arrayed on the board as shown ${ }^{20}$. Red moves first and play proceeds counterclockwise around the table. The play proceeds as it does in Xiangqi, but with three notable differences. In addition to the standard compliment of Xiangqi pieces, each army has two bannermen pieces (they are called qi for the Wèi army, huo for Shu, and feng for Wú). One of these pieces moves in a similar manner to a ma, but moves two spaces orthogonally rather than one. Should a pao or ju encounter the triangle of points in the center of the board, their move may proceed from that point by either of the lines which would require them to turn less than 90 degrees.

In the case of either a checkmate or stalemate, the player whose move delivered the mate assumes control of the defeated army, selecting a piece either from their own army or that of the opponent they defeated to move each turn.


## Kurierer (Courier Chess)

$12^{\text {th }}$ century
Kurierer is rather interesting in that it was an apparent intermediate step between Shatranj and chess. It uses more pieces than either game, and was the first game to incorporate the movement which would later be given to the bishop piece in chess. Courier chess was commonly played for several centuries before falling out of style, only to be later revived by chess clubs of the late $19^{\text {th }}$ century; during its most active periods of play it seems to have been most popular in Central Europe, particularly Southern Germany. Although it's exact origins are unclear I have given the names of the game and its pieces in old German, as the regions to which that language belongs are also those in which Kurierer enjoyed its greatest and longest-lived popularity.

## Summary of play

Kurierer is played on a checkered board of 8 ranks and 12 files. After the initial setup as in the first illustration, it is required that the first four moves of each player be to advance their rook pawns, queen pawn, and queen 2 squares as per the second illustration. It is unclear to me as to why the second illustration isn't simply considered the setup position, but as there is no practical distinction between the two in terms of the play the question is purely academic. Pieces are captured and victory is achieved in the same manner as in all other versions of Chaturanga. Check is called when threatening the opponent's könig, stalemates are awarded to the player who delivers them, and soldater which reach the opposite side of the board are promoted to königinnen. If it can be demonstrated that neither player is capable of winning, the game is considered a draw.

## Piece Movement

König (King) - The könig may move one square in any direction, but never into a threatened position.

Königin (Queen) - The königin may only move one space diagonally at a time.
Kurierer (Courier) - The eponymous Kurierer may move over any number of unoccupied squares diagonally ${ }^{21}$.

Roche (Rook) - Like the ratha and rokh, the roche may move over any number of unoccupied squares orthogonally.

Reutter (Knight) - The reutter is identical to its asb and ashwa predecessors; it moves one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Schütze (Archer, or Bishop) - The schütze moves in the same manner as its predecessor the pil; 2 squares diagonally, ignoring obstacles in the intervening square.

Man (Sage) - The man moves as the könig does.
Schleich (Fool) - The schleich is often pitied by those whose vans go fast, and who ain't gettin' on no plane. In addition to these obvious shortcomings, it is limited to moving one space at a time, and only orthogonally. The schleich would be well advised to drink more milk. ${ }^{22}$

Soldat (Soldier) - The soldat moves exactly as the padati does in Chaturanga. The only exception to this is the 3 compulsory pawn moves that take place at the beginning of the game.

21 The courier established the movement pattern that was later given to the bishop in Chess.
22 Smith, Peck, Murdock, and Baracus (collected works, 1983-1985)


## Short Assize

$12^{\text {th }}$ century
The Short Assize (or Short Sitting) is H. J. R. Murray's name for a variant which was popular in $12^{\text {th }}$ century France and England. It was probably an attempt to get the armies into contact sooner; many such attempts were periodically made before the eventual development of the rule in modern chess that an as-yet unmoved pawn may advance two squares rather than one; the compulsory movement at the beginning of Kurierer is probably another attempt to address the slow start of the game.

## Summary of Play

Players may opt to arrange their pieces in either of the two formations shown; note that the fers starts on the same square as a sarbaz. They may not move jointly, nor may any piece move to occupy the same square as another of its side; this is simply where they start play. As long as they occupy the same square, any move which would capture the occupant of the square captures both pieces.

Beyond the differences noted above, the game is played exactly as Shatranj is.

## Dai-Shogi and Chu-Shogi and Dai-Dai-Shogi

 $13^{\text {th }}, 14^{\text {th }}, \& 15^{\text {th }}$ centuries respectivelyDai-Shogi was a larger variant of Shogi. It is played on a $15 \times 15$ board, and each player begins the game with 65 pieces of 29 different types which may collectively move in any of 36 different ways. It's popularity did not last to the present day, but it was the direct inspiration for Chu-Shogi.

Marginally more conservative, Chu-Shogi (Middle-Shogi) was derived from Dai-Shogi in the $14^{\text {th }}$ century; it is played on a $12 x 12$ board with a marginally more conservative 46 pieces of 21 types.

Strikingly less conservative the $15^{\text {th }}$ century Dai-Dai-Shogi, played on a 17 x17 board with 96 pieces of 64 types on each side with 68 possible movement types, and it's almost comically large counterpart Maka-Dai-Dai-Shogi is played on a 19x19 board with 96 pieces of 50 different types per side with 74 possible movement types.

If the reader is at this point wondering why I am only listing board sizes and piece counts, it is because those numbers alone make the actual games wildly time consuming to recount here. I encourage readers who are interested in these variants to avail themselves of one or more of the many internet resources addressing Shogi variants. ${ }^{23}$

Somewhere deep beneath the waves, Kaiju no Shogi lies dreaming dreams of conquest...

23 You should have gone with an author who wasn't this lazy.


## Tamerlane

$14^{\text {th }}$ century
Developed during the time of amir Timur (also historically known as Tamerlane), who founded the Timurid Empire in Persia and Central Asia, this game was named in honor of the ruler of the time. It has also been posited that Timur may have invented the game, but that supposition is uncertain. Tammerlane Chess has also been called Shatranj Kamil (Perfect Chess) and Shatranj Al-Kabir (Large or Great Chess).

## Summary of Play

Tammerlane is played on a board of 10 ranks, 11 files, and 2 additional spaces, one to the right of the second rank, and one to the left of the ninth. The pair of additional spaces added to each side are called citadels; no piece other than a royal piece may enter them, and only an advantitious king (see below) may enter its own citadel. Pieces are set up as shown and players take turns in much the same manner as in Shatranj and Chaturanga. There is reportedly a choice of 3 different but similar board setups for Tamerlane, but due to certain resources being hard to obtain I have as yet only been able to find the one I present here. This is also the reason the names of pieces below are presented in English (although it is probably safe to assume that those pieces which Tamerlane shares with Shatranj would have the same names in both games). After set up, players take turns moving their pieces, seeking to checkmate one another's king. If a player manages to occupy their opponent's citadel with a king, the game ends in a draw. Tamerlane's pawns are distinct one from another, each representing one of the piece types. When a pawn reaches the final rank, it is promoted to the piece it represents. Since this includes there being a pawn of kings, this means that a side may have more than one royal piece. As long as a side has more than one royal piece, that side is free to move its royal pieces into check or
ignore them if they are threatened, and the opponent may capture them as any other pieces. When only one royal piece remains on a side it must be checkmated. Additionally, once per game a player may exchange a king which is in check for any other non-royal piece as long as it is not their only king. Stalemates are awarded to the player who delivers them.

I was unable to find a ruling addressing the issue, but since no non-royal piece may technically enter a citadel and could therefor never capture an advantitious king hiding in his own citadel, it must be assumed that for the purposes of checkmating them when they are the only remaining royal piece on their side that pieces are still considered to threaten them while they are in a citadel and may therefor be mated despite being effectively unreachable.

## Piece Movement

King - The king, and all royal pieces, may move one square in any direction, and as noted above may move into the opposing citadel in order to force a draw. The advantitious king may also move into its own citadel.

Prince - The prince is a royal piece, moving as the king does. A pawn of kings is replaced with a prince upon reaching the far side of the board.

Advantitious King - The advantitious king is a royal piece, moving as do the king and prince; it is the result of a pawn of pawns having been twice promoted (see below). As noted above, the advantitious king is permitted to move into its own citadel.

General - The general may move one square diagonally.
Vizir - The vizir may move one square orthogonally.
Giraffe - The giraffe moves one square diagonally and no less than three squares orthogonally, and may only move across unobstructed squares.

Picket - The picket moves no less than two squares diagonally, and may only move across unobstructed squares.

Knight - The knight moves like the a asb or ashwa; one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Rook - Like the ratha and rokh, the rook may move over any number of unoccupied squares orthogonally.

Elephant - Like the gaja of Chaturanga and pil of Shatranj, the elephant may move two spaces at a time diagonally, ignoring any obstacles in the intervening squares.

Camel - Similar to the knight, the camel one square on one axis, but three on the other instead of two, also jumping over any pieces on the intervening squares.

War Machine - Similar to the elephant, the war machine moves 2 spaces orthogonally, ignoring
obstacles in the intervening squares.
Pawns - For every type of piece which is on the board at the beginning of play there is a pawn of that piece type. With the exceptions of the pawn of pawns and pawn of kings, pawns promote to the piece they represent. The pawn of kings promotes to a prince; the special rules surrounding the pawn of pawns are noted below. Apart from exceptions which stem from the promotion rules of Tamerlane, pawns move as padati in Chaturanga, moving one square orthogonally forward, and attacking one square diagonally forward.

Pawn of Pawns - Upon reaching the furthest rank of the board for the first time, the pawn of pawns does not promote and may not be captured. The pawn remains where it is until such time as either a piece becomes inescapably threatened by one of the player's pawns, or the player moves one of their pawns into a fork (placing it such that it threatens two pieces at once), in either case the threatened piece may not be a royal piece. Immediately when one of these conditions is met, the pawn of pawns is moved to the threatened square (or the player's choice of squares in the case of a fork), automatically capturing the threatened piece. The pawn of pawns then continues to move as any pawn does until reaching the promotion rank once more. Upon reaching the promotion rank for a second time, the pawn of pawns is returned to the starting position of the pawn of kings. The sources I have been able to find are unclear as to how to proceed should this square be occupied, but in terms of minimally obtrusive rulings possible solutions would be to place it on the nearest unoccupied pawn starting position, to disallow moving the pawn of pawns to a promotion square for a second time unless the pawn of kings' starting square in unoccupied, or to allow this promotion to capture any piece on the pawn of kings' starting square at the time. I personally favor the latter as it introduces an interesting but minimally impactful capturing mechanic. Upon finally reaching the promotion rank for a third time, the pawn is then promoted to an advantitious king. ${ }^{24}$

[^3]

## Chess of the Mad Queen (Chess)

$13^{\text {th }}-16^{\text {th }}$ century
Already on the cusp with games like Short Assize and Kurierer ${ }^{25}$, the Shatranj players of Europe began playing the variant which would become Chess in the $13^{\text {th }}$ century. The modifications to Shatranj began with pawns being given an optional extra square of movement on their first move in the $13^{\text {th }}$ century, naturally followed by the en passant rule in the $14^{\text {th }} .1422$ marks the earliest recorded assertion that a stalemate should be considered a draw, and in 1471 the Gottingen manuscript, the first ever book written solely about European Chess was written. The final changes that made the orthodox game of chess from which all chess variants stem were gradually adopted during the late $15^{\text {th }}$ and early $16^{\text {th }}$ centuries, these being the adoption of the castling rule, the use of the movement of the courier piece from Kurierer for that of the bishop, and the introduction of an entirely new movement pattern for the queen which earned this version of chess it's original name "Chess of the Mad Queen" or (slightly more pejoratively) "Madwoman's Chess".

In her book on the history of the queen, Marilyn Yalom observed that the queen was originally given the ability to move any distance in any direction in Spain during the reign of Isabella I, and that her great political power may have been the inspiration for the change, going on to note that the rapid spread of the use of this movement for the queen coincided with both the growing use of the printing press (invented in the 1430s), and the 1492 expulsion of the Jewish population of Spain, either or both of which may have hastened the spread. ${ }^{26}$

The first informal international Chess tournament was held in 1575 between the Italians Leonardo da Cutri and Paolo Boi, and Ruy Lopez and Alfonso Ceron of Spain, played at the court of

[^4]Philip II in Madrid. ${ }^{27}$

## Summary of Play

Chess is played on a checkered board of eight ranks and files. The board is oriented such that a white square is at the lower right corner as either player observes it, and pieces are arranged as shown. Players take turns moving their pieces with the goal of checkmating the opposing king. In cases of stalemate the game is drawn. If both a king and one of its rooks both have not yet moved, the king is unthreatened, and there are no pieces in between them, a player may move his king 2 squares towards the rook and the rook to the square on the other side of the king's new position in a single move. This is called 'castling'.

## Piece Movement

King - The king may move one square in any direction.
Queen - The queen may move over any number of unoccupied squares in any direction.
Rook - Unchanged from its ratha roots, the rook may move over any number of unoccupied squares
Knight - Another piece which has gone unchanged through the ages, this ashwa moves one square on one axis and two on the other, jumping over any pieces on the intervening squares.

Bishop - As the kurierer which popularized this movement to begin with, the bishop may move over any number of unoccupied squares diagonally, moving only on the squares of one color.

Pawn - Like the padati, the pawn moves one square forward orthogonally and attacks one square forward diagonally. Additionally, the pawn has the option of moving two spaces as its first move rather than one; however, should the first square of the pawn's movement be threatened by an opposing pawn, that pawn may choose to capture it 'en passant' (in passing), moving their pawn as though the first pawn had only moved one square, and capturing the first pawn as though it occupied that square. En passant captures may only be performed immediately following the move which provokes them.


## Janggi <br> $16^{\text {th }}$ century

One of the most recent additions to the field of cultural chess variants is Janggi, a Korean contribution which evolved from Xiangqi in the $16^{\text {th }}$ century, first being mentioned in Korean literature by an author named Chang Yu who lived from 1587 to 1638 . Thanks in part to its late addition in the annals of Chaturanga variants, Janggi is still played with the same set of rules it had at its outset. The pieces themselves represent the rival states of Han and Chu which warred during the post-Qin interregnum period. They are written in Chinese characters as in Xiangqi, but except for the pawn pieces do not use different characters for each piece; to differentiate between armies, the Han pieces are written in red and the Chu are written in blue or green, as well as being written in semi-cursive script.

The board which is used is the same as that of Xiangqi, except that there are no omitted lines in the middle, and thus there is no river. This effects gameplay in that the elephant piece ('sang', in Janggi) is not confined to one side of the board and slightly different rules for the pawns (byeong/jol).

## Summary of Play

At the start of the game players randomly determine their armies. Han sets up their side first, opting to either set their pieces up as shown ${ }^{28}$, or to transpose the position of the Ma and Sang pieces. Once the armies are arranged, Cho moves first; as with all permutations of Chaturanga, players take turns moving their pieces on the board, attempting to checkmate ${ }^{29}$ the opponent's janggun. In the case where a player has no legal moves, they must skip their turn; the game does not end in a forced draw unless neither player has a legal move, or neither player has enough pieces to deliver a mate. A draw may also occur if a move causes the janggun to face each other unobstructed (a condition called bikjang) and the subsequent move does not change this situation. Upon making a move which threatens

[^5]the opposing janggun, they announce it by declaring "janggun".

## Piece Movement

Janggun (General) - The Janggun pieces are marked with the characters Han and Chu respectively. As in Xiangqi, the janggun may not leave the palace; unlike in Xiangqi however a janggun may be moved to face the other janggun unobstructed, and will end the game in a draw if left in that position at the end of the other player's turn. The janggun may move along any line connecting the nine points of the palace.

Sa (Guards) - The movement rules and restrictions regarding guards are identical to those for the janggun, except there are no rules pertaining to their facing the opposing janggun unobstructed.

Ma (Horse) - Like the ma in Xiangqi, the ma moves first one point orthogonally, and then one point diagonally away from its point of origin; the ma may never opt to move diagonally first, and is obstructed by any pieces occupying squares through which it must pass.

Sang (Elephant) - The elephant moves one point orthogonally, and two points diagonally away from its origin, otherwise moving like the ma.

Cha (Chariot) - The cha may move over any number of unoccupied squares orthogonally, and additionally may move along the diagonal lines of the palaces, but may only ever travel in a straight line.

Po (Cannon) - Unlike its predecessor the pao, the po both moves and captures by moving to any point orthogonally which is on the other side of another piece (called the screen). A po can also do this diagonally along the lines in the palace, but may never move or capture without a screen. A po may neither capture another po, nor use it as a screen.

Byeong/Jol (Soldier) - The soldier pieces may move or attack in any orthogonal direction except backwards. They may also advance diagonally forward along the lines of a palace.

## **************************************************

Chaturanga continues to play a huge role in games today. Of the twenty permutations of Chaturanga I have listed here (many of which are ancient), 9 are still widely played today- each with its own nuances and feeling of individuality, yet at the same time unmistakably cut from the same ancient cloth ${ }^{30}$. The pieces and their movements may change or get renamed, but this family of games persists as a worldwide millenia-old collaborative effort to find the most enjoyable way to move elephants across a table.

30 Linen, maybe?


[^0]:    1 Adi Parva 2. 15-23
    2 Sanskrit for "having eight feet"
    3 A "checkmate"- although that term originated later from the Persian "shah mat" or "the king is dead"
    4 "baring the raja"

[^1]:    $6 \quad$ It should be noted that this could also be describing Pachisi, which was quite popular at the time.
    7 Pachisi was eventually introduced to the United States 19 the 1860s by the Parker Brothers company, who renamed it to Parchisi.
    8 Yo dawg, I heard you like footnotes- so I put footnotes in my footnotes so you can read a semi-topical aside while you read a semi-topical aside.
    9 A collection of ancient Sanskrit writing containing Hindu legends and folklore

[^2]:    15 not to be confused with Dai-Dai-Shogi (Very-Large Shogi), Maka-Dai-Dai-Shogi (Extremely Large Shogi), or Kaiju no Shogi (Shogi so large it will destroy Tokyo)
    16 Kaiju no Shogi is not a real thing... yet.
    17 Diagram courtesy of Wikipedia

[^3]:    24 Interesting side-note: If you conceive a child immediately prior to playing Tamerlane that child will be quite close to completing their sophomore year of high school at about the same time that you finally manage to get an advantitious king, give or take a year depending on rate of play and academic performance of the child.

[^4]:    25 Which addressed complaints like the slow early game and the relative weakness of the elephant piece
    26 Marilyn Yalom, Birth of the Chess Queen: A History (2004)

[^5]:    28 Diagram courtesy of Wikipedia
    29 In this case, "waetong"

