



RESEARCH ARTICLE

Mehen, The Ancient Egyptian Serpent Game

A Reappraisal of the Evidence Set

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Abstract

The Game of the Snake, the Serpent Game, or Mehen is a board game thought to have been played by ancient Egyptians throughout at least Dynasties 1–6. This paper identifies important inaccuracies and misunderstandings in the evidence and in prior works about Mehen from the mid-19th–21st centuries, many of which have been propagated for decades, and attempts to clarify them while also assessing new developments from a ludological perspective.

Newly interpreted archaeological evidence is incorporated from the tombs of Rashepses and Hesy at Saqqara, and from the pyramid complex of Sahure at Abusir. Furthermore, the paper provides new insights into Mehen boards held in international collections, including the Fitzwilliam Museum, Cambridge, the Ashmolean Museum, Oxford, The Metropolitan Museum of Art, New York, the Petrie Museum, London, and the Ägyptisches Museum, Berlin, plus observations regarding the board fragments discovered in the tomb of Peribsen in 1905. A variety of minor clarifications regarding game piece finds and texts are also identified.

The evidence set is significantly changed and notably more consistent once the findings in this article are incorporated. From a ludological perspective, the changes represent a crucial shift and should allow future researchers to present much stronger arguments for theories of game-play.

Keywords: mehen, games, snake, serpent, Old Kingdom

نحو تعدد التخصصات في علم ميهين، لعبة الثعبان المصرية القديمة - إعادة تقييم مجموعة من الأدلة

المُلخَص

لعبة الثعبان أو لعبة الأفعى أو ميهين هي لعبة لوحية يعتقد أن المصريين القدماء لعبوها منذ الأسرة الأولى إلى الأسرة السادسة على أقل تقدير. إذ تعمل هذه الورقة البحثية على تحديد أهم المغالطات والمفاهيم الخاطئة التي وردت في الأدلة والدراسات السابقة الخاصة بلعبة ميهين منذ منتصف القرن التاسع عشر إلى القرن الحادي والعشرين، التي انتشر العديد منها على مدى عقود. لذا، تهدف هذه الورقة إلى توضيح هذه الأخطاء، إلى جانب العمل على تقييم المستجدات الحديثة من منظور خاص بعلم دراسة الألعاب. حيث تتضمن الورقة البحثية على أدلة أثرية تم تفسيرها حديثاً من مقابر كل من رع شبسس وحسي في سقارة وأيضاً من المجموعة الهرمية لساحورع في أبو صير. وبالإضافة إلى ذلك، تعمل هذه الورقة البحثية على تقديم آراء جديدة حول اللوحات الخاصة باللعبة ميهين المحفوظة في المجموعات المتحفية الدولية، بما في ذلك متحف فيتزويليام بكامبريدج، ومتحف أشموليان بأكسفورد، ومتحف المتروبوليتان للفنون بنيويورك، ومتحف بيري بلندن، وكذلك المتحف المصري في برلين، وعلاوة على ذلك تقدم الورقة أيضاً ملاحظات تخص أجزاء من لوحة لعبة ميهين تم العثور عليها في مقبرة بر إيب سن عام 1905. كما تم عرض مجموعة متنوعة من التوضيحات البسيطة المتعلقة بالقطع والنصوص الخاصة باللعبة. حيث وضح أن مجموعة الأدلة تتغير بشكل كبير لتصبح أكثر تماسقاً لدرجة ملحوظة بمجرد أن يتم دمج الاستنتاجات التي توصلت إليها هذه المقالة. إذ إن من منظور

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خاص بعلم دراسة الألعاب، وضح أن التغيرات التي طرأت للعبة تمثل تحول جوهري مما يتيح الفرصة للباحثين المستقبليين بتقديم حجج أقوى بكثير لنظريات اللعب. الكلمات الدالة ميهين لعبة ثعبان أفعى الدولة القديمة

1 Introduction

The Game of the Snake, the Serpent Game, or Mehen¹ is a board game thought to have been played by ancient Egyptians throughout at least Dynasties 1–6 (c. 3000–2200 BCE). The earliest evidence, as established in this paper, is dated 3650 BCE–3300 BCE, which is older than any other known board game, although it is not certain that it was a playable activity at this date. The general form of the board used for Mehen is a segmented spiral track based on a snake form with the head at the centre (e.g. Figure 1). The game was often, or always, played with marbles² together with relatively large recumbent lion and lioness pieces (Figure 2).



Fig. 1: The Berlin Board © Staatliche Museen zu Berlin - Ägyptisches Museum und Papyrussammlung, Inv. No. ÄM 13868, Photo: Sandra Steiß. Used with permission.

In 2020, the author began research to better understand how Mehen might have been played. It became clear that the evidence set for the game was varied and inconsistent, particularly in terms of gameboard layout and construction and some recent authors had concluded that little more could be said about gameplay (CRIST et al., 2016: 27; HANUSSEK, 2020: 6; PUSCH, 2007: 83; ROMAIN, 2000: 14). It was apparent that some evidence for Mehen had been misreported repeatedly and many authors had made speculations for

¹Throughout this document, 'Mehen' refers to the game unless it is made obvious that Mehen, the deity, is being discussed.

²Throughout this document, 'Marble' means a small ball composed of any hard material.

game-play that were not supported by the evidence, or were based on invalid evidence, or were ludologically impractical. The resulting corpus was large, confusing, and in many cases, contradictory.

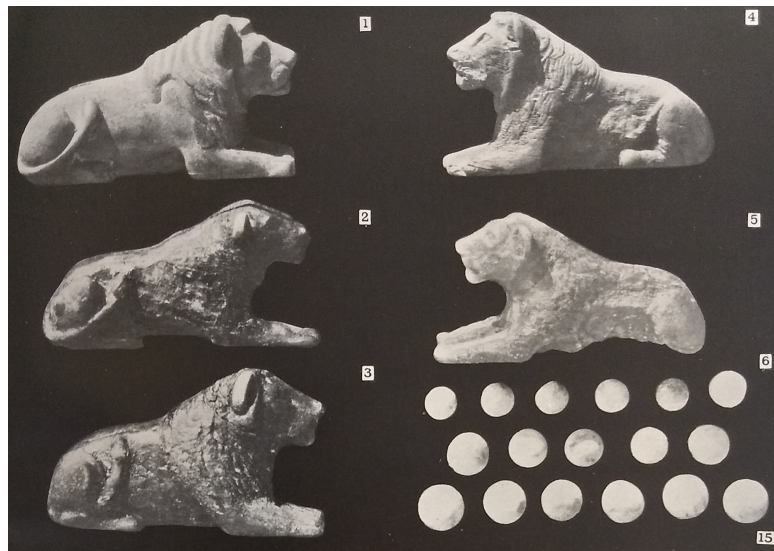


Fig. 2: Marbles, Lioness and Lion game pieces found in Grave 156, NE corner, Funerary Enclosure of Djnet, Abydos. Image taken from [PETRIE](#), 1925: Plate VII. *Original image has been cropped.*

The purpose of this paper is to correct inaccuracies found in the evidence set, many of which have been propagated for decades, and to add recent archaeological evidence and new findings proposed by the author. Each section in this article begins with a summary of the evidence set as it was thought to exist prior to this paper. The result should be a reset of the Mehen evidence set so that future research can work from an updated and more consistent baseline.

The geographical and chronological scope for this article is within ancient Egypt until the end of the Old Kingdom; Mehen boards found from later periods in Crete and Cyprus ([KENDALL](#), 2007: 43) are not considered. The accepted evidence for Mehen is sparse and, once the findings in this article are accounted for, consists of:

- Depictions: Six tomb reliefs of the game in progress plus another that is largely destroyed, and the painting in the Tomb of Hesy of three games that includes a complete Mehen set.
- Artefacts: Eight whole or partial game boards, only one of which has a provenance, plus a find of board fragments in Second Dynasty tomb of Peribsen. Also, five amuletic/votive objects that seem to relate to the Mehen game or deity.
- Game pieces: A variety of miscellaneous game pieces, none of which have been found with a board. Of these, only four finds appear to be indisputably for Mehen.
- Texts: Captions/inscriptions for the tomb reliefs plus other Old Kingdom texts that are thought to relate to the game.

1.1 Current state of Mehen literature and research

The study of ancient games inevitably combines archaeology and ludology. Archaeological reports incorporating evidence and speculation relating to Mehen commenced from 1837 ([WILKINSON](#), 1837: 417), with the

first dedicated article published by **RANKE** (1920). From the 1990s, contributions from the discipline of ludology have increased, notably with the publication of *Ancient Games in Perspective*, 2007 and articles in *Board Game Studies* journal. Recently, research interest in ancient games has increased. For instance, *Board Game Studies Journal* 16 Vol. 1, 2022 was devoted solely to ancient games. Games from Egypt have not received the same level of study as those from the classical world; for example, in 2017 the European Research Council funded *Locus Ludi* (**DASEN**, n.d.), a project focused on ancient Greek and Roman board games only.

A history of many Mehen works can be found in (**HANUSSEK**, 2020). The most important works include *The Tomb of Hesy* (**QUIBELL**, 1913), reporting the find of a depiction of three games; *Das Altägyptische Schlangenspiel* (**RANKE**, 1920), the seminal work on Mehen; *Mehen, Mysteries and Resurrection from the Coiled Serpent* (**PICCIONE**, 1990), which contains ground-breaking generally accepted ideas about the religious purpose behind the game; and *Mehen* (**KENDALL**, 2007), a consolidation of the evidence for Mehen that is probably more prominent than any other article. A chapter in *Ancient Egyptians at Play* (**CRIST** et al., 2016), contains the most recent, comprehensive, and objective archaeological evidence report for Mehen prior to this work.

2 Methodology

More than fifty primary archaeological and ludological reference sources were obtained and assessed and from them, a list of discrepancies in the archaeological evidence and in writings and assumptions from previous authors was derived. Potential conflicts in archaeological reports with ludological principles were included in this preliminary assessment.

Having identified specific issues, discrepancies, and conflicts in the historical record and evidence, each was investigated in more detail. First-hand examination was undertaken of Mehen boards and associated game pieces in the collections of the Ägyptisches Museum, Berlin and the Petrie, Fitzwilliam, Ashmolean, and British Museums. Where necessary, authors of recent relevant works were consulted directly, and for most areas discussed, advice was sought from both ludologists and archaeologists/curators, synthesising analyses from both to arrive at an overall result.

Training in the physical art of stone carving methods was obtained³ and work was undertaken in conjunction with curators and Egyptologists, some of which led to new observations regarding acquisition history and provenance. Archaeological conclusions were challenged if they did not conform to ludological principles and interdisciplinary collaborations were undertaken with a geologist and stonemason regarding the Fitzwilliam board's production and history.

The assessment of prior works revealed a disparity in textual interpretations from many experts. It was felt that simply producing a new transliteration or interpretation for each Mehen text would not sufficiently progress knowledge. Instead, it was decided to collect multiple independent new interpretations for each text, add these to interpretations from prior works, and thence attempt to draw a conclusion by assessing and comparing all proposals in a more objective way.

The updated evidence set incorporating the findings in this paper is seen in Appendix A, forming a new baseline reference for future research.

³Thanks to Matt Szafran and the Egypt Exploration Society.



Fig. 3: The Mehen relief in the tomb of Kaemankh, Giza (G4561), Dynasty 5. © KHM-Museumsverband. Used with permission. *Images cropped and merged.*

3 Findings

3.1 Depictions of Mehen

There are reliefs of Mehen being played in the Old Kingdom tombs of Kaemankh, Nimaatre, and Idu, on the Causeway of Sahure, and the tomb of Rashepses. A further two reliefs were found in the tombs of Ibi and Ankhefensakhmet that are dated to Dynasty 26 but thought to be copied from a Dynasty 5 tomb (RANKE, 1920: 13). Finally, a picture of the equipment for three games—Senet, Mehen and Men—was found on a wall in the tomb of Hesy.

3.1.1 The Tomb of Kaemankh

Senet and Mehen are shown being played in a scene depicting other entertaining activities (Figure 3, Figure 4) (KANAWATI, 2001: 34). The player viewed as on the right holds up a closed fist towards the board with the other hand underneath it. The left player appears to do the same, although the lower hand is less clear.

3.1.2 The Tomb of Nimaatre

The Tomb of Nimaatre (KHALED, 2020b: 865) features an almost identical scene to that of Kaemankh, incorporating various celebratory activities but only part of one Mehen player and a tiny sliver of the Mehen board remain. The scene was listed by some previous authors (e.g. KENDALL, 2007: 40) as being in the tomb of Isesi-mery-Netjer (ROTH, 1995: 131) due to misnumbering by Reisner (KHALED, 2020b: 865).

3.1.3 The Tomb of Idu

Three board games are shown in play within a scene of other entertaining activities in the tomb of Idu (Figure 5). The Mehen board (centre) is depicted with what appears to be a table (SIMPSON, 1976: 25). The two players place flat-bottomed game pieces onto the board. Detailed analysis reveals that the hand of the player



Fig. 4: The relief of entertainment and games in the tomb of Kaemankh, Giza (G4561), Dynasty 5 (KANAWATI, 2001: 34). © Naguib Kanawati. Used with permission. *Image cropped.*

on the left is likely above the board, palm upwards. Early authors on Mehen proposed that the trapezium-shaped appendage represents a stand, but further debate resolved that it was in fact part of the board (MONTET, 1955: 196).

3.1.4 The Tomb of Hesy

Quibell describes a picture of three games on a wall in the tomb of Hesy from Saqqara (S2405, Dynasty 3).⁴ The Mehen board is believed to be constructed from yellow timber, possibly cedar, and the black snake's head and tail are thought to be made from ebony. The pictures of the board in Quibell's report show cross-bars as lines, while the main spiral channel has a significant thickness. The accompanying colour illustration (QUIBELL, 1913: fig. XI) (see Figure 6) is beautifully rendered but some of its aspects are misleading.

The rim of the board has the same thickness as the spiral channel and shows a pattern described by Quibell as 'a cord pattern of red lines on white' (QUIBELL, 1913: 19). The black and white version of the picture (Figure 7) in the same volume (QUIBELL, 1913: 19, fig. 2) shows this cording but the colour version does not.

The set of Mehen pieces on the colour rendering shows six sets of six marbles, each a different hue, whereas Quibell himself reported that the 'colours of these are indistinct except in two sets, the middle one on the left where the marbles are dark red and the top one on the right, where they are black; from the others the colour has mostly fallen away. Probably there were only three originally and these were the same on each side...' (QUIBELL, 1913: 20). He goes on to say that two 'pinpoints' of red are seen on the middle balls on

⁴Probably painted by Quibell's wife, Annie.

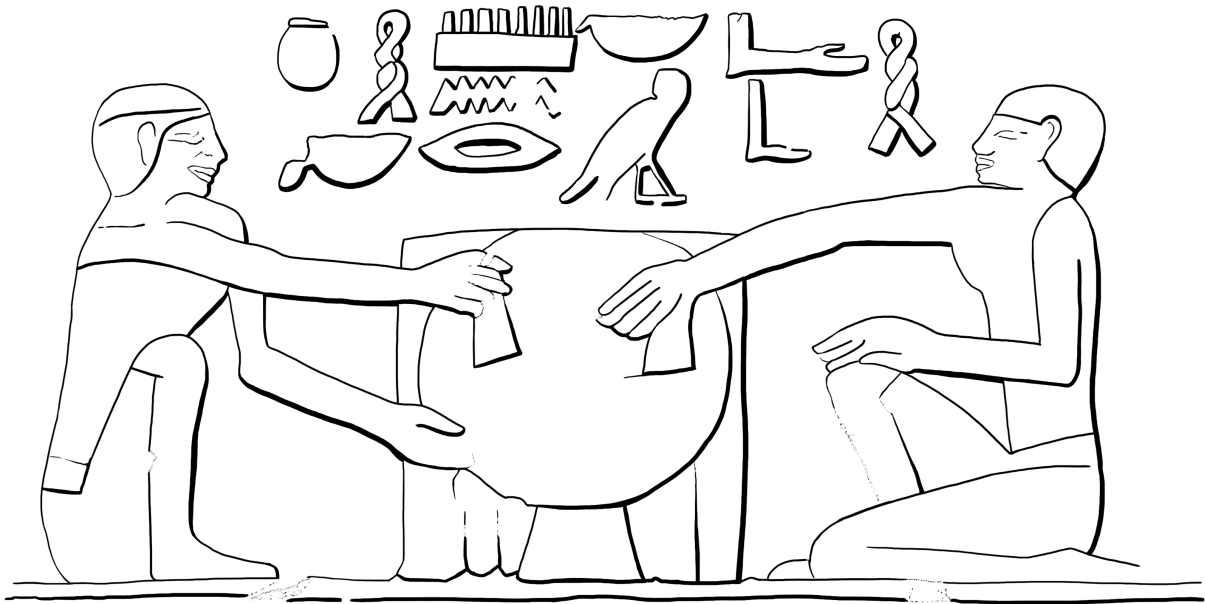


Fig. 5: Mehen being played in a scene of general entertainment depicted on a relief in the tomb of Idu, Giza (G7102), Dynasty 6. Line drawing following unpublished photo by Mohammedani Ibrahim, available via Digital Giza (Bendjet, in G 7102). © Juan Fr. Herrera.



Fig. 6: The picture of games depicted on a wall from Quibell's 1913 report on the tomb of Hesy, Saqqara (S2405). Image taken from [QUIBELL](#) (1913: fig. XI).

the right. Montet (MONTET, 1925: 374) reiterated this, as did Petrie (PETRIE, 1927: 56) saying ‘there are 6 white, 6 red, and 6 black balls, on each side’ although it is not clear if this comes from first-hand knowledge or Quibell’s report.

Archaeological evidence also does not support six colours of marbles. For marbles almost certainly associated with Mehen, there are two finds of white balls only (EMERY, 1954: 58) and one find of red and white balls (MONTET, 1946: 186). For marble finds that are probably for Mehen (see §3.3), no colours other than black, red, and white have been found (CRIST et al., 2016: 25–6).

Numerous works on Mehen, including (KENDALL, 2007: 34 and CRIST et al., 2016: 24), assert that six colours of marbles were seen. RANKE (1920: 4) states only two colours were seen but also seems to assume six colours were used. Many hypotheses for game-play assume six colours and thus play by up to six players. In conclusion, the six coloured marbles idea is ingrained but should be reconsidered since the evidence suggests that it is more likely that three different coloured marbles were used. As Mehen may have been a two-player or two-team game, it is also possible that there are four colours e.g. left: black, red, and green; right: black, red and white. The evidence might also allow for five colours, but this is almost certainly not the case since from a ludological perspective the pieces can only be shared out amongst two players/teams, three players/teams or six players. It is not possible to share out five colours equally.

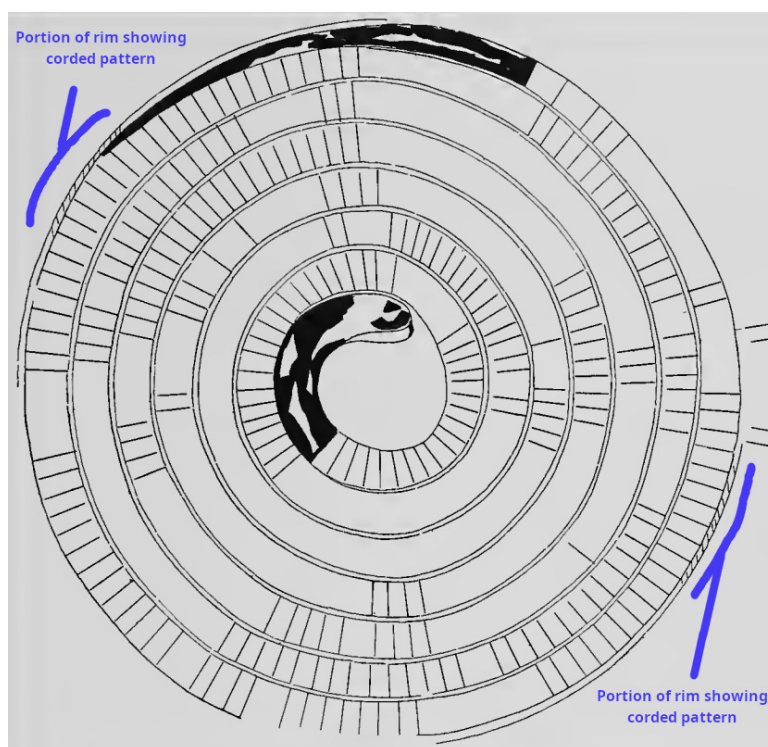


Fig. 7: Line drawing of the Mehen board from games painted on a wall in the tomb of Hesy. Image taken from QUIBELL (1913: 19, fig. 2). Annotations added by the author.

3.1.5 The Causeway of Sahure

In 2019, a two-metre block was excavated from the major causeway forming part of the Dynasty 5 pyramid complex of Sahure (2490–2477 BCE) at Abusir. It depicts scenes of a musical banquet, celebrations, and three people on either side of a Mehen board consisting of hundreds of tiny playing spaces (KHALED, 2020b: 862; Figure 8, Figure 9). Other activities include musicians playing, the king’s sons indulging in archery and stick fighting, a reward ceremony, and a keeper with 2 monkeys (KHALED, 2020a: 53).



Fig. 8: The Mehen board and players shown on a block from the causeway of Sahure, Abusir (SC/North/2019/013), Dynasty 5. © Allesandro Vannini, Laboratoriorosso SRL. Used with permission. *Image cropped.*

According to Khaled⁵ the Mehen scene in Sahure's causeway was not accessible by the general populace so it remains true that all provenanced evidence for the game of Mehen has been found in elite locations.

As with information gleaned from Rashepses' tomb, the depiction represents a valuable enhancement of Mehen knowledge and contains several unique features:

- It is the only depiction showing Mehen with more than four players at the board.
- It is the only scene of Mehen play that does not also feature the game of Senet.
- Each player is positioned and holds arms and hands in a similar way – one arm held at a slight downward angle towards the board with palm face down. It suggests that players not immediately adjacent to the board may also be involved in the game (KHALED, 2020b : 862–64).
- The representation of the board is less abstract than other relief depictions of Mehen. Although very damaged, the board is divided into as many as 600 small playing spaces.⁶ The large number of spaces on its spiral and the trapezium-shaped appendage bear a striking similarity to the Mehen board pictured on the wall in the tomb of Hesy (Figure 7).

Although at first glance, it appears that all players are depicted identically and symmetrically, this is not the case. The hand of the player viewed as on the inside right of the board reaches in as far as the second coil from the outside, whereas the opposing inside player barely reaches the board or does not touch it at all. Hand details are not clear, and it is possible that they differ. In particular, it is not clear if the inside players hold a game piece or not.

There are two captions above the men, both translating as 'Playing Mehen'. The hieroglyphs in front of the first player translate as 'Utterance: Four!' or 'Words to be recited: four (times)', possibly for a spell. A cry of 'four' might have been associated with a bet, a dice roll or a guess for the number of marbles in an opponent's hand.⁷

⁵Direct communication with Mohamed Khaled, March 2021, who said: 'The scenes of the causeway were exclusively permitted to the priests in certain cultic performances', '...even the priests were using a secondary side causeway to reach the funerary temple from its side entrance'.

⁶An estimate for the number of spaces is around 624, extrapolated by counting the viewer's bottom left quarter spaces.

⁷See the Mehen Texts section for a more detailed analysis.



Fig. 9: A close-up showing the tiny spaces on the Mehen board from the causeway of Sahure © Allesandro Vannini, Laboratoriorosso SRL. Used with permission. *Image cropped.*

The depiction might naively lend substantial support to the theory that up to six independent players could play Mehen, but there remain sound arguments to doubt that conclusion without further evidence. It is possible that the game is for two teams and, ludologically, this may be equivalent to a two-player game where the players on a team take turns to play their side. In such a scenario, players might play any of their team's pieces, as with Middle Eastern Tab (PARLETT, 2018: 227) and variants of African Mancala (PARLETT, 2018: 218), or they might be limited to a subset of pieces, as with Indian Pachisi (MURRAY, 1952: 132).

The hand position is reminiscent of people laying a stake, therefore one theory is that players are placing bets rather than moving pieces. Evidence for gambling in ancient Egypt exists; a tablet found in the pyramid of Khufu outlines the story of Thoth winning five new days for the calendar in a game of chance against the Moon. Other documents show that gambling was forbidden and the punishment for anyone so caught was hard labour in the quarries (WYKES, 1964: 30–1). Therefore, it is possible that there are only two players, but that betting was fundamental to or an additional aspect of the activity.

3.1.6 The Tomb of Rashepses

The second published evidence for Mehen was the line drawing of Mehen play depicted in the Dynasty 5 tomb of Rashepses from Saqqara (LS16) (LEPSIUS, 1849: fig. Bl. 61a),⁸ one of three board games being played within a scene of other entertaining activities (Figure 10). It shows four people at the game, the two on either side of the board each playing a marble on the track near the centre of the board. Seven or eight other marbles are shown adjacently on the track. The image was drawn by Max Weidenbach, an artist accompanying Karl Lepsius on his 1842 Prussian expedition to Egypt to record and collect ancient Egyptian artefacts.

In 1913, James Quibell challenged this rendering (QUIBELL, 1913: 19), saying ‘...there is a slight error in

⁸Later authors such as KENDALL, 2007, CRIST et al., 2016 and HANUSSEK, 2020 incorrectly referenced the drawing as 61b, presumably because the caption for the lower picture, 61b, is positioned directly underneath the Mehen image.

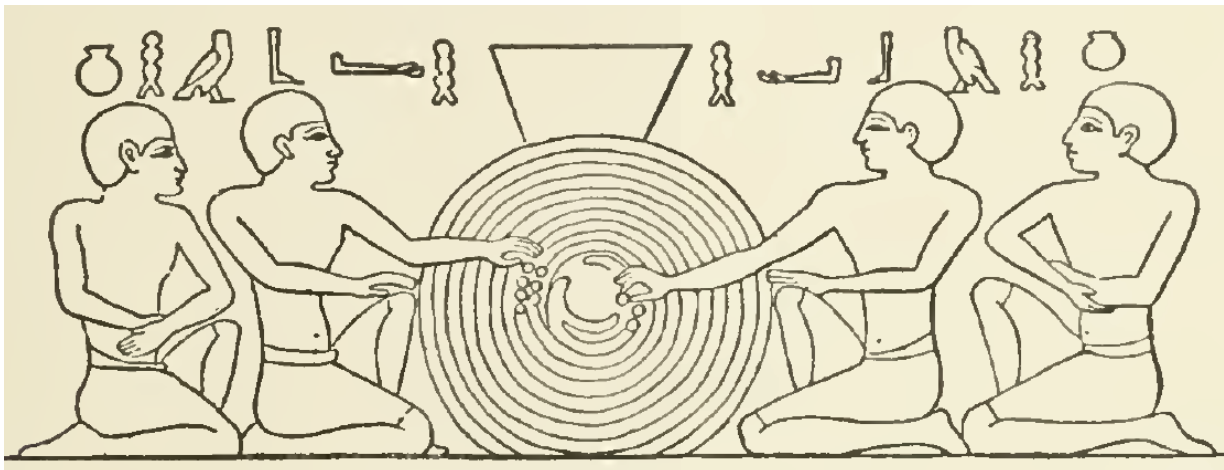


Fig. 10: The invalidated depiction of Mehen play in the tomb of Rashepses (LEPSIUS, 1849: fig. Bl. 61a) was reproduced as this line drawing by WILKINSON (1878: 61). Both images have been referenced in numerous works since. *Image cropped.*

Weidenbach's drawing. The objects held in the outstretched hands of the players are certainly animals, either dogs or lions.' Few heeded Quibell's warning, the image is used in almost every work on Mehen to date and many game-play proposals are based upon the inaccurate rendering of multiple marbles.

In 2013, Dr. Hany El-Tayeb was given funding by the Egypt Exploration Society to re-open Rashepses' tomb for further study. His photograph of the wall with the Mehen relief (Figure 11, Figure 12) shows Weidenbach's illustration to be inaccurate (EL-TAYEB, 2018: 297). El-Tayeb remarked 'I found several mistakes in the drawing of Weidenbach, not only in the Mehen game but also in other scenes'.⁹

Figure 13 shows a close-up of the middle of the relief with overlaid lines showing that the animals are clearly lions. The lions seem to be recumbent in the same manner depicted in a set of Mehen game-pieces in the tomb of Hesy, and from many other game-piece finds (CRIST et al., 2016: 24–6). The lion depicted in the lower part of the scene may be male, as evidenced by the possible outline of a mane, although it is possible that this is a continuation of the raised area in the stone below. A mane is not evident on the upper lion, which is therefore likely to be female, although the usual distinguishing feature of a lioness, a collar, is not apparent. Lines at the rear of the lioness appear to continue below her hindquarters, but these lines cannot be part of the animal since the base line of the recumbent lioness piece can be seen.

The player on the left holds something between his thumb and forefinger. Quibell and El-Tayeb believed that both players were holding a lion. For the upper lion, this seems untenable because, if so, its paw would extend considerably in front of the lioness's head in a way that is not seen in any real recumbent lion game-piece (e.g. Figure 2) or in the only other depiction of a lion game piece on the wall of Hesy's tomb. Moreover, it is usual to grip a lion piece by its head or back but unnatural to grasp its paw. Other depictions with players holding game pieces from above show the same two fingers coming at a similar angle—including the Senet players in the same relief. It therefore appears almost certain that the lion's paw ends marginally in front of its head and the player is holding a different game piece.

For the player viewed as on the right, it seems indisputable that the lions are entirely disconnected from the fingertips, so the lower lion is certainly sitting independently in the middle area. The player must be holding a game-piece between the thumb and forefinger.

It is the author's belief that the outline of a circular shape between the forefinger and thumb of the hands

⁹Direct communication with author, February 2021.



Fig. 11: The bottom part of the northern wall in the passage (room no. 15) of the tomb of Rashepses, Saqqara (LS16), Dynasty 5, showing players at Mehen and Senet. [EL-TAYEB](#) (2018: 297, fig. 9) © Hany El-Tayeb. Used with permission.



Fig. 12: A close-up of the centre of the Mehen board in the tomb of Rashepses, Saqqara (LS16), Dynasty 5. © Hany El-Tayeb. Used with permission.



Fig. 13: Undisputed features of the Mehen board in the tomb of Rashepses (Saqqara (LS16), Dynasty 5) in solid lines, with dotted lines showing the likely continuation of lion tails and fingers holding marbles. © Hany El-Tayeb. Used with permission. *Line drawing added by the author.*



Fig. 14: Alternative speculation for game pieces held by the players in the tomb of Rashepses (Saqqara (LS16), Dynasty 5) © Hany El-Tayeb. Used with permission. *Line drawing added by the author.*

of both players is evident. The circular outlines are the same size and separate from the lion gaming pieces. An alternative viewpoint is that long game pieces are depicted between the fingers of both hands and possibly elsewhere (Figure 14).¹⁰ This seems less likely since, following this idea, the thumb viewed on the right may be abnormally short and no long pieces have been found in sets of pieces that are believed to be for Mehen, although bars with a square profile have been found as game pieces (PETRIE and QUIBELL, 1896: Plate VII; SCHARFF, 1926: Tafl 40). Another theory encountered is that the player on the right holds a cone (adjacent to the thumb),¹¹ but the piece appears to point downwards impractically in relation to the fingers and conic pieces are not found in the Mehen evidence set. Although the reliefs are badly damaged, the application of advanced imaging and spectrographic techniques could provide a clearer answer to this debate.

JUNKER (1940: 37), based on KLEBS (1915: 113), suggested that the game involved players moving the board to ‘get the balls rolling’ between the coils in the manner of a dexterity game. The two players are shown holding pieces in the same way that Senet pieces are gripped in this relief (Figure 11) and in other similar pictures, casting further doubt on this already highly speculative idea and adding strength to the argument that Mehen was a board game that, like Senet, involved moving pieces on a board.

Both lions point directly towards, and are close to, whatever is in each player’s fingers. Given the various positions and directions that the lions could be pointing, it seems highly unlikely that this is a coincidence. It is conceivable that it was just a whim of the artist, but it seems plausible that pointing lions towards game pieces was part of the game.



Fig. 15: Alternative ways of perceiving the Rashepses spiral © Hany El-Tayeb. Used with permission. *Image cropped. Line drawing added by the author.*

The lines delineating the track on the board in the tomb of Rashepses are inconsistent. Circuits near the edge and middle are closer to a single spiral, but circuits in-between are more readily traced as a double spiral (Figure 15). Since all known boards and amulets feature a single spiral, all other depictions of boards with a path¹² feature a single spiral and the accepted religious symbolism supports a single snake deity, two tracks would be an anomaly. This may be explained by artistic licence or a convenience for the artisan when carving

¹⁰Thanks to Rev. Brigitte Goede for this idea.

¹¹Thanks to Dr. Marie-Lys Arnette for this idea.

¹²The causeway of Sahure, the tomb of Hesy and the tomb of Kaemankh.



Fig. 16: Mehen as depicted on the relief from the Tomb of Ibi (TT 36), Thebes, Dynasty 26. Image taken from [WILKINSON](#) (1837: 2:55). *Image cropped.*

the image, since the outer two circuits of lines terminate against the arms of the players in a way that appears to be deliberately ambiguous.

There are some reports of two images of Mehen in the tomb of Rashepses e.g. [KENDALL](#) (2007: 39) says ‘it features the game in two nearly identical scenes in different chambers’. In February 2021, Dr. Hany El-Tayeb stated in direct communication to the author: ‘[there is] only one scene of the Mehen game’.

In conclusion, Weidenbach’s picture from [LEPSIUS](#) (1849: Ab. II Bl. 61a) is misleading and should be discounted. Rashepses’ tomb shows an image of Mehen with recumbent lion and lioness pieces at the centre of the board. Arguments suggesting that the depiction of recumbent lion pieces in the tomb of Hesy was insufficient to prove that they were associated with Mehen are defeated. Marbles and recumbent lion pieces were used for Mehen in at least some of its forms and lions were almost certainly involved in game-play. It can no longer be assumed that players played more than one piece each along the track.

3.1.7 The Tombs of Ibi (also known as ‘Aba’) and Ankhefensakhmet (Late Period)

Both these Late Period tomb depictions are generally accepted to have been copied from a Dynasty 5 or 6 tomb, the Tomb of Ibi (Figure 16), almost certainly from the Dynasty 6 tomb of his namesake, Iby at Deir el-Gabrarwi ([RANKE](#), 1920: 13) and the tomb of Ankhefensakhmet ([CAPART](#), 1938) likely the same ([VANDIER](#), 1964: 489).

For Ankhefensakhmet (Figure 17), the two outer persons hold a bag of marbles or are dropping marbles from one hand to another while looking in the opposite direction. The inner person, viewed as on the right, holds a fist up in the same manner as seen in Kaemankh’s depiction. The other inner person holds a fist above the other hand cupped underneath. The inner players do not face the board, a clear indication that the copying artists did not understand the game.

For Ibi, the outer player viewed as on the right appears to use one hand to hide something in the other hand, which is held back while the inner player turns to look at him and holds a fist and a palm facing upward towards him. The opposing inner player adopts a similar pose, and also points while the adjacent outer player appears to simply point back with one hand.

Details of the Dynasty 26 reliefs cannot be considered reliable reproductions of the original tomb wall, especially as it seems likely that their creators did not know the game ([RANKE](#), 1920: 14; [PUSCH](#), 2007: 75). However, it is asserted that certain details can be regarded as likely because they are the same in both reliefs or are repeated in other Old Kingdom reliefs.

Likely aspects in both the tombs of Ibi and Ankhefensakhmet include holding the hands back as if they hide something (also in tomb of Rashepses), holding one hand above the other (also in tombs of Rashepses and



Fig. 17: Mehen as depicted on the relief from the Tomb of Ankhefensakhmet, Memphis, Dynasty 26. Image courtesy of the Walters Art Museum. *Image cropped*. This image is published under a CC0 1.0 Universal license.

Kaemankh), holding a fist up to the other player (also in tomb of Kaemankh), off-board interaction between two people at the game, and the caption for the three games shown which reads ‘Enjoying the Mehen game, the Senet game and the Tau¹³ game’.

Unreliable aspects include pointing fingers, players facing away from their outstretched arms, players’ bodies facing away from the board, and the marbles shown between hands.

3.2 Mehen Boards from the Old Kingdom

3.2.1 Mehen Game Board Evidence as at 2021

Prior to this article, a total of twelve segmented Mehen game-boards were reported to exist¹⁴, the details of which, except the New York board, are summarised in Figure 18 and Table 1.

Timothy **KENDALL** (2007) categorised known Mehen boards chronologically based on their features:

- Pitted boards: the Dynasty 2 Peribsen finds and the British Museum board
- Early ‘grooved’ boards: Ashmolean, Cairo, Berlin, and Petrie Museums
- Later ‘grooved’ boards: Fitzwilliam Museum, Louvre table, and Chicago, which are better crafted. The suggested era for these is Dynasty 3 or later (**HANUSSEK**, 2020: 23; **KENDALL**, 2007: 39).

An unexplained discrepancy in Kendall’s exposition is that the Naqada Ashmolean board is much earlier than the Peribsen Dynasty 2 boards.

¹³Earlier authors believed ‘Tau’ referred to the Game of Twenty Squares, but Pusch argued that it meant Marbles, which is convincing, given that only two game-boards are shown.

¹⁴Kendall stated fourteen but his list included two unplayable boards.

Tab. 1: Reference and dating for playable Mehen game-boards (excluding the New York board) ordered chronologically by first recorded date, as understood prior to this article.

Board name	Location	Museum Ref.	First mention/report	Other dates	Material	Diam. / mm	Notes
Giza	Unknown, lost	-	(Petrie & Quibell 1896: 42)	-	Green Glaze	Unknown	-
Ashmolean	Ashmolean Museum, Oxford	AN1895.997	Report of Tomb 19, Ballas Cemetery (Petrie & Quibell 1896: 42)	-	Limestone	105	Found on a pot. Naqada period.
Berlin	Ägyptisches Museum und Papyrussammlung, Berlin	ÄM 13868	(Scharff 1929: 145)	Gifted from private collection of an Egyptologist in 1897. Ranke (1920: 7) mentions it.	White Limestone	275	Kendall 2007 has a typo; the board being referenced incorrectly to the 1926 instead of the 1929 Scharff volume. Crist et al. 2016 used the same mis-reference, and this was compounded because only the 1926 volume is in the bibliography
Petrie	Petrie Museum, London	UC20453	(Petrie 1914: 25, Plate 47)	A photo dated 1898-9 exists in the Petrie Museum (DIOS.NEG). Not properly reported until Kendall 2007.	Limestone	288	-
Cairo	Museum of Egyptian Antiquities, Cairo	JE 27354	(Maspero 1902: 173)	A museum guide, only. Scharff (1929: 146) mentions it.	Limestone	330	On four low legs
Peribsen - Louvre	Musée du Louvre, Paris	E 29891	Report of Tomb P, Umm el-Qa'ab, Abydos (Amélineau 1905: 494-95)	-	Blue Faience	200	Pitted, Dynasty 2
Peribsen - Mariemont	Musée royal de Mariemont	B.102	Report of Tomb P, Umm el-Qa'ab, Abydos (Amélineau 1905: 494-95)	-	Blue Faience	200	Pitted, Dynasty 2
Peribsen - Picardie	Musée de Picardie, Amiens	MP89.3.1	Report of Tomb P, Umm el-Qa'ab, Abydos (Amélineau 1905: 494-95)	-	Blue Faience	-	Pitted, fragment only, Dynasty 2
Peribsen - Brussels	Musées Royaux d'Art et d'Histoire, Brussels	E.04180	Report of Tomb P, Umm el-Qa'ab, Abydos (Amélineau 1905: 494-95)	-	Blue Faience	-	Pitted, Dynasty 2

Tab. 1: Reference and dating for playable Mehen game-boards - cont.

Board name	Location	Museum Ref.	First mention/report	Other dates	Material	Diam. / mm	Notes
Fitzwilliam	Fitzwilliam Museum, Cambridge	E.GA.4464.1	(Swiny 1980: 69)	A brief footnote. Not properly reported until Kendall 2007. Gayer-Anderson owned it in 1917.	Limestone - Travertine	440	-
Chicago	Institute for the Study of Ancient Cultures, Chicago	E16950	(Piccione 1990: 46-7)	Purchased by Harold Nelson in Luxor in 1932 (Piccione 1990: 46)	Alabaster	373	-
Louvre - Table	Musée du Louvre, Paris	E 25430	(Vandier 1964: 488)	Bought from a Parisian collector and gallery owner, Roger Khawam, 1958	Alabaster	410	Single foot
British Museum	British Museum, London	19,610,408.1	(Shore 1963)	Won in a Spink & Son auction, 1961	Limestone	370	Pitted. Single low foot



Fig. 18: Playable Mehen boards thought to exist as of 2022, according to known publications. Left to right, top to bottom: © Ashmolean Museum, University of Oxford; © 2004 Musée du Louvre / Christian Décamps; © RMAH, Brussels; © Musée royal de Mariemont; © James F. R. Masters; © Staatliche Museen zu Berlin - Ägyptisches Museum und Papyrussammlung, Inv. No. ÄM 13868, Photo: Sandra Steiß; © Petrie Museum of Egyptian and Sudanese Archaeology, UCL; © Alain Guilleux; © The Fitzwilliam Museum, Cambridge. Reproduced by kind permission of the Antiquities Department; © 2006 Musée du Louvre, dist. RMN-Grand Palais / Georges Poncet; © Joan Lanberry. All images used with permission.

3.2.2 New York Mehen Board

The authenticity of the Mehen board held at The Metropolitan Museum of Art, New York (58.125.1) was questioned by **KENDALL** (2007: 37) and correspondence for this paper with Julie Zeffel, Senior Manager of Rights and Permissions at the Museum in March 2021 indicates that the board is a fake. She stated that the board is a ‘...a modern work and not an ancient Egyptian object. It is now restricted...’¹⁵

This board had debilitated efforts to produce viable theories for the game since it was inconsistent with other known boards in terms of material (slate), manufacture (incised lines rather than carved), annotation (uniquely, a symbol is inscribed on the board representing King Hor-Aha of Dynasty 1), dating (the board design matches a later era according to Kendall), and its form (flat). Ludologically, all other known boards and depictions allow for the movement of marbles along the track whereas this one, being without depressions or grooves, does not. These issues can now be permanently set aside.

¹⁵Requests for further information did not meet with a response.

3.2.3 Fitzwilliam Museum Mehen Board

The largest known Mehen board at 44 cm in diameter was part of a collection of Egyptian antiquities gifted to the Fitzwilliam Museum in 1943 by Major Robert (John) Gayer-Anderson (E.GA.4464.1943) (Figure 19) and is in two parts.

In November 2020, communication between the author and Dr Melanie Pitkin of the Fitzwilliam Museum led to a re-examination of the travertine board¹⁶, which conclusively confirmed that the two parts of the board did not originally belong together. A preliminary assessment indicated that:

- The two parts do not fit comfortably together at the join. In particular, the underside of the smaller part is convex, whereas the underside of the larger part is flat. The curvature of the board also turns slightly at the meeting points.
- There are visible differences in the appearance and quantity of the surface tool marks and cross-hatching on some of the elevated game spaces.
- Bandings in the stone in both fragments do not align.
- The larger part has discolouration on some playing spaces and a grey substance in the grooves that are not seen on the smaller part.



Fig. 19: The Mehen board held at the Fitzwilliam Museum, Cambridge (E.GA. 4464.1943). 44 cm diameter. © The Fitzwilliam Museum, Cambridge. Photo: Louise Jenkins. Reproduced by kind permission of the Antiquities Department.

¹⁶Direct examination at the Fitzwilliam Museum by the author and Dr. Melanie Pitkin was undertaken in September 2021.

Given that the parts almost fit and the hatching corresponds on both sides of the join, it appears that one part of the board has been made to match the other. It is unlikely that the addition was made to mislead. Gayer-Anderson was known to modify objects he acquired for display, as evidenced by other objects in the Fitzwilliam Museum's collection,¹⁷ and it is likely that the extra piece was made to complete the object for display purposes.



Fig. 20: Rear of the Mehen board held at the Fitzwilliam Museum, Cambridge (E.GA. 4464.1943). © James F. R. Masters.

The board comes with a separate conical stand, which has not previously been reported although three other boards are known to have stands or legs.¹⁸ Its smooth finish suggests it was turned on a lathe, so it is probably a modern object.¹⁹

In the notes made by former Keeper of Antiquities at the Fitzwilliam Museum, Janine Bourriau, Pitkin found the following remark about the Mehen board: 'Smaller of the two pieces is the original fragment, the base and larger fragment are additions.' However, no documentation exists to support Bourriau's assertion, and it seems possible that this was her opinion rather than a known fact. An extensive examination of the board by Pitkin, the author and geologist Trevor F. Emmett, in consultation with stonemason, Andrew Tanser concluded that the larger part is more likely to be the original. Key factors leading to this conclusion include:

- A comparison of tool markings.
- The history of the board deduced from labels attached to its underside.
- Most compelling is that the smaller part has an uneven, convex underside that, if continued would cause it to sit crookedly and wobble when placed on a flat surface (Figure 20).

The fact that a significant part of the board is missing is not previously reported. The number of spaces at 127 may need revising, but other matters remain unchanged including its most unique feature, that five spaces on the board are marked with hatching.

¹⁷Two examples at the Fitzwilliam Museum are a cartonnage mask with suspension holes drilled around its edge (E.GA.290.1949) and part of a coffin foot with an embedded suspension hook (E.GA.2911.1943).

¹⁸The Louvre Table (E25430), British Museum (1961,0408.1) and Cairo (JE27354) boards (CRIST et al., 2016: 22).

¹⁹Asserted by geologist, Trevor Emmet.

3.2.4 Ashmolean Museum Mehen Board

The oldest known Mehen board (Figure 21), which also has the clearest provenance history, is held in the Ashmolean Museum collection (AN1895.997). It was found in Tomb 19 of the Predynastic cemetery at Ballas, Naqada Period (PETRIE and QUIBELL, 1896: 42).

Much of the literature on this artefact suggests that this limestone board was purely symbolic, or made as a model board given its small size (MONTET, 1955: 189; KENDALL, 2007: 37; CRIST et al., 2016: 17). While it is plausible that Mehen was not played as a game at all during this early period, direct visual examination by the author concluded that it would be possible to play game-pieces along the track since none of the spaces are too small for a flat-bottomed game-piece. As lions, marbles and other game pieces were found in Ballas graves (PETRIE and QUIBELL, 1896: 14), it cannot be ruled out that the people of Ballas knew of Mehen as a playable pastime.

Exact locations and detailed contents of minor graves such as these were often not fully reported by Quibell, meaning that it has not been clear which of the Naqada sub-periods Grave 19 belongs to. Compounding this vagueness has been that dating for the Naqada periods based on archaeological evidence have been unsatisfactory – the narrowest date range arrived at being 4000 BCE–3000 BCE (DEE et al., 2013: 3). This is also the suggested date range for the Ashmolean Mehen board with most authors assuming a date just prior to 3000 BCE (ROTHÖHLER, 1999: 11; DEPAULIS, 2020: 127).

More recent research has sought to improve the dating for the Pre- and Early Dynastic periods through radiocarbon dating. In 2013, a ground-breaking paper was published with improved estimates for these periods based on new analysis of many Ballas graves (DEE et al., 2013: 1). Detailed records of individual graves do not form part of the paper but Dr. Alice Stevenson, a co-author, reported that: ‘Grave 19 at Ballas had very limited pottery in it, and unfortunately the pottery was not terribly diagnostic (R57a, R66, L28a) which gives a rather broad spread of possible relative dates from Naqada IIA to IID’.²⁰

Thus, the date of Grave 19 can be narrowed from ‘The Naqada Period’ to ‘Naqada II’ and the date of the Mehen board reduced from a range of perhaps 1000 years to around 350 years. The end date of the Naqada II period is 3377–3238 BCE with a 95% confidence level and the new more confident range estimate for the board is 3650–3300 BCE (DEE et al., 2013: 5).

3.2.5 Fragments found in the Tomb of Peribsen

The collector Émile Amélineau reconstructed three faience Mehen boards from fragments found in the Dynasty 2 tomb of Peribsen at Abydos (tomb P of Umm el-Qa’ab’s royal cemetery), apparently deliberately smashed by tomb robbers (AMÉLINEAU, 1905: 494).

Previous writers have suggested that the Peribsen boards were model or symbolic boards due to their small size at around 20 cm diameter. It is nevertheless conceivable that these boards were playable since, although the raised portions near the middle of the boards are too thin for flat-bottomed game pieces, even the thinnest depressions would still retain a marble. In comparison, some modern travel chess sets are significantly smaller and still playable.

Although faience, with its bright, reflectively glossy characteristics, was often used in Ancient Egypt for decorative and amuletic items (STOCKS, 2003: 225), the unique use of faience for these Mehen boards does not distinguish them from other boards in terms of use, since it is plausible that all known Mehen boards were solely symbolic grave goods designed for use only in the afterlife. Conversely, it is possible that all known boards were designed to be played on, albeit potentially only in limited religious contexts.

Each Peribsen board shows unique differences compared to all other depictions and artefacts, two having

²⁰Direct communication with Dr. Alice Stevenson.



Fig. 21: The Ashmolean Board (AN1895.997), 10.5 cm diameter. Tomb 19, Ballas cemetery, Naqada II period.
© Ashmolean Museum, University of Oxford. Used with permission.



Fig. 22: The whole and the genuine part of the Peribsen Mehen board held by the Museum of Mariemont, Belgium, Tomb P Abydos (B.102) © Musée royal de Mariemont. Used with permission. *Detail cropped.*

concentric rings instead of a spiral and the third with four spirals. The reconstructions were poorly done, particularly at the centres, but many authors have discussed these boards on the assumption that the reconstructed designs were correct based on [RANKE](#) (1920: 6), who mentioned that the reconstructions are unreliable but seemed to believe their design regardless, through to recent authors including [KENDALL](#) (2007: 35), [CRIST](#) et al. (2016: 20), and [HANUSSEK](#) (2020: 22).

Amélineau admits in his 1905 report of Peribsen's tomb that the reconstruction was 'not strictly accurate in the three restored tables'. The restoration was delegated to another person and details of their methods remain unclear ([AMÉLINEAU](#), 1905: 494–5). The report states that the centres of the Louvre and Brussels boards were missing, as was the starting point for both the Louvre and Mariemont boards. It is not made clear how much more of each board was missing, how much of the restoration is new material, nor how much genuine material was incorporated into the rebuilt sections.

The collections database of the Musée royal de Mariemont describes the Peribsen artefact held by them as a 'fragment.' The description discusses the 'original third' and says, 'around sixty of the original pits and hollows are preserved'. It is apparent that two-thirds of the board has been added and only one third of it is authentic. Detailed examination of photos (Figure 22) revealed that around one third of the board has a slightly rougher, more pock-marked surface than the rest and must correspond to the original part.²¹ The extent that the rest incorporates fragments of the original is unclear and while none of it can be considered reliable, it seems likely that some of the snake-like features at the middle are authentic.²²

The board has been reported in recent works to be non-spiral with a slight misalignment to allow the pieces to move inwards once per circuit ([CRIST](#) et al., 2016: 20–21; [KENDALL](#), 2007: 35). However, the misalignment is at the join of the old and new parts and is therefore no more than a result of the substandard restoration work. Looking at the original fragment, there is no reason to believe that it was not a normal spiral like other boards and Amélineau states explicitly that his reconstructed board does not feature a starting point only because 'it was impossible to know where it began'.

²¹Confirmed in direct communication with Dr. Arnaud Quertinmont of Musée royal de Mariemont, May 2021.

²²Snake-like features, while potentially original, cannot be included in the image of the genuine segment as both their authenticity and position are uncertain.

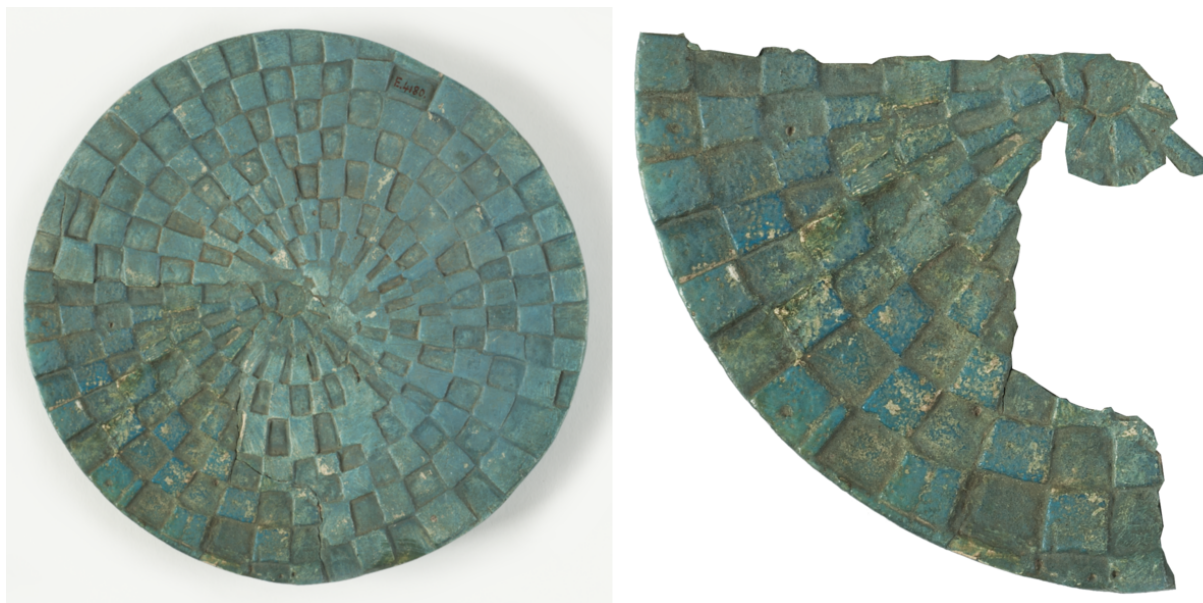


Fig. 23: The whole and the genuine part of the Peribsen Mehen board held by the Musées Royaux d'Art et d'Histoire, Bruxelles (E.04180). © RMAH, Brussels. Used with permission. *Detail cropped.*

The collections database of the Musées Royaux d'Art et d'Histoire, Brussels similarly describes their artefact (E.04180) (Figure 23) as a 'Fragment of circular gaming table', although again recent articles have considered the board to be whole (CRIST et al., 2016: 20–1; KENDALL, 2007: 35).

It was reconstructed with four spirals – an inexplicable aberration in Mehen design. Amélineau's report states that this was the only one of the three that 'shows us a starting point which existed on the intact part,' the implication being that the rest of the board was not intact or was missing (AMÉLINEAU, 1905: 495). Inspection of the photo finds that around one quarter of the board is enclosed within a crack and this section, like the Mariemont board, has a rougher, darker surface and features a single starting point for the track, matching the report's description of the 'intact part'. Therefore, the remaining starting points must all be modern creations, since they form a large portion of the remainder of the board which has a consistent finish that is different to the authentic part. It is deduced that the whole of the remainder of the board must be considered unreliable and discounted. Examining the authentic section, there appears to be no reason for Amélineau to deduce that there were four spirals.

A separate fragment with the same surface as the authentic part forms perhaps a third of the middle, even though Amélineau states that the middle was missing. It seems likely that this part is also genuine, and it includes a small, raised part that resembles the head of a snake.

The situation is repeated with the Peribsen board in the Louvre (Figure 24). The artefact is described in the Louvre database as 'fragment; restored' and again a portion of around one quarter of the board shows a different surface to the rest. The reconstructed board has been discussed in prior literature about Mehen as another anomaly because it features concentric rings and not a spiral (CRIST et al., 2016: 20–1; KENDALL, 2007: 35). This conclusion is unfounded. There is no reason to suppose that the board originally comprised concentric rings and again Amélineau's report states that he thought there was a spiral even though his reconstruction omitted it.

There is no reason to challenge the restored diameter at 20 cm. Based on the authentic portions of each board, the number of coils for Mariemont is around five; for the other two it is 6 or 7. For the Mariemont and Louvre boards, the restorations give a guide to the number of pits, at approximately 90 and 140–160 respectively. An estimate for the Brussels board by extrapolation from the authentic piece only is also 140–160.

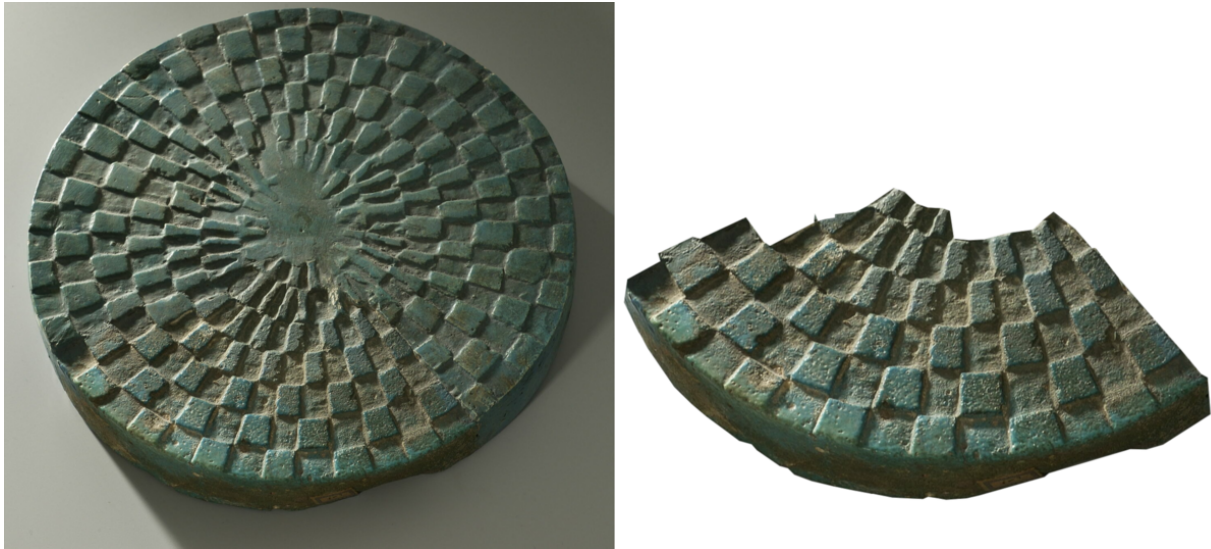


Fig. 24: The whole and the genuine part of the Peribsen Mehen board held by the Louvre, Paris (E 29891). © 2004 Musée du Louvre. Photo: Christian Décamps. Used with permission. *Detail cropped.*

The assumption that the boards did not feature a trapezium or appendage as seen on other boards is rendered invalid.

To conclude, Amélineau's 'restorations' were poorer than previously thought and most authors writing about them have not appreciated that their form is incorrect. Amélineau's reputation as a scholar is questionable and one of his primary motivations was to collect objects for profit (PETRIE, 1931: 185–6) so it seems plausible that the restorations were done because he hoped that a whole board, regardless of historical accuracy, would fetch a higher price than a fragment. The majority of all three boards are modern reconstructions and it is highly likely that all the original boards featured a single spiral track, consistent with all other known and depicted Mehen boards.

It is also not certain that there were four separate boards in this tomb because a smaller fourth fragment held at the Musée du Picardie (MP89.3.1) looks similar to the Mariemont fragment and is the same thickness to within 1 mm. It might be that these were once part of the same board.

3.2.6 The Berlin Board

The Berlin board (Figure 1) features an arrow-like symbol emerging from the snake's head that might be thought to represent the snake's tongue (Figure 25). However, its emergent point is about half-way along the bulge that appears to depict the snake's head rather than near its mouth. Snake nostrils are set back from the mouth and PICCIONE (1990: 48) translated Pyramid Text 758 in the Pyramid of Queen Neith as 'Neith is conceived in the nose. This is how Neith is born in the nostril'. Consequently, this aligns with Piccione's ideas, as the location from which the dead person emerges from the snake's head after travelling through the body of Mehen.

RANKE (1920: 7) described the feature as a bird figure, which is conceivable.²³ There are numerous birds in Egyptian mythology, including the Ba-bird that was associated with the dead person, their soul and resurrection, the Falcon of Horus, representing the king and Mut, and the Vulture Goddess of protection. An alternative interpretation is that the figure represents a body with the feet viewed as on the right in Figure 25 and the line that connects the snake's nostril with the figure's mid-point is a jet of fiery breath through which

²³Board examined February 2023 by the author with thanks to Dr. Robert Khun.



Fig. 25: Middle of the Berlin board showing the figure emerging from the snake head and the red pigment in the spiral channel. © James F. R. Masters (with permission by and thanks to Ägyptisches Museum und Papyrussammlung, Berlin).

the deceased spirit is reborn, as described in Pyramid Text 332.

3.2.7 Giza Mehen Board

In his report of the Ashmolean board, Petrie stated ‘a similar object in green glaze, and larger, is in the Ghizeh Museum’ (PETRIE and QUIBELL, 1896: 42). The apparently thorough Maspero (MASPERO, 1883) does not mention a snake board in the visitor’s guide to the Boulaq Museum, the contents of which moved to the Giza Museum in 1891. Its whereabouts are now unknown (RANKE, 1920: 7) and a board by that description is not mentioned in the new visitor’s guide when the museum’s contents were moved to the Cairo Museum in 1902 – although the current limestone Cairo board is featured (MASPERO, 1902: 173). This was not a Peribsen board since that tomb was excavated in 1898 and it does not appear to be the Cairo Board since that is not green glaze. It is not the glazed snake disk now held by the Field Museum, Chicago (31009), because that was gifted to the museum in 1896, having been purchased by Edward Ayer in Egypt a year or two before, and its colour is much closer to blue than green.²⁴ Possibilities include:

- The board was lost or sold privately via the Giza Museum’s sale room.
- The board has gone unrecognised in museum storage or archival facility.
- It is the Cairo board, and Petrie’s description of the board as green glaze was mistaken.
- It is the Cairo board, and the green glaze has since been removed from it.

Kendall states that the Cairo board is green glaze (KENDALL, 2007: 36)—he must have assumed that the two boards were the same artefact, which does seem to be the most likely hypothesis.

²⁴Confirmed via direct communication with Julia Kennedy of the Field Museum.



Fig. 26: Image showing traces of red pigment on Mehen board at the Petrie Museum (UC20453); image colour enhanced then equalised with GIMP 2.8 default calibration. © James F. R. Masters (with thanks to the Petrie Museum of Egyptian Archaeology, UCL Culture).



Fig. 27: Image showing traces of red pigment on Mehen board at the Petrie Museum (UC20453); retinex contrast enhanced using GIMP 2.8, scale: 240, scale division: 3, Dynamic: 1.2. © James F. R. Masters (with thanks to The Petrie Museum of Egyptian Archaeology, UCL Culture).

3.2.8 Pigment on Mehen boards

PICCIONE (1990: 47) observed that the Chicago board shows a brown substance, thought to be pigment, in the spiral lines and crossbar grooves, the layer being thicker in the crossbars. According to **HANUSSEK** (2020) traces of pigment were also visible on the Louvre table board, found in the ‘slot-incisions’ that were removed as part of a restoration process.

Not previously reported, two further boards show traces of pigment. Red pigment exists on the Petrie board, most obviously on the outer ledge between the snake’s body and the edge of the board but also in the main spiral channel (Figure 26, Figure 27).²⁵ The Berlin board (Figure 25) also reveals remnants of pigment most clearly in the spiral channel and on the outer ledge. Tiny traces can also be seen in the crossbars, the snake’s head and in one place on the side of the board. The raised spaces seem to have been covered with a yellowish material on top of the stone.²⁶

It therefore appears that four out of the seven grooved Mehen boards contained a pigmented substance at least in their spiral channel and on the outer ledge.

3.2.9 Amuletic Mehen boards

Five unprovenanced objects exist that relate either to the deity Mehen or to the game, but which could not have been played. It is apparent that a coiled depiction of Mehen was sometimes used solely as a religious symbol and so Mehen boards with segmented game tracks that were used for play undoubtedly also carried a symbolic purpose. These five objects are briefly described below:

- A non-spiral board with concentric rings is engraved onto the underside of serpentinite turtle-shaped artefact at the Metropolitan Museum of Art (Accession no. 61.33, 14.8 x 11.8 cm) (**DUNN-VATURI**, 2012: 24). Its relationship with Mehen is tenuous.
- A blue Lapis lazuli 52 mm diameter amulet in the form of a coiled snake with a convex, unsegmented body (Petrie 1914: 25, Plate XII) is held at the Petrie Museum (UC38655).
- A 28 cm diameter, blue-green glazed earthenware object acquired by the Field Museum, Chicago in 1896 (Object no. 31009) has the snake’s tail at the middle and its head at the rim.
- **KENDALL** (2007: 37) reported a 45 mm diameter ivory board owned by a private collector in New York with the correct form of a game board including the remnant of a trapezium appendage but impractically small to play on. Kendall suggested that the four holes in the board may represent hazard spaces, but this seems unlikely because each hole is located on the bar between spaces. They may equally represent game-pieces (strengthening an argument that marbles were played to the bars between spaces) or be ascribed to a frivolous drilling incident.
- A large 7 x 42 cm board at the Leiden Rijksmuseum van Oudheden (F 1968/3.1) of the size of other Mehen boards but with a convex snake body and no game spaces (Figure 28).

²⁵Direct examination by the author.

²⁶Direct examination, February 2023 with thanks to Dr. Robert Kuhn.



Fig. 28: The Leiden board held by Rijksmuseum van Oudheden, 42 cm (F 1968/3.1). With thanks to the National Museum of Antiquities, Leiden.

The Leiden board's size is similar to the Fitzwilliam and Louvre Table boards and, like the Chicago and Louvre Table boards, its rim is encircled with a goose or duck figure. It is accepted that this board must be votive, amuletic or for religious symbolism only (KENDALL, 2007: 42). There are no game spaces, and the snake is convex so pieces cannot be played along it in the manner of a normal board game, plus marbles would not reliably hold in a specific position if moved along the track between the coils.

Marbles could be rolled between the coils of the board as a dexterity game, but it is difficult to imagine that this would work well or be entertaining for more than a few seconds.

The reliefs in the tombs of Rashepses and Kaemankh both show boards with coils that do not have any visible game-spaces, which might suggest they are like the Leiden board. But the Rashepses picture shows game pieces being moved in the manner of a board game so that argument seems specious, since it is impractical to move game pieces without any delineated spaces. For both Rashepses and Kaemankh, lack of visible game spaces is easily explained in one of two ways. Such depictions are intrinsically abstract and the tomb of Idu shows players placing or moving pieces on to an entirely blank board which is clearly unfeasible. Alternatively, the tombs of Rashepses, Kaemankh and Idu are badly decomposed and, if surface paint originally showed divisions, it has likely disappeared.

It might be possible to concoct rules that could utilise the Leiden board but they would inevitably be contrived to the point of being untenable for this era. For instance, perhaps rules could be imagined that involve lions straddling coils moved using a distance measure but such devices have never been seen for board games and first appeared for wargaming during the 19th century in Europe. The measure would be a critical piece of equipment for which no evidence exists. It is also possible to imagine very simple games e.g. lion pieces straddling two coils having just three coil jumps to reach the centre but such ideas also seem extremely

unlikely.²⁷ Regardless, such games are different to a game played on boards with delineated spaces.²⁸ That in itself seems difficult to justify and if a game played on the Leiden board was different to that played on other boards, anything said about it is independent of discussions involving other boards and depictions.

Kendall's conclusion that this board was purely amuletic seems highly likely and does not contradict the idea that other boards were designed probably both as religious symbols and for a board game in the usual sense.

3.2.10 Fakery

It has been suggested to the author that some, or most, known stone boards might be fakes. The Ashmolean board and the Peribsen fragments reported in 1896 and 1905 respectively have archaeological provenances and are securely identified as authentic. It is known that a 'fake industry' existed during the 1900s and, if convincing, collectors, dealers and museums could pay large sums for such objects. The remaining known Mehen boards were bought or acquired in Egypt so this argument warrants discussion.

An important factor in determining an object's authenticity is its acquisition date. It is believed that the fake industry burgeoned from 1912 when the Egyptian government passed a law giving finders of antiquities half the objects discovered or their value in money (WAKELING, 1912: 7). Furthermore, Mehen finds appear to be treated as unexceptional until Quibell's report of the tomb of Hesy in 1913, followed by Ranke's Mehen article published in 1920. Mehen was probably unknown to most forgers and collectors at this time and so anything acquired earlier than around 1913 seems likely to be authentic. The Cairo board is known to have been in the Cairo Museum in 1902,²⁹ a photograph exists of the Petrie board taken in 1898–9 and the Berlin board was acquired from a collector in 1897.³⁰ The Fitzwilliam board has a label on the reverse of its larger part showing that it was loaned by its owner, Gayer-Anderson in 1917.³¹ Therefore, it is the author's belief that these are all highly likely to be authentic artefacts.

The Chicago board was purchased in Luxor in 1932 (PICCIONE, 1990: 46) and features a bird's head projection on the rim, a unique feature at the time, arguably indicating a greater chance of authenticity. Similarly, since the segmented snake format was well-known, it seems disingenuous and so perhaps less likely for a forger to have invented the unique pitted design of the British Museum's board.

3.3 Game Piece finds

Only marbles, lions and lioness game pieces are known to be associated with Mehen - from depictions in the tombs of Hesy and Rashepses. Although many such pieces exist in international collections, none have been found with a Mehen board.

3.3.1 Lions and Marbles in graves near the Tombs of Djer and Djet

The archaeological reports for lion pieces found in this area by Petrie in his 1925 publication 'Tombs of the Courtiers' (PETRIE, 1925: 6–7) are confusing, which has led to subsequent misunderstandings. Seventeen

²⁷Some grooved boards are just 1 or 2 coil moves to the centre which would be facile.

²⁸If it was the same game as Hesy/Sahure or grooved boards, then why put delineations on the coils? Also, what are the players placing on the coils? They do not appear to be lions.

²⁹It may be that this artefact was acquired earlier than the Ashmolean board making it the first board found, since it could be the board referred to as being in the 'Gizeh Museum' despite the mention of green glaze (PETRIE and QUIBELL, 1896: 42). If so, being similar in design to the Ashmolean, it could then not be tenable that it is a fake. Regardless, the early date makes it highly likely to be genuine.

³⁰Thanks to Dr. Robert Kuhn for this information.

³¹Direct examination by the author with thanks to Dr. Melanie Pitkin, Fitzwilliam Museum.

Artefact from Plate VII	Destination as written in Distribution List	Current Location	Accession Date/ Number
Lion 1	University College	Fitzwilliam Museum	E.4.1927
Lioness 2	Manchester	Fitzwilliam Museum	E.5.1927
Lion 3	Kyoto	Kyoto University Museum	2175 / 1922
Lion 4	Ny Carlsberg	Manchester Museum	6766 / 1922
Lioness 5	Chicago	Petrie Museum (UCL)	UC15506
Limestone Marbles 6	Manchester	Manchester Museum	6767.a / 1922

Tab. 2: A comparison of the distribution list in ‘Tombs of the Courtiers’ against current location

marbles are shown in Plate VII, but Petrie does not state the quantity in his text and the number held by the Manchester Museum is thirty-four so it appears that only half of them were photographed for the report. Six lion pieces are mentioned and illustrated as being from the cemetery of court servants of Djet, Umm el-Qa’ab, Abydos. One male lion was found separately in grave 126 while the remaining five pieces, were found in Grave 156. Petrie’s description ignores the second pictured lion but investigation by the author reveals that the five are three lions and two lionesses of the same style (PETRIE, 1925: fig. VII, XXI), which is the most common type known and matches those depicted in the tomb of Hesy. Found alongside the thirty-four white marbles, they appear to be an incomplete Mehen set. The five matching lions were sent to different museums (see Table 2).

As at July 2021, Petrie Museum’s online collection database reports the lion pieces from the courtyard of Djet as being a set of six instead of five. CRIST et al. (2016: 26) says four lion pieces were found near the tomb of Djer, with the reference Petrie 1901, which reports only two lions of a different style. A comparison of Plate VII in Petrie’s volume against museum photographs and direct examination concluded that its distribution list PETRIE, 1927: 27) is inaccurate (see Table 2).

The register of courtier’s graves in Petrie ‘Tombs of the Courtiers’ (PETRIE, 1925: fig. XX–XXI) gives an unspecified number of lions found in tomb 426 of Djet (not pictured) and a total of ten other lion pieces from tombs 507, 485, 787, 126 and 156 in the courtyard of Djer; Manchester Museum says a total of fourteen lions were found in this area (The Manchester Museum Database, Accessed 4 February 2022). If both sources are correct, then four lions were found in tomb 426, in which case these may constitute another set, not previously reported.

3.3.2 Six Marbles inscribed with a King

The National Museum of Scotland holds six unprovenanced limestone marbles (A.1972.227–A.1972.232), each inscribed with the name of an early King in a Serekh–Narmer, Aha, Djer, Djet, Den, and Anedjib. A link with Mehen has not previously been proposed, but given that the number six seems to be significant for Mehen and that game-pieces representing kings were likely played along the snake track (PICCIONE, 1990), a link with Mehen is feasible, although their size at 15 mm +/- 1 mm is larger than other known Mehen marbles.

3.3.3 Identifying game pieces associated with Mehen

Individually found recumbent lion pieces that closely resemble those ascribed for Mehen as pictured in the tomb of Hesy seem likely to be for Mehen, but might conceivably be for some other purpose (CRIST et al., 2016: 26). Similarly, there are numerous other finds of marbles and although many of them are coloured red, white and black, like those in the tomb of Hesy, they might equally be for some other activity. Game-pieces

that can be ascribed to Mehen with certainty are therefore ostensibly limited to finds with multiple lion pieces. Slightly differing lists by previous authors have been assessed together with new information from this paper and then categorised into ‘almost certain’ and ‘probable’:

Game pieces almost certainly intended for Mehen are:

- Tomb 3504 at Saqqara, Dynasty 1 (held at the Cairo Museum, accession number unknown). A set of 3 lionesses and 3 lions, 39 white limestone marbles, 14 game pieces suitable for playing Senet and 2 sets of dice sticks (EMERY, 1954: 58).³²
- Abu Roach Tomb I, Dynasty 1. 3 lionesses and 3 lions (MONTET, 1946: 189). Louvre (E 16667–16671).
- Abu Roach Tomb VIII, Dynasty 1. 3 lions, 3 lionesses with red and white marbles (MONTET, 1946: 186).³³ Cairo Museum (Lions: JE 44918 and Marbles: JE 45026).
- Grave 156 in the cemetery of court servants of Djet, Abydos. 3 lions and 2 lionesses of the same style found with 34 ‘small balls of white stone’ (PETRIE, 1925: 7, Plates VII, XXI) (see section 3.3.1).

Other possible candidates include:

- A set of six recumbent hound figures were found in Abusir Grave 58 c 4 (SCHARFF, 1929: 63, Pl. 39). Most authors have assumed that they were a set for Mehen due to their familiar size, posture and quantity (SCHARFF, 1929: 63; KENDALL, 2007: 24; CRIST et al., 2016: 34). While this does seem highly likely, they are not lions and were not found with marbles, so it is difficult to be certain. Held at the Cairo Museum (accession number unknown).
- The Petrie Museum holds two lions (UC15509, UC15510) from Grave 507, King Djer (PETRIE, 1925: 6 & Pl. XX).
- It is possible that four lions were found in tomb 426 of the cemetery of court servants of Djet, in which case these may constitute another set (see section 3.3.1).
- Two lions, two lionesses, a hare, sixteen pyramid pieces, ivory sticks and some ironstone marbles were the only contents of an unmarked hole in a Ballas cemetery (PETRIE and QUIBELL, 1896: 14,35), current location unknown, and this has been ascribed to Mehen (CRIST et al., 2016: 25). Four lions instead of six, together with a hare of a similar style in what appears to be a complete set, casts some doubt.

Adams (ADAMS, 1974: cat. no. 355, pl. 43.) lists three, consecutively catalogued, unprovenanced lions at the Petrie Museum. UC16179 is elephant ivory while UC16180 and UC16181 are hippopotamus and UC16180 is longer than the other two, so they appear to be unrelated. In Adams’ opinion, although reported as from Hierakonpolis, it is more likely that they are from Petrie’s Djer/Djet excavation. They might relate to others from that location, including lion remnant UC27619. For other relevant game-piece finds see Crist et al. (CRIST et al., 2016: 25–6).

³²Emery (EMERY, 1954: 58) reported a set of lions with thirty-nine marbles at Saqqara. One of the two pages in the 1954 report has a typo and says ‘35’. Separately, in KENDALL, 2007, the reference for the same set is incorrectly to PETRIE, 1925 (which shows a different set mentioned in the earlier part of the same sentence).

³³Montet described them as white and red but the museum display features three larger black marbles - it seems most likely that these were added from a different find at a later time. The remaining six marbles are white but at least two of them appear slightly darker and might have faded from red.

3.4 Mehen-related texts

In addition to captions on the Mehen tomb reliefs discussed above, Mehen has also been mentioned in the Pyramid Texts (e.g. as spells inscribed on tomb walls of certain Dynasty 6 kings) and is listed amongst a list of offerings in the tomb of Prince Rahotep of Dynasty 4 (RANKE, 1920: 8–9; PETRIE and GRIFFITH, 1892: Pl. XIII).

Translations of writings pertaining to the game have been varied and contradictory. Context is part of the interpretation process and those who believed that Mehen was played in a particular way have often translated from their viewpoint. Consequently, rather than take any single point of view, translations from important works on Mehen were combined with more recent independent translations,³⁴ and from this dataset, the current best understanding for each was deduced.

3.4.1 Undisputed Mehen text interpretations

The hieroglyphs above the Mehen scene on the South wall of the Dynasty 6 tomb of Idu are given in the original paper by SIMPSON (1976: 25) as ‘I am playing the Mehen game against you’.

The Mehen scenes in the tombs of Ibi and Ankhfensakhmet, probably copied from the same Dynasty 5 tomb have the same caption: ‘Enjoying the Mehen game, the Senet game and the Tau³⁵ game’ (RANKE, 1920: 11; PUSCH, 2007: 74).

The inscription ‘Playing Mehen’ can be found above Rashepses’ Mehen board (RANKE, 1920: 11; KENDALL, 2007: 40) and above both players on Sahure’s causeway (KHALED, 2020b: 863).

PICCIONE (1990: 49) and ROTHÖHLER (1999: 15) agree that Pyramid Text 626 from the pyramid of Queen Neith reads: ‘Recitation: It is as Wr (the swallow) that Neith has gone forth, and it is as the falcon that she has alighted. The face of Neith is in the mehen board of (this) Shesmu’, although Rothöhler suggests that ‘Shesmu’ might be a mistake that should read ‘escort’, alluding to the role of Mehen as escort of Ra. ALLEN (2015) interprets ‘Wr’ as ‘a great one’ and the second sentence as ‘Neith’s sight is on the Delapidated One’s coil’ which differs, but the underlying meaning appears to be similar.

According to Oxford Expedition to Egypt: Scene-details Database (LINACRE COLLEGE, OXFORD, 2006: sc. 12.9), there is a reference to Mehen in the tomb of Horemheb (SCHNEIDER et al., 1996: 84). It appears that one of the Old Kingdom blocks (OK 12) found at this New Kingdom site incorporates a hieroglyph that looks like a Mehen symbol. In fact, it is not quite the same as a Mehen hieroglyph and has nothing to do with the game, as per Schneider’s translation.

3.4.2 Hieroglyphs accompanying the Mehen scene in the Causeway of Sahure

KHALED (2020b: 863) translated the third caption of Sahure adjacent to the players as ‘Invocation of words, the fourth one’ with a speculative interpretation of ‘It is the turn of the fourth player’. Goede and Tait (pers. comm.) believe a reading of ‘fourth’ requires an additional *nw* hieroglyph, which is not apparent, and so they believe only the number ‘4’ is represented and ‘fourth’ is incorrect.

Tait’s opinion was that ‘a reading of *ḏd mdw* as ‘Recitation’, ‘Utterance’, looks highly likely. Then *fdw* is ‘four’. The author speculated that this might refer to a bet, the call of a dice roll, or a call to guess the number of marbles in another’s hand. Tait concurred saying ‘the suggestion that ‘four’ is a call or bid by the player is excellent: the meaning would be ‘Utterance: Four!’.

³⁴Thanks to Prof. John Tait, Dr. Marie-Lys Arnette, Luca Miatello and Rev. Brigitte Goede for their contributions to this discussion.

³⁵The meaning of Tau may be controversial. Earlier authors believed it referred to the Game of Twenty Squares, but Pusch argued that it meant Marbles, which is convincing, given that no other game-board is shown.

Arnette (pers. comm.) pointed out that *dd mdw* indicates something ritual, a recitation, as opposed to ordinary discourse, indicating perhaps that these scenes may show ritual games. This is further supported by Meyer-Dietrich's work (MEYER-DIETRICH, 2010: 2), which discusses recitation and even gives an example of *dd mdw 4* "to be recited four times". This aligns with Goede's interpretation (pers. comm.): 'Words to be recited: four (times)', perhaps to invoke a spell that would bring the players and game into reality in the afterlife.

3.4.3 Hieroglyphs above the Mehen scene in the tomb of Kaemankh – Left Player

The tomb of Kaemankh from Giza (G4561) bears a caption as part of a Mehen scene which has been interpreted in various ways. JUNKER (1940: 38) gives the translation of the hieroglyphs as 'Hurry up! Why don't you play?'. SHORE (1963: 90), says 'Hurry up and play!', while KANAWATI (2001: 34) gives 'go on, play'. Although somewhat speculative, KENDALL (2007: 40) gives a contrasting interpretation: 'I take aim at you and play toward you'.

Goede's opinion (pers. comm.) was 'As often in Old Kingdom reliefs people are talking, shouting, giving sharp or funny or threatening comments, often in imperative form, as here. This means 'go ahead (and) play!'. It appears that Kendall overlooked that the hieroglyphs are disordered for symmetric reasons in *hb* 'play'.

The consensus is clear: 'Hurry up and play!' or 'Go ahead and play!'

3.4.4 Hieroglyphs above the Mehen scene in the tomb of Kaemankh – Right Player

There is a second caption above the player seen on the right. SHORE (1963: 90) says: use of the Egyptian word *iti* implies 'capture' of a piece. KENDALL (2007: 40) interprets it slightly differently as 'seizing Mehen'. He speculatively suggests without explanation that this means either 'gaining advantage in Mehen', 'seizing the lead in Mehen' or merely 'my turn'. Kanawati's interpretation was 'catching/playing a snake game' (KANAWATI, 2001: 376).

Goede offered: 'The first part has the function of a headline and means "Taking Mehen". This is a substantiated infinitive, but the first part *Jtj* is usually "taking by force", "taking away" or "stealing".'

Miatello (pers. comm.) put forward the following explanation: '1) *jtj.t mhn* "Capturing/taking Mehen". This is the literal translation and could mean "Capturing the serpent" or, in a very neutral reading "Taking the Mehen board (to play with)". The literal translation is less likely than *Jtj.t (m) mhn*. Firstly, because the elision of *m* (= "in"), before a noun beginning with *m* is common in the Ancient Egyptian language. Secondly, because there is that scene in a tomb, published by Quibell, in which above two players playing the Senet game board there is the sentence *jtj.t m zn.t* "Capturing/grabbing (pieces) in/with Senet". Therefore, the most likely translation should be: 2) *jtj.t (m) mhn* "Capturing (pieces) in/with the Mehen game". 3) *jtj.t (m) mhn* "Grabbing (pieces) in/with the Mehen game".

There is general agreement that the first word generally means taking / robbing / capturing. This may mean the capturing of a game-piece although, at the inception of board games, it might not mean capturing as understood now, for example in the game of chess. The second word translates directly as 'Mehen'. In other words, it could be that two equally plausible interpretations exist. The straightforward interpretation from Miatello is that there is an implied central word giving something like 'Capturing in the Mehen game', while the alternative translation gives 'taking the game', that is to say, 'winning' the Mehen game'.

3.4.5 Pyramid Text Utterance 332 in the Pyramid of Teti, Saqqara

JUNKER (1940: 37) and MONTET (1955: 196) both give translations that relate to their belief that Mehen was about a lion hunt. Junker: 'T[eti] is the hunter who emerged victorious from the game of *mhn*'. Montet: 'It

seems to me that the entire chapter 332 (541 a–e) pertains to hunting...’

Teti is the hunter who comes out of the pit-trap.
Teti came out like a breath and now he is back.
Teti ran, o heaven, o heaven.
Teti walked, o earth, o earth.

PICCIONE (1990: 48) ideas largely supplanted the lion hunt theory. His translation of PT332:

‘It is this N[eith] who has come forth from the mhn-board.
When he came around, N[eith] came forth from its fiery breath.
Just as N[eith] has travelled <to> the two skies, so N[eith] has returned <to> the two lands.’

Piccione then goes on to say: ‘passage describes the circular direction of travel on the board, as well as exiting on the breath of the snake. **SETHE** (1935: 13) understood the text in a similar manner. Furthermore, he interpreted the mhn-game in this and similar contexts as an ordeal or legal trial for the deceased’. Egyptologists Goede (pers. communication), **ARNETTE** (2020: 56) and **ALLEN** (2015: 73) broadly concur. The exception is **KENDALL** (2007: 41), who appears to accept Piccione’s theory but then suggests that the text implies the deceased returns to earth to be reborn, a unique interpretation pertaining to his theory that Mehen gameplay is the same as the modern board game, Hyena, in which pieces travel to the centre and back.

CRIST et al. (2016: 30) favour a more recent explanation from **ALLEN** (2005: 69), which reverts to an early idea of escaping from Mehen via its head, either because Mehen is dangerous, or because the journey was. For gameplay, the idea of escaping from the head of a dangerous Mehen gives the same result as travelling within a benign Mehen to be reborn from the head—so at least the consensus is that the aim of the game was to travel from tail to head and, in either case, Piccione’s translation seems reasonable.

3.4.6 Pyramid Text Utterance 659 from the Pyramids of Pepis I and II, Saqqara

This is an oblique text which has led to some speculative interpretations starting with **RANKE** (1920: 24–8). **ROTHÖHLER** (1999: 15) translates it as ‘Take for you these your white teeth! They are within Mehen, who is wound around these as arrows in their name “arrow”’.

PICCIONE (1990: 48) understood it as: ‘...the deceased king is exhorted to move his pieces around a mhn-board in the context of his own deification: Take for yourself these your white ivory pieces (lit. “teeth”) from the mhn-board. Go around them as an arrow in this their name of “Arrow”’. **CRIST** et al. (2016: 30) agree, regarding the use of ‘teeth’ as a reasonable metaphor for ivory game pieces.

Goede believes that the text is literally about teeth because adjacent sentences are about other body parts of the king: ‘... in this case spell 659 the word is not written *mḥn.w* but *m ḥn.w*, with different meaning. Determinatives are always at the end of a word. Here it is not. “Receive for you these white teeth in (a right) order, which are going around (in the mouth) and are straight as an arrow.”’.

In either case, no significant advance is made in our understanding of Mehen symbolism or gameplay.

3.4.7 Pyramid Text Utterance 758 in the Pyramid of Queen Neith, Saqqara

The reading of this pyramid text is the subject of debate. **PICCIONE** (1990: 48) explains: ‘The dual notion of Mehen as gameboard and snake from whose fiery breath the deceased is reborn is expressed more clearly in PT Utterance 758, ‘Neith is conceived in the nose. This is how Neith is born in the nostril. Just as Neith rests in your coils, so Neith sits in (i.e. “resides in”) your mhn-board.’ This entire passage refers to the birth

of Queen Neith into the afterlife from the breath and nostrils of the serpent. Residing within the coils of the serpent is synonymous with being upon the *mhn* gameboard and is part of the resurrection process’.

Kendall also interprets this text as showing that the game represents an ordeal for the dead wherein the king travels through the serpent and emerges from it to be reborn. Others have broadly concurred (e.g. **ROTHÖHLER**, 1999: 15–6).

Goede cast doubt that the expression refers to the board game, pointing to translations from **FAULKNER**, 1969, **ALLEN**, 2015 and **TOPMANN**, 2020, all of whom gave translations that do not mention Mehen as a game: ‘There is ... just the word “mehen” as a protective word. They do differ a little in the hieroglyphs...’.

In conclusion, the story of the dead king travelling through the coils of Mehen to be reborn into the afterlife from the head of the serpent is affirmed, although it is likely independent of the board game in this instance.

4 Discussion: Ludological implications from the new evidence set

This paper has identified and corrected a range of inaccuracies in our understandings of Mehen that were introduced as early as 1849. The issues highlighted have likely slowed research progress with Mehen and by eliminating them, the evidence set for Mehen becomes more consistent.

One of the largest obstacles in understanding Mehen was the inaccurate reconstructions of the Peribsen boards by Amélineau. The propagation of these designs confounded the defining spiral nature of the game so that any theory for the underlying theology of Mehen or its game-play was compromised. Game-play hypotheses were further weakened by several misunderstandings, in particular an inauthentic flat board incapable of holding marbles and Lepsius’ inaccurate rendering of Rashepses’ Mehen board that omits lions and shows multiple marbles where none exist. These anomalies can now be discounted from the evidence set for Mehen.

The compelling ideas of **PICCIONE** (1990) concluded that a piece moving along the track on a Mehen board is a religious metaphor for the spirit of a dead person moving through the body of the deity, Mehen, in order to be reborn into the afterlife through the serpent’s head at the centre. These ideas were compromised by Amélineau’s reconstructions because boards without a single spiral do not match the religious story. They were also diminished by Lepsius because movement of a single game piece more closely matches the idea of a single dead person travelling to the afterlife than do multiple game pieces. The observation that the snake’s nostril on the Berlin board appears to have something emerging from it also supports Piccione’s argument. Consequently, the updated evidence set strengthens Piccione’s theory and in turn, hypotheses that do not conform with Piccione’s ideas are weakened; for example Kendall’s argument that Mehen was played like the modern Sudanese game of Hyena in which game pieces are played to the middle and then back to the tail (**KENDALL**, 2007: 43–4).

Two aspects of these findings allow greater freedom for future researchers. Lepsius’ report led to the belief that each player played multiple marbles along the track, and due to the slightly misleading depiction of marble colour in Quibell’s report it was widely believed that up to six players independently took charge of a set of differently coloured marbles. This research shows that both ideas might not be true. For instance, each player might have raced a single marble or other game piece. The idea that Mehen was a game for two players, or two teams is as feasible as a six-player game and perhaps more likely given that the earliest known board game for more than two players, Indian Chaturaji, is dated around 900 CE (**PARLETT**, 2018: 325).

An overarching game-play theory for Mehen has been difficult to construct, given the variety of boards, game tracks and doubts regarding the background story. Scholars could only conclude that equipment and rules must have varied and evolved markedly over time – in contrast with other ancient Egyptian games such as Senet, Aseb and Fifty-Eight Holes where basics of game-play (if not artistic design) appear to have hardly changed over thousands of years (**DE VOOGT** et al., 2013: 1728). Although details of Mehen’s rules will

probably never be known, with the removal of the fake flat board and non-spiral boards from the evidence set, possibilities for game-play are reduced considerably:- now all known and depicted boards incorporate a single spiral snake track that can contain marbles. Existing game-play hypotheses that do not sit well with the new evidence set can be dismissed and it should now be possible to propose convincing general ideas for game-play and detailed rule-sets that align with the evidence.

5 Concluding remarks and future research potential

This study addressed numerous inaccuracies in our understanding of artefacts relating to the game Mehen that have appeared in former scholarship, both archaeological and ludological. Two important new reports on the causeway of Sahure and the tomb of Rashepses have become available since the last significant work on Mehen was published but the ludological implications of these had not yet been assessed or reported in detail. Additionally, the author discovered various new facts about Mehen that had not previously been reported and was thus able to contribute new interpretations of the available evidence. It is hoped that this new and more comprehensive body of information may significantly update the known evidence for Mehen, and hence reinvigorate research efforts into the game.

Future scholars can henceforth investigate game-play within a more restricted and confident set of parameters. The context within which Mehen was played can also be better examined – was it played only by the societal elite? Was it played primarily for prestige reasons (HANUSSEK, 2020)? Was it a ritualistic activity that was not played in the sense that we understand board games today?

Mehen, the game, is clearly inextricably intertwined with Mehen, the deity, and future research might uncover further religious associations. For instance, no-one has yet proposed a theory to explain the figure of a goose or other bird encircling the edge of some Mehen boards.³⁶ Might this be related to the figure that Ranke thought was a bird symbol at the centre of the Berlin board? The lion god, Aker, was a protector of deceased kings and a guardian of Ra on his nightly journey through the underworld, both of which resonate with Piccione's ideas. Aker was depicted in the Old Kingdom as a reclining lion with an open mouth and a substantiated link to Mehen lion game pieces would be a significant discovery.

Advanced imaging techniques and technical analyses applied to some of the Mehen tomb reliefs and artefacts³⁷ might further our understanding. Specific suggestions that have the potential to yield a breakthrough include a spectrographic and VIL analysis of the pigmented material now known to be in the grooves of some Mehen boards, applying imaging techniques to the player's hands in the tomb of Rashepses or detailed examination of tool marks on the surface of some carved boards. Optical or infrared stimulated luminescence dating techniques might confirm or refute the authenticity of unprovenanced Mehen boards or give a chronological insight.

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³⁶Louvre Table (E25430), Chicago (E16950) and Leiden (F 1968/3.1).

³⁷e.g., magnification, Visible Induced Light Luminescence (VIL) photography, Raman spectroscopy, 3D scanning, photogrammetry or reflectance transformation imaging.

sity College, London), Dr. Hany El-Tayeb (Ministry of Tourism and Antiquities, Egypt), Mohamed Ismail Khaled (Julius-Maximilians-Universität Würzburg), Aayko Eyma, Prof. Naguib Kanawati (Macquarie University, Sydney), Luca Miatello, Dr. Ulrich Schaedler (Musée Suisse du Jeu, La Tour-de-Peilz), Dr. Irving Finkel (The British Museum, London), Dr. Robert Kuhn (Staatliche Museen zu Berlin), Dr. Arnaud Quertinmont (Musée royal de Mariemont), Dr. Daniel Soliman (Rijksmuseum van Oudheden, Leiden), Therasse Isabelle (Musées royaux d'Art et d'Histoire, Brussels), Hélène Guichard (Le Louvre, Paris), Julia Kennedy (Field Museum, Chicago).

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Appendix A Pre-dynastic and Old Kingdom evidence set for Mehen

This appendix outlines the new Predynastic and Old Kingdom evidence set for Mehen based on the findings of this paper. It contains important corrections and updates since the last publication outlining the evidence for Mehen, *Ancient Egyptians at Play* (CRIST et al., 2016). For any Mehen scholar, and particularly those interested in game-play, this updated evidence set gives an essential new understanding. The accepted evidence for Mehen prior to the First Intermediate Period of Egypt is meagre being:

- Eight whole or partial game boards, only one of which has provenance, plus a find of board fragments in the Dynasty 2 tomb of Peribsen (see Table 4)
- The painting in the Tomb of Hesy of a complete Mehen set (see Table 3)
- Six tomb reliefs of the game in progress (see Table 3)
- Captions / inscriptions for the tomb reliefs
- Three or four other Old Kingdom texts that Egyptologists have gleaned relate to the game
- A variety of miscellaneous game pieces, none of which have been found with a board. Of these, only four finds appear to be indisputably for Mehen (see Table 5)
- Some amuletic/votive objects that seem to relate to the Mehen game or deity (see Table 4).

The subset of provenanced Mehen evidence is smaller still; see Table 6 for a full list of these items in chronological order.

Tab. 3: Depictions of Mehen

Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimensions (mm)	# Spaces	Coils	Notes
Painting–Tomb of Hesy	Dynasty 3. c. 2650 BCE	Saqqara Tomb S2405	-	-	(Quibell 1913)	-	-	-	>400	7	Colour picture is inaccurate. B&W pictures should be used
Relief–Causeway of Sahure	Dynasty 5, c.2470 BCE	Abusir, Block SC/North /2019/013	-	-	(Khaled 2020a)	-	-	-	624	7	Tomb relief, Dynasty 5
Relief–Tomb of Rashepses	Dynasty 5, c. 2375 BCE	Saqqara Tomb LS 16	-	-	(Lepsius 1849), (El-Tayeb 2018)	-	-	-	-	7	Lepsius picture is invalidated
Relief–Tomb of Kaemankh	Dynasty 5, c. 2375 BCE	Giza Tomb G4561	-	-	(Kanawati 2001)	-	-	-	-	7	
Relief–Tomb of Nimaatre	Dynasty 5, c. 2375 BCE	Giza Tomb G2097	-	-	(Roth 1995)	-	-	-	-	-	Mostly destroyed. Believed identical to the Tomb of Kaemankh depiction
Relief–Tomb of Idu	Dynasty 6. c. 2330–2280 BCE	Giza Tomb G7102	-	-	(Simpson 1976)	-	-	-	-	-	-
Relief–Tomb of Ibi (also known as ‘Aba’)	Late Period Dynasty 26	Thebes Tomb TT36	-	-	(Wilkinson 1837)	-	-	-	-	-	Presumed based on a Dynasty 5 tomb, probably the Tomb of Iby
Relief–Tomb of Ankhfensakhmet	Late Period Dynasty 26	Memphis	Walters Art Gallery, Baltimore	22.152 & 22.153	(Capart 1938)	Acquired by Henry Walters, 1930-1, Museum purchase, 1957	-	-	-	-	Presumed based on a Dynasty 5 tomb, probably the Tomb of Iby

Tab. 4: Mehen Boards

Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimen- sions (mm)	# Spaces	Coils	Notes
Playable Boards											
Giza	Un- known	No Provenance	Unknown - Lost	-	(Petrie and Quibell 1896: 42)	-	Green Glaze	-	-	-	This may be the Cairo board
Ashmolean	Naqada II period. 3650 – 3300 BCE	Tomb 19, Ballas cemetery	Ashmolean Museum, Oxford	AN1895.997	(Petrie and Quibell 1896: 42)	-	Lime- stone	105	30	2	Found on a pot. Naqada II
Berlin	Un- known	No Provenance	Ägyptisches Museum und Papyrus- sammlung, Berlin	ÄM 13868	(Scharff 1929: 145)	Gifted to Berlin Museum from private collection of an Egyptologist in 1897. Ranke (1920: 7) mentions it.	White Lime- stone	275	92	3	Formerly held by the Bode Museum, Berlin, under the same inventory number
Petrie	Un- known	No Provenance	Petrie Museum, London	UC20453	(PETRIE, 1914: 25, pl. 47)	A photo from the 1898–9 season exists in the Petrie Museum (DIOS.NEG.181). Not properly reported until Kendall 2007.	Lime- stone	288	73	3	
Cairo	Un- known	No Provenance	Museum of Egyptian Antiquit- ies, Cairo	JE 27354	(Maspero 1902: 173)	A museum guide, only. Scharff (1929: 146) mentions it.	Lime- stone	330	105	3	On four low legs
Peribsen–Louvre	Dynasty 2. c. 2740 BCE	Tomb P, Royal cemetery, Umm el-Qa’ab near Abydos	Musée du Louvre, Paris	E 29891	(Amélin- eau 1905: 494–5)	-	Faience	200	140 - 160	6 or 7	Pitted. Fragment only, Dynasty 2
Peribsen–Mariemont	Dynasty 2. c. 2740 BCE	Tomb P, Royal cemetery, Umm el-Qa’ab near Abydos	Musée royal de Mariemont	B.102	(Amélin- eau 1905: 494–5)	-	Faience	200	90	5 or 6	Pitted. Fragment only, Dynasty 2

Tab. 4: Mehen Boards - cont.

Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimensions (mm)	# Spaces	Coils	Notes
Peribsen–Picardie	Dynasty 2. c. 2740 BCE	Tomb P, Royal cemetery, Umm el-Qa'ab near Abydos	Musée de Picardie, Amiens	MP89.3.1	(Amélin-eau 1905: 494–5)	-	Faience	-	-	-	Pitted. Small fragment only, Dynasty 2
Peribsen–Brussels	Dynasty 2. c. 2740 BCE	Tomb P, Royal cemetery, Umm el-Qa'ab near Abydos	Musées Royaux d'Art et d'Histoire, Brussels	E.04180	(Amélin-eau 1905: 494–5)	-	Faience	200	140–160	7	Pitted. Fragment only, Dynasty 2
Fitzwilliam	Unknown	No Provenance	Fitzwilliam Museum, Cambridge	E.GA.4464.19	(SWINY, 1980: 69)	This was a brief footnote. Not properly reported until Kendall 2007. Gayer-Anderson owned it in 1917	Limestone - Travertine	440	126	4	With modern addition—original slightly less.
Chicago	Unknown	No Provenance	Oriental Institute, Chicago	E16950	(Piccione 1990: 46–7)	Purchased by Harold Nelson in Luxor in 1932 (Piccione 1990: 46)	Alabaster	373	127	4	
Louvre–Table	Unknown	No Provenance	Musée du Louvre, Paris	E 25430	(Vandier 1964: 488)	Bought from a Parisian collector and gallery owner, Roger Khawam, 1958	Alabaster	410	137	4	Single foot
British Museum	Unknown	No Provenance	British Museum, London	19,610,408.10	(Shore 1963)	Won in Spink & Son auction, 1961	Limestone	370	83	5	Pitted. Single low foot

Tab. 4: Mehen Boards - cont.

Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimen- sions (mm)	# Spaces	Coils	Notes
Unplayable / Amuletic Boards											
A Mehen board of size and type commensurate with playable Mehen boards but with a convex snake body and no game spaces (The Leiden Board)	Un- known	No Provenance	Rijksmu- seum van Oudheden, Leiden	F 1968/3.1	(Kendall 2007: 42)	Purchased from Mr. Möger, an art dealer in March 1968. Not properly reported until Kendall 2007	Lime- stone	420	-	5	
A model Mehen board including the remnant of a trapezium appendage but impractically small to play on	Un- known	No Provenance	Private Collection, New York	-	(Kendall 2007: 37)	-	Ivory	45	342	6.5	There are four tiny holes, each located on a bar between spaces
A small amulet in the form of a coiled, unsegmented snake with a convex body and without game spaces	Un- known	No Provenance	Petrie Museum, London	UC38655	(Petrie 1914: 25, pl. XII)	-	Blue Lapis lazuli	52	-	3.5	
A board in the form of a coiled, unsegmented snake with a convex body but the snake's tail is at the middle and the head is at the rim	Un- known	No Provenance	Field Museum, Chicago	31009	(Piccione 1990: 51)	Purchased in Egypt by Mr E. Ayer, 1895. Later donated to the museum	Blue- green glazed earthen- ware	280	-	2.5	Field Museum lists it as Dynasty 18. Piccione agrees
A non-spiral board engraved onto the underside of a turtle artefact	Un- known	No Provenance	Metropol- itan Museum of Art, New York	61.33	(Dunn- Vaturi 2012: 24)	-	Serpent- inite	148 x 118	-	-	The association of Mehen with this object is tenuous

Tab. 5: Mehen Game Pieces

Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimensions (mm)	# Spaces	Coils	Notes
Mehen Game Pieces											
3 lionesses, 3 lions, 39 marbles, 14 Senet pieces, 2 dice sticks sets	Dynasty 1, c. 2980 BCE	Tomb 3504 at Saqqara	Museum of Egyptian Antiquities, Cairo	Unknown	(Emery 1954: 58)	-	Lions: Ivory, Marbles: Limestone	L: 70 +/- 1, Marbles 8 - 11	-	-	
3 lionesses and 3 lions	Dynasty 1, c. 2980 BCE	Abu Roach Tomb I	Louvre, Paris	E 16667-16671	(Montet 1946: 186)	-	Elephant Ivory	H:50 x L:92, H:49 x L:92, H:46 x L:92 x W:25, H:47 x L:82, H:41 x L:94 x W:24	-	-	The Louvre do not list the 6 th lion. It is not clear if they possess it
3 lions, 3 lionesses with red and white marbles	Dynasty 1, c. 2980 BCE	Abu Roach Tomb VIII	Museum of Egyptian Antiquities, Cairo	Lions: JE 44918, Marbles: JE 45026	(Montet 1946: 186)	-	Lions: Ivory, Marbles: Stone	H:35, L: 60 (lioness), 65 (lion)	-	-	Currently displayed with 3 black marbles.
3 lions and 2 lionesses with 34 marbles (see section 3.3.1)	Dynasty 1, c. 2980 BCE	Grave 156, NE corner, Funerary Enclosure of Djet, Abydos	Fitzwilliam, Kyoto, Petrie, Manchester Museums	Fitz: E.4.1927, E.5.1927, Kyoto Uni: 2175, Petrie: UC15506, Manc: 6766, 6767.a	(Petrie 1925: 7, pls. VII, XXI)	-	Lions: Ivory, Marbles: white stone	Fitz L:70, Petrie L:70, H:37, Manc L:71, W:26, Marbles: 8-12	-	-	-
Candidate Mehen Game Pieces											
Set of 6 recumbent hound figures	Dynasty 5	Abusir Grave 58 c 4	Museum of Egyptian Antiquities, Cairo	Unknown	(Scharff 1926: 63, pl. 39)	-	Ivory	L:35-39	-	-	-
2 lions	Dynasty 1, c. 2980 BCE	Grave 507, King Djer, Abydos	Petrie Museum	UC15509, UC15510	(Petrie 1925: 6, pl. XX)	Ivory	L:65,H33, L:60,H:27	-	-	-	-
Probably 4 Lions	Dynasty 1, c. 2980 BCE	Tomb 426 of Djet square, Abydos	Unknown - probably different museums	-	(Petrie 1925: pl. XXI)	Ivory	-	-	-	-	Speculative. If 4 lions were found in this tomb, it is not certain they were a set



Tab. 5: Mehen Game Pieces - cont.


Name	Date	Loc or Ref.	Loc	Mus Ref.	First rep	Other dates	Material	Dimensions (mm)	# Spaces	Coils	Notes
6 marbles, each inscribed with the name of an early King in a Serekh—Narmer, Aha, Djer, Djet, Den and Anedjib	-	No provenance	National Museum of Scotland	A.1972.227– A.1972.232	Not thought to be published	Limestone	14, 14, 14, 15, 15 & 16	-	-	-	-
2 lions, 2 lionesses, a hare, 16 pyramid pieces, ivory sticks and some marbles (sole contents)	Predyn- astic	Unmarked hole, Ballas cemetery	Unknown	-	(Petrie and Quibell 1896: 14, 35)	-	Lions: Lime- stone, Marbles: Ironstone	-	-	-	-


Tab. 6: Summary of Dates for Provenanced Mehen Evidence

Evidence	Date	Explanation
Ashmolean Board	Naqada II period. 3650 – 3300 BCE	See 'Mehen, The Ancient Egyptian Serpent Game—A Reappraisal of the Evidence Set', 2023, section 3.3.4
3 lions, 3 lionesses and 39 marbles	Dynasty 1, c. 2980 BCE	Tomb 3504 at Saqqara from the reign of Djet
3 lions and 2 lionesses with 34 marbles	Dynasty 1, c. 2980 BCE	Grave 156, NE corner, Funerary Enclosure of Djet
3 lions, 3 lionesses	Dynasty 1, c. 2980 BCE	Abu Roach Tomb I
3 lions, 3 lionesses with red and white marbles	Dynasty 1, c. 2980 BCE	Abu Roach Tomb VIII
The 4 Peribsen fragments	Dynasty 2. c. 2740 BCE	All found in the tomb of Peribsen. Date unsure and controversial but 2740 BCE give or take say 30 years
Painting—Tomb of Hesy	Dynasty 3. c. 2650 BCE	Lived during the reign of king Djoser, first ruler of Dynasty 3, and maybe also under king Sekhemkhet
List of offerings in the tomb of Prince Rahotep	Dynasty 4, c. 2600 BCE	Probably the son of Sneferu, first king of the Dynasty 4 dynasty, c. 2600 BCE
Relief—Causeway of Sahure	Dynasty 5, c.2470 BCE	Sahure was second ruler of Dynasty 5
Relief—Tomb of Rashepses	Dynasty 5, c. 2375 BCE	Rashepses was a high-ranking official under Djedkare Isesi (El-Tayeb 2018: 289), penultimate ruler of Dynasty 5 2414--2375 BCE
Relief—Tomb of Nimaatre	Dynasty 5, c. 2375 BCE	A palace attendant of Djedkare Isesi
Relief—Tomb of Kaemankh	Dynasty 5, c. 2375 BCE	Date has been controversial. Junker suggested Dynasty 6. Current thinking is that it dates to the time of Djedkare (Woods 2009: 172; Kanawati 2001: 15)
Pyramid Text Utterance 332 in the Pyramid of Teti	Dynasty 6, c.2330 BCE	Teti was first ruler of Dynasty 6, 2345--2333 BCE
Relief—Tomb of Idu	Dynasty 6. c. 2330–2280 BCE	Official of Dynasty 6, probably during the reign of Pepi I, third ruler of Dynasty 6 2332--2283 BCE
Pyramid Text Utterance 659, from the pyramid of Pepi I	Dynasty 6, c.2280 BCE	Pepi I, 3rd ruler of Dynasty 6 2332–2283 BCE
Pyramid Text Utterance 659, was also found in the pyramid of Pepi II	Dynasty 6, c.2180 BCE	Pepi II, fifth ruler of Dynasty 6 2278–2184 BCE
Pyramid Text Utterances 758 & 626 in the pyramid of Queen Neith	Dynasty 6, c.2180 BCE	Neith was wife of Pepi II

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