Petteia - Polis & Ludus Latrunculorum, as partially chess ancestors

Firstly published on Dec 12, 2020,

in https://www.chess.com/blog/introuble2/petteia-polis-ludus-latrunculorum-as-partially-chess-ancestors

It was in Yuri Averbach's History of chess [2012], where I've read firstly about a possible influence of ancient Greek board games on the invention or/and development of chess in India. An idea that seems to be supported by him since 1991. It felt really attractive as it could come along with our knowledge on history.

Since the Indian campaign of Alexander the Great during 327-325 BCE, the Greek element was present in the area for centuries. Firstly with the Hellenistic Seleucid empire. But even when it was defeated by the Parthians during 2nd century BCE and shrinked to the western coasts of Near East, the independent Greco-Bactrian Kingdom, and then the Indo-Greek one, just North-West of the Indus river, remained dominant in the area. Till the last years of the 1st c. BCE, when the Kushan empire made its appearance and started controlling these regions up to the 4th c. CE. This Indo-Greek interaction can be tracked in the artifacts of the so-called Greco-Buddhist art, mainly appearing in the area of Gandhara. But the Greek element can also be found during the first two centuries of the Kushan rule. Just consider that Kushans, after conquering the area, used Greek language as their official one, eg. on their coins. And this until mid 2nd century CE [generally on Kushans, check Harmatta [ed. 1994]].

But this wasn't the only contact between the people of India and the western world. Cassius Dio, a Greco-Roman statesman and historian of the 2nd-3rd c. CE, wrote [in Hist.Rom, 68.15] that in 107 CE ca, an embassy from India arrived at the court of the Roman emperor Trajan; and archaeological findings comfirm some trade between these people. This embassy probably was of the Kushan empire, as the strongest at the time state placed in the lands of India.

Kushan Empire is one of the candidates for the invention of chess. Josten [2001, and citing Isaac Linder] attracts our attention to some artifacts excavated in the site of Dalverzin Tepe, in the heart of Bactria - now Uzbekistan [fig. 01 & 02]. They are miniatures of animals, an elephant and a bull [?], made by ivory and dated in 2nd c. CE. And by many authors are considered of the first chess pieces.

fig. 01: The elephant from official site of Uzbekistan. Probably in the exhibition of Termez Archaeological Museum. Generally it was a little hard to track photos and info of these artifacts

fig. 02: An other shot found in silkway. Bull left, elephant right. Check also http://history.chess.free.fr/dalverzin.htm

It has been noted the resemblance between this elephant and similar chess pieces coming from India or Persia. Bull seems a little awkward, but Linder [1975] reminds us of the bull-piece of shatranj al-Kabir, found in one manuscript described in Murray [1913, p. 346]. However, this latter manuscript should be dated surely not earlier than 15th c. Generally without a relevant written record or other artifacts, the identification of these pieces as chess ones is a little obscure. However, if we would choose to place them in the chess history timeline, it can't be easily ignored that these items are coming from a place and time where the Greek element was really intense, if not dominant[1].

Returning to Averbach's point of view, he underlined this possible Greek influnce mainly with two points: the introduction of a war board-game and the absence of the luck [-dice] element. Myron Samsin [2002] had moved further. He examined the way of capture in the ancient board games of Greek Petteia - Polis and the Roman Ludus Latrunculorum, possibly draught-like games, with the latter considered as Polis' derivative. Taking into account some sources [that we'll see below], he set two preconditions: firstly that the way of capture in these games was the one we know for the Tafl game - a piece is removed if it's surrounded on its two opposite sides by opponent's pieces; secondly that the usual move of a piece in these games should be to move forward. With these in mind, he saw a possible evolution that led to the way of capture by a pawn in chess...

1 On the Dalverzin Tepe findings. Excavation was concluded in 1972. Of the following writers, Pugachenkova & Turgunov were leading the archaeologists' group. Turgunov [1973] identifies them as chess-pieces and dates them in 2nd c. CE, mainly based on coins found in the same room. It's also tried a comparison with some other artifacts found in Ayrtam's site [Uzbekistan, near Termez] and dated in the same period. The given photo of the latter was really bad. If they are truly chess-pieces, they seem more abstract artistically. The reference in Pugachenkova & Rtveladze [1978, p. 39] is short as the work is more general. Linder [1975] gives maybe the most complete chess aspect, taking in account and the Turgunov's thoughts.

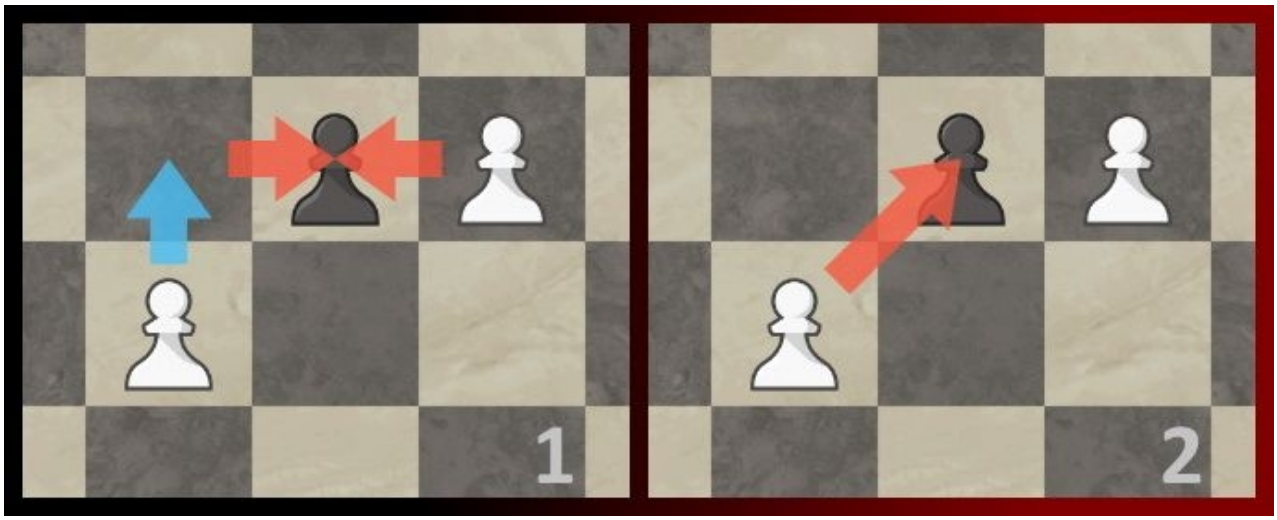

fig. 03: paradigm by Samsin's paper

I can't be sure how true are the aforementioned thoughts, but they made me look at the Greek & Latin sources [translations are all mine, trying to make them as accurate as possible so for you to draw your own conclusions; unless it's written elseway. Complete references at the end of the post].

INDEX

A. Petteia – Polis up

1. As introduction up

Petteia or pesseia [πεττεία/ πεσσεία] was a general term in ancient Greece for games, probably board ones, that were played with pieces, stones [= pessoi/ πεσσοί]. First tracked mention of pessoi as a game is made by Homer in Odyssey of the 8th c. BCE, when he describes one of the very first scenes of the epic poem taking place in the palace at Ithaca...

Text 01: Homer Odyssey, A/106-108

οἱ μὲν ἔπειτα πεσσοῖσι προπάροιθε θυράων θυμὸν ἔτερπον ἥμενοι ἐν ῥινοῖσι βοῶν, οὓς ἔκτανον αὐτοί	Then they [=the suitors] were taking pleasure in pessoi in front of the doors, sitting on the hides of oxen that they themselves had killed.

The reference is too plain and the kind of the piece-game of the suitors had concerned scholars since the antiquity [though some hundreds years after the poem was written]. Athenaeus of Naucratis, in his work Deipnosophistae of the early 3rd c. CE, was reproducing a lost now version that was given by an earlier Homer's commentator; Apion of Alexandria, a greco-egyptian grammarian born few years before the common era starts. The way it's written can let us believe that it was humorous or ironic to a degree.

Text 02: Athenaeus, Deipnosophistae, 1.29

καὶ οἱ μνηστῆρες δὲ παρ᾽ αὐτῷ 'πεσσοῖσι προπάροιθε θυράων' ἐτέρποντο, οὐ παρὰ τοῦ μεγάλου Διοδώρου ἢ Θεοδώρου μαθόντες τὴν πεττείαν οὐδὲ τοῦ Μιτυληναίου Λέοντος τοῦ ἀνέκαθεν Ἀθηναίου, ὃς ἀήττητος ἦν κατὰ τὴν πεττευτικήν, ὥς φησι Φαινίας. Ἀπίων δὲ ὁ Ἀλεξανδρεὺς καὶ ἀκηκοέναι φησὶ παρὰ τοῦ Ἰθακησίου Κτήσωνος τὴν τῶν μνηστήρων πεττείαν οἵα ἦν. 'ὀκτὼ γάρ, φησί, καὶ ἑκατὸν ὄντες οἱ μνηστῆρες διετίθεσαν ψήφους ἐναντίας ἀλλήλαις, ἴσας πρὸς ἴσας τὸν ἀριθμόν ὅσοιπερ ἦσαν καὶ αὐτοί. γίνεσθαι οὖν ἑκατέρωθεν δ᾽ καὶ πεντήκοντα. τὸ δ᾽ ἀνὰ μέσον τούτων διαλιπεῖν ὀλίγον ἐν δὲ τῷ μεταιχμίῳ τούτῳ μίαν τιθέναι ψῆφον, ἣν καλεῖν μὲν αὐτοὺς Πηνελόπην, σκοπὸν δὲ ποιεῖσθαι εἴ τις βάλλοι ψήφῳ ἑτέρᾳ...	And the suitors amused themselves 'in front of the doors with pessoi', not having learnt the piece-game [petteia] from Diodorus the great or from Theodorus, neither from Leon of Mitylene, the ever since always Athenian, who was absolutely invincible at the piece-game, as Phainias says. But Apion of Alexandria says that he had heard from Cteson of Ithaca what kind of game was the piece-game of the suitors. 'The suitors, being a hundred and eight, he says, arranged their pieces opposite to one another, in equal numbers, as they themselves were. So that there were fifty[-four] on each side. And between them they left empty a small space. And in the middle they placed one piece, which they called Penelope, and they made it the goal, if one of them could strike it with his piece/stone...

It's my feeling that the writer wanted to make the suitors look a little like fools. After all they were the bad guys of this epic.

However, the invention of the game petteia had taken a legendary form. Plato of the 5th c. BCE, gives a beautiful myth originated in Egypt, place that he probably had visited.

Text 03: Plato, Phaedrus, 274c-d

ἤκουσα τοίνυν περὶ Ναύκρατιν τῆς Αἰγύπτου γενέσθαι τῶν ἐκεῖ παλαιῶν τινα θεῶν, οὗ καὶ τὸ ὄρνεον ἱερὸν ὃ δὴ καλοῦσιν Ἶβιν: αὐτῷ δὲ ὄνομα τῷ δαίμονι εἶναι Θεύθ. τοῦτον δὴ πρῶτον ἀριθμόν τε καὶ λογισμὸν εὑρεῖν καὶ γεωμετρίαν καὶ ἀστρονομίαν, ἔτι δὲ πεττείας τε καὶ κυβείας, καὶ δὴ καὶ γράμματα. βασιλέως δ’ αὖ τότε ὄντος Αἰγύπτου ὅλης Θαμοῦ...	So I heard that at Naucratis of Egypt, was one of the ancient gods there, whose sacred bird is called Ibis; and the name of this god is Theuth. And he invented numbers and calculation, and geometry and astronomy, also piece-games and dice-games, and especially letters. And the king of all Egypt at that time was Thamus...

Naucratis was a Greek colony in ancient Egypt, founded in the 7th c. BCE; a place where a culture interaction occurred. However, the most important point of this passage is that Plato is using the relevant terms in plural, underlining that there were more than one kind of the piece-games. Also a contrast, or at least a distinction, between piece-games and the dice ones, is made. Similar separation is tried and by Aristoteles [Rhetoric, 1371a], where he describes as pleasant the victory in games, distinguishing them in knucklebones, balls, dice-ones and pessoi-ones; always in plural. On this distinction, Hesychius of Alexandria, trying to analyze a passage by Sophocles, was writing in his Lexicon:

Text 04: Hesychii Alexandrini, Lexicon, 'πεσσὰ πεντέγραμμα'

'καὶ πεσσὰ πεντέγραμμα καὶ κύβων βολαί' Σοφοκλής Ναυπλίῳ Πυρκαεί, παρ' όσον πέντε γραμμαϊς έπαιζον, διαφέρει δε πετ(τ)εία κυβείας, εν ή μεν γαρ τους κύβους αναρρίπτουσίν εν δε τή πετ(τ)εία αυτό μόνον τας ψήφους μετακινούσι	'And five-lined stones and dice throws', according to Sophocles in Nauplios Pyrkaeus [=Nauplios arsonist], as they played on five lines. And petteia [=piece/stone game] is differing from kybeia [=dice game], in which [=kybeia] they are throwing the dice. But in petteia they are moving only the pieces.

Hesychius was writing almost 1.000 years after Plato and Sophocles, and his entry possibly is incomplete to a degree. However, it's known that he had used previous sources. The

distinction he tries, isn't as accurate as it can be. We know that sometimes the terms could be mixed, as we're gonna see below. But maybe it shows that it was typical[2].

Plato placed the invention of pessoi in Egypt. However Greek tradition was different. Already since 5th c. BCE we can find texts attributing this creation to a less known hero, Palamedes...

Text 05: Gorgias, Yper Palamedous, 30

τίς γὰρ ἂν ἐποίησε τὸν ἀνθρώπινον βίον πόριμον ἐξ ἀπόρου καὶ κεκοσμημένον ἐξ ἀκόσμου, τάξεις τε πολεμικὰς εὑρὼν μέγιστον εἰς πλεονεκτήματα, νόμους τε γραπτοὺς φύλακας [τε] τοῦ δικαίου, γράμματά τε μνήμης ὄργανον, μέτρα τε καὶ σταθμὰ συναλλαγῶν εὐπόρους διαλλαγάς, ἀριθμόν τε χρημάτων φύλακα, πυρσούς τε κρατίστους καὶ ταχίστους ἀγγέλους, πεσσούς τε σχολῆς ἄλυπον διατριβήν;	So who made human life wealthy from poor, and ordered from disordered, finding war tactics, the biggest advantage, and written laws, guardians of justice, and letters memory's tool, and measures and weights, for rich commercial dealings, and the number, guard of money, and the torches, the best and quickest messengers, and pessoi [=game pieces], the pleasant pastime?

It's noticeable that in some texts Palamedes invented dice along with game pieces, while in some only pessoi are mentioned. Palamedes was a hero that participated in the Trojan war; though not mentioned in the famous Homer's epics, but in other sources - versions of the Trojan war. Generally a hero with weird attributes. He was famous for his bright mind, while one of the stories goes that he tricked Odysseus, who was pretending the fool so to avoid the Trojan war, and revealed his acting. Odysseus didn't forget it and set up a trap, convincing the Achaeans that Palamedes was a traitor; and so Palamedes was condemned to death [most detailed ancient source Philostratus, Heroicus, of early 3rd c. CE, also Cypria in Proclus' Chrestomathy & Pseudo-Apollodorus' Library Epit. 3.6-3.11// for a possible transposition in Medieval literature check this previous blog].

2 Kidd [2017b] showed with almost certainty that the word κύβος [kybos=cube, die] and its derivatives were used in antiquity not only for dice-games but in a more general way for gambling. And he actually deternimed gambling as money betting in '*any game which involves winning and losing*'. The latter could actually include in kybeia-group even games that weren't played via chance. Though the wider approach of the word kybeia as gambling is totally convincing, I don't feel 100% sure that this included and games not played with some luck element [eg. in modern terms, would it be chess part of this dice-group?]. Generally important remark. But for the present approach it won't have a decisive effect. As we're looking for a total absence of the luck element in the games under question, I think that we should be more strict so to exclude it with more safety. However it made me think on the use of this term in Greek and Latin when it was related with the relevant prohibitions of the Middle Ages.

In this story Mariscal [2011] saw a possible interpretation of a scene found in ancient Greek vases since 6th c. BCE.

fig. 04: Attic Black-Figure Neck Amphora in Getty Museum. It's from the few that the pieces are clearly shown

Over 150 vases, dated between 550-450 BCE, had been found depicting two warriors playing a board game. In some the names are written, Achilles and Ajax, two heros of the Achaeans in the Trojan War. While in fewer, numbers are written too, like the two players are announcing their dice throws. According to the story, Achilles and Ajax were Palamedes' friends and were opposed to the Achaeans' decision, refusing in the end to fight with them. So the scene may show the two of them playing instead of fighting, while the board game, sometimes possibly with dice, is a reference to Palamedes.

It's an approach that could be convincing. However, Nagy [2015] considers these vases, at least some of them, as a depiction of the theme '*Who could be the best Achaean warrior*', Achilles or Ajax as the best ones; mainly based on the fact that Achilles has a stronger dice throw.

fig. 05: Maybe the most famous of these vases. In Vatican Museums

2. Some ancient excerpts giving general characteristics of petteia up

Some passages mainly from classical antiquity may bring some light to the kind of game that petteia could be. The problem is that are really few and can only be approached interpretatively. And we should always have in mind that there wasn't only one petteia-game.

2.1. A complicated game up

Text 06: Euripides, Iphigenia en Aulidi, 192-199

κατεῖδον δὲ δύ’ Αἴαντε συνέδρω, τὸν Οἰλέως Τελαμῶνός τε γόνον, τὸν Σαλαμῖνος στέφανον· Πρωτεσίλαόν τ’ ἐπὶ θάκοις πεσσῶν ἡδομένους μορφαῖσι πολυπλόκοις Παλαμήδεά θ’, ὃν τέκε παῖς ὁ Ποσειδᾶνος...	And I saw two in council [-or just talking], one was Ajax of Oileus, the other Ajax of Telamon, the glory of Salamis· and [I saw] Protesilaus, on seats for pessoi pleased with the complicated shapes, with Palamedes, who was Poseidon's grandchild...

This tragedy was written in 407 BCE ca. There're two points here that would need some explanation regarding translation.

Firstly the word *μορφή*. Originally means shape, literally as much as metaphorically. So we have a complicated shape that could please a player. Possibly the position of the pieces is meant, or a combination.

The second point is about who is playing. All agree that Protesilaus and Palamedes are in. But there're translations that involve also the two first, under the name Ajax, based on this *συνέδρω*, that could be translated as in council or just talking/with the company of. Hubner [2009, p. 89], suggests that was a consultation game in pairs. Something that underlines the complexity of the position. However I think that only Protesilaus and Palamedes are playing. This '*in council*' refers strictly to the first two, something that isn't repeated for the second pair.

2.2. A war game up

Text 07: Polybius, Histories, 1.84.7-8

πολλοὺς μὲν γὰρ αὐτῶν ἐν ταῖς κατὰ μέρος χρείαις ἀποτεμνόμενος καὶ συγκλείων ὥσπερ ἀγαθὸς πεττευτὴς ἀμαχεὶ διέφθειρε	And in partial warfares, by cutting off and surrounding many of them, like a good piece-player, he [=Hamilcar] destroyed them without battle

The text was written in the 2nd c. BCE, describing the rebellion that followed in Northern Africa, after the defeat of the Carthaginians during the 1st Punic War. More specifically around the warfares after the battle of Utica in 240 BCE; Hamilcar, who fought against the rebels, was a general of Carthage and father of Hannibal.

The comparison is clear. Petteia here is a war game of strategy. The terms '*cutting off*' and '*surrounding*' may deserve to be taken in account; also a piece by piece capturing could be implied, something like guerrilla warfare, though both cautiously. '*Surrounding*' would fit really better in a draught-like game, rather than backgammon. The term '*without battle*' may show some deepening in gameplay.

2.3. A game of leading strategy?! up

Text 08: Aeschylus, Iketidai [Suppliant Women], 11-15

Δαναὸς δὲ πατὴρ καὶ βούλαρχος καὶ στασίαρχος τάδε πεσσονομῶν κύδιστ᾽ ἀχέων ἐπέκρινε φεύγειν ἀνέδην διὰ κῦμ᾽ ἅλιον, κέλσαι δ᾽ Ἄργους γαῖαν...	And father Danaos, being the advisor [=leader of a plan] and the leader of our band, arranging the pieces, decided as the best of pains to just leave through the waves of the sea, and come in the land of Argos...

The passage is a little difficult, as Aeschylus seems toying with the words, in a play written between 490-465 BCE. While the meanings may have even some proleptic interpretation for events that would follow in the play.

Let's see the plot for a while. It's an introductory scene. Danaos, king of Libya, & his fifty daughters [Danaides], left Egypt, so to avoid a forthcoming marriage with the fifty sons of Aegyptus, Danaos' brother and king of Egypt. And asking for asylum, they arrived at Argos, where Danaos had family roots.

Our word is *πεσσονομῶν* [pessonomon], meaning playing with the pessoi/pieces, but with a word origin of arranging or setting [the pieces]. I think it should be approached with the other two characteristics of Danaos, *βούλαρχος* and *στασίαρχος* [voularchos, stasiarchos]. The first is translated as advisor or leader of a plan, but it's also a word used for the president of a local senate in few cases. The second is translated as leader of a band, possibly with a meaning of revolted/outlaw. I believe that the basic element we should see is the 2nd component of both of these characteristics; meaning that Danaos is -*αρχος* [-archos] of something, that stands for leading power. A leader arranges the pieces. Almost a clear reference of petteia as a strategy game[3].

3 Bakewell [2008] commenting on this passage, adopted inter alia some political approach used by Kurke [1999a, 1999b]. Kurke tried an interesting explanation of the games of petteia with political terms. But connecting a certain type of petteia game, with a specific ideology, within a dualistic pair democracy-oligarchy [1999a, p. 265]; approach that isn't repeated with the same terms in the 1999b paper. However, such a strict connection, between a specific kind of game with a particular political system, may raise some questionning.

2.4. A king's game, as the science of ruling up

Text 09: Plato, Politicos [Statesman], 292d-e

-ἐξ ἀνάγκης δὴ νῦν τοῦτο οὕτω σκεπτέον, ἐν τίνι ποτὲ τούτων ἐπιστήμη συμβαίνει γίγνεσθαι περὶ ἀνθρώπων ἀρχῆς, σχεδὸν τῆς χαλεπωτάτης καὶ μεγίστης κτήσασθαι. δεῖ γὰρ ἰδεῖν αὐτήν, ἵνα θεασώμεθα τίνας ἀφαιρετέον ἀπὸ τοῦ φρονίμου βασιλέως, οἳ προσποιοῦνται μὲν εἶναι πολιτικοὶ καὶ πείθουσι πολλούς, εἰσὶ δὲ οὐδαμῶς. -δεῖ γὰρ δὴ ποιεῖν τοῦτο, ὡς ὁ λόγος ἡμῖν προείρηκεν. -μῶν οὖν δοκεῖ πλῆθός γε ἐν πόλει ταύτην τὴν ἐπιστήμην δυνατὸν εἶναι κτήσασθαι; -καὶ πῶς; -ἀλλ᾽ ἆρα ἐν χιλιάνδρῳ πόλει δυνατὸν ἑκατόν τινας ἢ καὶ πεντήκοντα αὐτὴν ἱκανῶς κτήσασθαι; -ῥᾴστη μεντἂν οὕτω γ᾽ εἴη πασῶν τῶν τεχνῶν: ἴσμεν γὰρ ὅτι χιλίων ἀνδρῶν ἄκροι πεττευταὶ τοσοῦτοι πρὸς τοὺς ἐν τοῖς ἄλλοις Ἕλλησιν οὐκ ἂν γένοιντό ποτε, μή τι δὴ βασιλῆς γε.	- Necessarily, then, this we should now think, in which, if any, of these sciences occurs the one of ruling men, almost the hardest and greatest to acquire. As we must discover it, so that to see whom of the men we should remove from the wise king, who pretend to be statesmen and convince many that they are, but aren't at all. - We should do this, as it was implied [=said] in our conversation. - Would it seem possible the crowd in a city-state to acquire this science? - How? - Would it, perhaps, be possible in a city of one thousand men, a hundred, or even fifty, to acquire it sufficiently? - This way it would be the easiest of all the arts· as we know that, among other Greeks, would never occur so many excellent pessoi-players in one thousand men, let alone kings.

A clear passage. Good pessoi-players are rare and like rulers, or at least like ones who know how to rule. This could also be a loose allusion of the game πόλις [polis], a type of petteia games; and this as the game of petteia is mentioned along with or around the word. Suffice it to say now that the word, πόλις, originally meaning city but also state, has been tracked in some excerpts where meanings around it are analyzed and presented with examples or expressions containing some game of petteia [of which some cases we'll see under A.5.2].

2.5. No legal moves or zugzwang - as a strategy?! up

Text 10: Plato, Republic, 6.487b-c

...καὶ ὥσπερ ὑπὸ τῶν πεττεύειν δεινῶν οἱ μὴ τελευτῶντες ἀποκλείονται καὶ οὐκ ἔχουσιν ὅτι φέρωσιν, οὕτω καὶ σφεῖς τελευτῶντες ἀποκλείεσθαι καὶ οὐκ ἔχειν ὅτι λέγωσιν ὑπὸ πεττείας αὖ ταύτης τινὸς ἑτέρας, οὐκ ἐν ψήφοις ἀλλ᾽ ἐν λόγοις.	... and just like the unskilled [players] in the end [=finishing], are shut out [=blocked, trapped] by the experts in pessoi and don't have what to play [=lead/ direct], in the same way and those [previously mentioned], in the end [=finishing], are blocked and don't have what to say by this other game of petteia, not with counters but with words.

A really interesting passage that probably shows some specific strategy in some game with pessoi, but has some difficulties with its translation.

Here Plato likens some game of petteia to a dialectic process, where a step by step questioning and answering could mislead to a wrong result, seemingly agreeing with one's primal correct thesis. And the debator can't continue his arguments, like in a petteia game there could be a situation where a player has nothing to move, to play. The verb that is used is *ἀποκλείονται*, literally meaning being prevented to move, being shut out or shut up, so blocked, trapped, imprisoned. This has been translated by some writers as cornered, resembling to a draught-like or even a chess-like situation and underlining a possible connection. However, this can't be accurate. Being blocked, either as in a no legal move situation or as in zugzwang, can be seen in the backgammon game, as well as in draughts or chess. But in any case shows some deepening in the gameplay strategy.

However, possibly no luck element is implied here. This as the blocked position has occurred primarily after the losing player's moves, who is misled; if there're dice in, there could be not a save by them.

It's difficult to see whether this blocking signifies the end of the game, something like stalemate. The participle *τελευτῶντες* [=finishing] strictly has as subject the weak players or/and talkers, so here most probably they are finishing their set of moves - combinations, not the game. On this maybe light could bring the following passage, attributed with doubt to Plato again, but which is considered spurious [for a philological comparison of these two texts, check Donato [2016]].

Text 11: Plato [?], Eryxias, 395a-b

Ἴσως γάρ, ἦν δ’ ἐγώ, σὺ οἴει, ὦ Ἐρυξία, τουτουσὶ μὲν τοὺς λόγους, οὓς νυνὶ διαλεγόμεθα, εἶναι παιδιάν, ἐπεὶ οὐκ ἀληθῶς γε οὕτως ἔχειν, ἀλλ’ ὥσπερ ἐν τῇ πεττείᾳ εἶναι πεττούς, οὓς εἴ τις φέροιτο, δύναιτ’ ἂν τοὺς ἀντιπαίζοντας ποιεῖν ἡττᾶσθαι οὕτως ὥστε μὴ ἔχειν ὅτι πρὸς ταῦτα ἀντιφέρωσιν.	Perhaps, I said, you think, Eryxias, that these words, which we are now saying to each other, are [just] a game, as [you think] they aren't true, but just like in petteia [you think that] they are pessoi, that, if one moves them, he could make his opponents weaker, so that they don't have what to counterplay.

Here pessoi are compared again with words, but the meaning is obviously more negative. The writer seems believing that there's some truth beyond arguments in words, while on the contrary in the game of petteia the truth is just on the board. The passage signifies that the situation where there's no counterplay, is just an inferior position. Not a defeat exactly. The word that is used is *ἡττᾶσθαι*, originally meaning being defeated but also being weaker, inferior, dominated, overcome. If we choose to translate as defeat, then the meaning becomes irrational due to the structure of the sentence. Cause the inability of counterplay is set as a conclusion of this *ἡττᾶσθαι* [=being defeated or weaker]; and losing just ends the game. The translation of being weaker feels really better.

2.6. A clever game up

Text 12: Philostratus, Heroicus, 33.3-4

ὄντων δὲ τῶν Ἀχαιῶν ἐν Αὐλίδι πεττοὺς εὗρεν οὐ ῥᾴθυμον παιδιάν, ἀλλ᾽ ἀγχίνουν τε καὶ ἔσω σπουδῆς.	And while the Achaeans were in Aulis, he [Palamedes] invented pessoi, which is not a frivolous [= easy] pastime, but a shrewd and of inside zeal [= pains, trouble, effort].

A later text of the early 3rd c. CE, and without the need of any further explanation

2.7. Compared with geometry and calculation up

Text 13: Plato, Gorgias, 450 d-e

ἔτεραι δέ γέ εἰσι τῶν τεχνῶν αἳ διὰ λόγου πᾶν περαίνουσι, καὶ ἔργου ὡς ἔπος εἰπεῖν ἢ οὐδενὸς προσδέονται ἢ βραχέος πάνυ, οἷον ἡ ἀριθμητικὴ καὶ λογιστικὴ καὶ γεωμετρικὴ καὶ πεττευτική γε καὶ ἄλλαι πολλαὶ τέχναι, ὧν ἔνιαι σχεδόν τι ἴσους τοὺς λόγους ἔχουσι ταῖς πράξεσιν, αἱ δὲ πολλαὶ πλείους, καὶ τὸ παράπαν πᾶσα ἡ πρᾶξις καὶ τὸ κῦρος αὐταῖς διὰ λόγων ἐστίν.	But there're and others of the arts, that accomplish their whole purpose though reasoning [= logic, reckoning, speech, word], and - as it's said briefly - they aren't attached to any action or very little· such as [the arts of] arithmetic and calculation and geometry and pessoi and many other arts, of which some have equal the reasonings to the actions, but the most of them [have the reasonings] more, and absolutely every action and their value [= power, validity] exists trough reasonings.

Here the game of pessoi is in the same group of arts like arithmetic, calculation and geometry. I don't feel 100% sure if this connection signifies a deep thinking/calculation or just a

calculation of the dice throws. At first it could be both. However, a calculation of dice throws compared with geometry seems really really inferior.

A translation problem here could be the word *λόγος* [logos]. It originally means speech, word, and this way we will find most of the passage's translations. However it also means reasoning, logic, reckoning. The problem is that the main object of this Plato's dialogue is the rhetoric art, so speech/word should be a first choice. But this *λόγος* [or even in plural] is characteristic of arithmetic and geometry, too. So if we would choose to translate as word, the thinking process [through words] should be meant firstly or at least implied. I believe that here Plato is toying with the word to a degree, actually letting both meanings to be understood[4].

2.8. First impression up

Having in mind that there were probably more than one games in the group of petteia, here we have: a war-game, a complicated game, a strategic one, one resembling to the art of ruling, one for smart guys, and an other compared with geometry. Well I feel almost sure that at least one of them would be played without dice. Besides the fact that nowhere here dice are implied, especially the art of ruling should exclude a chance element. Also Polybius' description of petteia as a war game [text 07] is rather incompatible with chance.

However, even if the above descriptions could convince us around a non-chance element [something that will be confirmed and below, under A.5.c], we can't be 100% sure that they are referring to the firt appearance of non-dice games; they possibly could just be the first textual allusions. In my mind there was the case of the game under the title *Nine men's morris*, that mainly was played without dice. Around it they have been given some possible really ancient first dates, since 2nd millenium BCE. But they have been questioned convincingly, placing the

4 The comparison between the petteia game and geometry reminds the relevant entry of '*petteia*' in the Lexicon of Platonic words, possibly edited by some Timaeus the Sophist of the first centuries CE. There it was written that geometry was another way to call petteia in Platonic dialogues. However generally the origins of this work as a whole, as well as of each entry seperately, is under question.

first findings in Roman sites of the 1st c. BCE [Berger [2004], p. 15, also discussion in Kevin & Brent Moberly in Classen [2019], p. 711ff].

In any case, maybe the possible indisputable step in game evolution that was made here with petteia, was a non-dice game played on an open board; something that would let human imagination free.

3. Julius Pollux: the earliest surviving games' description of the 2nd c. CE up

Onomasticon, an important work, was originally written before the end of 2nd c. CE by Julius Pollux, a Greek scholar and rhetorician from Naucratis of Ancient Egypt. According to Philostratus, writing almost a century after in his Lives of Sophists [Βίοι Σοφιστών], Pollux was nominated as a professor in the Academy of Athens by Roman emperor Commodus; however Philostratus is questioning to a degree Pollux's education, without being exactly positive or negative.

Unfortunately Pollux's work seems to be a compendium of his original one, written or compiled towards the end of 9th c. CE, by Arethas, Archbishop of Caesarea, but also a book collector and scholar-theologian of the Greek Orthodox Church, who saved many works from classical antiquity [inter alia check this online Review by Philip Rance, also Erich Bethe's introduction - in Latin - in Pollucis Onomasticon, vol. 1, 1900].

Text 14: Julius Pollux, Onomasticon, IX 97-98

τὰ μὲν οὖν ἐργαλεῖα τὰ κυβευτικὰ ἐν τοῖς περὶ τεχνῶν, ἔστι προειρημένα, τὸ δὲ πεττεύειν καὶ ἡ πεττεία, καὶ τὸ πεσσονομεῖν καὶ ὁ πεττευτής, καὶ ταῦτα μὲν ἐπ' ἐκείνοις προείρηται· ἐπεὶ δὲ ψῆφοι μέν εἰσιν οἱ πεττοί, πέντε δ' ἑκάτερος τῶν παιζόντων εἶχεν ἐπὶ πέντε γραμμῶν, εἰκότως εἴρηται Σοφοκλεῖ 'καὶ πεσσὰ πεντέγραμμα καὶ κύβων βολαί'. τῶν δὲ πέντε τῶν ἑκατέρωθεν γραμμῶν μέση τις ἦν ἱερὰ καλουμένη γραμμή· καὶ ὁ τὸν ἐκεῖθεν κινῶν πεττὸν παροιμίαν	And the dice tools are already described in [the chapter] on the arts, and petteuein [=playing with pieces] and petteia [=piece-game] and pessonomein [=arranging pieces] and petteutis [=piece player] and these around them have been already told; and as pessoi are pieces, and each of the two players had five on five lines, properly is said by Sophocles: 'and pessa pentegramma [=five-lined stones] and dice throws'. and of the five lines on each side, there's one line in the middle called sacred· and the one who moves the stone from there

'κίνει τὸν ἀφ' ἱερᾶς'. ἡ δὲ διὰ πολλῶν ψήφων παιδιὰ πλινθίον ἐστί, χώρας ἐν γραμμαῖς ἔχον διακειμένας· καὶ τὸ μὲν πλινθίον καλεῖται πόλις, τῶν δὲ ψήφων ἑκάστη κύων· διῃρημένων δὲ εἰς δύο τῶν ψήφων κατὰ τὰς χρόας, ἡ τέχνη τῆς παιδιᾶς ἐστὶ περιλήψει δύο ψήφων ὁμοχρόων τὴν ἑτερόχρων ἀνελεῖν· ὅθεν καὶ Κρατίνῳ πέπαικται 'Πανδιονίδα πόλεως βασιλέως τῆς ἐριβώλακος, οἶσθ' ἣν λέγομεν, καὶ κύνα καὶ πόλιν, ἣν παίζουσιν'. ἐγγὺς δέ ἐστι ταύτῃ τῇ παιδιᾷ καὶ ὁ διαγραμμισμὸς καὶ τὸ διαγραμμίζειν, ἥντινα παιδιὰν καὶ γραμμὰς ὠνόμαζον.	according to the proverb: 'moves the from the sacred line [stone]'. And the game with many pieces is a plinthion [=board], that has fields [=lands, spaces, squares] lying in between lines· and the board is called polis [=city], and each of the pieces kyon [=dog]· and as the pieces are divided in two according to the color, the art [=way of playing] of the game is in summary that two pieces of the same color eliminate [=destroy, kill] the one of different color· from where and by Cratinus was played [=told in a play]: 'Son of Pandion King of the fertile city, you know the one that we mean, and the dog and the city, that they play'. And close to this game is diagrammismos [=action/product of dividing with lines] and diagrammizein [=dividing with lines], game that is called also lines.

So here we have three games played with pessoi:

- One that we'll call Five Lines [= Pente Grammai] for ease [under A.4.]. I won't deepen too much in it. It's presented mostly for completeness and comparisons.
- One propably called Polis [under A.5.], that is my main target.
- And one similar to the latter, that is called Diagrammismos [also under A.5. in some points for comparison with polis].

4. Five Lines - Pente Grammai up

Pollux, in 2nd c. CE, seems to be the first mentioning this early reference of the game, pessa pentegramma [=five-lined stones], but, according to what he was writing, found in a Sophocles' tragedy of the 5th c. BCE. Hesychius, almost 400 years after Pollux, is making the same reference [in text 04], but he's giving the name of the tragedy too, Nauplios Pyrkaeus. It has been traced that Hesychius was sometimes copying entries of previous lexicographic works, but here the new element of the name of the tragedy can signify either that both, Pollux and Hesychius, were consulting a third independent previous source, or that Hesychius had in hand a possible more complete Pollux's work. In any case the addition of the name of the Sophocles' play gives a validity to the source.

fig. 06: Greek vase of the early 5th c. BCE. It's a unique case of the group of vases depicting Achilles and Ajax playing, where a five-lined board with pieces/stones on each side are shown. Schädler [2009] gives it as in Musees Royaux d'Art et d'Histoire, Brussels, inv. no. R2512.

Pollux, in an other entry of his work [VII 206], is classifying the game among the ones that were played with dice, though in a descriptive way, using actually only the phrase '*the sacred line*'. But a phrase that could refer only to this game in his work. A case where petteia [piece-games] and kybeia [dice-games] are crossed.

The dice element can be confirmed by archaelogical finds, too. Schädler has given some really interesting items in his of 2009 paper. One of them is the following [fig.07], discovered in a tomb in Anagyros, Attiki, Greece. It's a gaming table with five parallel lines on it and four mourning women on each edge, dated in 7th c. BCE, and accompanied by a die. We know from a mourning poem attributed to Pindar [of 5th c. BCE] that there should be a belief around dead, who were amused in playing with pessoi in the afterlife.

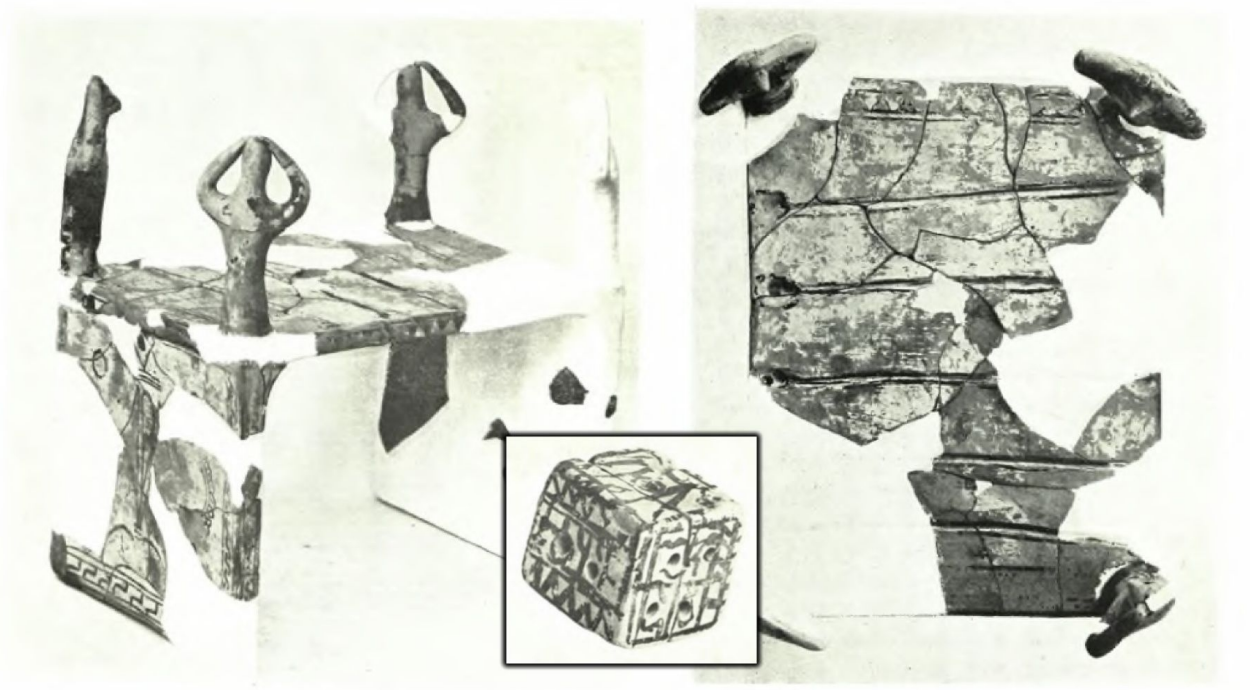

fig. 07: Gaming table and die of 7th c. BCE in Anagyros, Greece. From Kallipolitis, 'Anaskaphi tafon Anagyrountos', Archeologikon Deltion 18, 1, 1963, tables 53-55, in docplayer

Pollux seems also to be the fist in literature matching the aforementioned Sophocles' proverb of '*five lines*' with the probably ancient proverb of '*moving the from the sacred line stone*' [=the middle line]. Phrases that were repeated and analyzed by Eustathius, Archbishop of Thessalonica, in his comments on Homer's Odyssey, too. Specifically he was writing:

Text 15: Eustathius of Thessalonica, Homer's Odyssey, rh.A'/v.107, in the 1825 edition, vol 1, p. 28

ὁ δὲ τὰ περὶ Ἑλληνικῆς παιδιᾶς γράψας... τοὺς δὲ πεσσοὺς λέγει, ψήφους εἶναι πέντε. αἷς ἐπὶ πέντε γραμμῶν ἔπαιζον ἑκατέρωθεν, ἵνα ἕκαστος τῶν πεττευόντων ἔχῃ τὰς καθ᾽ ἑαυτόν. Σοφοκλῆς. καὶ πεσσὰ πεντάγραμμα καὶ κύβων βολαί. παρετείνετο δέ φησι δι᾽ αὐτῶν, καὶ μέση γραμμή. ἣν ἱερὰν ὠνόμαζον ὡς ἀνωτέρω δηλοῦται, ἐπεὶ ὁ νικώμενος, ἐπ᾽ ἐσχάτην αὐτὴν ἵεται. ὅθεν καὶ παροιμία, κινεῖν τὸν ἀφ᾽ ἱερᾶς, λίθον δηλαδὴ, ἐπὶ τῶν ἀπεγνωσμένων καὶ ἐσχάτης βοηθείας δεομένων. Σώφρων. κινήσω δ᾽ ἤδη καὶ τὸν ἀφ᾽ ἱερᾶς. Ἀλκαῖος δέ φησιν ἐκ πλήρους, νῦν δ᾽ οὗτος ἐπικρέκ[τ]ει κινήσας τὸν πείρας πυκινὸν λίθον. τοιοῦτον δὲ καὶ παρὰ	The one who wrote on the Greek game... says that pessoi are five pieces. which were played on five lines on each side, so each of the players has his own [lines, most probably]. Sophocles. and five lined stones and dice throws. and it's lying among them, he says, a middle line. which they called sacred as it's mentioned above, as the loser moves it at last. from where and the proverb, 'moving the from the sacred', that is stone, for the desperated and the ones asking for the last chance help. Sophron. I'll move now the from the sacred. And Alcaeus says it fully, 'now he prevails, moving the from sacred compact [<-possible translation]

Θεοκρίτῳ τὸ, τὸν ἀπὸ γραμμᾶς κινήσω λίθον. Διοδώρου δέ φησι τοῦ Μεγαρικοῦ ἐνάγοντος τὸν τοιοῦτον λίθον εἰς ὁμοιότητα τῆς τῶν ἄστρων χορείας, Κλέαρχος τοῖς πέντε φησί πλάνησιν ἀναλογεῖν.	stone'. and the same by Theocritus the [proverb], 'I'll move the from the lines stone'. And he says that, though Diodorus of Megara was likening this kind of stone to the orbit [=literally 'dance'] of the stars, Clearchus says that [the five pieces] correspond to the five planets.

Firstly it should be underlined that Eustathius lived in the 12th c. CE. But his mentioned prime source is '*the one who wrote On the Greek game*'. A lost now work whose author has been identified as Roman Suetonius of 1st c. CE [check eg. Wardle [1993]]. For me it's not clear enough if the proverbs that followed, are taken all from Suetonius' work or Eustathius was using other even earlier sources. This repeated '*says*' has not always a clear subject. However the mainstream approach is that were all given by Suetonius [check eg. Kidd [2017a], where generally an approach on the references for this game, though I have doubts on one by Aristotle, that will be mentioned below].

> Just a short list of the by Eustathius mentioned here names: Sophocles, tragedian of 5th c. BCE, Sophron of Syracuse, writer of dialogues with comic elements and mimes, of 5th c. BCE, Alcaeus of Mytilene, lyric poet of the 7th c. BCE, Theocritus, Sicilian poet of the 3rd c. BCE, Diodorus Cronus of the Megarian philosophy school of 4th-3rd c. BCE, Clearchus of Soli - Cyprus, philosopher of the 4th–3rd c. BCE.

To these it should surely be added one line by Plato.

Text 16: Plato, Nomoi [Laws], 5.739a

ἡ δὴ τὸ μετὰ τοῦτο φορά, καθάπερ πεττῶν ἀφ᾽ ἱεροῦ, τῆς τῶν νόμων κατασκευῆς, ἀήθης οὖσα, τάχ᾽ ἂν θαυμάσαι τὸν ἀκούοντα τὸ πρῶτον ποιήσειεν.	The next move on the law construction, being unusual just like of pessoi of the sacred, might cause surpise to the one who would hear it for first time.

Not sure if it was unusual to move from the sacred line [=rare], or the move was unusual [=different]. Kidd's in parallel analysis of the aforementioned Alcaeus' passage shows that moving a stone from the sacred line may have special attributes, that could change the game's outcome.

In any case, with these and more in mind and though Murray's approach was different [1952, p. 28], the game seems to be in general a backgammon-like one, played with dice, on a board of five lines [or more of odd number], with pieces moving on them possibly on the same direction-orbit [like planets], and with a possible ultimate goal this sacred line in the middle [mainly, Schädler [2009] & Kidd [2017a]].

fig. 08: Bronze mirror in British Museum [n. 1898,0716.4], of 3rd-2nd c. BCE, Italy. Here we have 11 lines in total on the board

5. Polis up

Repeating Pollux so to start:

And the game with many pieces is a plinthion [=board], that has fields [=lands, spaces, squares] lying in between lines· and the board is called polis [=city], and each of the pieces kyon [=dog]· and as the pieces are divided in two according to the color, the art [=way of playing] of the game is in summary that two pieces of the same color eliminate [=destroy, kill] the one of different color· from where and by Cratinus was played [=told in a play]:

'Son of Pandion King of the fertile city, you know the one that we mean, and the dog and the city, that they play'.

So let's see the given characteristics one by one:

a. The game is played with many pieces. This '*many*' comes after a description of another game that was played with five stones. So probably Polis was played with more than five pieces on each side. The piece is called *κύων* [kyon = dog].

Diagrammismos was probably played with even more pieces. Pollux doesn't mention it, but Hesychius in the 6th c. CE describes it as played with '*60 pieces, white and black, drawn [dragged] into fields*'.

b. We have a game played on a board called *πόλις* [polis, city], probably with squares, as '*fields lying between lines*'. The square element is underlined also by the chosen word *πλινθίον* [plinthion], a word derived from *πλίνθος* that literally means brick, signifying either a board-frame with little bricks or a bigger squared board [or both]. To have a clue, it's also a word [plinthion] that has been used to signify a squared-rectangular formation of soldiers in battle.

The fact that there were these kind of gaming-boards in ancient Greece can be seen in all four of the following photos [fig. 09, 10, 11, 12]. The following fig. 09 specifically is an artifact found in the archealogical area of Pella, Greece, now exposed in the local museum. Ignatiadou describes it as '*a turquoise faience plaque with a plain grid of 11x11 squares, from Pella; it is exhibited with twelve glass counters that may or may not belong together*' [in Ignatiadou [2019], pp. 145 & 152, where also a list of items and a photo of another smaller marble board, p. 146, of 3rd-2nd c. BCE, in Arch. Mus. of Abdera].

Unfortunately she doesn't give a picture of this board. The following is a compilation of two shots found in web, and picked according to the description. Without finding an official

presentation I couldn't either identify in a certain way the exact dating of it. Ignatiadou sets it with a question mark in the Hellenistic period, that is mainly during the 4th-2nd centuries BCE.

fig. 09: Gaming board of 11x11 squares, in Archaeological Museum of Pella, Hellenistic period [?]. Big photo, the board with knucklebones on left, from sophiarenblog, smaller [up left] for comparison and identification, the board with pebbles on right, shot from Михаил Назаренко youtube channel

The item of fig. 10 & 11 is clear. A gaming scene made of terracotta. Two playing on a checker board with pieces and without the presence of dice, while a third is watching. It was dug out in the area of Athens in the 19th c, now in the National Archaeological Museum of Athens. Unfortunately not in the permanent exhibition. Archaeological websites are dating it in the 1st c. CE.

fig. 10: Gaming scene made of terracotta, 1st c. CE, in the National Archaeological Museum, Athens [EAM 4200]

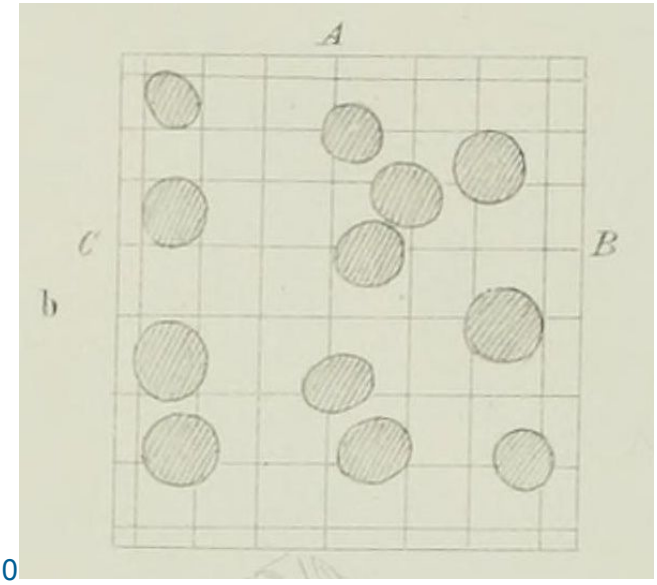

fig. 11: Drawing of the board from above. The pieces seem to be placed randomly. From Archäologische Zeitung, 1863, col. 37 & tafl. CLXXIII

c. Dice. Pollux doesn't mention the use of dice or knucklebones for the game Polis. In a previous entry of his Onomasticon [VII 206], is listing games played with the help of dice. There as we've seen Pente Grammai are given. Also Diagrammismos, the game that was close to Polis. However Polis not. [There's also an allusion of Diagrammismos as a dice-game, in a fragment by Philemon, a comedian playwright of 4th c. BCE, mentioned by Eustathius in Iliad's comments, rh.Z'/v.169].

Kidd [2017b] indicated convincingly and specifically with examples, that this Pollux's list of dice-games in the VII 206 entry, doesn't include strictly dice-games only, but generally gambling-ones. However he suggests further that by the term gambling [=kybeia] Pollux was meaning mostly the money-betting feature. This could let us have the impression that games played without the help of chance could be part of gambling, if they were played for money. And this would be really useful for our current approach, so to show that Polis and other games weren't played via chance, even if kyboi [=dice] are mentioned. However I think that is better to remain more strict on this very latter approach, so to seem more convincing. The fact that Polis-game isn't included in the Pollux's dice-list should be sufficient for now.

Further, in the current entry of IX 99, the knucklebones' description is following, and Polis isn't mentioned or implied at all, again; underlining the total absence of the luck-element for this particular game according to Pollux. Eustathius of the 12th c. CE, gives a different version involving knucklebones, that will be discussed below [under A.5.1].

d. The way of capture seems to be similar with the Roman Ludus Latrunculorum and Northern Tafl. Two pieces can eliminate one of the opponent's. Though it isn't mentioned exactly if these two attacking pieces should be on the opposite sides of the target-piece. Hubner [2009, p. 88] suggests that this was a Pollux's loan from descriptions of the Roman game in Ovid, and not the game's original method of play. We will be back on this [under A.5.2.3 & A.5.3].

e. There's a clear reference of a comical play written by Cratinus of the 5th c. BCE, where the game polis is mentioned, something that justifies at least the existence of the game since then. Cratinus' passage seems to be given and in earlier writings. Zenobius of the 2nd c. CE but surely earlier than Pollux, wrote a compedium of proverbs that were given by Didymus Chalcenterus of Alexandria, 1st c. BCE, and by Lucillus of Tarrha [Crete], 1st c. CE.

Text 17: Zenobius, Compendium of Proverbs, 5.67

Πόλεις παίζειν: μέμνηται ταύτης Κρατῖνος ἐν Δραπέτισιν· ἡ δὲ πόλις εἶδός ἐστι παιδιᾶς πεττευτικῆς. Καὶ δοκεῖ μετενηνέχθαι ἀπὸ τῶν ταῖς ψήφοις παιζόντων, ταῖς λεγομέναις νῦν χώραις, τότε δὲ πόλεσιν.	Playing cities [poleis]: Cratinus remembers it in Drapetisin [=Run-away women]; and the city is a kind of piece-game. And it seems that was transferred [the name] from the players of the pieces, that are called now fields, then [were called] cities.

The proverb seems to be given in a different way. In singular by Pollux, in plural by Zenobius. And Pollux names the board as polis [=city], while Zenobius the pieces as poleis [=cities]. Pollux's proverb is bigger. Maybe it was just a repetition in the same play. However, it underlines that they didn't copy each other, but there should be at least one other third earlier source. Zenobius mentions also the name of the theatrical play, fact that adds more validity. It's also important that dice, or generally the luck-element, isn't mentioned or implied at all, again. Generally the passage gives the impression of an old game that had survived; as the change of the piece-names indicates[5].

5 One interesting thing is that the expression in Pollux goes '*and the dog and the city, that they play*' [see above, text 14]. The relative clause that starts with '*that*' in the ancient text refers only to '*city*', as the relative pronoun [introducing the relative clause] '*ἣν*' is of feminine gender like *πόλις* [city], while *κύων* [dog] is masculine. Something that may cause questioning if these are two different games; the whole phrase would probably need a neutral gender. If I would read it in an historical text I would feel more sure for this approach, however, as it's written in a comical play, maybe it's just given for a comic emphasis. The word '*dog*' [=κύνα] is probably referring to a game-piece. The knucklebone throw [check below under A.5.1] bearing the same name seems less possible, as here it's in singular.

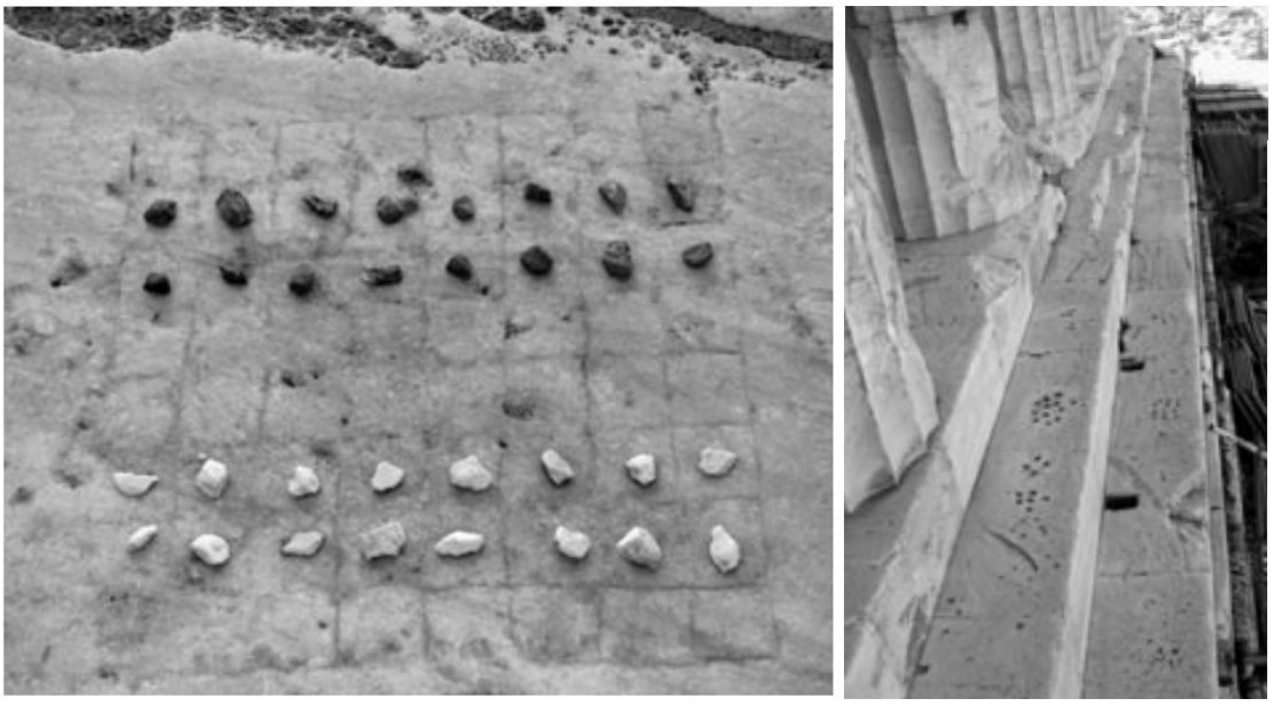

fig. 12: Carved 8x8 board on the west-side colonnade of Parthenon, Acropolis, Athens. Karakitsou [2009], informs us that around Parthenon there are about 50 carved games on the marble stones, most of them close to each other. Only three of them could be of the pessoi-group. Dating is difficult according to Karakitsou. However she suggests that they should be carved in a period when ancient god worship would have started to decline, so after 3rd c. CE. But before 6th c. CE, as many of them are found on a trace of a wall built in those years

5.1. The problematic Eustathius' comments on the game Polis up

Eustathius, a Byzantine Greek scholar and Archbishop of Thessalonica, gave some confusing information. Possibly the fact that he was writing in the 12th c. CE, hundreds of years after, had played its part. Commenting on the Homer's lines on pessoi [text 01], wrote on Polis:

Text 18: Eustathius of Thessalonica, Homer's Odyssey, rh.A'/v.107, in the 1825 edition, vol 1, p. 29

ὁ τὰ περὶ τῆς καθ' Ἕλληνας παιδιᾶς γράψας... περὶ δὲ τοῦ εἰρημένου κυνὸς, κἀκεῖνο λέγει αὐτὸς γραφὲν καὶ ἀλλαχοῦ, ὅτι εἶδός τι κυβείας, καὶ πόλις· ἐν ᾗ ψήφων πολλῶν ἐν διαγεγραμμέναις τισὶ χώραις κειμένων, ἐγίνετο ἀνταναίρεσις· καὶ ἐκαλοῦντο αἱ μὲν γραμμικαὶ χῶραι, πόλεις ἀστειότερον· αἱ δὲ ἀντεπιβουλεύουσαι ἀλλήλαις ψῆφοι, κύνες διὰ τὸ δῆθεν ἀναιδές. Ὅτι δὲ καὶ τις βόλος ἀστραγαλιστικὸς, κύων ἐκαλεῖτο,	The one who wrote on the pastime [=game] of Greeks... and around the aforementioned dog, he says and that [<-pronoun], which is written and elsewhere, that [<-conjunction, that-clause] it's a kind of dice-game, and a city; in which, as many pieces lying on some divided with lines fields, occurs [ant-]elimination. and the drawn by lines fields are called poleis [=cities], for [seeming] more funny. and the pieces that are planning against one another, [are called] kynes [=dogs], for [seeming] supposedly rude.

προδεδήλωται.	And that some knucklebone throw is called dog, has already been said.

These information of Eustathius on the game Polis seem coming again from Suetonius of the 1st c. CE. The passage comes right after an entry on knucklebones, where a throw, the '1', is also called dog [=kyon, κύων]. Compared to the Pollux's text, Eustathius gives the reason of the names. But also gives/repeats the term *ἀνταναίρεσις* [antanairesis], as the main action of the game. *ἀνταναίρεσις*, a rare term, is a compound word, 2nd element is *ἀναίρεσις*, same word-root found and in Pollux, translated as killing, eliminating, destroying. 1st element is the preposition *ἀντ(ὶ)*, with prime meanings '*against*' or '*instead*'. However Liddell & Scott lexicon gives the whole word *ἀνταναίρεσις* as meaning here '*alternate removal*'. The term removal is ok. But I believe that anti [=ἀντ(ὶ)] here could retain its prime translation as '*instead*'. Meaning removal instead of a move, more literal, or, more allegorically, removal taking the piece's place.

The big problem with this entry is that Eustathius seems classifying the game Polis among the dice-games, or the knuckldbone ones; coming somehow in opposition with the earlier Pollux's and Zenobius' writings [texts 14 & 17]. The Kidd's approach [2017b], that *κυβεὶα* could stand for all the gambling-game group, doesn't seem possible to be applied here. Before this entry, precedes a comparison-similarity between knucklebones and dice [='*ὁμοίως κύβῳ*'] based on the fact that knucklebone is like a four-sided die. Thus the term [=κυβεὶα, dice-games] seems to have a more literal meaning here, rather than a wider approach. However syntax and grammar of this Eustathius' entry combined with possible meanings could be a real problem, too, but better to put this aside, as analysis would make things just more complicated[6].

6 Suffice to say here that the term *πόλις* [polis] seems at first to be component of the first sentence where the dice are mentioned [fact on which the confusion is based], but kinda separated and at the end of the sentence, maybe a little as a foreign part. It seems better belonging semantically to the following sentence where the term is explained. This assumption is strongly underlined by the punctuation found in the manuscripts. In P1 of the 12th-13th c. CE [BNF Grec ms 2702, f. 9r] the word is separated with a comma from the first senctence and with a mid-point from the following sentence [as in the text 18 that I give above]; but in P2, a later manuscript of the 16th c. CE [BNF Grec ms 2703, f. 18v], which is considered partially copy of the previous, the term *πόλις* [polis] is separated with a mid-point from the previous sentence and with not any sign from the following, signifying that it belongs only to the explanatory 2nd sentence; like a correction [?]. However P1 is considered an autograph by Eustathius, though not for official showing, but rather personal.

A possible answer to this classification is that Eustathius was writing only '*around the aforementioned dog*'. Statement repeated and after the description of the game Polis. So Schädler [2002] considers this passage just part of a context. The assumption, that in text 18 there's just a logical connotation, could be signified, too, by the statements that the knucklebone throw '1' is called dog, and so the game pieces in Polis; but the latter not cause of a possible connection with the knucklebones. It's just so to seem supposedly rude, brash.

Schädler, in his of 2012 paper, also suggests that '*Eusthathius was confused by the double meaning of dog as a counter in polis and as a throw in dice games*', taking in account and an other Eustathius' passage [text 20]. With this approach may come along, the naming of the knucklebones' throws by Greeks and Romans.

Text 19: Propertius, Elegiae 4, VIII, v. 46

me quoque per talos Venerem quaerente secundos semper damnosi subsiluere canes	And as I was looking for Venus through my second knucklebones, the injurious dogs have always come out

At least at three instances in Latin literature, one can read about these '*damnosi canes*' [=injurious dogs]. Specifically once in Sextus Propertius and twice in Ovid, all of the 1st c. BCE [Propertius, Elegiae 4, VIII, v. 46 - Ovid, Ars Amatoria, II, v. 206 - Ovid, Tristia, v. 474]. Something that may show a possibility of mistransliteration or just a confusion, either by Eustathius or even in a source he used; just a possibility with doubts of course. However it's underlined by the fact that '*dogs*' seems to be the only common name as a knucklebone throw, both in Greeks and Romans; the rest seem altered [eg. Venus was the best Roman throw, while Euripides probably the best Greek one].

So can't be sure of anything, just for the fact that the interpreter or transcriptor of this passage seems facing the same difficulties since 16th c. CE. And it has been also noted that P1 had passed through other hands that added mainly marginal comments; a mid-point wouldn't be such a notable addition, while these specific words in the early ms seem a little damaged, like more ink had poured. Further, another manuscript of the 14th-15th c., L: [Laurenz. MS Plut. 59.06, f. 16r], has a similar with P2 '*corrected*' punctuation; the term polis is seperated with a comma from the previous sentence and not at all with the next one. This L manuscript is a copy of another autograph M: [Marc. Gr. Z. 460 (=330)] of 12th c., of which unfortunately I couldn't track an online copy. So my search ends here. According to these, the early transcriptors saw in Eustathius' personal notes that the term polis should belong to the next sentence [for general approach of these manuscripts, Makrinos [2005 & 2007] & Cullhed [2012 & 2016]].

But Eustathius is writing again on the game Polis in his comments. This time directly in connection with knucklebones.

Text 20: Eustathius of Thessalonica, Homer's Iliad, rh.Ψ'/v.88, in the 1830 edition, vol 4, p. 270

... δηλοῖ δὲ ὁ ῥηθεὶς κύων βόλος ἀνταναίρεσίν τινα ψήφου· ἐν χώραις γάρ τισι διαγεγραμμέναις πεττευτικῶς, πολλῶν κειμένων ψήφων, ἅς ἐχρῆν ἀνταναιρεῖν, αἱ μὲν χῶραι πόλεις ἐλέγοντο νόμῳ κυβευτικῷ, κύνες δὲ αἱ ἀλλήλαις ἀντεπιβουλεύουσαι ψῆφοι.	... and the said throw dog signifies the [ant-]elimination of some piece, and while many pieces lying in some fields drawn by lines in the petteia way, which [pieces] one should [ant-]eliminate, the fields are called cities according to the dice rule, and the pieces that are planning against one another [are called] dogs.

Comparing the two texts [18 & 20], they're like been written by the same person but at different periods of his life. Opposed information, or at least altered, are given. Sounds also weird the saying that the game was played on a board for a petteia-game, while the fields were called cities [=Poleis] according to the dice rule; a mixing between piece-game and dice-game rules is premised. But the biggest contradiction is that, in text 18, the fields are called cities so to seem more funny, while in text 20, are named this way just according to the aforementioned dice-rule. Is it implied here that were called and played elseway according to some other rule, like a petteia piece-rule? It seems like Eustathius is just using two different sources[7].

7 In accordance with this, Eustathius gives Suetonius as his source for the first text [18], while none for the second [20]. One notable observation is that in the autograph manuscript of the Iliad of the 12th c. [Laurenz. MS Plut. 59.03, f. 189v] the passage of text 20 and some lines before were added by Eustathius as a footnote at the end of the page. Cullhed [2012, p. 447] gives the dating of the Eustathius' works. He wrote firstly his comments in Iliad, then the ones of Odyssey. However, in Iliad he added some footnotes, as this one, written in a long period of time ahead, using new sources. And a strange coincidence occurs. In the knucklebone description in Iliad [rh.Ψ'/v.88, around text 20], Eustathius gives two pieces of information, not repeated in the relevant passage in Odyssey [rh.A'/v.107 around text 18], though the latter is bigger. Firstly the fact that the knucklebone game was played with four pieces of knucklebones [='*τέσσαρσιν ἀστραγάλοις*'], secondly a proverb by Kallimachus. Both these hints, along with the rest of the text, were given by Arethas in the 9th c. CE, as remarks in the Plato's dialogue Lysis, 206e; fact that can signify a possible origin of Eustathius' comments in Iliad [Bodl. Clarke MS 39, f. 308v & transcr. in Greene [1981], p. 456]. However, some other Byzantine remarks could be enlightening, too; indicating maybe a general view. For example the anonymous Plato's scholiast of the 9th c., commenting on Laws 7.820c, writes around petteia: "*and pessoi are cubes [=dice]... and Aristarchus calls pessous the pieces with which they played...*" [in BNF Grec 1807, 9th c. CE, f. 230r & transcr. in Greene [1981], p. 333]. Comment that probably underlines a possible misled identification between pessoi-pieces and dice, that could exist during those years in Byzantium, though Aristarchus' correct saying is also collated [possibly Aristarchus of Samothrace

In any case this last text 20 seems irrational, or at least intentionally incomplete. Taking for granted what it's written, let's see what we have: in a game played on a board with fields, the purpose is to eliminate opponent's pieces. This elimination, however, comes if I throw a dog, '1'. This 1 was the worst knucklebone throw, so what does it mean? That I should remove my own? But let's ignore this. If my prime goal is achieved by a throw and only, then why to play this game, and not just knucklebones? And what would happen if I never threw a dog? Best case scenario is that rules are omitted intentionally and that there were and other ways for capturing pieces. If that's the case, Eustathius is just giving the knucklebone version or part, without meaning that the game was played only with knucklebones [compare Schädler [2002], p. 97]. And this as a best case scenario.

Schädler was right. Eustathius does seem confused. Generally I believe that Eustathius' entries [texts 18 & 20] should be taken in account very cautiously.

5.2. Possible allusions of game Polis in petteia references since classical antiquity up

As we've seen in Cratinus' passage, mentioned by Pollux and Zenobius [texts 14 & 17], Polis was a known term in classical antiquity as a game. However polis also meant the city, the state. Texts have been tracked where petteia references and examples/comparisons are used on a discussion around the city/state. So an allusion of the game Polis is really probable.

5.2.1. Polis, a game of ruling virtue up

Text 21: Euripides, Iketidai [Suppliant Women], 403-411

Θησεύς: πρῶτον μὲν ἤρξω τοῦ λόγου ψευδῶς, ξένε, ζητῶν τύραννον ἐνθάδ· οὐ γὰρ ἄρχεται ἑνὸς πρὸς ἀνδρός, ἀλλ᾽ ἐλευθέρα πόλις. δῆμος δ᾽ ἀνάσσει διαδοχαῖσιν ἐν μέρει ἐνιαυσίαισιν, οὐχὶ τῷ πλούτῳ διδοὺς τὸ πλεῖστον, ἀλλὰ χὠ πένης ἔχων ἴσον.	Theseus: Firsty you started your speech falsely, stranger, in seeking an absolute ruler here. As [this city] isn't ruled by one man, but is a free city. People rule it in succession every year, without giving the most to the wealth, but the poor have equal.
Κῆρυξ: ἓν μὲν τόδ᾽ ἡμῖν ὥσπερ ἐν πεσσοῖς δίδως κρεῖσσον: πόλις γὰρ ἧς ἐγὼ πάρειμ᾽	Herald: You give us one advantage, as in a game of pessoi; as the city from which I

of the 3rd c. BCE]. Here also it could be applied Kidd's approach [2017b] but maybe in a wider way; meaning that the phrase '*pessoi are cubes*' could be translated more freely as '*pessoi are gambling*', but this with a huge doubt.

ἄπο ἑνὸς πρὸς ἀνδρός, οὐκ ὄχλῳ κρατύνεται·	come is ruled by one man only, not by the mob;

A possible allusion of Polis game is obvious.

Euripides' Iketidai is a play written in 422 BCE ca. The plot till this scene, inspired from legend, has as follows: A battle for the control of the city of Thebes took place. Invaders lost, but both leaders died. Thebes' new leader ordered the non-burial of the enemies' dead bodies. Suppliant women from the city of Argos, that had sent troops against Thebes, ask from Theseus to intervene so to bury their beloved ones. However, he had to convince his Athenian co-citizens for this, as the city has democracy. Meanwhile a herald from Thebes arrives to Athens, so to ask from the city to keep neutrality.

So a comparison between monarchy and democracy is tried, using the game of pessoi with a probable allusion to the Polis one. Kurke [1999a, pp. 265-266] saw here a possible reference in two games, one corresponding to tyranny, one to democracy. More probable seems to me that the comparison between two political systems isn't transfered into a choice between two games. This as only the herald does mention pessoi. Theseus doesn't answer afterwards on this petteia reference. Instead, he calls the herald a good worker of the words, and starts analyzing directy the benefits of democracy.

Herald, right after considering that ruling by one man, instead of a mob, is an advantage, is explaining that not all men are able to rule a city, while many of the mob could be misled by words. If we apply these to the game, the meant advantage probably refers to the kind of the player, and not to the possible game rules. Seems more probable that the herald is implying here that ruling efficiently a city [polis] needs some quality, like playing in the game of Polis. An approach that agrees with Plato, in Politicos [Statesman], 292d-e [text 09].

5.2.2. City or cities? up

Text 22: Plato, Politeia [Republic], 4.422d-423b

- τί δ’ ἂν πρεσβείαν πέμψαντες εἰς τὴν ἑτέραν πόλιν τἀληθῆ εἴπωσιν, ὅτι ‘ἡμεῖς μὲν οὐδὲν χρυσίῳ οὐδ’ ἀργυρίῳ χρώμεθα, οὐδ’ ἡμῖν θέμις, ὑμῖν δέ· συμπολεμήσαντες οὖν μεθ’ ἡμῶν ἔχετε τὰ τῶν ἑτέρων;’ οἴει τινὰς ἀκούσαντας ταῦτα αἱρήσεσθαι κυσὶ πολεμεῖν στερεοῖς τε καὶ ἰσχνοῖς μᾶλλον ἢ μετὰ κυνῶν προβάτοις πίοσί τε καὶ ἁπαλοῖς; - οὔ μοι δοκεῖ. ἀλλ’ ἐὰν εἰς μίαν, ἔφη, πόλιν συναθροισθῇ τὰ τῶν ἄλλων χρήματα, ὅρα μὴ κίνδυνον φέρῃ τῇ μὴ πλουτούσῃ. - εὐδαίμων εἶ, ἦν δ’ ἐγώ, ὅτι οἴει ἄξιον εἶναι ἄλλην τινὰ προσειπεῖν πόλιν ἢ τὴν τοιαύτην οἵαν ἡμεῖς κατεσκευάζομεν. - ἀλλὰ τί μήν; ἔφη. - μειζόνως, ἦν δ’ ἐγώ, χρὴ προσαγορεύειν τὰς ἄλλας: ἑκάστη γὰρ αὐτῶν πόλεις εἰσὶ πάμπολλαι ἀλλ’ οὐ πόλις, τὸ τῶν παιζόντων. δύο μέν, κἂν ὁτιοῦν ᾖ, πολεμία ἀλλήλαις, ἡ μὲν πενήτων, ἡ δὲ πλουσίων· τούτων δ’ ἐν ἑκατέρᾳ πάνυ πολλαί, αἷς ἐὰν μὲν ὡς μιᾷ προσφέρῃ, παντὸς ἂν ἁμάρτοις, ἐὰν δὲ ὡς πολλαῖς, διδοὺς τὰ τῶν ἑτέρων τοῖς ἑτέροις χρήματά τε καὶ δυνάμεις ἢ καὶ αὐτούς, συμμάχοις μὲν ἀεὶ πολλοῖς χρήσῃ, πολεμίοις δ’ ὀλίγοις. καὶ ἕως ἂν ἡ πόλις σοι οἰκῇ σωφρόνως ὡς ἄρτι ἐτάχθη, μεγίστη ἔσται, οὐ τῷ εὐδοκιμεῖν λέγω, ἀλλ’ ὡς ἀληθῶς μεγίστη, καὶ ἐὰν μόνον ᾖ χιλίων τῶν προπολεμούντων· οὕτω γὰρ μεγάλην πόλιν μίαν οὐ ῥᾳδίως οὔτε ἐν Ἕλλησιν οὔτε ἐν βαρβάροις εὑρήσεις, δοκούσας δὲ πολλὰς καὶ πολλαπλασίας τῆς τηλικαύτης.	- So what if they would send an embassy to the other city and tell the truth, that 'we don't use neither gold or silver, nor this is our law, but it's yours; so if you fight with us, you will get the [wealth] of the others;' you think that, after hearing these, they would prefer better to fight against dogs solid and thin or along with the dogs against sheep fat and tender? - I think not. But if the wealth of the others, he said, are accumulated in one city, look if there's danger for the non-wealthy [city]. - Fortunate you are, I said, thinking that some other [city] deserves to be called as a city, compared to the kind of the one that we are constructing. - But what [it should be called], he said. - The others, I said, should be called in a greater way [=plural]; cause each of them are many, and not one city, as the saying of the players goes. And two [cities they are; meant as components of a big one] at least, each fighing the other, the one of the poor, the other of the rich; and in each of them many [cities], which if you treated them as one, you would fail totally, but if [you treated them] as many, giving the wealth, powers or even persons, of the ones to the others, you would always have many friends [=allies], and few enemies. And till your city is governed prudently, like it was set above [=the one they were constructing], it will be the greatest, not in reputation I say, but truly the greatest, and even if it has only one thousand of defenders-fighters; cause you won't find easily one big city of this way neither in Greeks, nor in barbarians, but [you'll find] many and multiplied in size [cities] that seem [big].

The implication of the game Polis was so intense, that even the Plato's Scholiast of the 9th c. mentioned the game in his brief comments, and without a dice reference [BNF Grec 1807, f. 39r & transcr. in Greene [1981], p. 221].

Here Plato, is praising the city that shows unity and discipline compared with the one that has such diversity, that could be even considered as more cities in one. He argues that the former could prevail in war over the latter, even if the numbers were against. The transfer of this comparison to the game is easy. Just assume that the citizens are the pieces.

It's noticeable that here the word city [=πόλις] is close to the one for dogs [=κύνες], as its defenders-fighters; the name that Pollux had used for the game pieces. The term dogs had been used and at other instances of ancient Greek literature, out of game's references, to signify generally the guardian [eg. Aeschylus, Agamemnon 896] or even a god's agent [eg. Aeschylus, Prometheus Bound 1022].

The difficulty of this text is the phrase '*τὸ τῶν παιζόντων*', literally meaning '*the one of the players*' making the allusion more intense. It's a phrase that has been tracked in Plato and in other excerpts, freely & safely translated: '*as they say (jestingly)*'; and it's placed around possible proverbs [in Rep. 9.573d & Laws. 6.780c, but also see Laws 4.723ε]. However the mainstream approach, based and on the Scholiast of the 9th c., is that at least in this case, the game is implied too [check also Dobbs [2018], p. 69, Adam [1905], p. 211, in comments, contra Stewart [1893]].

5.2.3. The lonely piece - ἄζυξ up

Text 23: Aristotle, Politics, 1.1253a

ἐκ τούτων οὖν φανερὸν ὅτι τῶν φύσει ἡ πόλις ἐστί, καὶ ὅτι ὁ ἄνθρωπος φύσει πολιτικὸν ζῷον, καὶ ὁ ἄπολις διὰ φύσιν καὶ οὐ διὰ τύχην ἤτοι φαῦλός ἐστιν, ἢ κρείττων ἢ ἄνθρωπος· ὥσπερ καὶ ὁ ὑφ᾽ Ὁμήρου λοιδορηθεὶς 'ἀφρήτωρ ἀθέμιστος ἀνέστιος'· ἅμα γὰρ φύσει τοιοῦτος καὶ πολέμου ἐπιθυμητής, ἅτε περ ἄζυξ ὢν ὥσπερ ἐν πεττοῖς.	So from these it's obvious that the city [=organized society/state] is of the natural [things] and that the man is by nature a political animal [=meant to live in organized society], and the citiless man by nature and not by fortune, is either lower or better than a man; just like the one who was reviled by Homer [as:] 'clanless, lawless, hearthless [=familyless, homeless]'; as he's by nature like this and at the same time desirous of war, just like being single [=without partner] just like in pettois.

An important text of the 4th c. BCE. And a really difficult passage, that has caused many and different thoughts among the writers.

Aristotle considers that man is born meant to live in a society [in polis]. In case this doesn't occur cause of man's choice/nature, and not just accidentally, he considers man either lower or higher than the average human being. For this sets a poetic example taken from Homer, where a man actually out of the society is considered as '*desirous of war*'. A strange expression, that connects it seemingly with an allegoric picture of a single piece [= '*ἄζυξ*'] in some petteia game[8].

The mention of the word polis [=city] along with the relevant meanings gave a strong argument for supporting a connection with the game Polis described by Pollux [Austin [1940]]. Such a connection could even be a justification of Pollux's description of capturing [text 14], where two pieces prevail over one; this as *ἄζυξ* [=azyx] means the unpaired. And it's one strong enough coincidence that in the Roman Ludus Latrunculorum, the enemy that could capture a piece was called on the contrary '*twin*' or '*two-headed*' [under B.2.4.].

But the word *ἄζυξ* had been also tracked in a poem of Agathias Scholasticus, of the 6th c. CE, describing a backgammon-like game, where this single piece seemed to be a '*blot*', a piece that can be hit during the game; regarding the Aristotle's time, possibly the Pente Grammai would be meant [from the latest and really enriched Kidd [2017a], also Susemihl & Hicks [1894], p. 148].

However a general sceptisism has been expressed already since 19th c. [Newman [1887], p. 121, Jackson [1877]]; and Thraede in 1967 just considers it a poetic addition having speech-metrical characteristics. Hubner [2009] seems rejecting, or at least arguing against, both possible connections with the specific games of petteia. Regarding the backgammon-like one

8 On the word ἄζυξ: It's a compound word. 1st component is the privative prefix '*α-*', 2nd is the word '*ζυγός*' with first translation as '*yoke*'. So ἄζυξ is the unyoked, commonly used for a pair of animals that should drag a vehicle. And based on this it was meaning metaphorically the unpaired, the one without partner/match, the single; used for example for the unmarried or even the virgin. However one of the early translations of '*ζυγός*' was also the rank, file, of a troop formation. And made me wonder if this ἄζυξ here would have also the meaning of the one out of this formation. Really wide approach. In any case the translation as '*single*' or better '*unpaired*' are sufficient enough.

of Agathias, mostly cause of the really long time that separates the two texts, almost 1.000 years, without the existence of any other intermediate written record that would mention the term. The fact that also Pollux doesn't cite the word, though he was quoting terms even without explanation, agrees with Hubner's argument. Regarding the possibility of Polis, Hubner rejects it mainly with the thought that a single piece can't be considered as '*desirous of war*', while it can be captured by two of the opponent's, not being itself able to attack. He seems partially concluding that game comparisons were usual in ancient texts, and we shouldn't take them to the letter.

But I think that this '*desirous of war*' may give the solution. Before analyzing it, two preconditions:

i. Aristotle's text is a philosphical/political one, not poetic. In the relevant petteia allegory the particle '-*περ*' is used, literally meaning *just*->very much/exactly, signifying the accuracy of the comparison. And in fact this word can be seen twice. Aristotle seems to feel sure for this allegory.

ii. Ancient Greeks were quite familiar with the Homeric epics. These were the most famous work for centuries by far and part of their entairtainment. To such degree, that it was said that Solon the Athenian, legislator of the 6th c. BCE, had issued decree ordering the bards of the Homeric epics to recite them in sequence when in public; meaning each would continue from the point that the last stopped; and this according to law. Fact that underlines the position of these works in the life of the ancient Greeks. So when Aristotle is referring to Homer in this passage, he's probably addressing to an aware audience.

Already since 1877 Jackson had noted that the Homeric passage should be seen complete so to understand Aristotle. And he was right on this.

Text 24: Homer, Iliad, I'/63-64

ἀφρήτωρ ἀθέμιστος ἀνέστιός ἐστιν ἐκεῖνος, ὃς πολέμου ἔραται ἐπιδημίου ὀκρυόεντος.	clanless, lawless, hearthless [=familyless, homeless] is he, who loves the chilling [=horrible] civil war.

So that '*desirous of war*' is based on Homer and it's in fact a '*civil war*'. To understand what Homer was saying let's see the plot. The Achaeans were losing by the Trojans, so badly that their leader Agamemnon suggested quiting the war. Reaction followed in the camp. And the above were of the words told by Nestor, of the elders and wisests. He was trying to forestall some possible reaction in a conference that would follow, where Nestor was planning to propose to Agamemnon a delegation to the mighty warrior Achilles. Achilles, the best Achaean warrior, was refusing to fight, cause of a dispute he had with Agamemnon. So Nestor was actually suggesting that an apology should be asked with ultimate goal Achilles to join again the war against the Trojans. And Agamemnon was convinced.

Hence this civil '*war*' wasn't even a war, but a possible dispute, a verbal conflict, between leading men of the same side. At a first level the obvious is meant: a conflict between the side that would do anything to continue the war and the one that would quit. But at a second level, it should be at least implied the dispute between Achilles and Agamemnon, of the main elements of Iliad. And I don't know if it's a poetic irony or just a word-toying, but the use of the word '*πολέμου*' [='*war*'] in Homer creates here a verbal-meaning contrast; the mighty warrior Achilles, actually is refusing to fight and join the Trojan war, cause of the previous dispute [='*civil war*'] he had with Agamemnon. So the emphasis in this phrase is transfered on the word *ἐπιδημίου* [=civil].

Aristotle doesn't need to repeat the whole Homer's words; and the sentence's structure was altered, changing places between subject & predicate. While in Homer the civil war lover is a clanless man, in Aristotle the citiless is a desirous for war; probably a change for emphasis, as he's speaking to an aware audience. And Aristotle's lines are making sense now. The citiless man is one who desires a dispute/disruption inside his own [previous] city.

Transfering these to a possible game of petteia, the single piece [*ἄζυξ*] is a piece that would cause problems, disruption, to its own side. And this piece seems to be something exceptional, not the rule, just like the case in Iliad. A known to the auditors game strategy is probably implied here; pieces should be united and close to each other.

These could be understood easily for an open-boarded, draught-like game; a backgammon-like one doesn't seem that possible. There the '*blots*' are almost a necessity in the gameplay and would occur by force cause of the dice-throws. They would just cause a delay, as more possibly the struck piece would start the race again or just wait till it would be free again [according to the possible backgammon rules as we know them today]. Something common, maybe no big deal. And in any case if here this backgammon-type game would be played with only five stones, just like Pente Grammai, a blot is not just a necessity but almost the only real thing, cause of the small number of the pieces.

Further this caused disruption in one's camp cause of a single piece feels a little irrational, if it's applied in a backgammon-like game. It would just start the race again. In an open boarded one, where less pieces would mean gradually less power, makes more sense; and it would be mainly the player's choice either to isolate a piece or to attack with two or more pieces. If that's the case, pieces' moves shouldn't also be that free and powerful, meaning not a rook-like one; as then the single pieces could be supported easily or flee, and they wouldn't be such a problem.

With these in mind, if I had to choose between Pollux's Polis or Pente Grammai, I would choose Polis[9].

9 I was curious enough to search for the manuscript tradition of this Aristotle's passage, and I've managed to find 8 manuscripts. A strange, and noted generally by writers, thing is that in five here manuscripts [d, e, f, g, h] the word *ἄζυξ* is omitted, but leaving a gap at its possible place. Like the transcriber avoided to write it, cause maybe he couldn't read it or recognize it. From the rest three, two [b, c] have the text as above, but with a scholion/remark of the word *πετεινοῖς* [peteinois], that literally means '*birds/able to fly*', as explanation of the word *πεττοῖς* [pettois, the game]. The latter seems with a little doubt that has to do with the first latin translations of text in the 13th c. by William of Moerbeke, where the relevant Aristotle's game expression was given as a free-lonely birds, instead of single piece. Possibly mistransliteration

5.2.4. Mixed up pieces, an ugly picture up

Text 25: Euripides, Erechtheus, frag.360, in Lycourgos, Kata Leocratous [Against Leocrates], 100

ἐγὼ δὲ δώσω τὴν ἐμὴν παῖδα κτανεῖν. λογίζομαι δὲ πολλά· πρῶτα μὲν πόλιν οὐκ ἄν τιν᾽ ἄλλην τῆσδε βελτίω λαβεῖν· ᾗ πρῶτα μὲν λεὼς οὐκ ἐπακτὸς ἄλλοθεν, αὐτόχθονες δ᾽ ἔφυμεν· αἱ δ᾽ ἄλλαι πόλεις πεσσῶν ὁμοίαις διαφοραῖς ἐκτισμέναι ἄλλαι παρ᾽ ἄλλων εἰσὶν εἰσαγώγιμοι.	And I will give my daughter to be killed. And I think of many; firstly that one can't have a better city than this [=Athens]; where firstly people aren't brought in from elsewhere, indigenous [=natives] we were born; and the other cities are built by moves similar [to ones] of the game-pieces, others are imported from others [<- probably colonies meant].

This is a fragment from a lost now tragedy of Euripides, called Erechtheus, the mythical first king of ancient Athens. According to this legend, at the time of Erechtheus, Athens was about to be attacked by the Thracians, and the Athenian king went to the oracle of Delphoi asking for a prophecy. He was said that he should sacrifice his own daughter. The passage is part of the acceptance of the prophecy by Praxithea, the girl's mother, praising actually the city of Athens. It's a text of the 5th c. BCE that was used & found in a rhetoric speech by Lycourgos in 332 BCE ca.

The general meaning is easy to understand but an exact translation is really difficult as the work is poetic. However, the main line that interests us isn't that hard. Trying to describe the cities that aren't constituted by native citizens, says that they are '*built by moves similar [to ones] of the game-pieces*'. Putting aside the obvious xenophobia, this is said describing something unwanted compared to homogeneity of Athens. And regarding the petteia-Polis game, the only picture that could come up is one on an open board with pieces trying to constitute a city but being mixed up in color, as a mosaic.

---

but not sure [for English translation of the Latin text, check Regan [2007]]. There's no doubt among the writers that the correct Greek text has the game as comparison. The manuscript (a) has the correct text as given here, without remarks, which seems to be the oldest of all these. The manuscripts: (a) BNF Coislin MS 161, 14th c., f. 168v / (b) BNF Grec MS 2025, 15th c., f. 2v / (c) BNF Grec MS 2023, 15th c., f. 117r / (d) BNF Grec MS 1857, 1492 CE, f. 3v / (e) BNF Grec MS 2026, 15th c., f. 3r / (f) BL Harley MS 6874, 15th c., f. 2r / (g) LOC Greek MS 2124, 15th c., f. 26r / (h) VAT Barb. gr. 215, 15th c., f. 2r

A similar fragment of this tragedy is given by Plutarch, some centuries later. Of the following four lines, three are identical with the previously given and one slightly altered. The rest of the whole passage, not given here, is different; and by this it can be concluded that isn't just a different tradition of the same text, but a repetion of some lines, slightly altered, belonging to a different passage of a tragedy, possibly as a response.

Text 26: Euripides, Erechtheus, frag.981, in Plutarch, Peri Fygis [De exilio], 604d-e

ᾗ πρῶτα μὲν λεὼς οὐκ ἐπακτὸς ἄλλοθεν, αὐτόχθονες δ᾽ ἔφυμεν· αἱ δ᾽ ἄλλαι πόλεις πεσσῶν ὁμοίως διαφορηθεῖσαι βολαῖς, ἄλλαι παρ᾽ ἄλλων εἰσὶν εἰσαγώγιμοι.	... where firstly people isn't brought in from elsewhere, indigenous [=natives] we were born; and the other cities are scattered [torn in pieces, disrupted] with strikes [or throws] like of game-pieces, others are imported from others [<-probably colonies meant].

Plutarch gave it as an example of contradiction; explaining that the one who wrote these lines, Euripides, actually died away from Athens, in the court of the Macedonian king, Archelaus.

Regarding our approach, the image given here is more violent. The cities now are '*scattered by strikes like of game-pieces*'. A translation problem is the word *βολαῖς*, literally meaning '*strikes'/'hits*', but also '*throws*', used sometimes with the latter meaning as '*dice throws*'. However here is difficult to understand how a '*piece throw*' in a petteia-Polis game could work. This would lead to a throw-type game that was derided in the Athenaeus' passage [text 02].

A strike could be understood more easily, as an aggressive capturing move. This is underlined by the words that changed. The cities from '*built of moves of the game-pieces*' became '*torn by strikes of the game-pieces*'.

These two passages [texts 25 & 26] seemed to me to belong to the same group of the previous ones [texts 22 & 23]; depicting a specific strategy of the Polis game, the unity of the pieces. But with the latter [text 26] adding almost clearly the element of capturing. It also may bring some light to the following excerpt.

Text 27: Socrates, in Stobaeus, Anthology IV.56.39

πεττείᾳ τινὶ ἔοικεν ὁ βίος, καὶ δεῖ ὥσπερ ψῆφόν τινα τίθεσθαι τὸ συμβαῖνον. οὐ γὰρ ἔστιν ἄνωθεν βαλεῖν οὐδὲ ἀναθέσθαι τὴν ψῆφον.	Life is like some piece-game, and it's necessary the incident [=occurence, fact, event] to be placed [=arranged] just like some piece. Because it's not possible to strike from above nor to replace the game-piece.

The proverb is attributed to Socrates of the 5th c. BCE, but found in Stobaeus' Anthologium of 5th c. CE. One thing that concerned here is the reliability, cause of the long time that separates Socrates and Stobaeus. I couldn't track some earlier source copying this specific proverb, however Stobaeus can be considered reliable as other of his entries have been confirmed by earlier writings [check eg examples in Mansfeld/Runia [1996]].

The difficulty in this proverb lies in the expression *ἄνωθεν βαλεῖν*, literally translated as either '*to throw...*' or '*to strike from above*'. The mainstream approach is '*throw*', explained as a dice throwing [=from above] [eg. Dobbs [2018], p. 81]. If that's the case, maybe here we can find a certain reference of a piece-game without the use of dice. This, as the verb is '*to throw*', not to '*re-throw*', while on the contrary regarding the piece's [re]placement, the attribute of repetition is expressed. So it's not possible to throw the dice in a piece-game, as it's not possible to take back a move. Absence of luck in life; progressive idea for its time but kinda weird!

However I can't be sure for this approach. It's certain that the verb *βαλεῖν* [=as throwing] has been used many times for dice, and the adverb *ἄνωθεν* [=from above] seemingly helps here. But we just saw that the same word-root has been used at least once for pessoi [=pieces, text 26, above], with the most probable translation as '*striking*' -> capturing. In our sentence here only the game and the stones are mentioned, not the dice. So it seems more probable that here the piece-strike is meant.

If that's the case, the only implied meaning that I could think here, is that the game-pieces hadn't a specific arrangement at the beginning of the game and were placed in turns before they start to move. This way, not striking from above could mean that one couldn't strike-capture during this 1st phase of the game. Approach repeated for the Roman Ludus

Latrunculorum by Schädler [2001 & 1994]. This would underline even more strongly the need for the unity of the pieces. With this approach then, the whole proverb gives the meaning that in life one's first actions won't have immediate consequences but will define the future. Partially determinism.

5.3. Concluding on the game Polis from Greek texts up

Trying to see characteristics given and written before Pollux, so to confirm his entry on the game of Polis, we can feel almost sure that there were gaming-boards with squares, since classical-Hellenistic period. By the fact that a game called Polis was known since the time of classical antiquity [texts 14 & 17], we can conclude, with almost certainty, that examples/comparisons of petteia-games around the word πόλις, as city/state, are referring to this game. Therefore the game of Polis was possibly the one resembling to the art of ruling [text 21 compared with 09], assumption that could possibly certify the absence of the luck-element. There's an almost clear reference of it as a war game [text 22, with 07]; and a strong allusion of the capturing feature [test 26], while there's a possibility of surrounding capturing moves [text 07]. There's also some possibillity that the pieces were placed in turns on an open board, without being arranged from the beginning [text 27].

But the most repeated information is this of the unity of the pieces, as a strategy [texts 22, 23, 25, 26, & and possibly underlined by 27], that could indicate more possibly an open boarded game than a backgammon-like one. This unity is suggested as a winning element in war, most probably in attacking [text 22]; with a maybe more defensive sense, as an almost obligatory precondition so for the camp not to be weakened [text 23, with argument of 24]; and generally as power [texts 25 & 26]. And this need for unity may indicate the one-by-one move, excluding the dice-use, too. On an open board, where pieces move multiple squares or even more with dice, unity can be restored easily I think; in any case it wouldn't probably be the prime concern.

So the two vs one capturing feature that Pollux wrote about, isn't exactly confirmed by these. However, as unity is suggested in order to win, one surely would need two or more pieces

close to each other. Remembering that this was probably a war-game with a capturing feature [compare texts 07, 22, 25, 26], this unity should exist either for defense or attack. Assumption that tends to confirm Pollux.

fig. 13: Gods of Olympus Surrounding a Chess Board, engraving by John Carwitham, 18th c., in metmuseum

6. Some more excerpts on Petteia up

And three more philosophical excerpts-proverbs from ancient sources, that may just show some vague general view on petteia.

6.1. Better to play with a professional up

Text 28: Plato, Politeia [Republic], 1.333b:

Ἆρ’ οὖν ὁ δίκαιος ἀγαθὸς καὶ χρήσιμος κοινωνὸς εἰς πεττῶν θέσιν, ἢ ὁ πεττευτικός; Ὁ πεττευτικός.	So, is the lawful-man a good and useful associate in the placement of pessoi, or the professional player? The professional.

I translate as professional player the word *πεττευτικός* [=petteutikos], that could also have the meaning of skilled player or one who plays often. In the rest of the passage [not shown here], Plato sets a dialogue where the lawful [fair, just] man is compared with professions, so to choose the best partner regarding some certain activity [eg. with a builder for a house construction etc]. By this obviously playing with pessoi could be a profession, or at least something that would need a level of knowledge.

I'm not sure if here is meant the opponent, so the game would be a friendly one and gambling would be out of question; or it's implied a game in pairs, so the professional would be the partner.

6.2. Time is a child playing up

Text 29: Heraclitus, frag. 52 in Hippolytus of Rome, IX.9,4

Αἰὼν παῖς ἐστι παίζων, πεσσεύων· παιδὸς ἡ βασιληίη	The [eternal] time is a boy playing, arranging the pieces; the kingship is of the child

6.3. God is a player up

Text 30: Plato, Nomoi [Laws], 10.903d-e

ἐπεὶ δὲ ἀεὶ ψυχὴ συντεταγμένη σώματι τοτὲ μὲν ἄλλῳ, τοτὲ δὲ ἄλλῳ, μεταβάλλει παντοίας μεταβολὰς δι᾽ ἑαυτὴν ἢ δι᾽ ἑτέραν ψυχήν, οὐδὲν ἄλλο ἔργον τῷ πεττευτῇ λείπεται πλὴν μετατιθέναι τὸ μὲν ἄμεινον γιγνόμενον ἦθος εἰς βελτίω τόπον, χεῖρον δὲ εἰς τὸν χείρονα, κατὰ τὸ πρέπον αὐτῶν ἕκαστον, ἵνα τῆς προσηκούσης μοίρας λαγχάνῃ.	And as soul, being united now with one body, then with another, undergoes all kinds of changes cause of itself or of another soul, there's no other task left for the piece-player but to transpose the growing better character [<-with a moral sense] to a better place, the worse [character] to worse [place], according to what suits to each of them, so to may obtain the appropriate fate.

Plato's approach of reincarnation. God here is a piece-player who decides the next life of each human being.

B. Ludus Latrunculorum up

1. As introduction up

No matter how much I tried, I couldn't find a relevant legend of some game creation in Roman mythology. The closest was an entry in the Etymologiae, an encyclopedic work written by Isidore of Seville in the early 7th c. CE. According to the lemma De tabula [Etym. 18.50], tabula is alea [more possibly a backgammon-like game or generally a dice-game?]; it has come from Greece and was created by a hero in the Trojan war named Alea [compare with Palamedes, above under A.1.]. This encyclopedia of course was written hundreds of years after the period that interests us, however probably underlines a Greek origin, or at least a belief around, for games in general. And comes along with the mainstream opinion that some petteia games passed into the Roman empire from Greece. Like Roman Ludus Latrunculorum is suggested to be originated from Greek Polis [discussion indicatively in Austin [1940], Richmond [1994], Schädler [2012]].

However the earliest written connection between Ludus Latrunculorum and the Greek game Polis I've found, was tried by Claudius Salmasius in 1620. Specifically in his comments on the life of Proculus, in Historia Augustue, a late Roman collection of biographies that has raised questioning around its authorship & dating [possibly late 4th c. CE]. Salmasius' connection is really loose, actually just mentioning proverbs. More important seems the excerpt of the original text, where Proculus, a Roman usurper of the 3rd c. CE, is called imperator for winning ten times in the game of Latunculi.

fig. 14: Gaming board with counters, die and shaker. 2nd-3rd c. CE. In Corbridge Roman Town museum, in English heritage

2. Laus Pisonis up

The latin references on Ludus Latrunculorum are fewer than the Greek ones on the game Polis. However they seem clearer at many instances. Writers [eg Richmond [1994], Schädler [1994]] have used, in their game approach, as main basis few lines of a panegyric Latin poem of the 1st c. CE and of unknown authorship. Next to this the rest of the shorter excerpts are collated, confirming or explaining. Seemed a useful idea.

Text 31: Laus Pisonis, v. 190-208

te si forte iuvat studiorum pondere fessum non languere tamen lususque movere per artem, callidiore modo tabula variatur aperta calculus et vitreo peraguntur milite bella, ut niveus nigros, nunc et niger alliget albos. sed tibi quis non terga dedit? quis te duce cessit	If you like by chance, tired of the weight of studies, not to be idle and yet to move the game through [=by means of] skill, in a clever way the stone is varied [<- also changed, moved] on an open board and with a glassy soldier wars are accomplished [=take place], so the snowy-white [binds] the blacks, and now the black binds the whites. but who hasn't given to you back [=>retreat]? what piece is lost

calculus? aut quis non periturus perdidit hostem? mille modis acies tua dimicat: ille petentem, dum fugit, ipse rapit; longo venit ille recessu, qui stetit in speculis; hic se committere rixae audet et in praedam venientem decipit hostem; ancipites subit ille moras similisque ligato obligat ipse duos; hic ad maiora movetur, ut citus ecfracta prorumpat in agmina mandra clausaque deiecto populetur moenia vallo. interea sectis quamvis acerrima surgant proelia militibus, plena tamen ipse phalange aut etiam pauco spoliata milite vincis, et tibi captiva resonat manus utraque turba.	when you are leader [=>player]? or what [piece] that would perish hasn't detroyed enemy? In a thousand ways your army fights; that [piece], while escaping, itself captures the attacker; that, which has stood in mirrors [??=>possibly meaning mirrored but in a distance], comes from long retreat; this dares to join in quarrel and, coming for the spoils, cheats the enemy; that [piece] enters into two-headed hindrances [=delays] and, seemingly tied, itself binds two; this moves to greater [deeds], so that [it] rushes quickly forth into the troop lines [?] while the enclosure bursts open, and so, with the entrenchment hanging [=down], to destroy the sealed city walls. Meanwhile, although the combats rise sharpest in the divided soldiers, and yet you win with the phalanx itself complete or even disarmed in few men, and each hand resounds the captured by you crowd.

2.1. Identification of the verses as referring to Ludus Latrunculorum up

Latro in Latin means mercenary, soldier; and with a following meaning of a robber. Latrunculus is its diminutive. The term isn't tracked in the poem, however, one can read an equivalent; the stone is called *miles*, that means also soldier.

Schädler [1994, p. 54] gives an additional argument based partially on history. The addressee of this panegyric poem has been identified, though with some doubt, as Gaius Calpurnius Piso, a Roman senator of the 1st c. CE and the mastermind of the unsuccessful so-called Pisonian Conspiracy against Emperor Nero. His name can be, also, tracked in the 5th Satir of Juvenal, a Roman poet of the late 1st c. CE. In an edition of these poems by Georgius Valla in 1486, some remarks were published written by a certain Probus, possibly taken from a manuscript in Valla's possesion and now lost. This Probus has been questioned as an original source [for these check, Duff, [1934, ff. 289], Anderson [1965], Reeve [1984], Champlin [1989], Green [2010], Dobbs [2018, ff. 126]].

In any case this Probus' remark has as follows:

Text 32: Probus' Scholion on Juvenal's Satura V/109, in Georgius Valla edition of 1486

Piso Calpurnius (ut Probus inquit), antiqua familia, scaenico habitu tragoedias actitavit, in latrunculorum lusu tam perfectus et callidus ut ad eum ludentem concurreretur.	Piso Calpurnius (as Probus says), from old family, he played in tragedies on stage, at playing latrunculi [he was] so perfect and clever that they flocked to [see] him playing

2.2. Board & pieces up

The earliest surviving source, given by Marcus Terentius Varro in 1st c. BCE, informs us that Latrunculi were played on a board with squares. He's using it as an example of table, where one could decline in grammar an adjectif. This example implies a 6x6 square board, however it isn't clear enough that these exact dimensions were used for the game of Latrunculi.

Text 33: Marcus Terentius Varro, De lingua Latina, X.22

Ad hunc quadruplicem fontem ordines deriguntur bini, uni transversi, alteri derecti, ut in tabula solet in qua latrunculis ludunt. Transversi sunt qui ab recto casu obliqui declinantur, ut albus albi albo; derecti sunt qui ab recto casu in rectos declinantur, ut albus alba album; utrique sunt partibus senis. Transversorum ordinum partes appellantur casus, derectorum genera, utrisque inter se implicatis forma.	At this four-sided source two sets of lines are drawn, the ones accross, the others straight, as is used in the table on which they play with mercenaries. The accross ones are those that are inflected from the direct case [=nominative] as oblique [=rest cases], such as albus, albi, albo; the straight ones are those that are inflected in straight by the direct case, such as albus, alba, album; each of two are of six parts. The parts of the accross lines are called cases, of the straight lines genders, with each of both attached to each other in shape.

The board could be sometimes used on both sides, one for draught-like games, one for backgammon-like ones, as it's written in a Martial's epigram. It's also a source indicating the way of capture in the game [that we'll see below under B.2.4]

Text 34: Marcus Valerius Martialis, aka Martial, Epigrammata, 14. 17-18

Hac mihi bis seno numeratur tessera puncto; Calculus hac gemino discolor hoste perit. Insidiosorum si ludis bella latronum, Gemmeus iste tibi miles et hostis erit.	From this to me [=from my side] a die is counted twice, marked each with six; From this a stone perishes by a twin enemy of different color. If you play wars of the cunning mercenaries, this set with gems will be soldier and enemy for you.

The pieces were pebbles-gems, many times described as glassy, as in Laus Pisonis, in Ovid or in Martial. And of different color; Laus Pisonis mentions them as whites and blacks.

2.3. Initial set-up and possible formations up

Nothing totally clear is found around a possible initial setup in Laus. By this absence Schädler [1994 & 2001] concluded that the pieces should be placed in turns, before starting moving. Mainly with the thought that Latrunculi was a war-game, being described many times with military terms; fact that would make one to expect a relevant military designation for the initial position, too.

This may be underlined by the existence of terms like '*mandra*', '*vallo*', '*moenia*' & '*phalanx*', words that could signify a possible troop formation; but being on the contrary towards the end of these lines [when the final winning strike is described], can't easily be connected with the start of the game. '*Mandra*', a word of Greek origin, is actually an enclosed space, meaning sometimes a pen for animals. I can assure you that in modern Greek has also the meaning of the wall surrounding this space. It's a word used by Martial, too, for this specific game.

Text 35: Marcus Valerius Martialis, aka Martial, Epigrammata, 7.72

Sic vincas Noviumque Publiumque Mandris et vitreo latrone clusos;	So you may win Novius and Publius, shut with enclosures and a glassy soldier;

In the poem Laus Pisonis, the term '*mandra*' seems to be treated in a same way with the term '*vallum*' [as both are broken]; the latter literally meaning wall, rampart, entrenchment, but usually made by nature. Both can give the image of soldiers in line, while being in defense. *Moenia* are the city walls, word that may be a reference to the Greek game Polis. And '*phalanx*' is primarily a troop formation.

Coming back to the approach around the pieces' initial position, Schädler's opinion seems to be supported and by the phrase '*tabula variatur aperta calculus*'. It's translated literally: '*a stone is varied on an open board*', and the problem seems to be in the interpretation of the verb '*variatur*'. Being in the first lines of this excerpt, it can easily give the impression that at the beginning of the game the stones are placed with variety. Austin [1934a] translates: '*the pieces are disposed on an open board*', agreeing actually with Schädler's approach. But Richmond [1994] gives instead: '*you vary the moves of your counters on an open board*'; so in a more

general way that may signify that there's no such 1st phase of the pieces' placement. The verb choice seems to tilt to Schädler's approach, though not in a totally certain way.

fig. 15: Ludus Latrunculorum. 7 x 6 gaming board made by terracotta with pieces. From Fayum, Egypt, of Roman Period. Now in Petrie Museum [UC59258]

2.4. Pieces' moves and capturing up

Laus Pisonis doesn't give a clear image on piece moving. It mentions however an attribute of the counters to tie, to bind, the opponents' ones, expressed mainly with derivatives of the verg -*ligo*. It's described as a main goal on the first lines, where white binds blacks, and black binds whites. And few lines ahead in more detail where, a piece '*enters into two-headed hindrances [=delays] and, seemingly tied, itself binds two*'. The poem also mentions a destoying attribute, and probably a removal one as '*each hand resounds the captured by you crowd*'. But the aforementioned imprisonment isn't associated in the poem directly with the capturing-removal result. However, the binding and the destroying attributes should be connected, or else why to bind and not destroy at once?!

Ovid also mentions in his poems the 2 vs 1 feature, but mainly directly to the destroying result:

Text 36: Ovid, Ars Amatoria III, 357-360

Cautaque non stulte latronum proelia ludat, Unus cum gemino calculus hoste perit, bellatorque sua prensus sine compare bellat, Aemulus et coeptum saepe recurrit iter.	And [if] she'll play the battles of mercenaries cautiously, not foolishly, one stone perishes by a twin enemy, and a warrior detained is fighting without his equal [=companion, fem.], and rivaling takes often back the started path.

So here two pieces destroy one. While a single piece can't do much and retreats. Besides the repeated 2 vs 1 feature that results a destroying-removal, there's seemingly a contradiction between Ovid and Laus Pisonis around the possible attributes of a single piece. In Laus it can bind two, in Ovid can do nothing but retreat. However, it should be underlined that in Ovid is emphasized that it's single, while in Laus it's unclear if it managed this tie alone.

The particle '*prensus*' in Ovid, also, may raise some difficulty. It's literally translated as '*occupied*', '*detained*', but also '*taken by surprise*'. Richmond [1994, p. 171] considers it as equivalent to '*tied*'. Though it gives seemingly an impression of the aforementioned '*tie*', it has more probably the meaning of '*battle*' in a more general way. It seems more rational, as this piece achieves a retreat alone; if that was possible in a tied situation, it would make the latter meaningless. Another interesting, and unexplained, point here is that the piece's possible companion is feminin. This made me think, without any further possible explanation, the Aristotle's term *ἄζυξ* [look A.5.2.3. above], that could be translated as unmarried.

But Ovid comes back to this 2 vs 1 rule:

Text 37: Ovid, Tristia II, 477-480

discolor ut recto grassetur limite miles, cum medius gemino calculus hoste perit, ut bellare sequens sciat et revocare priorem, nec tuto fugiens incomitatus eat;	How a soldier of different color attacks in straight path, when a stone perishes in the middle of twin enemy, How [a] following [stone] knows to fight and to recall a prior [soldier], or how doesn't turn out unaccompanied retreating safely

The destroying result comes in the middle between two enemies. Another hint is that the stone moves-attacks in a straight path. But it's also described an ability of a stone to come to the aid

of an advanced one and help it retreat. We know from Seneca that a tied stone wasn't immediately removed, but it could be saved instead.

Text 38: Seneca, Ad Lucilium Epistulae Morales, 117.30

Nemo, qui ad incendium domus suae currit, tabulam latruncullariam prospicit, ut sciat, quomodo alligatus exeat calculus.	Noone, who runs to the fire of his house, looks at the lantruculi board, so to understand, how a tied stone escapes.

By these it's almost certain that tying a piece and removing it out of play, were two different plies. Richmond [1994] suggests that this rescue comes if the 2nd helping piece lands on an adjacent square of the tied piece. Schädler expressed a possibility of a leap-move of the rescued piece over the rescuing one. This was based on the '*straight path*' of the rescuing piece, that could block the retreat of the rescued one.

According to Schädler, here is explained, too, the phrase of Laus Pisonis: '*that [piece] enters into two-headed hindrances [=delays] and, seemingly tied, itself binds two*'. Depicting Schädler's approach with whites and blacks: a white stone is tied in the middle between two blacks. One more white comes to rescue the tied one. And now two whites have tied one of the black attackers, that was previously bounding the first white one. And this way the white, which was tied, is freed [fig. 16]. Richmond seems more sceptical on this.

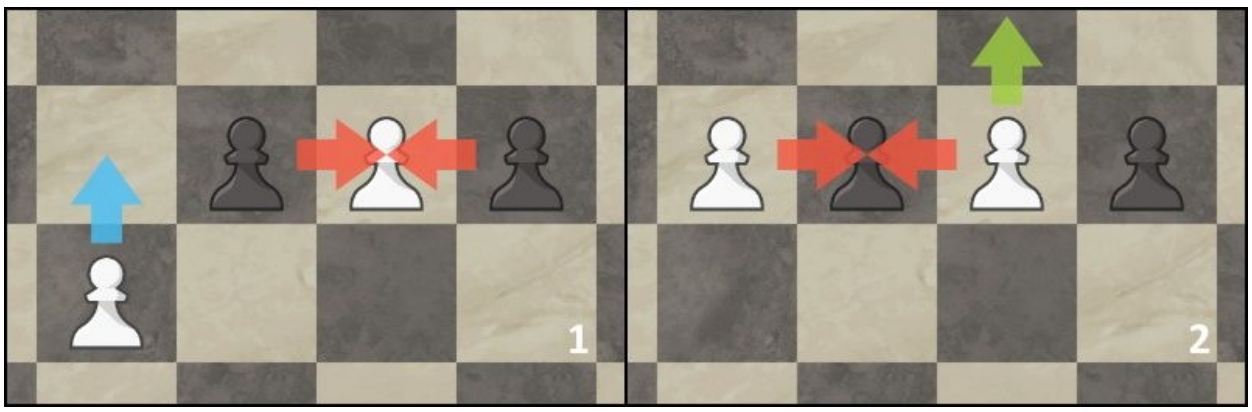

fig. 16

Maybe at first it's an acceptable approach; but not totally convincing. As this way, the whites would tie only one black, while in the poem the stone binds two. For this rescue mission they would be needed at least two rescuers, I think. Further, the use of the verbs seems signifying that '*submitting in two-headed delays*' and '*binding two*' are two actions that the piece

completes almost at the same time. Maybe the answer lies on the poem's term '*similisque ligato*', meaning '*like tied*', not already tied. And maybe it isn't described the rescue feature, but just a risky smart move [possible move taken by Richmond's paper, fig. 17].

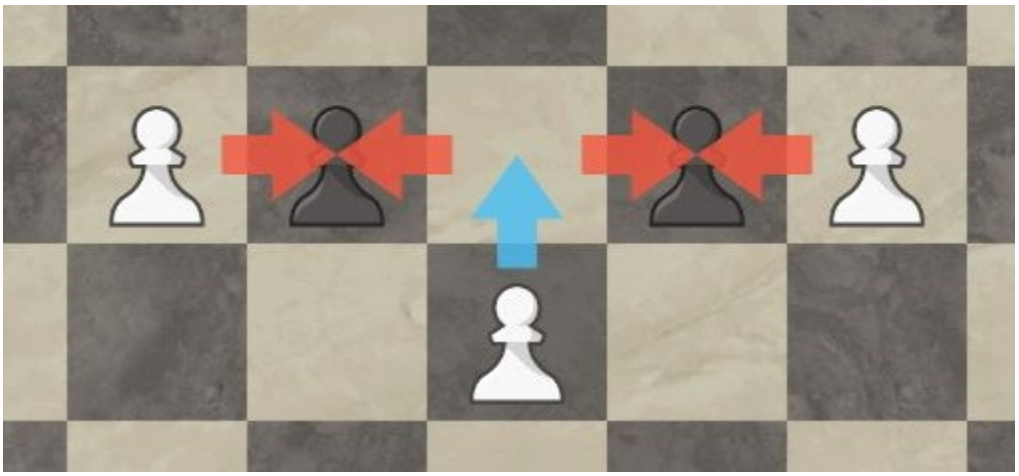

fig. 17

By these Schädler [1994 & 2001] also concluded that the pieces should move only one square, as in the opposite case it would be too easy to rescue one piece. Richmond [1994, p. 168] considers that the pieces should move more squares, like a chess rook. His approach was based on a line of Laus Pisonis where a piece '*which has stood in mirrors [=>possibly meaning mirrored but in a distance], comes from long retreat*', explaining that this long distance sould be covered more quickly. It's a dualistic choice: difficulty vs speed of the game-play. Seems more probable the one by one movement.

2.5. Concluding on Ludus Latrunculorum up

The game was played on a chessboard but of unknown specific dimensions.

The pieces possibly were placed in turns before starting moving.

More possible that the pieces were moving square by square. The alternative is a rook-like move.

One piece could be tied between two stones of the opponent. This would result elimination and removal. The tying and the removal were most probably two different plies.

Even if one piece was tied, it could be saved with the help of a 2nd piece. However, the rescue way is not totally certain.

Probably the winner should be the one that had eliminated all the opponent's pieces, but one.

fig. 18: Gaming board found in Roman Fort, Vindolanda, in Handrian's Wall, England, in here

3. And a couple of excerpts on Ludus Latrunculorum up

3.1. Playing just before execution up

Text 39: Seneca, De Tranquillitate Animi, 14.7

Ludebat latrunculis, cum centurio agmen perituroruм trahens illum quoque excitari iuberet. Vocatus numeravit calculos et sodali suo: "Vide", inquit, "ne post mortem meam mentiaris te vicisse"; tum annuens centurioni: "Testis", inquit," eris uno me antecedere". Lusisse tu Canum illa tabula putas? Inlusit!	He was playing latrunculi, when centurion dragging a crowd of moribounds ordered him, too, to come forth. Being called he counted the stones and said to his companion: "Look, don't lie after my death that you won"; then nodding said to the centurion: "You will be witness that I'm ahead one [stone]". You think that Canus was playing with that game-table? He was mocking!

By these words Seneca described the last hours of Julius Canus [or Canius], a stoic philosopher of the 1st c. CE, condemned to death by emperor Caligula, possibly with the

accusation of a conspiracy [check discussion in Kavanagh [2001]]. Here seems lying some first reference of a man playing an intellectual game, just right before being executed; a theme that has been transferred and in chess with some illustrated examples [check this previous blog]. At least this seems to be the earliest reference.

An other weird fact [and off-topic], that Seneca is describing few lines ahead, is that Julius Canus promised to his companions that if there was some afterlife, he would get back to inform his friends. Strangely enough we can find a similar reference written by George Syncellus, a Byzantine chronicler, ecclesiastic and monk, of the 9th c. CE.

Text 40: Georgios Syncellus, Chronographia, Anni Mundi 5537, in 1625 edition p. 330

Οὗτος καὶ τὸν Ἰούλιον Κᾶνον, ἕνα τῶν Στωικῶν φιλοσόφων, ἀνεῖλε· περὶ οὗ παράδοξον Ἕλλησιν, ὡς δοκῶ, πέπλασται. ἀπαγόμενος γὰρ πρὸς τὸ θανεῖν ἀταράχως λέγεταί τινι τῶν ἑταίρων Ἀντιόχῳ τοὔνομα, Σελευκεῖ, συνεπομένῳ προειπεῖν, ὡς ἐντεύξεται αὐτῷ κατὰ τὴν αὐτὴν νύκτα μετὰ τὴν ἔξοδον, καὶ διαπορήσει τι τῶν σπουδῆς ἀξίων, καὶ ὅτι μετὰ τρεῖς ἡμέρας Ῥεκτός, εἷς τῶν ἑταίρων, ὑπὸ Γαΐου φονευθήσεται. ἃ καὶ γέγονεν, τοῦ μὲν ἀναιρεθέντος τριταίου, τοῦ δ' Ἀντιόχου τὴν ἐποψίαν εἰπόντος τῆς νυκτός, ὅτι φανεὶς Ἰούλιος Κᾶνος τὰ περὶ διαμονῆς τῆς ψυχῆς καὶ καθαρωτέρου φωτὸς μετὰ τὴν ἔξοδον διηγήσατο. ταῦτα Πλούταρχος ὁ Χαιρωνεὺς ἱστορεῖ.	He [<-Caligula] killed Julius Canus, one of the Stoic philosophers; around him, a paradox is invented [=fabricated] by the Greeks, I think. Cause, being led to death quietly, he is said that foretold to one of his friends who was accompanying him, named Antiochus of Seleucia, that he will meet him at the same night after the exit [=death], and will question [=doubt] something of the worthy of study, and that after three days Rectus, one of the companions, will be killed by Gaius [Caligula]; and these they took place, latter [=Rectus] was killed on the third day, and Antiochus spoke of the inspection [=the image] of the night, that Julius Canus, appearing after the exit [=death], narrated the things around the soul's residence and the clearer light. These are told by Plutarch of Chaeronea.

So Canus seems to be a man of legend. This reference hasn't been found in the Plutarch's surviving texts. And it's quite weird that a man of church [Syncellus] was narrating around the characteristics of a person, even as fiction, that they should be attributed to Jesus Christ.

3.2. If you want to have sex... just lose up

Text 41: Ovid, Ars Amatoria II, 203-208

Seu ludet, numerosque manu iactabit eburnos, Tu male iactato, tu male iacta dato: Seu iacies talos,	Or [if] she will play and will throw numbers of ivory with her hand, you, if it's thrown badly, you throw them badly; Or [if] you will throw knucklebones, no

victam ne poena sequatur, Damnosi facito stent tibi saepe canes: Sive latrocinii sub imagine calculus ibit, Fac pereat vitreo miles ab hoste tuus.	satisfaction will follow beating her, make the injurious dogs remain often to your side; but if a stone of military service will proceed under the picture, make your soldier perish by the glassy enemy.

C. Expanding and concluding up

The attributes we were searching are all there; a war-game played on an open board without dice, and even more. But does this feel enough? A stronger connection would be needed between the aforementioned Greek-Roman games and the Indian game tradition. The problem is the poor records that can be found in this area [regarding games], during these last centuries before [& first after] common era starts. So the approach can only be surrounding and approximate. I'm trying to see some aspects, though I think that only one [under 2.2.] could give some positive results.

1. The Buddhist game list up

Murray [1913, p. 34] attracts our attention at an excerpt of Brahmajāla Sutta [DN1]. It's the first part of the Buddhist texts of Dīgha Nikāya/Agama. And more specifically this text is of the tradition of the so-called Pali canon [Sri Lanka?] of the Theravada Buddhist school. What can be a point of interest, inter alia, is the mention of the games *aṭṭhapada* and *dasapada*. The eight-way and ten-way boards, that Murray considered as a first basis for the development of chess. An other is the use of dice.

> "*Or he might say: 'Whereas some recluses and Brahmans, while living on food provided by the faithful, continue addicted to games and recreations; that is to say,*
>
> *Games on boards with eight [aṭṭhapada], or with ten [dasapada], rows of squares [*].*
> *The same games played by imagining such boards in the air [ākāsa] [**].*
> *…*
> *Throwing dice [khalika] [***]*
> *…*
> *Games with balls [akkha] [****]*
> *…*
> *[*] Chess played originally on a board of eight times ten squares was afterwards played on one of eight times eight squares. Our text cannot be taken as evidence of real chess*

in the fifth century B. C., but it certainly refers to games from which it and draughts must have been developed. The Sinhalese Sanna says that each of these games was played with dice and pieces such as kings and so on. The word for pieces is poru (from purisa)-just our men.'

[**] Ākāsaṃ. How very like blindfold chess !

[***] Khalikā. Unfortunately the method of playing is not stated. Compare Eggeling's note as in his Satapatha-Brāhmaṇa 11I, 106, 7. In the gambling-scene on the Bharhut 'Tope (Cunningham, PI. XLV, No. 9) there is a board marked out on the stone of six times five squares (not six by six), and six little cubes with marks on the sides visible lie on the stone outside the board.

[****] Akkhaṃ. The usual meaning is 'a die.' But the Sinhalese translator agrees with Buddhaghosa. Neither gives any details. "

[The above translation was made by Rhys Davids [1899, p. 9]. More recent ones, by Bhikkhu Bodhi or Bhikkhu Sujato [that can be found in The Prime Net], mention some '*negligence*' that the games may cause, while there's one allusion of gambling. I follow Rhys.].

The text's dating isn't certain. According to what I've read, I could understand that generally the first textual form of these Buddha's discourses should appear possibly not earlier than the 3rd c. BCE. While this specific Pali version in the 1st c. BCE[10].

10 On texts in more detail: Dīgha Nikāya is part of the Buddhist literature, considered of the early Buddhist texts. According to Jens-Uwe Hartmann [in Buswell [2004], p. 10 - 'Agama'] it's not known when the Buddhist monks started to gather and compile these Buddha's discourses. Tradition says that they were already collected by the time of the First Council, shortly after Buddha's death [though the historicity of this council is under question, check eg Berkwitz [2010], p. 43]. So since 486 BCE ca or 404 BCE ca, as Buddha's exact dates of birth and death aren't certain. Hartmann, however, adds that there were 2-3 centuries of oral tradition before the possible first written records. The specific aforementined translation was based on the so-called Pali canon of the Theravada school, possibly the oldest surviving complete text of the Nikayas of Indian origin. Gethin [1998, p. 42] informs us that '*the tradition is that the Pali texts were subsequently written down for the first time in the first century BCE*,' based on an oral inheritage coming from northern and started in the 3rd c. BCE, during Asoka time.

This aphoristic game list is repeated, as it is, two more times in these Nikaya texts of the Pali canon [in Sāmaññaphala Sutta - DN2 & in Tevijja Sutta - DN13]. And once elsewhere, in the Vinaya texts, of the Pali tradition again, that are regulating the monastic life [Cullavagga I.13.2]. The latter's dating is obscure, but probably can't be earlier than the aforementioned Nikayas [3rd c. BCE][11].

A somehow different list of games, that are discouraged, is appearing in the tradition of the Mulasarvastivada Buddhist school. In manuscripts found in the area of Gilgit [Pakistan] is given another version of the Vinayas [that seems corresponding to the aforementioned Cullavagga [I.13.2] of the Pali tradition]. Some games are omitted, others are added, while according to transliterations I've seen, there should be some part impossible to read [?? - there were dots...]. However, *astapade* and *dasapade* are common ground and again first in the list. Generally the manuscripts are dated in the 5th-6th centuries CE, analyzed that are based on tradition of the 2nd c. CE during the Kushan rule of Kanishka [Gnoli [1977], pp. xix-xx].

Further, the Chinese translation of the Dīgha Nikāya/Agama [DA20 & DA21] of the Dharmaguptaka school, that corresponds to the aforementioned translated by Rhys Buddha's discourses, is repeating the game list. It's dated in the 5th c. CE, considered that reflects earlier tradition. There the items are even fewer, but it seems that the eight-ways and ten-ways boards are again in [八道、十道].

11 On texts in more detail: Legend has that Vinayas were product of the aforementioned First Council, too. However an account of the Second Council can be found in [100 years later]. The oldest texts we have are dated much later, since 5th c. CE. Textual analysis of the different Vinaya versions of the early Buddhist schools may show some common structure and topics. The latter has been interpreted either as a common origin of them, placing the possible dating of the first forms of the Vinaya texts [or oral tradition] before the first separation of the Buddhist schools [3rd c. BCE - ?? -, in Asoka time], or as loans and interaction afterwards. Generally scholars set their initial writing form in the first centuries CE, though with some opposite opinions for earlier and later dates [Schopen G. in Buswell [2004], p. 885 - 'Vinaya', Lamotte [1988], p. 165, check also Schopen [1999], p. 75, for the dating of the possibly earliest written Mulasarvastivada-vinaya placed in the years of Kushan rule with references].

Finally, to these it should be added the Jain tradition. In one of their sacred texts [Sutrakritanga], possibly dated since 2nd c. BCE and later, the games on ashtapada board are also forbidden for monks. And these are the only mentioned games[12].

What can be seen easily, is that this game list is dynamic. The items in it are changing; due to different traditions of the Buddhist schools? Or cause of different regions and times? Can't be sure. I wish I could find a complete edition-translation of the Gilgit manuscripts of the Mulasarvastivada school, as closer to the lands that interested me.

However *aṭṭhapada* or *ashtapada* is always mentioned. Was it popular or just an item of the earliest tradition? The Chinese version of the Agamas [DA20 & DA21] mentions almost exclusively the items-games according to the number of the ways [squares or rows] of the boards, 8-way, 10-way, 100-way. This may indicate the popularity as a reason. In any case the term *ashtapada* as an 8 squared game board seems to be known at least since the mid 2nd c.

12 On texts in more detail: The Vinaya of the Mulasarvastivada Buddhist school can be found in the so-called Gilgit manuscripts written in Sanskrit, discovered in Gilgit [Pakistan] in 1931, and dated since 5th c. CE, but possibly from a tradition since 2nd c. CE, during the Kushan rule. The specific excerpt that interests us is in the last 17th part called Saṅghabhedavastu. All these texts of the same school, though with some differences, seem to have been translated into Chinese in the 8th c. CE, and into Tibetan in the 9th c. CE. Unfortunatly I couldn't find some translation of the Sanskrit text, only transliterations and general info [check Gnoli [1977], introduction, Gnoli [1978], p. 235 transliteration, also Kin Tung Yit [2004], pp. 136 & 312, Schopen [1999], p. 75, Schopen in Buswell [2004], p. 885 - 'Vinaya', Sasson [2013], pp. 46-47]. The Chinese translation of the Dīgha Nikāya as Dīrgha Agama of the Dharmaguptaka school is dated since 5th c. CE, possibly with an origin since 2nd c. CE again under the Kushan rule of Kanishka. It's noticeable that though the game list is quite shorter, the eight and ten ways boards are also mentioned along with the introductory fact that monks are living by the charity of the laity. In Ichimura's translation, the only I've found, these words are given as chess, gambling, checkers on 8 and 10-squared boards. I can't feel sure for it as chess has also been mentioned in translations of Sanskrit texts for asthapada, but with explanatory footnotes. Maybe it's just given freely. I'm staying in the item list as given in Kin Tung Yit [2004], p. 136 -> 八道、十道 ... [check Ichimura [2015], introduction, and [2016], p. 153 & [2018], p. 7 for English translations, also Kin Tung Yit [2004], pp. 136 & 312, Schopen G. in Buswell [2004], p. 885 - 'Vinaya']. Sutrakritanga is considered the 2nd Agama of the Svetambara canon of Jainism. The text is dated either towards 4th-3rd c. BCE [Jain [1999], p. 4], or not earlier than 2nd c. BCE cause of a possible Buddhist influence [Bronkhorst [2019], p. 171]. Ashtapada is mentioned as forbidden for monks [translation by Jacobi [1895], p. 303]. But generally I've found really few accounts on this work.

BCE; though possibly it isn't quite certain if an 8x8 or an 8xn board was meant. It's given as an example in the Sanskrit commentary-grammar of Patanjali[13].

Rhys also mentions a commentator of the Digha nikaya text, under the name Sinhalese Sanna. He explains the *asthapada* as dice-board games, but Murray seems a little sceptical on this, as these comments were written centuries after the first texts. Murray says he was of the 10th c. CE and later. Surely he commented after the times of the first commentator, Buddhaghosa of the 5th c. CE.

However, there's a scene connecting *asthapada* with dice in the Harivamsa Sanskrit epic. Its dating isn't certain, as it seems to be developed gradually, but probably was written during the first centuries CE, and maybe with some even later additions [Brockington [1998], p. 326ff]. There [2.61] we can find Rukmi, an Indian prince and brother-in-law of Krishna, playing dice over an *asthapada* with Balarama [or Balaveda], the god-brother of Krishna. Rukmi in the end lost but didn't accept it publicly, so to pay the bet, and Balarama angry killed him with this asthapada-board [transl. Dutt [1897] ch. CXVIII][14].

---

13 On texts in more detail: Patanjali in the mid 2nd c. BCE wrote Mahābhāṣya, a detailed commentary for the Aṣṭādhyāyī of Pāṇini, the latter being an ancient treatise on Sanskrit grammar and linguistics. *Asthapada* seems to be mentioned by Patanjali as an example in two cases [in Aṣṭādhyāyī's comments on 2.3.1 & 8.1.1], both with similar content. Thieme [1962] seems considering it an 8x8 board, while Mehendale [2002] argues that 8 are only the squares of each row without determining the number of rows. It's also noticeable that the earlier Panini's work doesn't mention it, without of course meaning that the term didn't exist. The work was on grammar, not lexicographic. However there's a point in Panini, where games' terms are mentioned, too, but not related directly with *asthapada* [Aṣṭādhyāyī 5.2.9]. The relative Panini's word was *ayanaya*, meaning moving from right to left and from left to right; and it was further explained by Patanjali as clockwise and anticlockwise movement. Thieme [1962] sees it more likely as a primitive chess reference; Mehendale [2002] not. Without having some knowledge on Sanskrit, I was more convinced by Mehendale's arguments. From older analysis check Weber [1873, p. 472ff].

14 Not on our topic, but this reminded me the relevant scenes of killing with a chessboard, that can be found in the medieval European romances of the Carolingian cycle [described in a previous post]. It also seems to be repeated in Chinese literature. The scene is placed in 154 BCE and in the court of Chinese emperor Wen. There, Lieu Hsien, a guest and heir-prince of Wu, started playing chess [棋] with the heir of the Empire. A quarrel arose for a doubtfull move, and the future emperor killed Lieu Hsien with the game-board. This became the cause for upcoming revolts. This event is described in Tongjian Gangmu, a Chinese history book of 1172 CE and attributed to philosopher Zhu Xi. It was based on

By the above, we can tell that the writing form we have of all these Sanskrit texts appears at a time, when there could be a parallel presence of the Yonas [or Yavanas; this is how Greeks were called at the time by Indian people]. And we know that Greeks had draught-like games played without dice. Is this reflected in these game lists? Generally hard to see. In the translated above Pali game list, the best candidates for Greek board games would be *asthapada* and *dasapada*, as game-groups that could absorb ones played on similar boards. Same for the Chinese tradition, where it seems that the writer wanted to include every possible type of board. But they have been interpreted as dice-board games and their origins maybe are far away of the places that Greeks inhabited. In the Gilgit tradition it's the hardest to see as the items seem to remain unknown.

But a question also is: a non-dice board game, of whatever origins, would it be in these lists? The answer tends to be negative, if we choose that the main enemies that these writers-teachers wanted to fight, were the gambling and the negligence. Dice-gambling & betting were discouraged in the area and under Hindouism during these times [check Laws of Manu - Manusmriti, eg 9.221]. And since much earlier [1000 BCE ca and maybe earlier] in the Rigveda collection of Vedic Sanskrit hymns [10.34] [check Jamison & Brereton [2014], vol. 3, p. 1429, for translation]. These may also underline the need for a more intellectual non-dice game. But can't be sure. It seems also possible, though to a lesser perhaps degree, that open-boarded non-dice games could be included in the terms *asthapada* and *dasapada* in a more general way.

2. Word origins & etymology up

The Buddhist game list can't answer the question of a possible Greek game influence. So I turned my attention to words, searching for a possible loan that would indicate a game tradition. Difficult task. Indian and ancient Greek share many common word-roots, but not cause of loans exactly. It's because these languages probably are part of the Indo-European

Sima Guang's famous history book of 1084 CE, under the title Zizhi Tongjian; though seems that this scene can't be found in this earlier treatise. The 1172 book was later translated into Manchu [possibly 15th-16th c. CE], that was the base for the first French translation by Mailla [1777, p. 571] [Check also Holt [1885], p. 358].

family. So words such as the Indian *raja* for king and *padati* or *patti* for foot-soldiers, that Murray [1913, p. 79] gives as the relative old Indian chess terms, they have common roots with corresponding Greek words, such as *άρχων* [=archon] for ruler & *πεζός* [=pezos] for the one on foot [some prime approach in Mayrhofer [1992], vol. 2, pp. 77, 74, 79 & 444]. Even the compound word *astapada* has same corresponding word roots into Greek.

They have been noted some loans from Greek to Indian, after Alexander the Great; but besides that they are quite few, they are mainly proper nouns. In any case they aren't words that stand for so primitive meanings[15].

2.1. The Greek word πεσσός up

The main word of the present post; though a possible etymological approach won't give in the end some positive results. But for completeness…

The word *πεσσός* [=pessos] appears already as a gaming piece in Homeric epics [8th c. BCE]. In plural it could also stand for the place or the gaming table. In later ages, since Strabo [1st c. BCE], it could have a meaning of a rectangular column. Most scholars consider it a word of unknown origin [eg. Frisk [1960]], not possible to connect it with some Greek word root. In a similar approach the word is also said to be pre-Greek. By this latter term, they are meant words-roots appearing in the Greek language but with possible origins in prehistoric Greece, before the appearance of the Achaeans [before 2nd mill. BCE]. The only Greek etymology I've read about was in Bailly [1895] connecting it with the verb *πίπτω* [=pipto], that stands for fall.

In some older dictionaries [or relevant works] they have been noted connections or origins from Eastern languages. So, Lewy [1895, p. 159] connects it with the Aramaic *pissa* for stone,

15 Notable examples of these loans, though with a little uncertified exact dating, are the Sanskrit words *mela*, derived from Greek *μέλαν* [=melan] for ink, and *kalama*, derived from Greek *κάλαμος* [=kalamos] for a reed-pen [Weber [1890], p. 914, & Tarn [1966], p. 376]. Something that may indicate when writing started becoming more popular in those lands, by these more handy means. Without having knowledge on Sanskrit, melan seems more strong for this Greek-Indian connection. Kalamos afterall is firstly a plant.

gaming table; Grimme [1925, p. 18] with a Hittite relevant word for flat table; while Frisk [1960, v.2, p. 519] leaves for a while the Semitic connections and attracts our attention at *pasah*, an ancient Indian root for cube/die, found in Mayrhofer. A dating is not given for none of the above. And generally they aren't the mainstream approach.

The most interesting for me is the connection with the Babylonian *passu*, for gaming piece; suggested by Landsberger [1960, p. 126, fn. 55], also in Finkel [2007, p. 21]. Though perhaps this latter connection is a little risky, as it relies on phonetics of an extict language like Babylonian. Scholars seem a little arguing on this. For example Finkel [[2007], p. 16, fn. 1] writes that: "*Babylonian words can be spelt out phonetically (and unambiguously)*". While Caplice [2002, p. 87] that: "*Their approximate pronunciation is deduced from other Semitic languages*".

However, this latter seems playing little part for our current approach. Whoever lent this word and whoever borrowed, it seems that this occurred at a far ancient age, before 1000 BCE. Meaning probably before a possible invention of a game with the attributes we are searching. So the word-loan wouldn't indicate a specific game-spreading.

2.2. The Dogs: a loan from or a loan to? A possible game-connection between Greece and the East world up

A different case seems to be the word for the gaming pieces of the Greek game Polis. According to Pollux they were called dogs [=*κύνες*]. But this is a text of the 2nd c. CE. The information was confirmed by Eustathius who used as source Suetonius of the 1st c. CE. However the term seems to be mentioned centuries earlier by Plato [text 22] and Cratinus of the 5th c BCE as given by Pollux [text 14]. But the dog as a game-piece appears and in other ancient texts not coming from Greece.

2.2.1. Egypt. The tale of Setna up

In the 19th c. attention was attracted for a papyrus that was bought by the new-then Museum of Antiquities at Boulaq, Cairo [Mariette [1871, pl. 29-32]]. It was written in Middle (Ptolemaic) demotic Egyptian, fact that allows a dating since 4th c. BCE and after. Brugsch [1867] specified it at 3rd-2nd c. BCE.

It was around a story of Setni-Khamois, one of the sons of pharaoh Usermaatre; the latter being a name for Ramesses II the Great, that has been adopted and by the Greeks. According to the story, Setni was informed for the magic book of Theuth, the Egyptian god of writing and knowledge [and possible inventor of piece-games; check text 3 above]. The book could be found in the tomb of a living-dead ancient prince, buried in Memphis and somehow cursed or enchanted. Trying to get it, Setni was challenged by the dead prince for a board game, possibly Senet [an ancient Egyptian game], where Setni lost three games in a row. However, he stole the book. Rest of the story seems like some kind of curse-pressure by the living-dead prince to Setni so to return the book.

The game pieces are called dogs [=iwiw]. Two independant of the early translations both agree on this, though they are apperaring some other slight differences [Révillout, [1879] & Maspero [1905], p. 100ff, and from recent check Piccione [1994], p. 199].

Nash [1902, p. 347] was writing: "*This name 'dog' does not seem to be applied to draughts-men earlier than the time of the Greeks in Egypt*". While Crist, Dunn-Vaturi & de Voogt [2016, p. 63] that "*it is probably more likely interpreted as a Hellenizing influence on Egyptian gaming vocabulary*". So we're talking for the Ptolemaic period of Egypt [4th-1st c. BCE], more possibly based on the fact that this textual reference is the earliest and probably of the uniques.

An other possible textual reference comes a little later from 3rd c. CE. In the Greek Oxyrhynchus papyrus 470 a device called *πεσσευτήριον* [=pesseutirion] is described, a word derived from pessoi. The fragmentary text mentions a 30-squared board on which

mathematical & astronomical measurements are applied. Hellenized Egyptian words and terms are used, and Piccione [as cited in Crist, Dunn-Vaturi & de Voogt [2016], p. 63] suggests that this is a Senet game-board. The moving pieces are called dogs [general approach and ancient Greek text in Grenfell & Hunt [1903], p. 141][16].

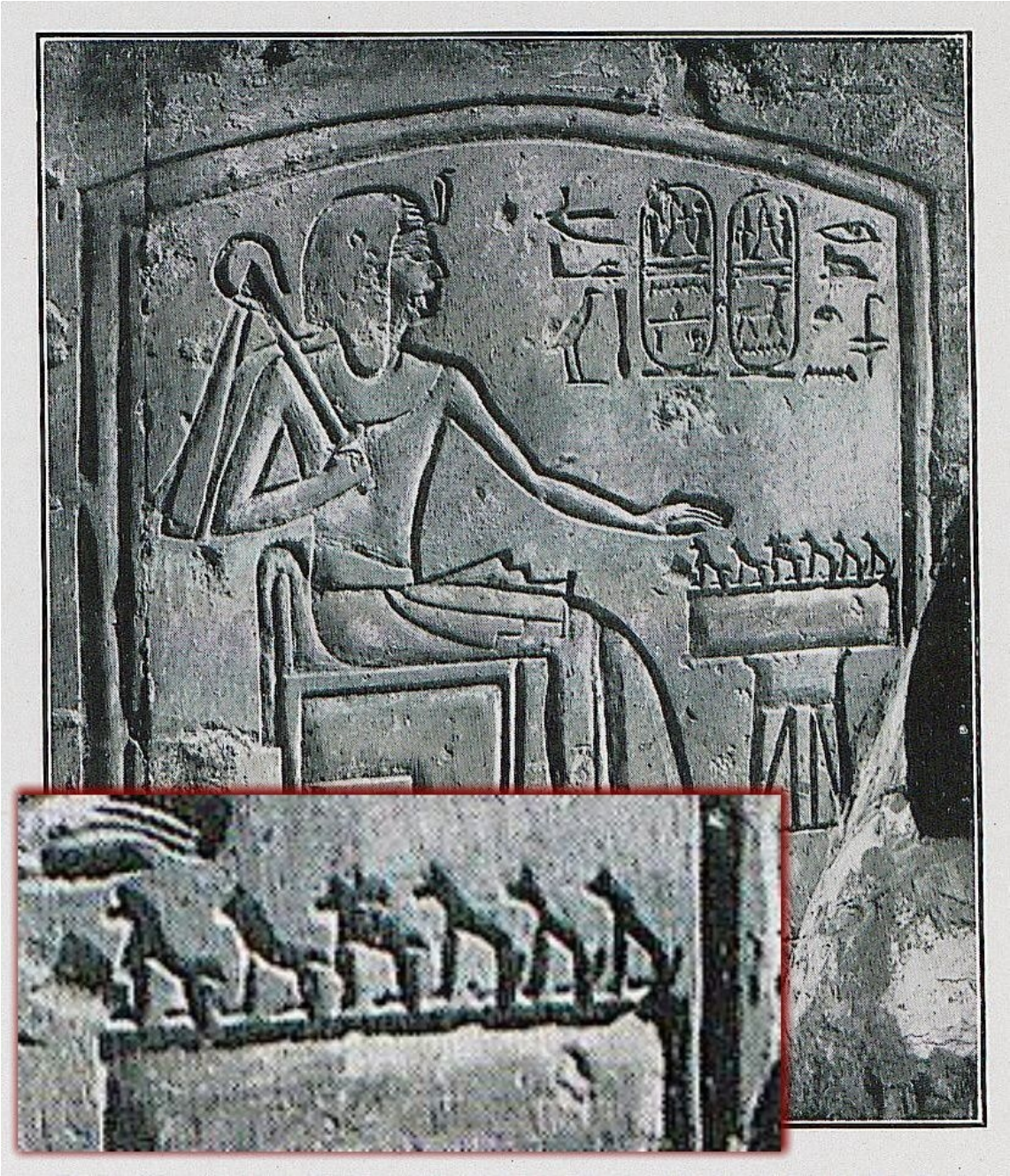

Fig. 19: Pharaoh Merenptah, son of Rameses II, found in Naville [1914, pl. 2]. The only image of the item I've found, located in a pass of Osireion, Abydos.

16 Eustathius [Od. A/107] in 12th c. CE, informs us that commentators of Plato's dialogues mention that Plato had this device in mind, and not the Greek game, when he was talking around the petteia invention by the Egyptians [above, text 03]. This specific comment hasn't been tracked, I think, in known manucripts.

However I've read in modern papers for a depiction of the dog-pieces since 13th c. BCE, at the time of pharaoh Merenptah of the 19th dynasty [fig. 19].

But Naville [1914, p. 2], being a member of the excavation group, was describing the pass where the above image was found as follows: "*On both sides are chapters of the Book of the Dead, the vignettes of which are well engraved. The deceased is supposed to be King Menephtah. In the first vignette of chap. xvii. we see him sitting in a pavilion playing draughts. Instead of the pieces being all alike as usual, each pawn represents a different animal*".

Taking a closer look it's possible that the artist did want to present different animals and not just dogs, but can't be sure for anything.

An other and more certain dog-depiction can be seen in the so-called game of Hounds and Jackals. A game [probably a race-one] with approximately 2.000 years of findings, but mainly played during the Middle Kingdom [2000-1700 BCE ca] in Egypt; it seems that it was overcome by Senet game in the followings centuries. Its original Egyptian name isn't known and generally as I've understood few records of it exist. It's also called by modern scholars the game of the 58 holes or the shield-game cause of the board-shape. The hound and jackal version is derived by the gaming-pegs, usually depicting two groups; one of jackal-headed and one of dog-headed [general approach in Crist, Dunn-Vaturi & de Voogt [2016], p. 103ff].

Fig. 20: Game of Hounds and Jackals, 1814–1805 BCE ca., found in Thebes' Necropolis; now in Metmuseum [26.7.1287a–k]. Possibly the only example combining certain gaming-pegs with certain game-board

However they have been found and other gaming-pegs [though fewer], interpreted as Hounds and Jackals ones, but not having canine shapes on top [fig. 21].

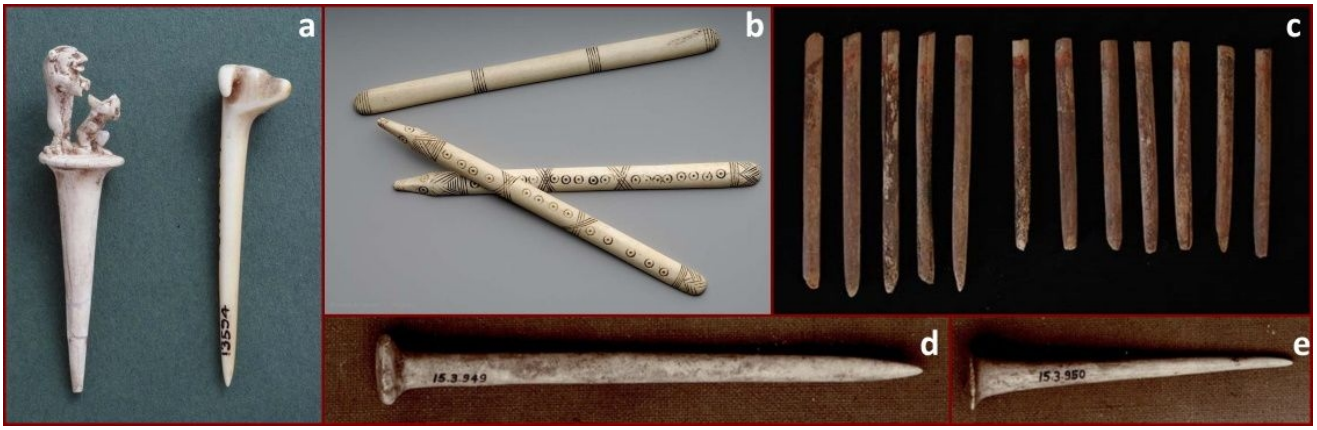

Fig. 21: (a) British Museum EA 13594, no found specific date and site. It's unclear what kind of animal is the left one. (b) Louvre Museum E 3674-6, New Empire, 1550 - 1069 BCE ca. Possible gaming pegs or throwing sticks. (c) Decorated ivory sticks that have been seen as possible pegs cause of the two distinctive heights and marks on them, British Museum F 9835, from Grave G244 at Amara West, Nubia. 13th-9th c. BCE [?]. (d) Metmuseum 15.3.949 & (e) Metmuseum 15.3.950. Both Middle Kingdom, 1981–1640 BCE ca. From Egypt, Memphite Region.

As many findings, especially boards, can tell, this game had spread out all over Near East. It's noticeable that the only reference of '*dogs*' I've read about, is coming from Sumer.

'*A fox/jackal walked around the game board*' (SP 8 Sec B 34).

The above translation is given by Vermaak [2011]. The previous one was giving '*throwstick*' instead of '*board*' [Alster as cited in Vermaak [2011]]. This newer approach could let a connection be between this Sumerian proverb and the game of Hounds and Jackals. Some other Sumerian proverbs are also mentioning dogs but it's really not clear if, even with the given translations, they were actually the game-pieces that were meant [see Vermaak [2011]]. The above is the clearest, I think. I couldn't track a dating of this specific one, but generally most proverbs from this Alster's collection "*are from Nippur and most date to the eighteenth century B.C."* [Taylor [2005]].

According to all these, pegs with canine forms were used for a board-game at least since 2.000 BCE ca in Egypt. On this, Crist, Dunn-Vaturi & de Voogt [2016, p. 111] are writing that "*the choice of fast-running animals for playing pieces is appropriate for a race game*". There's also a possible reference of a game-piece as a '*jackal*' or '*dog*' since these years, but by Sumerians and without a solid proof of what exactly was. '*Dogs*' are mentioned surely as game pieces since the Ptolemaic period and more possibly related to the game Senet, that was played on a board with squares. By these, it seems that Greeks found some zoomorphal game-piece tradition, but established a name.

2.2.2. Babylon. A pack of dogs up

One of the most interesting finds. However the most ambiguous for two reasons: its meaning and its dating.

Bottéro in 1956 published pictures of a Cuneiform stone-tablet. By that time, the object was already lost or destroyed during WWI [its short story is narrated in that article], and by pure

luck the photos had survived. Let's name it DLB after Finkel [2007]. DLB remains of unknown exact origin. It was written in the Neo-Babylonian language, something that as we'll see below it was used for its dating, though in a really general way; none of the writers gave a specific number for it. On its both sides Cuneiform signs were carved in a pattern of 3x4 squares; totally 12 squares on each side, that after some studying had been identified as the zodiac. On a third side, as the back of a book, there're just two written lines that start with "*A pack of dogs...*". All three papers I've read, agree with this translation, while there was a difference on a following word translated either as "*game*" or "*joy*"; game being more probable [Finkel [2007], Bottéro [1956], Landsberger [1960]].

The identification of DLB's writings as the zodiac, became possible after comparison with an other Cuneiform tablet, BM33333 preserved now in the British Museum. This is originated in Babylon of the Seleucid Empire, dated in 177-176 BCE with certainty based on its writings. One of its sides is almost identical with one of DLB, a zodiac. The other BM's side is describing the rules of an ancient game, identified as the Royal Game of Ur [Finkel [2007]].

I don't have any knowledge on Akkadian, Babylonian or Cuneiform script; but with common sense and other info some things seemed impossible to accept, at least without some more given information.

i. The meaning of these dogs

Finkel connected the phrase "*A pack of dogs*" with the rules of the Royal Game of Ur; and actually mentioning the use of the term dogs as gaming pieces, in Greece, Egypt etc. This connection seemed to me really loose. Finkel actually warned that "*These suggestions are mentioned with diffidence*". To get a clue, he starts with the side of the game's description, then goes to the other side where the zodiac is, and finally to the previous tablet with the same zodiac that bears the title "*A pack of dogs*"; in the end connecting the game's description with the dogs of the title of the other tablet.

But there weren't presented enough textual evidence, I think, to connect primarily the game's description with the zodiac. They could be two different things, one of each side; a fortune-telling calendar on one, the game's rules on the other. Further, my attention was attracted by the given translations, where the game pieces in the rules' part are mentioned as different kinds of birds, not dogs.

But maybe I'm more sceptical than I should, cause of my ignorance.

ii. The dating of DLB

Both Finkel and Bottéro are dating DLB tablet based solely on its Neo-Babylonian script, but without giving numbers; Finkel is just writing that "*judging from its NeoBabylonian script, it is several centuries earlier than the Seleucid tablet BM*", the latter of 177 BCE. The problem is that the circumstances and the place of DLB tablet's discovery remain unknown, not letting further conclusions to be drawn. Generally NeoBabylonian script has a dating range in the first half of the 1st mill. BCE, with more evidence between 800-550 BCE, but this can't be binding[17].

The appearance of the zodiac could help with the dating, I think. The zodiacal belt and its signs were surely known by Babylonians since 1000 BCE and maybe even earlier. However they weren't presented as 12 at first. In a tablet [BM 86378] dated in 687 BCE ca, the path of the moon has 18 [or 17] constellations. Waerden [1953] gives a tablet [VAT 4924] dated in 419 BCE, as the first item containing only the 12 signs of the zodiac. However later [Waerden

17 Babylonian language came to decline after the fall of the last Babylonian empire [in 539 BCE], and its use afterwards can't be considered regular. It was substituted by Aramaic as a lingua franca. To such degree that the following phase of the Babylonian language, the so called Late-Babylonian, has been considered by many scholars as not a spoken language [though with some different opinions, check Hackl [2011] for discussion]. Just to mention an example from an other point of view. The Antiochus cylinder [BM 36277], an object from Hellenistic Babylonia, is dated in 260 BCE ca, but written in an archaic traditional Babylonian dialect, "*that was used for official and cultic purposes*" according to Strootman [2013, p. 6]. DLB isn't written in this dialect, but generally can't know if a zodiac is out of some religious-astrological background, reflecting some earlier tradition.

[1974], p. 126] mentions also a tablet - lunar table of 486 BCE, concluding that it implies as precondition the 12-sign zodiac. Koch-Westenholz [1995, p. 163] mentions as start the 5th c. BCE.

But the most striking fact, that actually made me question the given DLB's dating, is underlined by Finkel [2007, p. 27], though not analyzed astronomically; only linguistically. Finkel mentions that the zodiac in both tablets that interested us, DLB & BM33333, starts with the constellation of Pegasus [??], instead of Aries as it would be expected for the sign of the vernal equinox. And this in the possible place of Pisces [before Aries and after Aquarius]. In a night sky one can easily see that Pisces and Pegasus are attached. Taking in account the precession of the equinoxes, this would indicate a year close to the start of our common era, the start of the age of Pisces; like the date of BM33333. Is there another explanation possible?

Taking for granted that the dogs are meant here as game-pieces, I can't be 100% sure if this reflects a loan, or generally a common ground, during the Hellinistic period; though it seems to me more probable according to the aforementioned possible astronomical dating. However even earlier, trade between these people isn't under question; afterall the western limits of the Babylonian empire were the Mediterranean coasts, same for Persians. While even stronger connections, as residence and immigration, have been also suggested, though they should be taken in account caustiously[18].

18 For Greeks at the Near East area before Alexander the Great, check Zorn [2014], where trade should be somehow reduced during the short-lived Neo-Babylonian empire of the 6th c. BCE. Lehmann [2014] where evidence for more intense Greek elements in the Persian empire since 5th c. BCE; trade, art, architecture. Also Lehmann [1998]. Niemeier [2001], as being more sceptical and strict regarding the early presence of the Greek element, however with references of the opposite opinions and in any case mentioning connections since Late Bronze Age-Early Iron Age. Main period under question for this paper were the 9th-7th c. BCE accepting mainly the presence of Greek mercenaries. Before this, the Philistines as of Aegean origin, and since late 7th c. BCE the apparent presence of Greek merchants in Near East. Also Waldbaum [1994 & 1997], being more sceptical but mentioning relevant findings. Yamauchi [1981].

2.2.3. The Babylonian Talmud up

Schädler [2002] attracts our attention at the pages of the Babylonian Talmud, a Jewish sacred text that is considered written between 3rd-6th c. CE.

In Kethuboth 61b, 8, translated under Epstein editorship [Soncino edition], one can read: "*The practical difference between them [is the case of a woman] who plays with little cubs or [is addicted to] checkers*.", explaining in the notes '*A woman who spends her time in this manner may be exposed to the temptation of unchastity but is in no danger of falling into idiocy*'.

These '*little cubs*' has been given equivalently as '*little dogs*' [eg. Goldschmidt, V, p. 192 & William Davidson Talmud]. They have been interpreted as game-counters for a board game, connected via Talmud commentaries with an other excerpt that will follow [Kiddushin 21b, 15]. Checkers is a translation of the word '*nardshir*', with obvious connection with the known nard game. Rashi, a Talmud commentator of the 11th c. CE, is writing on this: '*chess*'. But reading Ya'qubi's history [under 2.2.4], nard is probably a backgammon-type game; in Firdausi's Shahnameh isn't clear enough.

At three following instances in Talmud there's a term mentioned: '*iskundre*'. In two of them, Nedarim 25a, 2 & Shevuot 29a, 10, the term is interpreted as tokens-counters used instead of money. While Goldschmidt translates as Spielmarken. For the 2nd it was noted as comment in Epstein: "*Perhaps the debtor (who has to swear) had given to the creditor counters, such as are used as tokens (instead of money) in the game of iskundre (a kind of draughts or chess)*".

At the third excerpt, Kiddushin 21b, 15, the game '*iskundre*' is mentioned as a waste of time. Chananel, a Talmud commentator of the 11th c. CE earlier than Rashi, seems connecting this iskundre with the aforementioned game of little dogs, of Kethuboth 61b. I couldn't find any original translation of this specific commentary; but Kohut [1892, p. 131] seems saying so [using as source Nathan's Arukh for Chananel's comments]. Notes in Epstein are saying that Chananel translated '*iskudre*' as '*dog-racing*'.

Kohut [1892] connected the term '*iskundre*' with the Persian & Arabic Iskandar, a name for Alexander the Great. Seemed quite plausible; but Schädler [2002] mentioned some critisism so went further. He connected the term '*iskundre*' with Alexander Jannaeus, as same sounded; latter being an Hellenized [to a degree] king of Judaea, a part of Seleucid empire that at the time gained independence [for some aspects of Hellenized Jewism of that time, check Eyal [2017]; generally Greek culture elements, out of religion, seem to be adopted]. Schädler mentions coins, issued by Alexander Jannaeus, that are bearing his name on each side, in both Greek and Aramaic, latter sounding similarly with iskundre. Coins that probably were used as tokens or game-pieces.

I don't feel sure if the term iskundre signifies a Greek origin of a game, or just a use of Hellenized coins; or possibly even both. But seems also quite a coincidence the board game of little dogs.

2.2.4. The dogs of Ya'qubi up

And we come at a clear case where dogs are generally the pieces used at some game.

Ahmad al-Ya'qubi, a Muslim geographer & historian of the 9th c. CE during the rule of the Abbasid Caliphate, gave some illustrative scenes on the invention of chess and nard games. In the chapter of the Kings of India of his Tarikh [History], these games are described as creations of wise-men of India; Qaflan being a repeated name. In both, chess & nard, the game pieces are called dogs [=kalib, ' كلبا ']!

[original Arabic text found in wikisource: for nard:' وصير لها ثلاثين كلباً تشبيها بأيام الشهر ودرج البروج، إذا قسمتها، كان لها نصف، وهو اثنان وثلاثون، وهي عدة جميع الكلاب '...for chess:' ...Also check Gordon & others [2018], p. 353, fn. 399, and generally for modern English translation].

3. Concluding with Firdawsi's Shahnameh up

From the above, clear cases seem to be Ya'qubi and the Egyptian one, I think [2.2.1 & 2.2.4]. Generally, according to what I've read, the term dogs should be considered a scattered example, as usually other words-terms can be found instead. However, it seems that some Greek game tradition passed in these lands, probably through a game vocabulary. But one can notice easily that all the aforementioned possible examples seem coming from Semitic languages or the Egyptian one.

I've tried to see in Persian sources, too. The only text I could check to a degree is one of Middle Persian literature under the title 'Wizārišn ī Čatrang ud Nihišn ī Nēw-Ardaxšīr' [Explanation of Chess and Invention of Backgammon]; and this cause of an edition-translation of Daryaee [2016] that gives a glossary and transliterations. Daryaee earlier [2002] considers its date of composition unclear, but with the text pointing at late 6th c. CE, under the reign of Khosrow I of the Sasanian Empire. Brunner [1978] sets the writing in the 9th c. CE, based on an oral tradition since the 6th c. In any case, the text doesn't give some relevant term that could be used for our current approach[19].

In the text the game of chess is appearing as an Indian invention, compared with the game of nard that was invented by the Persians as an antagonist; in the known story where the games were presented to the kings of each court so their rules to be discovered. Nard here is described like a backgammon type game. Similar description of it is given by Ya'qubi, but mentioned as an Indian game. In Shahnameh by Firdawsi, a long epic Persian poem of the 10th c. CE, the legend of chess and nard inventions are given just like in the aforementioned Persian 'Wizārišn ī Čatrang ud Nihišn ī Nēw-Ardaxšīr'; but nard is described differently.

In Shahnameh the game of nard is played on a chess-board and is a war game with dice, where king-pieces are involved. I don't know if poet wanted to create some legendary game so

19 The text shows some surviving Greek legacy but not on game terminology. Silver coins are mentioned as drachms [after Greek δραχμή], but just standing for money; a possible surviving term via Parthians, that today is known as Dirham.

to be compared with chess convincingly as superior, but it hasn't been tracked this way nowhere else. At two instances there are possible allusions of the ancient Greek game polis [or ludus latrunculorum], underlined by Schädler [2002].

Firstly the camp of the opponent is described as City. This according to all found translations [check Mohl [1877], p. 313, Murray [1913], p. 157, Davis [2006], p. 701, while in Warner [1915], p. 389, the term city is absorbed in the word '*siege*' possibly cause this translation is metrical. I couldn't find some transliteration from the Persian text so to track the exact words].

Secondly, a single piece would be defeated and killed by two of the opponent's. Murray [1952, p. 54] considered nard as '*a modification of latrunculi*'.

All the above are just a strong indication of a possible Greek influence, not proof. And further it isn't 100% certain that Greeks were the first to reach at the game development we were searching; possibly they were the reason for some spreading. The non-dice game element could have been achieved and earlier, though Greeks seem to be the first to imply it. Maybe they were the first to combine it on an open board; something that would let human imagination free for the appearance of the other piece-movements. In any case this journey to the history of ancient games was fascinating for me. And my attention was attracted more at the way ancient Greeks & Romans were talking sometimes about petteia. In many cases it reminded to me how chess was treated in the middle ages. Perhaps, it was serving similar human needs.

References or for further reading: up

•Adam, James [1905], The republic of Plato, vol 1, books I-V, 1905

•Anderson, William [1965], Valla, Juvenal, and Probus, in Traditio Vol. 21 (1965), pp. 383-424

•Austin, Roland [1934a], Roman Board Games I, in Greece & Rome Vol. 4, No. 10 (Oct., 1934), pp. 24-34

•Austin, Roland [1934b], Roman Board Games II, in Greece & Rome Vol. 4, No. 11 (Feb., 1935), pp. 76-82

•Austin, Roland [1940], Greek Board Games, in Antiquity, 14, September, 1940, pp. 257-271

•Averbach, Yuri [2012], A History of Chess: From Chaturanga to the Present Day

•Averbach, Yuri, About the origin of Chess [О ПРОИСХОЖДЕНИИ ШАХМАТ], web article in http://chess.gpntb.ru/educat_activity/Aver_school/chess_history/

•Bailly, Anatole [1895], Dictionnaire grec-français d'Anatole, 1895

•Bakewell, Geoffrey [2008], Aeschylus' "Supplices" 11-12: Danaus as "πεσσονομῶν", in The Classical Quarterly New Series, Vol. 58, No. 1 (May, 2008), pp. 303-307

•Berger, Friedrich [2004], From circle and square to the image of the world: a possible interpretation for some petroglyphs of merels boards, in Rock Art Research 21/1, 2004, pp. 11–25

•Berkwitz, Stephen [2010], South Asian Buddhism: A Survey, 2010

•Bhatta, Panduranga [1995], Antiquity of Indian Board Games. A New Approach, in New Approaches to Board Research, 1995, pp. 125-133

•Bhatta, Panduranga [2003], Indian origins of chess, an overview, in Annals of the Bhandarkar Oriental Research Institute Vol. 84 (2003), pp. 23-32

•Bottéro, Jean [1956], Deux curiosités assyriologiques (avec une note de Pierre Hamelin), in Syria. Archéologie, Art et histoire 33/1956, pp. 17-35

•Brockington, J. L. [1998], The Sanskrit Epics, 1998

•Bronkhorst, Johannes [2019], The Formative Period of Jainism (c. 500 BCE-200 CE), in Brill's Encyclopedia of Jainism, 2020, pp.167-177

•Brugsch, Heinrich Karl [1867], Le Roman de Setnau contenu dans un papyrus démotique du Musée égyptien à Boulaq, in Revue archéologique 16/1867, pp. 161-179

•Brunner, Christopher [1978], The Middle Persian Explanation of Chess and Invention of Backgammon, in Journal of the Ancient Near Eastern Society 10/1978, pp. 43-51

•Buswell, Robert (ed.) [2004], Encyclopedia of Buddhism, 2004

•Caplice, Richard [2002], Introduction to Akkadian, 2002

•Cazaux, Jean-Louis Cazaux [2001], Is Chess a Hybrid Game?, IGK Symposium, Amsterdam, 2001

•Cazaux, Jean-Louis / Josten, Gerhard / Samsin Myron [2003], The Anatomy of Chess, 2003

•Champlin, Edward [1989], The Life and Times of Calpurnius Piso, in Museum Helveticum Vol. 46, No. 2 (1989), pp. 101-124
•Classen, Albrecht [2019], Pleasure and Leisure in the Middle Ages and Early Modern Age: Cultural-Historical Perspectives on Toys, Games, and Entertainment, 2019
•Clua Serena, Josep Antoni [2015], Denotations and Connotations of the expression ἀπὸ γραμμᾶς κινεῖ λίθον (Theocritus Id. VI 18), in REA Tome 117 - 2015 - N°1
•Crist, Walter & Dunn-Vaturi, Anne-Elizabeth & de Voogt, Alex [2016], Ancient Egyptians at Play, 2016
•Cullhed, Eric [2012], The Autograph Manuscripts Containing Eustathius' Commentary on the Odyssey, in Mnemosyne, Fourth Series, Vol. 65, Fasc. 3 (2012), pp. 445-461
•Cullhed, Eric [2016], Eustathios of Thessalonike: Commentary on Homer's Odyssey. Volume 1: On rhapsodies A–B (2016)
•Daryaee, Touraj [2002], The Games of Chess and Backgammon in Sasanian Persia, in Iranian Studies 35/4/2002, pp. 281-312
•Daryaee, Touraj [2016], On the Explanation of Chess and Backgammon, 2016
•Dasen, Véronique [2015], Achille et Ajax: Quand l'agôn s'allie à l'alea in La Revue du MAUSS 46/2015, pp. 81-98
•Davis, Dick [2006], Shahnameh : the Persian book of kings by Firdawsī, 2006
•Donato, Marco [2016], La πεττεία des discours. Réflexions sur la dialectique dans l'Éryxias pseudoplatonicien, 2016
•Dobbs, Christopher [2018], Not just fun and games : exploring ludic elements in Greek and Latin literature, thesis 2018
•Duff, J. & Duff, A. [1934], Minor Latin Poets: Laus Pisonis, 1934, ff. 289
•Dutt, Manmatha Nath [1897], A Prose English Translation of Harivamsha, 1897
•Epstein, Isidore (ed.) [1935-1952], Babylonian Talmud, Soncino, 15 vols, 1935-1952
•Eyal, Regev [2017], The Hellenization of the Hasmoneans, in Advances in Anthropology, 7/2017, pp. 175-196
•Finkel, Irving [2007], On the Rules for the Royal Game of Ur, in Ancient board games in perspective : papers from the 1990 British Museum colloquium with additional contributions, ed. by I. L. Finkel, 2007, pp. 16-32
•Frisk, Hjalmar [1960], Griechisches Etymologisches Wörterbuch, 3 volumes, 1960-1972
•Gethin, Rupert [1998], The Foundations of Buddhism, 1998
•Gnoli, Raniero & Venkatacharya, T. [1977], The Gilgit manuscript of the Saṅghabhedavastu: being the 17th and last section of the Vinaya of the Mūlasarvāstivādin, vol.1, 1977
•Gnoli, Raniero & Venkatacharya, T. [1978], The Gilgit manuscript of the Saṅghabhedavastu: being the 17th and last section of the Vinaya of the Mūlasarvāstivādin, vol.2, 1978

•Goldschmidt, Lazarus [1929-1936], Der Babylonische Talmud, 12 vols, 1929-1936
•Gordon, Matthew S., Robinson, Chase F., Rowson, Everett K. & Fishbein, Michael (eds) [2018], The Works of Ibn Wāḍiḥ al-Yaʿqūbī, An English Translation, 3 vols, 2018
•Green, Steven [2010], (No) Arms and a Man': The imperial pretender, the opportunistic poet and the Laus Pisonis, in The Classical Quarterly New Series, Vol. 60, No. 2 (Dec 2010), pp. 497-523
•Greene, William [1981], Scholia Platonica (clear transcription), 1981-reprint of 1938 edition Grenfell, Bernard & Hunt, Arthur [1903], The Oxyrhynchus papyri, vol 3, 1903
•Grimme, Hubert [1925], Hethitisches im griechischen Wortschatze, in Glotta 14. Bd., 1./2. H. (1925), pp. 13-25
•Guéniot, Philippe [2000], Un jeu clef: La petteia in Revue de Philosophie Ancienne Vol. 18, No. 2 (2000), pp. 33-64
•Hackl, Johannes [2011], Language Death and Dying Reconsidered: the Rôle of Late Babylonian as a Vernacular Language, 2011
•Hall, Mark & Forsyth, Katherine [2011], Roman rules? The introduction of board games to Britain and Ireland
•Harmatta, Janos [ed. 1994], History of civilizations of Central Asia, vol. II, 1994
•Holt, H. F. W. [1885], Notes on the Chinese Game of Chess, in The Journal of the Royal Asiatic Society of Great Britain and Ireland, New Series, Vol. 17, No. 3 (Jul., 1885), pp. 352-365
•Hübner, Robert [2009], Hinweise zum Verstandins des Begriffes ἄζυξ beim Brettspiel, in '… vor dem Papyrus sind alle Gleich!' Papyrologische Beiträge zu Ehren von Bärbel Kramer, pp. 80-92
•Ichimura, Shohei [2015], Canonical Book of Buddha’s Lengthy Discourses, vol. 1, 2015
•Ichimura, Shohei [2016], Canonical Book of Buddha’s Lengthy Discourses, vol. 2, 2016
•Ichimura, Shohei [2018], Canonical Book of Buddha’s Lengthy Discourses, vol. 3, 2018
•Ignatiadou, Despina [2019], Luxury Board Games for the Northern Greek Elite, in Archimede 6-2019, Games and play in antiquity, pp. 144-159
•Jackson, Henry [1877], Aristot. Polit., in The Journal of Philology, Vol 7/1877, p. 236
•Jacobi, Hermann [1895] transl., Gaina Sutras, vol. 2, 1895
•Jain, Sāgarmal [1999], Jaina Literature & Philosophy, 1999
•Jamison, Stephanie & Brereton, Joel [2014], The Rigveda, 3 volumes, 2014
•Jones, C. P. [1986], Suetonius in the Probus of Giorgio Valla, in Harvard Studies in Classical Philology Vol. 90 (1986), pp. 245-251
•Josten, Gerhard [2001], Chess - A Living Fossil
•Karakitsou, Elena [2009], The Games at Parthenon, in Enimerotikes Eidiseis, Jul 2009

•Kavanagh, Bernard [2001], The Conspirator Aemilius Regulus and Seneca's Aunt's Family, in Historia: Zeitschrift für Alte Geschichte Bd. 50, H. 3 (3rd Qtr., 2001), pp. 379-384
•Kidd, Stephen [2017a], Pente Grammai and the 'Holy Line', in Board Game Studies Journal 11(1), 2017, pp. 83–99
•Kidd, Stephen [2017b], How to Gamble in Greek: The Meaning of Kubeia, The Journal of Hellenic Studies 137, pp. 119-134
•Kin Tung Yit [2004], A Study of a stereotyped structure of the path in early Buddhist literature, 2004
•Koch-Westenholz, Ulla [1995], Mesopotamian astrology, an introduction, 1995
•Kohut, Alexander [1892], Ist das Schachspiel im Talmud genannt, und unter welchem Namen?, in Zeitschrift der Deutschen Morgenländischen Gesellschaft 46/1892, pp. 130-135
•Kraaijeveld, Alex [2000], Origin of chess - a phylogenetic perspective, in Board Games Studies 3/2000 [International Journal for the Study of Board Games], pp. 39-50
•Kurke, Leslie & Kurke, Geoffrey [1999a], Coins, Bodies, Games, and Gold, 1999, especially pp. 254-275
•Kurke, Lesli [1999b], Ancient Greek Board Games and How to Play Them, in Classical Philology Vol. 94, No. 3 (Jul., 1999), pp. 247-267
•Lamotte, Étienne [1988], The History of Indian Buddhism, 1988 (1958)
•Landsberger, Benno [1960], Einige unerkannt gebliebene oder verkannte Nomina des Akkadischen, in Wiener Zeitschrift für die Kunde des Morgenlandes, Vol. 56 (1960), pp. 109-129
•Lehmann, Gunnar [2014], The Levant during the Persian period, in The Oxford Handbook of the Archaeology of the Levant c.8000–332 BCE, by Steiner, Margreet & Killebrew, Ann (eds), 2014, p. 841ff
•Lehmann, Gunnar [1998], Trends in the Local Pottery Development of the Late Iron Age and Persian Period in Syria and Lebanon, ca. 700 to 300 B. C., in Bulletin of the American Schools of Oriental Research No. 311 (Aug., 1998), pp. 7-37
•Lewy, Heinrich [1895], Die semitischen Fremdwörter im griechischen, 1895
•Linder, Isaac [1975], Линдер, У порога открытия, in Этнографическое обозрение 2/1975, p. 125
•Mailla, Joseph-Anne-Marie de Moyriac de [1777], Histoire générale de la Chine, vol. 2, 1777
•Makrinos, Antonios [2005], Eustathius' commentary on Homer's Odyssey (Doctoral thesis (Ph.D))
Makrinos, Antony [2007], Eustathius archbishop of Thessalonica Commentary on the Odyssey: Codex Marcianus 460 and Parisinus 2702 revisited, in Bulletin of the Institute of Classical Studies, vol. 50, (2007), pp. 171-192
•Mansfeld, Jaap & Runia, David [1996], Aëtiana. 1. The sources, 1996

•Mariette, Auguste [1871], Les papyrus égyptiens du Musée de Boulaq (Band 1), 1871, pl. 29-32
•Mariscal, Lucia Romero [2011], Ajax and Achilles playing a board game, in The Classical Quarterly New Series, Vol. 61, No. 2 (Dec 2011), pp. 394-401
•Mark, Michael [2007], The Beginning of Chess, in Ancient Board Games in perspective, 2007 Maspero, Gaston [1905], Les contes populaires de l'Égypte ancienne, 1905 3rd ed. // English translation in Popular stories of ancient Egypt, 1915, pp. 115ff
•Mayrhofer, Manfred [1992], Etymologisches Wörterbuch des Altindoarischen, 3 volumes, 1992-2001
•Mehendale, Madhukar Anant [2002], Does Patañjali on Pāṇini 5.2.9 refer to Chess?, in Indian Linguistic Studies. Festschrift in Honor of George Cardona by Madhav M. Deshpande & Peter E. Hook (eds.), 2002, pp. 257-263
•Mohl, Jules [1877], Le Livre Des Rois, Vol VI, 1877
•Murray, H. J. R. [1913], A history of chess, 1913
•Murray, H. J. R. [1952], A history of board-games other than chess, 1952
•Nagy, Gregory [2015], A Roll of the Dice for Ajax, web article in https://classical-inquiries.chs.harvard.edu/a-roll-of-the-dice-for-ajax/
•Nash, W. L. [1902], Ancient Egyptian draughts-boards and draughts-men, in Proceedings of the Society of Biblical Archaeology 24/1902, pp. 341–348
•Naville, Edouard [1914], Excavations at Abydos, in Griffith's Egypt Exploration Fund: Archaeological report 1911-1912, 1914
•Newman, William L. [1887], The Politics of Aristotle, vol 2, 1887
•Niemeier, Wolf-Dietrich [2001], Archaic Greeks in the Orient: Textual and Archaeological Evidence, in Bulletin of the American Schools of Oriental Research No. 322 (May, 2001), pp. 11-32
•Piccione, Peter [1994], The Gaming Episode in the Tale of Setne Khamwas As Religious Metaphor, in For His Ka: Essays Offered in Memory of Klaus Baer, ed. Silverman, 1994, pp. 197-204
•Pugachenkova, Galina & Rtveladze, Edvard [1978], Пугаченкова, Г.А. Ртвеладзе, Э.В., Дальверзинтепе - кушанский город на юге Узбекистана, 1978
•Reeve, M. D. [1984], The Addressee of "Laus Pisonis", in Illinois Classical Studies Vol. 9, No. 1 (SPRING 1984), pp. 42-48
•Regan, Richard, transl. [2007], Aquinas, Commentary On Aristotle's Politics, 2007
•Révillout, E. [1879a,b], Le Roman de Setna, in Revue archéologique 37/1879, pp. 334ff & 38/1879, pp. 11ff [accumulated edition in 1880]
•Rhys Davids, Thomas William [1899], Dialogues Of The Buddha, vol. 1, 1899
•Rhys Davids, Thomas William [1910], Dialogues Of The Buddha, vol. 2, 1910

•Rhys Davids, Thomas William [1921], Dialogues Of The Buddha, vol. 3, 1921
•Rhys Davids, Thomas William & Oldenberg, Hermann [1881], The Vinaya Texts, vol. 1, 1881
•Rhys Davids, Thomas William & Oldenberg, Hermann [1882], The Vinaya Texts, vol. 2, 1882
•Rhys Davids, Thomas William & Oldenberg, Hermann [1885], The Vinaya Texts, vol. 3, 1885
•Richmond, John, [1994], The Ludus Latrunculorum and Laus Pisonis 190–208, in Museum Helveticum Vol. 51, No. 3 (1994), pp. 164-179
•Samsin, Myron [2002], Pawns And Pieces: Towards The Prehistory Of Chess
•Sasson, Vanessa [2013], Little Buddhas, 2013
•Schädler, Ulrich [1994], Latrunculi: ein verlorenes strategisches Brettspiel der Römer, in Homo Ludens 4, 1994, pp.47-67
•Schädler, Ulrich [1999], Vom 20-Felder-Spiel zum Würfelvierschach?, in Board Games Studies 2/1999 [International Journal for the Study of Board Games], pp. 144-148
•Schädler, Ulrich [2001], Latrunculi: A Forgotten Roman Game of Strategy Reconstructed, in Abstract Games 7/2001, pp. 10-11
•Schädler, Ulrich [2002], The Talmud, Firdausi, and the Greek game 'City', in Step by Step. Proceedings of the 4th Colloquium Board Games in Academia, 2002, pp. 91-102
•Schädler, Ulrich [2008], Antike Brettspiele und frühe Schachvarianten, in Scacchia Ludus - Studien zur Schachgeschichte Band 1, 2008, pp. 69-116
•Schädler, Ulrich [2009], Pente grammai - the ancient Greek board game Five Lines, in Proceedings of Board Game Studies Colloquium XI 2009, pp. 169-192
•Schädler, Ulrich [2012], Games, Greek and Roman, in Encyclopedia of Ancient History 2013 Schopen, Gregory [1999], The Bones of a Buddha and the Business of a Monk, in Figments and Fragments of Mahayana Buddhism in India: More Collected Papers, 2004, pp. 63-107
•Stewart, J. A. [1893], Plato, 'Republic' 422 E, in The Classical Review Vol. 7, No. 8 (Oct., 1893), p. 359
•Strootman, Rolf [2013], Babylonian, Macedonian, King of the World: The Antiochos Cylinder from Borsippa and Seleukid imperial integration, in E. Stavrianopoulou ed., Shifting Social Imaginaries in the Hellenistic Period: Narrations, Practices, and Images, 2013, pp. 67–97
•Susemihl, Franz & Hicks, Robert Drew [1894] The politics of Aristotle, books 1-5, 1894
•Tarn, William Woodthorpe [1966], The Greeks in Bactria and India, 1966
•Taylor, Jon, [2005], The Sumerian Proverb Collections, Revue d'Assyriologie et d'archéologie orientale, Vol. 99 (2005), pp. 13-38
•Thieme, Paul [1962], Chess and Backgammon (Tric-Trac) in Sanskrit Literature, in Indological studies in honor of W. Norman Brown by Ern. Bender's (ed.), 1962, pp. 204-216
•Thraede, Klaus [1967], Zu Aristoteles Pol. A 1253a 6-7, in Hermes 95. Bd., H. 1 (1967), pp. 122-124

•Turgunov, B. [1973], Тургунов, Новые данные к истории шахмат в Средней Азии, in Общест венные науки в Узбекистане 11/1973, p. 73
•Vermaak, P. S. [2011], A new interpretation of the playing objects in the Gilgamesh epic, in Journal for Semitics 20/1 (2011), pp. 109-138
•De Voogt, Alex [2019], Traces of Appropriation: Roman Board Games in Egypt and Sudan, in Archimede 6-2019, Games and play in antiquity, pp. 89-99
•Waerden, Bartel L. van der [1953], History of the Zodiac, in Archiv für Orientforschung 16. Bd. (1952-1953), pp. 216-230
•Waerden, Bartel L. van der [1974], Science awakening II, The birth of astronomy, 1974
•Waldbaum, Jane [1994], Early Greek Contacts with the Southern Levant, ca. 1000-600 B. C.: The Eastern Perspective, in Bulletin of the American Schools of Oriental Research No. 293 (Feb., 1994), pp. 53-66
•Waldbaum, Jane [1997], Greeks in the East or Greeks and the East? Problems in the Definition and Recognition of Presence, in Bulletin of the American Schools of Oriental Research No. 305 (Feb., 1997), pp. 1-17
•Wardle, D. [1993], Did Suetonius write in Greek?, in Acta Classica Vol. 36 (1993)
•Warner, Arthur George [1915], The Shahnama [by Firdawsi], vol. 7, 1915
•Weber, Albrecht [1873], Indische Studien, vol. 13, 1873
•Weber, Albrecht [1890], Die Griechen in Indien, in Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin, 1890, pp. 901-933
•Yamauchi, Edwin [1981], Daniel and Contacts Between the Aegean and the Near East Before Alexander, Evangelical Quarterly 53.1 (January-March 1981), pp. 37-47
•Zorn, Jeffrey [2014], The Levant during the Babylonian period, in The Oxford Handbook of the Archaeology of the Levant c.8000–332 BCE, by Steiner, Margreet & Killebrew, Ann (eds), 2014, p. 825ff

Main links-libraries that helped me gather my material:

- http://www.perseus.tufts.edu/hopper/
- http://www.poesialatina.it/
- https://www.thelatinlibrary.com/
- https://gallica.bnf.fr/
- http://www.bl.uk/
- https://www.loc.gov/
- https://digi.vatlib.it/
- https://www.ub.uni-heidelberg.de/helios/digi/digilit.html
- https://digital.bodleian.ox.ac.uk/

- http://teca.bmlonline.it/TecaRicerca/index.jsp
- https://books.google.com/
- https://archive.org/
- https://www.jstor.org/
- https://www.researchgate.net/
- https://www.academia.edu/
- https://www.persee.fr/
- https://www.cambridge.org/
- https://www.scribd.com/
- http://history.chess.free.fr/
- https://unesdoc.unesco.org
- https://docplayer.gr/
- https://docplayer.fr/
- https://content.sciendo.com/
- http://ex.ludicum.org/
- https://journal.iea.ras.ru/
- https://discovery.ucl.ac.uk/
- https://archive.nyu.edu/
- https://healthy.uwaterloo.ca/
- http://www.abstractgames.org/
- http://www.revue-etudes-anciennes.fr/
- https://www.ysma.gr/