

Islamic Ivory Chess Pieces, Draughtsmen and Dice

ANNA CONTADINI

There is no comprehensive study of Islamic gaming pieces, and information on them is scattered in general books or specialist articles. Research on their identification, their relationship to the various games, their history, and the development of types and shapes would contribute both to the study of games and gaming pieces in Islam, and also, given that many are in ivory, to the history of Islamic ivories in general. In this context the collection of ivory gaming pieces in the Ashmolean Museum¹ is of particular importance: not only are the seventeen pieces of very fine craftsmanship (*fig. 1*), but they are also different in style, type and date. They fall into two main groups, depending on the games for which they were used, chess or table games, and will be examined accordingly.

*Chess*²

Chess pieces during the Islamic era fall into two broad families as far as shape is concerned. In one, the pieces are more or less naturalistic representations of figures,³ while in the other they have abstract forms. When, where and why chess pieces started to become abstract is still a matter for debate.⁴ It is probable that both types were already in use soon before the Islamic era, but unfortunately our knowledge of this period is very limited.⁵ Setting aside the Venafrò and S. Sebastiano's catacomb pieces, which are probably of tenth or eleventh-century Italian manufacture,⁶ one can cite as possibly relevant only the chess set excavated at Afrasiyab and datable, according to the archaeological context, to the seventh century AD.⁷ Our knowledge of pre-Islamic times thus relies essentially on literary references.⁸

In the Islamic period we have no object certainly identifiable as a chess piece before the ninth century. Possibly the earliest are those excavated by the Metropolitan Museum of Art's Iranian Expedition at Nishapur, which are now in the Museum.⁹ They are in ivory and of abstract design, with virtually no decoration apart from carved vertical lines (*fig. 4*). There is one interesting exception: the horse (Knight), even if stylized, is still recognizable as a horse.

Another Knight, in stone, very similar in its stylized form, is in Kuwait, Dar

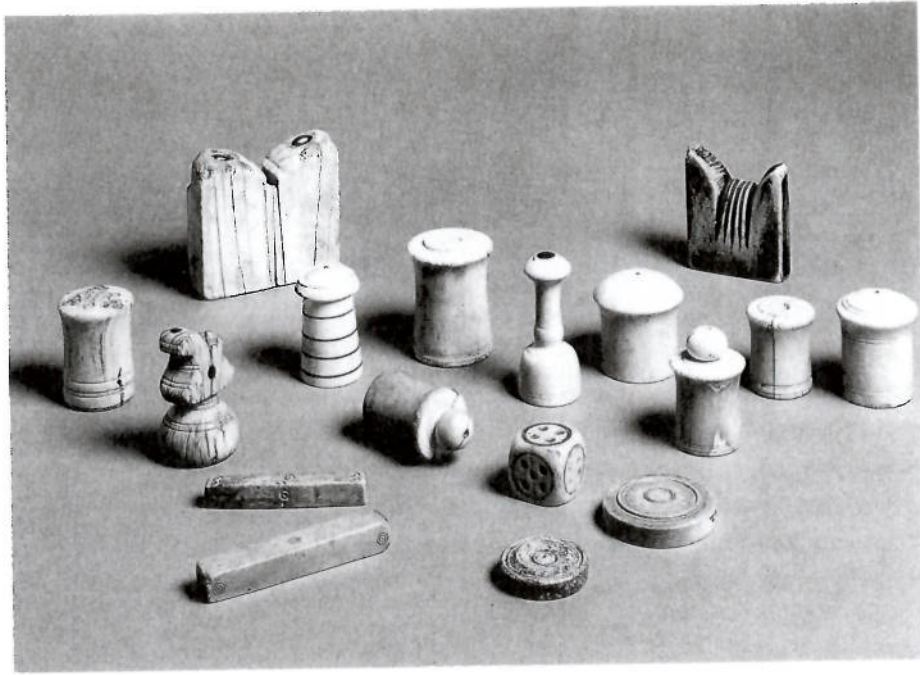


Figure 1 The Islamic ivory chess pieces, draughtsmen and dice in the Ashmolean Museum.

al-Athar al-Islamiyya, published here for the first time (fig.5).¹⁰ Those in other sets of abstract pieces are different, however, having a conical shape with one symbolic protuberance at the front (fig.6). But this does not necessarily mean that the shape of the Nishapur piece is archaic, even though there is a temptation to assume that the abstract Nishapur designs derive from earlier figurative styles. In the present state of our knowledge it is not possible to determine the relative chronology of these two types.

All twelve chess pieces in the Ashmolean collection are abstract, and only four probably belong to the same set. Therefore, the first problem is that of identifying the pieces. Unfortunately, in board diagrams in early Islamic treatises on chess the pieces are usually not represented, being identified only by their names, which in Arabic are: *shah* (King), *firzan* (Queen), *fil* (Bishop), *faras* (Knight), *rukhh* (Rook) and *baidaq* (Pawn).¹¹

It is in a Western manuscript of 1283, the treatise on chess of Alfonso X the Wise,¹² that the pieces are first found clearly drawn (fig.7),¹³ with board positions enabling the correct identification to be made. The treatise illustrates in detail every phase of the game, and also the making of chessmen, which are apparently turned on a bow-lathe (fig.8).¹⁴ Other Western manuscripts portray pieces with a

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strong resemblance to those shown here. The Manesse manuscript, a collection of Middle High German love lyrics of the first quarter of the fourteenth century, contains a painting of a chess match between Margrave Otto IV of Brandenburg and a lady, with clearly drawn pieces.¹⁵ A manuscript in Kassel, dated 1334, has a miniature of a couple playing chess.¹⁶ Those in all three manuscripts may be assigned to style set B defined below (see p.8), except for the Bishop and Knight, which belong to set A (fig.9b).

In the Islamic world, later illustrated treatises on chess contain accurate representations of boards and positions, but the pieces are not represented, again only the names being given. They are sometimes shown on the board in miniatures from the *Shahnama*, illustrating the passage on how the game passed from India to Persia,¹⁷ but the painter is concerned with the scene as a whole, especially with the two players. In some the pieces are not readily identifiable, or are only named.¹⁸ However, two *Shahnama* manuscripts in Berlin, one dated 1489 and the other 1593, include miniatures in which it is possible to recognize a few of them.¹⁹ These all



Figure 2



Figure 3

Figure 2 Figure of an elephant, ivory, possibly a chess piece. Iraq, late 9th-early 10th century AD. Florence, Museo Nazionale del Bargello, inv. no.63C.

Figure 3 Chariot (Rook), ivory. Reportedly from the Samarkand area, 7th century (?) AD. London, British Museum, inv. no. OA 1991.10-12.1.

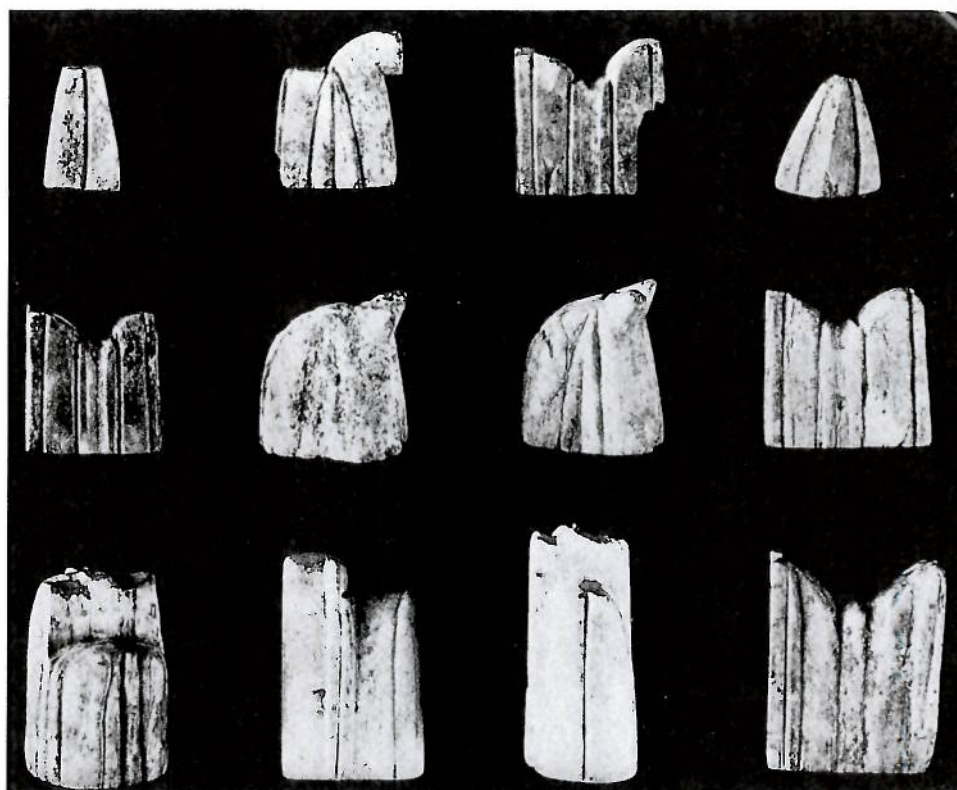


Figure 4

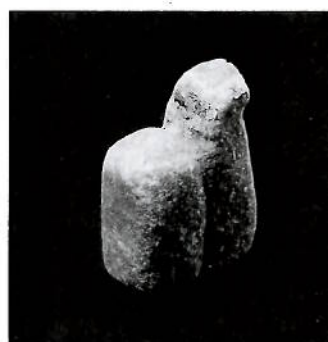


Figure 5

Figure 4 Ivory chess pieces excavated at Nishapur, 9th century AD.
New York, Metropolitan Museum of Art, inv. no.40.170.148-151 (after Wilkinson (1943)).
Style set A.

Figure 5 Knight, stone. 9th century AD. Kuwait, Dar al-Athar al-Islamiyya, inv. no.50 Sb
(photograph courtesy of the Al-Sabah Collection, Dar al-Athar al-Islamiyya,
Kuwait National Museum).
Style set A.



Figure 6 Knight, ceramic. c.11th century AD. Kuwait, Dar al-Athar al-Islamiyya, inv. no. LNS 273c (photograph courtesy of the Al-Sabah Collection, Dar al-Athar al-Islamiyya, Kuwait National Museum). Style set A.

correspond to style set B, including the Bishop and Knight.

The Ashmolean pieces may be approached initially through comparison with other Islamic abstract examples which, in general, have been identified by their resemblance either to modern Islamic abstract chessmen or to their earlier European counterparts. It is helpful, as a first step, to consider each piece in context, that is, to assign it to a particular style set and relate it to pieces in other collections. Two sets may be distinguished; a list of the pieces belonging to each is given in Appendix I.

STYLE SET A (FIGS 9a, 10)

The King (*shah*) and Queen (*firzan*) have an identical shape variously interpreted as a stylized human figure on a throne²⁰ or a ruler on a throne atop an elephant's back.²¹ (*fig.11*) The Queen is smaller than the King. The Pawn has a more or less rounded conical shape. The Bishop (*fil*) is a derivation of an elephant, but only the tusks remain, expressed by two protuberances. The Knight (*faras*) is a derivation of a horse, but with only one protuberance for the head. The Rook (*rukhh*) has a rectangular body, normally at least twice as wide as deep, with a deep cut in the middle top creating two horns on the outside, the remnants of the shape of a castle. To this group may be assigned pieces 8 and 9 (see Catalogue) in the Ashmolean collection, which are both Rooks.



Figure 8



Figure 7

Figure 7 Diagram of the type of chess pieces represented in Alfonso X's *Libro del Ajedrez, tablas y dados*, dated AD 1283. San Lorenzo del Escorial, Biblioteca Real, MS T.I.6.

From left: King, Queen, Bishop, Knight, Rook, Pawn. Early style set B

Figure 8 Alfonso X's *Libro del Ajedrez, tablas y dados*, dated AD 1283: the making of chess pieces and chess board. San Lorenzo del Escorial, Biblioteca Real, MS T.I.6, fol.3r
(photograph courtesy of the Biblioteca Real).

Figure 9 Diagram of style sets: a, style set A; b, early style set B; c, later style set B; d, late style set B; e, Alfonso X's chessmen, early style set B.

Figure 10 Stone chess set, 11th century (?). Kuwait, Dar al-Athar al-Islamiyya, inv. no.48 S a-t.
(Photograph courtesy of the Al-Sabah Collection, Dar al-Athar al-Islamiyya, Kuwait National Museum.) Style set A.

ISLAMIC IVORY CHESS PIECES, DRAUGHTSMEN & DICE

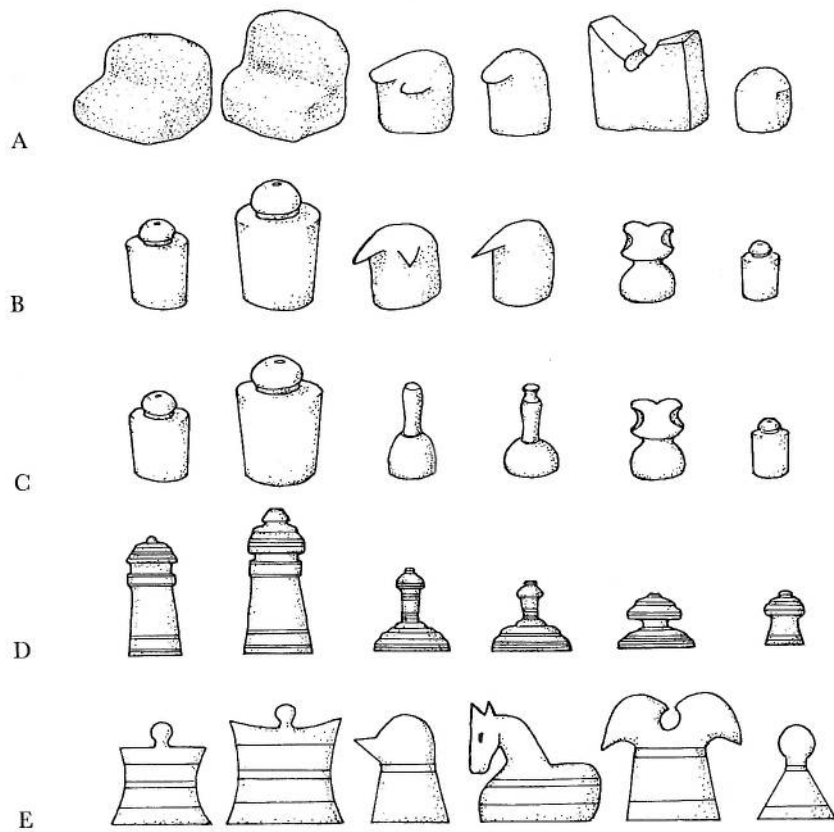


Figure 9

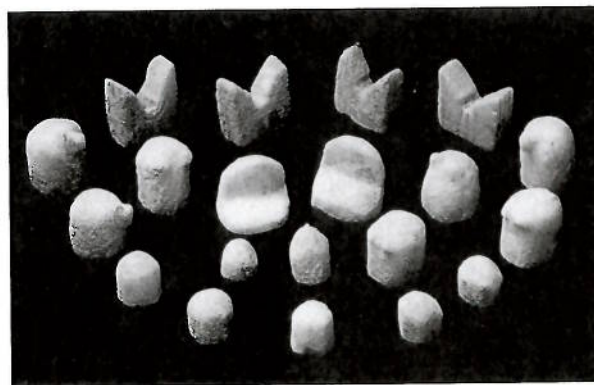


Figure 10

STYLE SET B — (FIG. 9C)

The King and Queen are cylindrical in shape, often waisted, and normally have a domed top or a knob. The Pawn has the same shape, differing only in size: the King is the biggest, the Queen is of medium size and the Pawn is the smallest. Both Bishop and Knight have a round base and a long cylindrical neck. It is not easy to distinguish between the two, but it may generally be said that either the Bishop has a neck ending with a top retaining a division into two parts (reminiscent of the tusks of the elephant), while the Knight (*fig. 9b*) retains a single small protuberance (the horse's head) at the top (in which case they are similar to the Bishop and Knight of style set A);²² or the Bishop terminates simply with a small round head, while the Knight has a flatter top. The Rook usually has a round base and an x-shaped top. To this group may be assigned pieces 1–7 and 10–12 in the Ashmolean collection.

Style set A appears in early archaeological contexts (ninth century), but survives also in later sets. This is the most successful style of Islamic medieval times, influencing greatly the Western medieval pieces.²³ The group is well represented by the pieces found at Nishapur, and by their Western counterparts, the Nuremberg pieces;²⁴ it represents the first style yet found and the shape would survive in the Middle East from the ninth until the twelfth century,²⁵ with later examples from the fifteenth century²⁶ and the Ottoman period.²⁷

Style set B appears later, but there is less archaeological evidence for it, and in general the pieces are more difficult to date. The piece found at Ghubayra (Appendix I, no. 5) is datable to the thirteenth century, and contemporary miniatures, such as those in the Alfonso manuscript, also testify to the existence of such pieces at this time. During this period the group seems to retain the Bishop and Knight shapes of set A, but these change subsequently and become as described for set B. In set B, a change occurs in the Rook, where a flat mushroom-like top seems later to be preferred to the x-shaped top (*fig. 9d*). I should stress that within these 'style sets' there are variations, especially in style B, and that what has been proposed is an initial broad classification.

Identification of the Ashmolean chess pieces

Two of the twelve pieces in the Ashmolean Museum belong to style set A (nos 8, 9), and ten to style set B (nos 1–7, 10–12).

1–4. There are grounds for thinking that four of the ten pieces in set B belong to the same set (*figs 12, 13, 14, 15*): a King or Queen (no. 1) and three smaller pieces, identical in size, which are likely to be Pawns (nos 2–4). Not only is the shape of these four pieces identical but also the quality and colour of the ivory. Further, they share the same decoration, consisting of horizontal incised lines above the

base and at the base of the knob. The whole group is comparable to three pieces in the British Museum (*fig. 16*),²⁸ of which the largest is probably a King or Queen, the two smaller pieces being almost certainly Pawns.

It is worth noting in this connexion that both the Islamic ivory chess pieces in the Ashmolean and those in the Medieval and Later Antiquities Department of the British Museum were acquired by the Revd G.J. Chester.

5. King (*fig. 17*). This is inlaid with metal wire and practically identical in shape, decoration and quality of ivory to BM Dalton 591 (*fig. 18*). However, the Ashmolean piece is a little bigger (height 4.1cm, as against 3.6cm). It is therefore reasonable to assume that they come from the same set, and that the smaller of them is a Queen. They could well be from the same set as two other pieces inlaid with bands of metal wire, Dalton 581 and 582 (*figs 19, 20*): even the quality of the ivory appears to be the same.

6. Bishop, or possibly a Knight (*fig. 21*). It fits well into the repertoire of Bishops and Knights of the second style. It may be a Bishop because of the roundish top. It is similar to BM Dalton 581 and 582 (*figs 19, 20*).

7. Rook (*fig. 22*). It is similar to BM Dalton 607 and 609 (*figs 23, 24*).

8. Rook (*fig. 25*), belonging to style set A.

9. Rook (*fig. 26*), belonging to style set A.

10. Probably a Pawn (*fig. 27*). It is so similar to BM Dalton 592 (*fig. 28*) that the two could readily belong to the same set. The fact that they are identical in size (height 3.8cm) may be taken as evidence that they are Pawns.

The next two pieces are harder to identify, as their shapes are less well defined.

11. King, Queen or Pawn (*fig. 29*). It has a cylindrical shape with incised circles over the top forming a sort of grape cluster. The use of incised double circles as a decorative device is very common in Islamic chess pieces and dice. A comparable piece is BM inv. no. 83.6-21.71, hitherto unpublished (*fig. 30*). This has both the same shape and the same type of decorative circle over the top, but because of the absence of others from the set the type cannot be easily defined. See also BM Dalton 601 (*fig. 31*).

12. Perhaps a Pawn (*fig. 32*), given the simplicity in shape and decoration. There is a slight possibility that it is a Rook, since in some later sets the Rook becomes relatively short, and has a flattish top, often like a mushroom.²⁹ See also BM 83.6-21.70 (*fig. 33*).

Dating the Ashmolean chess pieces

None of the twelve chess pieces in the Ashmolean Museum comes from a datable archaeological context. All were brought by the Revd G.J. Chester³⁰ in the second half of the nineteenth century: some from Cairo, others from an unknown provenance. A chronology of the development of shapes of Islamic chess pieces has



Figure 11

Figure 11 King, wood. Afghanistan, Ghazni period, 11th–12th century AD. Location unknown (photograph courtesy of Ralph Pinder-Wilson). Style set A.

Figure 12 King, ivory. Bought in Cairo, 15th–17th century AD. Ashmolean Museum, acc. no. X3325. Style set B.



Figure 12



Figure 13



Figure 14



Figure 15

Figure 13 Pawn, ivory. Bought in Cairo, 15th–17th century AD. Ashmolean Museum, acc. no. X3326. Style set B.

Figure 14 Pawn, ivory. Bought in Cairo, 15th–17th century AD. Ashmolean Museum, acc. no. X3327. Style set B.

Figure 15 Pawn, ivory. Bought in Cairo, 15th–17th century AD. Ashmolean Museum, acc. no. X3328. Style set B.

Figure 16 King or Queen, ivory. Bought in Cairo, 15th–17th century AD. British Museum, Dalton 603. Style set B.

Figure 17 King, ivory. Bought in Cairo, 15th–17th century AD. Ashmolean Museum, acc. no. X3330. Style set B.

Figure 18 Queen, ivory. Bought in Cairo, 15th–17th century AD. British Museum, Dalton 591. Style set B.

Figure 19 Bishop, ivory. Bought in Cairo, 15th–17th century AD. British Museum, Dalton 581. Style set B.

Figure 20 Knight, ivory. Bought in Cairo, 15th–17th century AD. British Museum, Dalton 582. Style set B.

Figure 21 Bishop or Knight, ivory. 17th century (?) AD. Ashmolean Museum, acc. no. X3323. Style set B.

been attempted in this article, but it must be emphasized that the evidence is limited and not always easy to interpret. It is fortunate, therefore, that a radiocarbon examination has been carried out on five of the Ashmolean pieces,³¹ providing an additional check on the results of stylistic analysis.

The analysis of the Ashmolean ivories therefore provides an important point of reference for pieces in other collections, especially those in the Oriental and Medieval and Later Antiquities Departments of the British Museum, several of which are very similar and were donated by the same person.

Let us consider the two Ashmolean Rooks, nos 8 and 9. These belong to style set A, which appears early on in the Nishapur pieces (ninth century), with a majority of examples from the eleventh, twelfth and thirteenth centuries (see Appendix I). The radiocarbon examination gave the result of AD 1060–1395 for no. 8 and AD 630–895 for no. 9, thus confirming the development of shapes explained above.

A radiocarbon examination was also carried out on no. 6, a Bishop or Knight, belonging to style set B. We have seen from the discussion of shape that this form of Bishop emerges fairly late. It appears sporadically in miniatures of the fifteenth century, but only becomes common in the seventeenth and eighteenth centuries.³² The radiocarbon examination confirmed the range proposed: AD 1470–1950.



Figure 16



Figure 17



Figure 18



Figure 19



Figure 20

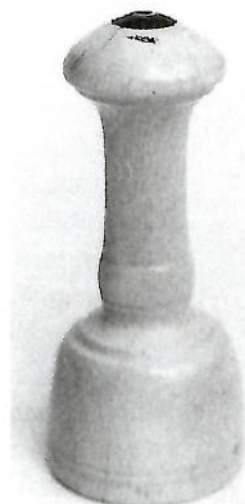


Figure 21



Figure 22

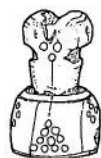


Figure 23



Figure 24

Figure 22 Rook, ivory. 15th–17th century AD.

Ashmolean Museum, acc. no. X3324.

Early style set B.

Figure 23 Rook, ivory. Bought in Cairo, 15th–17th century AD.

London, British Museum, Dalton 607.

Early style set B.

Figure 24 Rook, ivory. Bought in Cairo, 15th–17th century AD.

London, British Museum, Dalton 609.

Early style set B.

Similar considerations of style and quality of material apply to no.5 (for which no radiocarbon examination has been done), and this is therefore likely to be quite recent too (*fig. 17*). As noted above, it is very similar to a probable Queen in the British Museum (*fig. 18*), which, in its turn, is very similar to two other pieces surely identifiable as a Bishop and Knight (*figs 19, 20*), all of which could come from the same set. This would be of style B, with the 'later' shape of Bishop and Knight. One of these BM pieces, Dalton 582, is very similar to an ivory Bishop or Knight in the Staatliches Museum für Volkerkunde in Munich, for which a sixteenth-century date has been tentatively advanced.³³

Two other pieces have been examined by radiocarbon accelerator. The first, no.1, is the King or Queen of four pieces all belonging to style set B. The analysis is therefore valid for all of them. The second piece is no.7, also from style set B. For both, the analysis gave an approximate date of AD 1410–1650, thus confirming the result reached through an analysis of style.



Figure 25



Figure 26

Figure 25 Rook, ivory, 11th–14th century AD.
Ashmolean Museum, acc. no. X3320.
Style set A.

Figure 26 Rook, ivory, 7th–9th century AD.
Ashmolean Museum, acc. no. X3316.
Style set A.

Draughtsmen and Dice

The collection of Islamic ivory table pieces in the Ashmolean Museum consists of two draughtsmen (nos 13, 14; *figs* 34, 35), two rectangular dice (nos 15, 16; *figs* 36, 37), with the numbers on the opposite faces 1–6, 2–5, and one cubic die (no. 17; *fig.* 38), with the modern number pairings. The cubic die is obviously modern, of the type commonly found also in Europe, and discussion will therefore be concentrated on the other four pieces. The problems are not ones of identification, but rather of dating and of establishing for which game or games they were used.

DRAUGHTSMEN³⁴

If scholarship on Islamic chess pieces is still at an early stage, for Islamic draughtsmen and dice it is almost non-existent. Draughtsmen have retained practically the same shape, with almost identical decoration, in every period and every culture. Roman ivory or bone draughtsmen,³⁵ for example, are not dissimilar to Coptic³⁶ and Islamic ones (see Appendix II). The decorations employed are con-



Figure 27



Figure 28



Figure 29



Figure 30



Figure 31

Figure 27 Pawn, ivory. Bought in Cairo, 15th–17th century AD.
Ashmolean Museum, acc. no. X3329.
Style set B.

Figure 28 Pawn, ivory. Bought in Cairo, 15th–17th century AD.
London, British Museum, Dalton 592.
Style set B.

Figure 29 King, Queen or Pawn, ivory. Reported to come from Fustat, 14th–15th century AD.
Ashmolean Museum, acc. no. X3319.
Style set B.

Figure 30 King, Queen or Pawn, ivory. Bought in Cairo, 14th–15th century AD.
London, British Museum, inv. no. 83.6.-21.71.
Style set B.

Figure 31 King, Queen or Pawn, ivory. Bought in Cairo, 14th–15th century AD.
London, British Museum, Dalton 601.
Style set B.

Figure 32 Pawn, ivory. Reported to come from Fustat, 15th–17th century AD.
Ashmolean Museum, acc. no. X3318.
Style set B.

Figure 33 Pawn, ivory. Bought in Cairo, 15th–17th century AD.
British Museum, inv. no. 83.6-21.70.
Style set B.

centric circles containing rings of concentric circles, or small circles with a dot in the middle. Such circles are employed decoratively both for draughtsmen and dice from the Mohenjo Daro era of the 3rd millennium BC³⁷ down to Roman times³⁸ and beyond to Coptic (see note 36), medieval³⁹ and modern Islamic and European periods. This simple form of draughtsman has been used for various board games, such as *alea*, *tablas* and *nard*.⁴⁰

DICE⁴¹

Equally, dice are used for a wide variety of games of chance (*figs 39, 40*),⁴² and, in the Islamic context, it is very difficult to differentiate those that use cubic dice from those that use rectangular dice. Apparently the rectangular die is a direct evolution of the *talus*, the Roman knuckle-bones of sheep and goats. According to Culin 'Among the Greeks and Romans numerical values were attributed to the four long sides, the two pointed ends not being counted. The two broad sides, respectively convex and concave, counted three and four, while of the narrow sides, the flat counted one and the indent six.'⁴³ He then deals with the Turks, Arabs and Persians, specifying that 'The Arabic name for bones is *kab* (dual, *kabatain*, plural, *kabat*)'⁴⁴ meaning 'ankle', referring to their source. Two bones are now commonly used – one from the right and the other from the left leg of a sheep. I regard them as the direct ancestors of cubical dotted dice, the name of which in Arabic is the same as that of the bones. The dice used in Arabic countries are made in pairs, and the most popular and universal game is with two dice, *kabatain*.⁴⁵ There is evidence that the rectangular die could have been used for the four-handed chess game,⁴⁶ and possibly for the oblong chess game⁴⁷ and *nard* (a race game).⁴⁸

FOUR-HANDED CHESS⁴⁹

Arabic sources reveal that in early times (ninth century) four-handed chess was played with dice. The earliest description⁵⁰ is that of al-Biruni (362/973–440/1048) in his *Kitab fi tahqiq ma lil-Hind*.⁵¹ He says that since this game is not known to the Arabs he is going to give a full description of it as he saw it played among the



Figure 32



Figure 33

Indians. The game is played by four people, having eight men each: King, Bishop, Knight, Rook, and four Pawns. It is clear that both cubic (1-6, 2-5, 3-4) and rectangular (1-6, 2-5) dice can be used. Each number relates to a specific piece or pieces, which must be moved when that number comes up. If the dice are rectangular, therefore carrying only four numbers, each number must correspond to two kinds of piece. But if they are cubic, with six numbers, the same rule still applies, because the two extra faces are considered equivalent to two of the set of four faces, thus implying that the rectangular dice are the original ones and the cubic dice only a substitute for them.

The rectangular die is still common in India, where it is called *pasa*, being used also for the race-games of the *pachisi* type, *chausar* and *chaupur*, which are played upon a four-armed board.⁵² According to Murray,⁵³ Indian four-handed chess was played with a long die from the eleventh century to the fifteenth century, but he gives no supporting references. In India four-handed chess was still played, but without dice, at the beginning of this century.⁵⁴



Figure 34



Figure 35

Figure 34 Draughtsman, ivory. Excavated at Fustat, 11th century (?) AD.
Ashmolean Museum, acc. no. EA 1974.65.

Figure 35 Draughtsman, ivory. Reported to come from Fustat.
Ashmolean Museum, acc. no. X3321.

ORDINARY CHESS

In the Alfonso manuscript we are informed that the ordinary game of chess may be played with dice to 'speed it up',⁵⁵ and continues with the explanation of how to move the pieces according to the number thrown. Since it speaks of six numbers, it is clear that a cubic die is to be used. There is also literary evidence for chess played with dice in Italy in the eleventh century, although neither the form of chess is specified, nor the kind of dice.⁵⁶ It may also be noted that the Alfonso manuscript refers to the use of a seven-sided die for the great chess (twelve by twelve cells).⁵⁷

OBLONG CHESS

Among the games deriving from ordinary chess is oblong chess, an account of which is found in al-Mas'udi's *Muruj al-dhahab* ('Lands of Gold', tenth century).⁵⁸ This was played with the help of dice on a board of four by sixteen squares, with pieces of the ordinary game. In a twelfth-century Arabic *Kitab al-shatranj* ('Book on Chess') in Istanbul⁵⁹ it is explained that the same kind of dice as those for *nard* should be used, but without specifying whether cubic or rectangular. This manuscript and others are stated to derive from a work by al-'Adli (c.850),⁶⁰ from which it would follow that the game was already the subject of a specialized literature in the middle of the ninth century. The *Kitab al-shatranj* also includes the earliest recorded Islamic mention of the use of dice to determine the moves of a form of chess.⁶¹

NARD (OR NARDSHIR)

From the *Chatrang-namak* and, later, the *Shahnama* we learn that *nard* was invented in Persia.⁶² Here we also find an account and a symbolic explanation of the game, which was to be transmitted to Arab writers. *Nard* was immediately successful among the Arabs, so that al-'Adli wrote a treatise on it, which unfortunately is lost (see note 60).

Al-Ya'qubi (tenth century), in his *Tarikh*,⁶³ gives the earliest Islamic account of *nard*.⁶⁴ Here we find, in addition to a description, the symbolic explanation of the game already present in the *Chatrang-namak*. This is important for our purpose because it includes the symbolism of the die. The board stands for the year. It has 24 points because there are 24 hours to the day. It is arranged in two parts, each with 12 points symbolizing the 12 months of the year, or the 12 signs of the Zodiac. The number of men (in Arabic called *kilab*, 'dogs') is 30, because there are 30 days to the month. The two dice stand for day and night. The faces are arranged 6-1, 5-2, and 4-3, so that the total of the dots on each pair of opposite faces is 7, the number of the days of the week and of the planets.⁶⁵ The same explanation may,

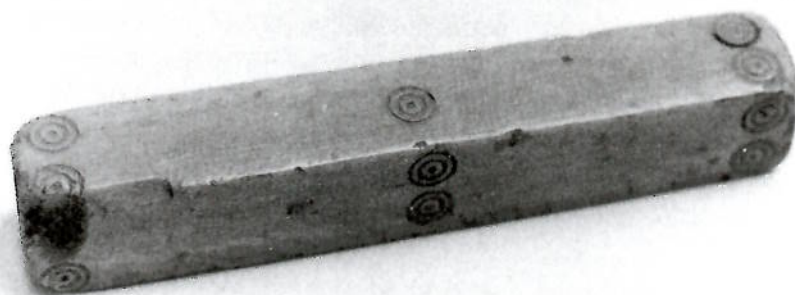


Figure 36



Figure 37



Figure 38

we deduce, have been offered for the choice of numbers 1-6, 2-5 on the rectangular die. What is important is not the sequence of the numbers, but the sum of the opposite faces.⁶⁶ This symbolism is further developed in the Arabic treatise on chess *Kitab fi al-shatranj wa mansubatih wa malhih* ('Book on the Game of Chess, its Positions and Subtleties'), which includes a section on *nard*, in the British Library.⁶⁷

Regarding the origin of this symbolic explanation, Hyde⁶⁸ quotes notes on the Byzantine game of *tabla* from Greek authors, containing the germ of the astronomical explanation in the *Chatrang-namak*. Nöldeke⁶⁹ suggested that the symbolism went back to a Neo-Platonic or Neo-Pythagorean source. The game of *tabla*, or *taula*, was probably identical with the Persian and Arabic *nard*. It is generally accepted that when *nard* reached the Byzantine empire it was given the name of *tabulae*, from the draughtsmen with which it was played, thus acknowledging that *nard* was played with draughtsmen.

Of all these games, *nard* was the one most widely played and most successful in all Islamic periods and among all levels of the population. Similar to European backgammon,⁷⁰ it still enjoys great popularity in the Arab countries, where it is also called *tawula*.⁷¹ As we have seen, there is evidence that draughtsmen were used, but it is not clear whether the rectangular dice were also employed. It is therefore likely that the draughtsmen in the Ashmolean Museum are pieces for *nard*, but we cannot be sure for which game the rectangular dice were used.

Dating the Ashmolean draughtsmen and dice

None of these pieces has been examined at the radiocarbon accelerator. Several were given by the Revd G.J. Chester in the second half of the nineteenth century, some acquired from Cairo. Only one piece is from an archaeological context: a draughtsman (no.13) excavated at Fustat in a level datable to the ninth century.⁷² The rectangular die (no.15) is also from Fustat,⁷³ but a surface find. The other draughtsman (no.14) and die (no.16) are similar in appearance to the datable draughtsman, but any attempt at dating by comparison is unreliable, because of the unchanging nature over centuries of the shape and decoration of draughtsmen and dice.

Figure 36 Rectangular die, ivory. Excavated at Fustat, 9th-11th century AD.

Ashmolean Museum, acc. no. EA 1974.64.

Figure 37 Rectangular die, ivory. Reported to come from Fustat, 10th-11th century (?) AD.

Ashmolean Museum, acc. no. X3322.

Figure 38 Cubic die, ivory. Bought in Cairo, a modern piece, possibly 19th century.

Ashmolean Museum, acc. no. X3331.



Figure 39

Figure 39 Alfonso X's *Libro del Ajedrez, tablas y dados*, dated AD 1283: the making of dice.
San Lorenzo del Escorial, Biblioteca Real, MS T.I.6, fol.65v
(photograph courtesy of the Biblioteca Real)

Figure 40 Alfonso X's *Libro del Ajedrez, tablas y dados*, dated AD 1283: the playing of dice.
San Lorenzo del Escorial, Biblioteca Real, MS T.I.6, fol.84v
(photograph courtesy of the Biblioteca Real).

There is only one further general observation that may be relevant to our purpose: the rectangular die seems not to be used in the Arab countries in modern times. The archaeological evidence in Islamic contexts, so far, is only for a period between the ninth and the eleventh century (see Appendix II). But we need more archaeological evidence and a good analysis of the existing pieces before any reliable conclusions can be drawn. In the present state of research, therefore, a relative chronology for the dice is not possible, but it is to be hoped that these pieces will be subjected to radiocarbon examination, thus enabling a more accurate dating.



Figure 40



Figure 41

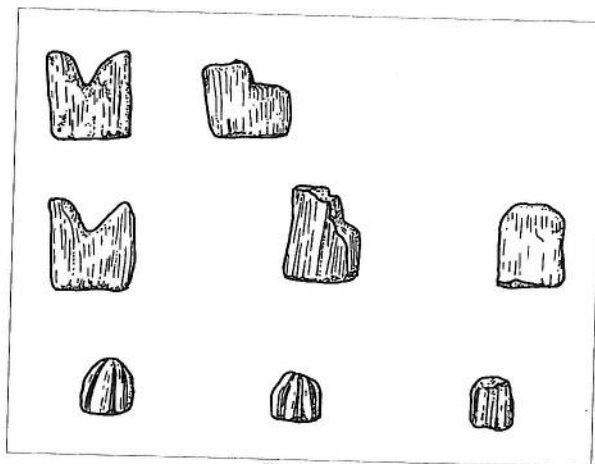


Figure 42

Figure 41 Ivory piece, possibly a finial, excavated at Fustat, 9th–10th century AD (photograph courtesy of George Scanlon).

Figure 42 Wood chess pieces. Serçe Limani wreck, first half 11th century AD

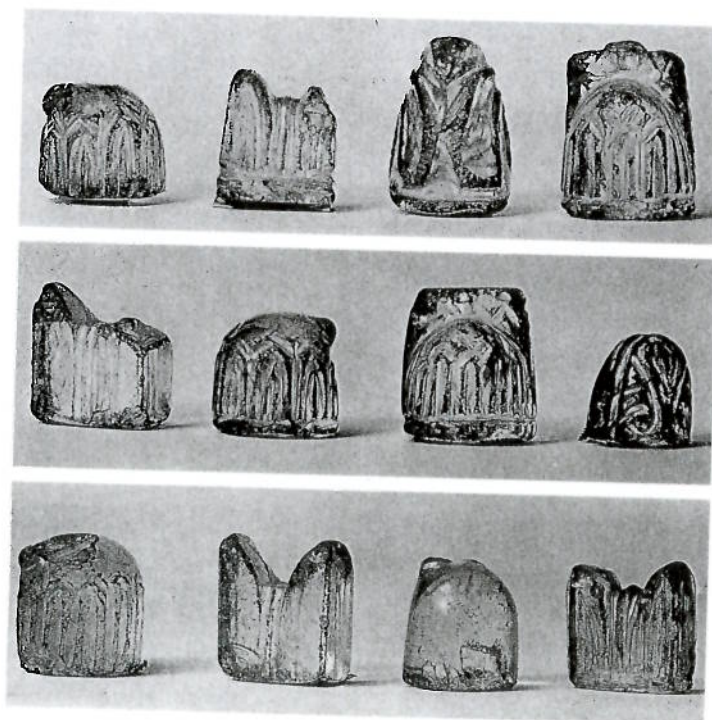


Figure 45 Rock crystal chess pieces. Egypt (?), 10th–12th century AD. Osnabrück, cathedral treasure. Style set A.



Figure 43 Rock crystal chess pieces. Egypt, 10th century AD.
Kuwait, Dar al-Athar al-Islamiyya, inv. no. LNS 1 HSA-j
(photograph courtesy of the Al-Sabah Collection, Dar al-Athar al-Islamiyya,
Kuwait National Museum).
Style set A.

Figure 44 Rock crystal chess pieces. Egypt, 10th century AD.
Kuwait, Dar al-Athar al-Islamiyya, inv. no. LNS 2 HSA-e
(photograph courtesy of the Al-Sabah Collection, Dar al-Athar al-Islamiyya,
Kuwait National Museum).
Style set A.

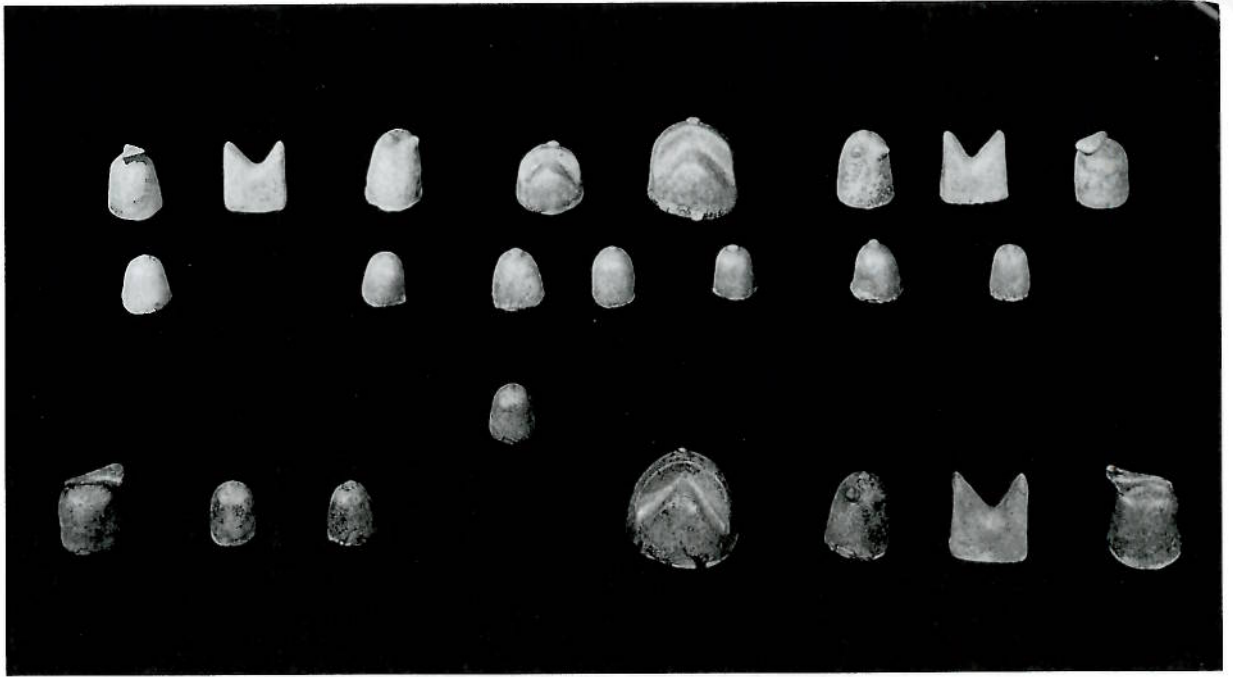


Figure 46

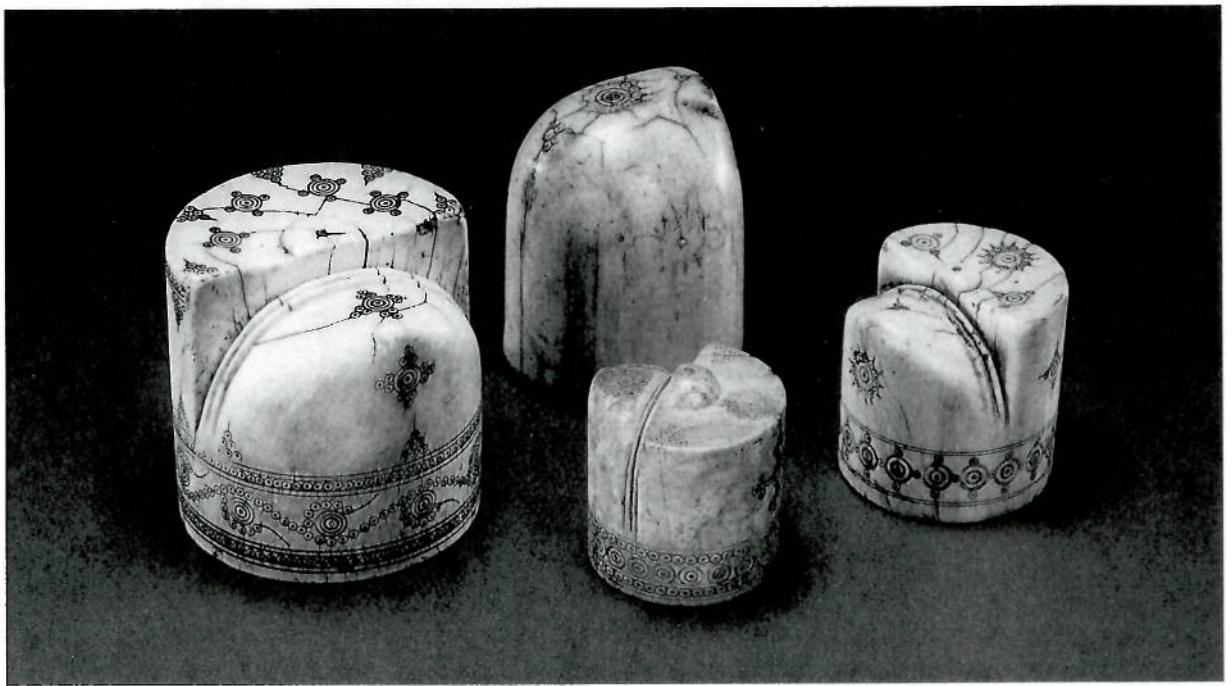


Figure 47

ISLAMIC IVORY CHESS PIECES, DRAUGHTSMEN & DICE

Figure 46 Ceramic chess set. Iran, 12th century AD
(photograph courtesy of Oliver Hoare).

Style set A.

Figure 47 Chess pieces (three Kings or Queens and a Knight), ivory.
10th–11th century AD.
London, British Museum, inv. nos 77.8–2.8; 62.8–9.2; 56.6–124; 81.7–19.47.
Style set A.

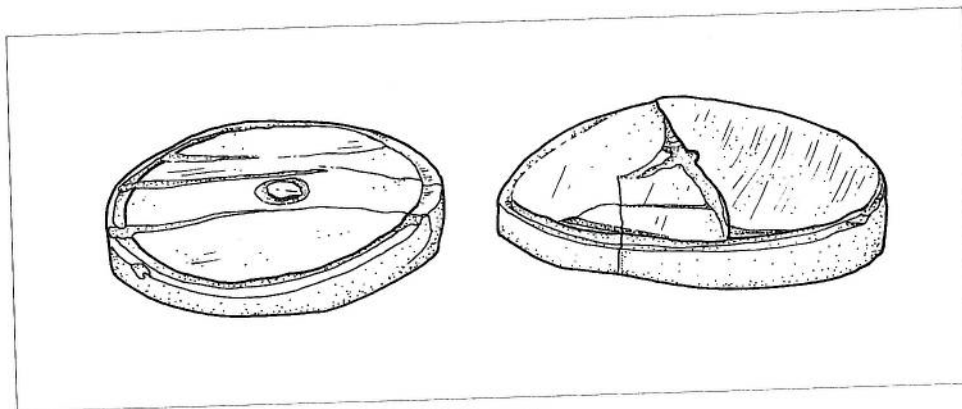


Figure 48

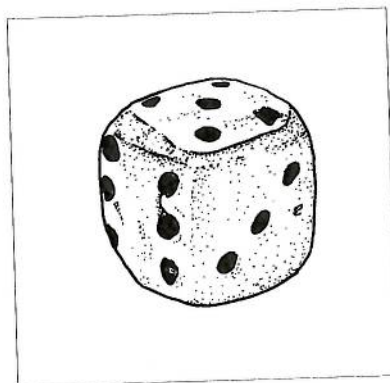


Figure 49

Figure 48 Draughtsmen, ivory.
Excavated at Mansura, 10th century (?) AD.
London, British Museum, inv. nos 1031, 1016/28.

Figure 49 Cubic die, ivory.
Excavated at Mansura, 10th century (?) AD.
London, British Museum, inv. no. 57.11–18.67.

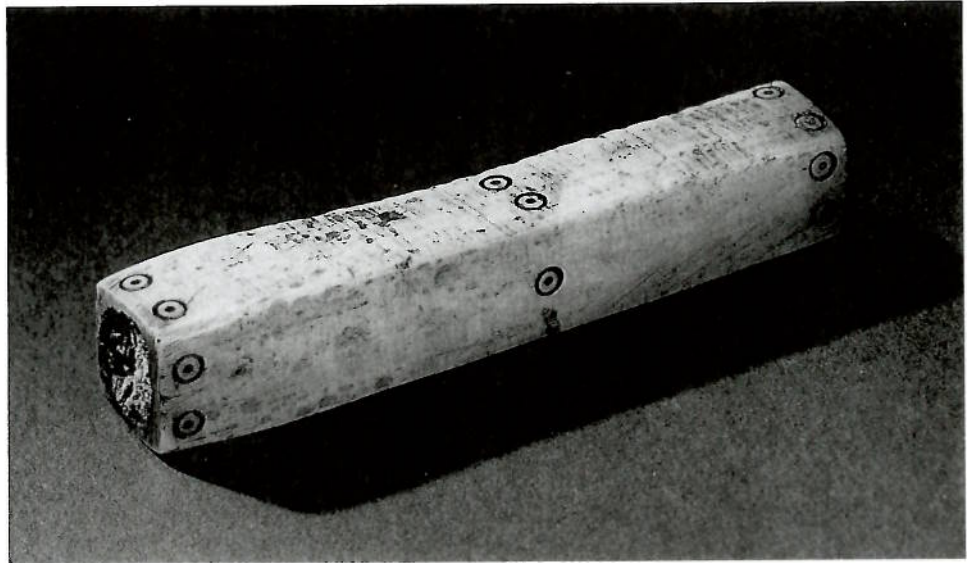


Figure 50

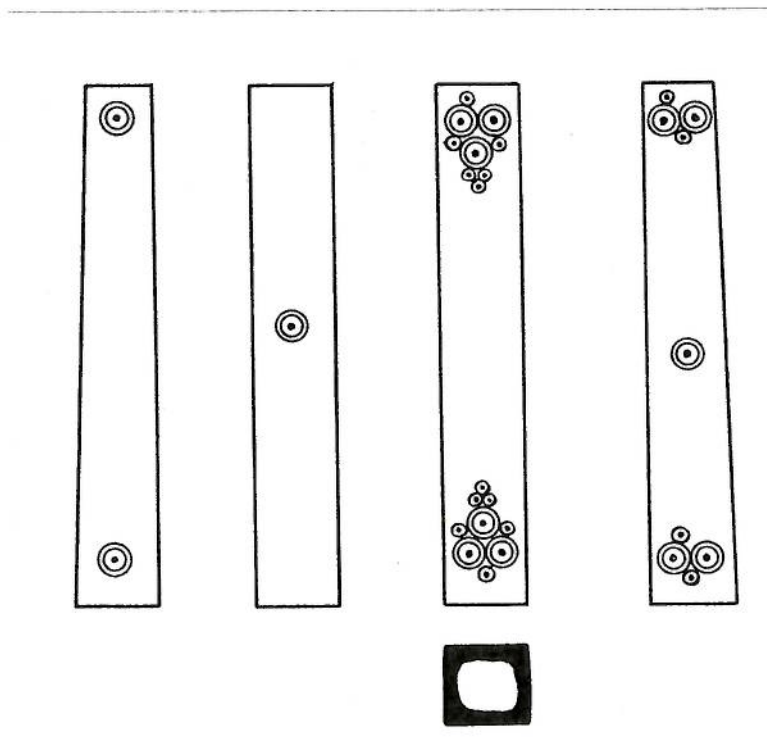


Figure 51

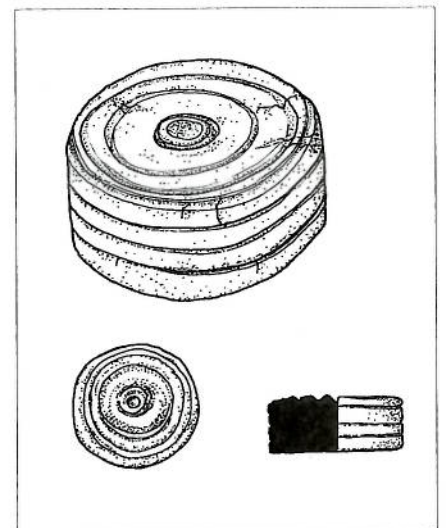


Figure 52

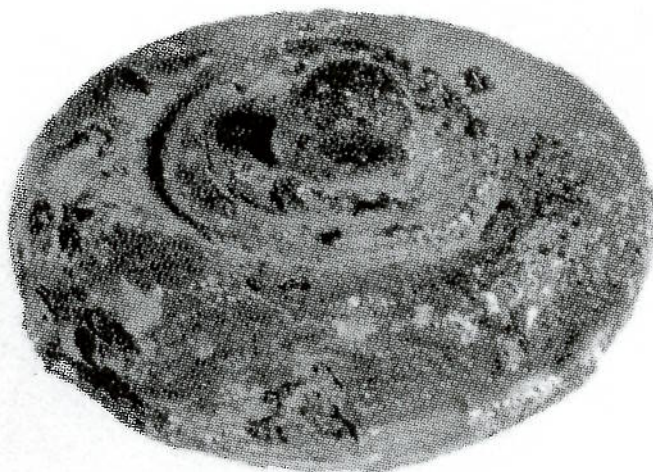


Figure 53

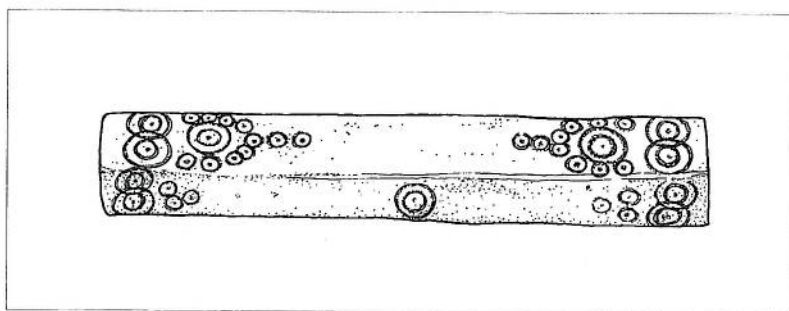


Figure 54

Figure 50 Rectangular die, ivory.

Excavated at Mansura, 10th century (?) AD.

London, British Museum, inv. no.1027.

Figure 51 Rectangular die, ivory.

Excavated at Fustat, 9th-10th century AD.

Kelsey Museum of Ancient and Medieval Archaeology, University of Michigan
(drawing courtesy of George Scanlon)

Figure 52 Draughtsman, ivory. Serçe Limani wreck, first half 11th century AD
(after Cassavoy (1988)).

Figure 53 Draughtsman, glass, 7th-10th century AD.

New York, Metropolitan Museum of Art, inv. no.1974.98.6 (after Jenkins (1986)).

Figure 54 Rectangular die, ivory. 9th-10th century AD.

London, British Museum, inv. no.95.11-27.2.

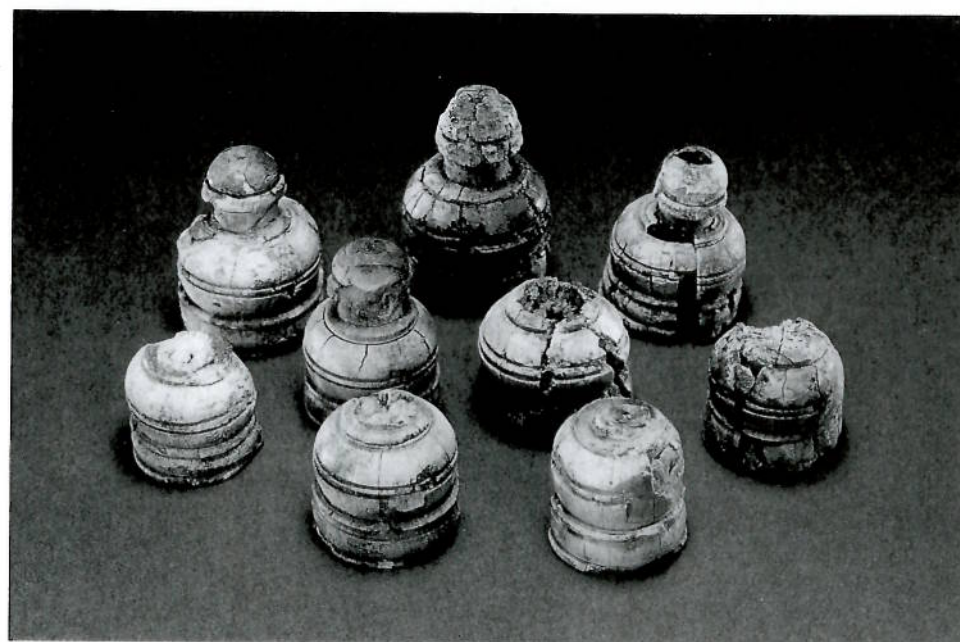


Figure 55 Ivory fragments, excavated at Mansura, thought to be chess pieces, but probably finials. London, British Museum.

Figure 56 Ivory gaming pieces(?), excavated at Mansura. London, British Museum.

Catalogue

Apart from the two from Fustat, all the other pieces were given to the Ashmolean Museum by the Revd G.J. Chester, in different years. In the following classification the first number is my listing number, the second is the inventory number and the number between brackets is the year when they arrived at the Ashmolean. All are presently in the Department of Eastern Art, and, apart from the two from Fustat, have been transferred from the Department of Antiquities.

1-4. Acc. nos X3325 (1883); X3326 (1883); X3327 (1883); X3328 (1883)

King (or Queen) and Three Pawns from the same set (*Figs 12-15*). The top of nos 1 and 2 is broken off. Nos 3 and 4 have a flattened finial at the top. All have three circles above the base, and a raised band of concentric circles at the base of the sphere.

1. King. Height 4.5cm, diameter of base 2.8cm. From Cairo. Radiocarbon dating gives the range AD 1410-1650.

2. Pawn. Traces of a red colour. Height 3cm, diameter of base 2.1cm.

The piece has a long hair crack. From Cairo.

3. Pawn. Traces of a red colour. Height 3cm, diameter of base 2.1 cm. The piece has a long crack. From Cairo.

4. Pawn. Height 3cm, diameter of base 2.1cm. The piece has a long crack. From Cairo.

5. Acc. no. X3330 (1883). King (*fig. 17*). Inlaid with four bands of metal wire. Flattened top debording over the central body. Pale ivory. Height 4.1cm, diameter of base 2.2cm. Good condition. From Cairo.

6. Acc. no. X3323 (1891). Bishop (or Knight) (*fig. 21*). Long narrow neck. Black inset at the top. Pale ivory with a yellowish transparent varnish on the surface. Height 5.3cm, diameter of base 2.1cm. Good condition.

No provenance. Radiocarbon dating gives the range AD 1470-1950.

7. Acc. no. X3324 (1891). Rook (*fig. 22*).

Originally had an x-shaped head now worn away for a third. Dark wood decorative insets in top and front. Yellowish, crackled ivory.

Height 4.6cm, diameter of base 2.3cm.

No provenance. Radiocarbon dating gives the range AD 1410-1645.

8. Acc. no. X3320 (1892). Rook (*fig. 25*).

Rectangular with two horns at the top, each inlaid with black 'eyes', probably mastic.

Pale crackled ivory. Height 5.7cm, 5.8cm wide, 2cm thick. The piece is clipped.

No provenance. Radiocarbon dating gives the range AD 1060-1395.

9. Acc. no. X3316 (1892). Rook (*fig. 26*). Flat front, two horns at top with five deep ridges running vertically down between. Clipped on the back. On the front there are clear traces of a dark red colour. The two opposite parts, in the case of ivory sets, were identified by different colours: white and black, or white and red, or red and green. Height 5cm, 4cm wide, present thickness at base 1.6cm.

No provenance. Radiocarbon dating gives the range AD 630-895.

10. Acc. no. X3329 (1883). Pawn (*fig. 27*). Two pairs of circles around body. Stepped domed top. Pale yellow ivory of a fine grain visible at the top. At the middle of the top there is a tiny hole which was probably filled with mastic, for decoration. Height 3.8cm, diameter of base 2.3cm. Good condition. From Cairo.

11. Acc. no. X3319 (1892). King, Queen or Pawn (*fig. 29*). Slightly waisted. Three incised circles above the base, and small concentric circles at the top with a dot in the middle, forming a bunch of grapes. Yellowish, crackled ivory, of the same kind as no. 8, which is also similar in style. Height 3.6cm, diameter of base 2.4cm. Reported to come from Old Cairo.

12. Acc. no. X3318 (1892). Pawn (*fig. 32*). Rounded head. Tiny hole at the middle of the top which was probably filled with mastic for decoration. Very pale ivory of a fine grain visible at the top. The piece is undecorated and has a hair crack. Height 3.5cm, diameter

of base 2.7cm. From Old Cairo.

13. Acc. no. EA 1974.65. Draughtman (*fig.34*). Excavated at Fustat, excavation no.72.10.49, XXI'.5. Pit B and D, at level 3.3-5.25m. Height 0.5cm, diameter 2.7cm. This is a very fine piece of ivory work. It retains traces of a dark red colour, which probably identified one side, which seems to have been scratched. Flat base. Good condition.

14. Acc. no. X3321 (1892). Draughtman (*fig.35*). Fine piece of work with two concentric circles. Yellowish ivory. Flat base with an inscription in black ink referring to the date of purchasing: 'Old Cairo 1878'. Diameter 3.5cm, 0.7cm thick. Very good condition. From Old Cairo.

15. Acc. no. EA 1974.64. Rectangular die (*fig.36*). Found at Fustat, excavation no.72.11.57, XXI'.5, surface. Length 6.1cm, 1cm thick. The die bears the following numbers on its opposite faces: 1-6, 2-5. The numbers are marked with two concentric circles and a dot in the middle. In one of these circles, at the number five, there is a trace of a black colour. The number six is marked with three rows of

two concentric circles, unlike the pieces that show two groups of three dots arranged in a triangle on the two sides of the face (no.16, Appendix II, nos 2, 3, 6). The piece is slightly chipped.

16. Acc. no. X3322 (1892). Rectangular die (*fig.37*). It bears the following numbers on its opposite faces: 1-6, 2-5. The numbers are marked with one incised circle and a dot in the middle. The piece seems to have a dark transparent varnish. The colour of the ivory is very similar to that of no.14. It is possible that they come from the same set. Length 5.2cm, 0.7cm thick. The piece is cracked in the middle. Bought in Cairo, but reported to come from Old Cairo.

17. Acc. no. X3331 (1872); Chester Collection, no.1448. Cubic die (*fig.38*). This is a cubic die with rounded corners. The numbering of the opposite faces is: 1-6, 2-5, 3-4. The numbers are marked with holes enclosed within two concentric circles. In those circles there are traces of a dark colour. Pale ivory. Height 2cm. Good condition. Bought in Cairo.

Appendix I

The following is a selection of abstract chessmen for which there is some evidence of date. Nos 1-5 all come from archaeological contexts, while the others can be dated with fair certainty by their shape and decoration.⁷⁴

1. Nishapur pieces, style set A (*fig.4*). Twelve ivory pieces (three Kings or Queens, two Bishops, a Knight, four Rooks, two Pawns) excavated at Nishapur by the Metropolitan Museum's Iranian expedition in 1940, New York, Metropolitan Museum of Art, inv. nos 40.170.148-151. 9th century.⁷⁵
2. Qasr al-Hayr pieces, style set A. Four wooden pieces (two Rooks, and probably two Pawns) from Qasr al-Hayr East, now in the Kelsey Museum of Archaeology, University of Michigan. They are decorated with encrusted

small circular bone units arranged in circular rows. The wood has been dated by carbon-14 analysis to AD c.870 +/- 120 years.⁷⁶

3. Serçe Limani pieces, style set A (*fig.42*). Eight wooden pieces (a King, a Queen, two Rooks, a Knight, three Pawns) from the shipwreck of Serçe Limani, inv. nos GW 484-489, GW 945-946, presently at Bodrum. First half 11th century.⁷⁷
4. Siraf pieces, style set A. An ivory Rook found at Siraf with a rectangular shaped body, and a deep cut in the middle forming 'horns', apparently datable to the 15th century,⁷⁸ and ten ceramic chess pieces (inv. nos 755-764) datable to the 13th century.⁷⁹
5. Ghubayra piece, style set B. An ivory King or Queen excavated at Ghubayra in 1971, inv. no. Gh. 71-44, School of Oriental and

African Studies, University of London. Attributed to the Ilkhanid or Muzaffarid period.⁸⁰

6. Rock Crystal. The Ager Chessmen, style set A (*Figs 43, 44*). Fifteen rock crystal pieces, called the 'Ager Chessmen', formerly in the Béhague Collection, now Kuwait, Dar al-Athar al-Islamiyya, inv. no. LNS I HSa-j. Egypt, 10th century.⁸¹

7. Rock Crystal. The Charlemagne Chessmen, style set A (*fig. 45*). Fifteen rock-crystal pieces, called the 'Charlemagne Chessmen', in the cathedral treasure of Osnabrück. Egypt, 11th–12th century.⁸²

8. Glass. Cairo pieces, style set A. Seven marvered glass pieces (a King, a Queen (?), two Knights, a Rook, two Pawns), Cairo, Islamic Museum. Late 12th–early 13th century.⁸³

9. Ceramic pieces, style set A. Thirty-two ceramic pieces, with turquoise and purple

glaze, in the Metropolitan Museum of Art in New York, inv. no. 1971.193 a–ff, said to be from Nishapur, 12th century.⁸⁴ Twenty-three pieces in ceramic with cobalt and turquoise glaze, Iran, 12th century (*fig. 46*).⁸⁵

10. Ivory. British Museum pieces, style sets A and B. Four ivory pieces belonging to style set A (three Kings or Queens, and a Knight) on exhibition in the John Addis Islamic Gallery, inv. nos 77.8–2.8 (acquired in Sicily, Catania); 62.8–9.2; 56.6–124; 81.7–19.47.⁸⁶ (*fig. 47*) And a group of pieces in the Medieval and Later Antiquities Department, mentioned above, of style sets A and B, 10th to 11th century.

11. Wood. Ghazni piece, style set A (*fig. 11*). A wooden King, bought in Afghanistan. The decoration on one side of the piece indicates the Ghazni period, 11th–12th century.⁸⁷

Appendix II

The following list includes Coptic and Medieval Islamic draughtsmen and dice, mostly from archaeological contexts.

1. Coptic bone draughtsmen and dice.

Several pieces excavated at Karanis, now in the Kelsey Museum of Ancient and Medieval Archaeology, University of Michigan (see note 36).

2. Mansura ivory draughtsmen and dice (*Figs 48, 49, 50*). Two draughtsmen (inv. nos 1031, 1016/28) and two dice: one rectangular (1–6, 2–5), inv. no. 1027, and one cubic (1–6, 2–5, 3–4), inv. no. 57.11–18.67, now in storage at the British Museum. 10th century (?). See below, Appendix III 'The Mansura Pieces'.

3. Fustat bone die (*fig. 51*). A rectangular die from Fustat (1–6, 2–5), Kelsey Museum

of Ancient and Medieval Archaeology, University of Michigan. 9th–10th century.⁸⁸

4. Serçe Limani bone draughtsman (*fig. 52*). A draughtsman from the shipwreck found at Serçe Limani. First half 11th century.⁸⁹

5. Glass draughtsman (*fig. 53*). A draughtsman in New York, Metropolitan Museum of Art, inv. no. 1974.98.6. 7th–10th century.⁹⁰

6. British Museum ivory die (*fig. 54*). A rectangular die on exhibition in the John Addis Islamic Gallery, inv. no. 95.11–27.2. 9th–10th century (?).⁹¹

7. Louvre ivory die. A rectangular die, Paris, Musée du Louvre, inv. no. 1346, 9th–10th century.⁹²

8. Tepe Dasht-i Deh bone die. A cubic die excavated at Tepe Dasht-i Deh, presently in Iran. 13th century.⁹³

Appendix III

THE MANSURA PIECES

The Mansura pieces consist of a number of ivory fragments (*figs* 55, 56), so far believed to be chess pieces; two draughtsmen; and two dice, one rectangular (1-6, 2-5) and the other cubic (1-6, 2-5, 3-4). Excavated by Bellasis⁹⁴ in 1855 at Mansura, the Muslim city raised near the old city of Brahmanabad, the present Hyderabad in the Pakistani region of Sind, they are presently in the collection of the Oriental Department of the British Museum, inv. nos 1857.11.18.55-63. They have been recently restored and properly photographed. First brought to attention by Murray, they have not been published since. In his account on the excavations Bellasis states that he sent drawings of various relics, including those of the chess men, to Lieutenant Colonel W. H. Sykes, at East India House.⁹⁵ These drawings are now in the India Office Library, MSS Eur G 45/3b, Eur G 45/9, including only a watercolour of the cubic die at fol. 71 of the latter. Two illustrations from *The Illustrated London News*, where the engravings of some chess pieces and the rectangular die were published, are attached at fols 347 and 44 respectively. Bellasis dated his findings to the 11th century, when the city was supposedly destroyed by an earthquake.⁹⁶ More recently Pathan concluded that the city had been destroyed by an earthquake, but at the end of the ninth century.⁹⁷ This would mean assigning the pieces to a

similar date at the latest. The finding of ceramic lustre fragments of a type ascribed to the 9th or early 10th century might support this dating for the city of Mansura.⁹⁸

After restoration and reconstruction of the fragments, their identification as chess men was no longer obvious. Some are entirely hollow. Others have pegs, which makes one suppose that they were finials. Bellasis thought that the pegs were for a board with holes, like those of modern times, which seems rather unlikely. Murray (see note 94) thought that the pieces, being quite big, were made in different sections and held together by these pegs. In my opinion, the completely hollow objects are not chess pieces, but handles. Those with pegs could be either finials or chess pieces. We do not know enough about the making of ivory chess pieces to be sure. There are hollowed ivory chess pieces (but not hollowed up to the top), and there are also chess pieces made in sections with a central part (similar therefore to a peg) in the middle (like some of the pieces in the British Museum). The pieces could have been made in sections because they were made from ivory remnants. Finally, the nine objects resembling pawns seem to be gaming pieces (*fig.* 56). They are hollow, but not up to the top. The knob on the top is separate. It should not be forgotten that they were found with dice, one cubic and the other rectangular.

ENDNOTES

1. I should like to thank especially James Allan, Irving Finkel and Ralph Pinder-Wilson for their support, time and help. I am also grateful to many other institutions and friends: in the British Museum, the staff of the Department of Oriental Antiquities; Neil Stratford and the staff of Medieval and Later Antiquities; K. J. Wallace, archivist. Also: Philip Dymond, formerly India Office Library; Prof. Michael Rogers, School of Oriental and African Studies; Prof. Géza Fehérvári, formerly School of Oriental and African Studies; Shaikha Hussa al-Sabah, Director of the Dar al-Athar al-Islamiyya, Kuwait; Daniel Walker of the Islamic Department, and the staff of the Medieval Department of the Metropolitan Museum of Art, New York; Irene Aghion, Cabinet des Médailles, Paris; Prof. George Scanlon, American University in Cairo; Prof. George Bass, Director of the expedition at Serçe Limani; Elaine Gazda, Director of the Kelsey Museum of Ancient and Medieval Archaeology, Michigan; L. van der Heijdt. The drawings for this article are by Sue Godard.
2. The bibliography on chess is vast. On Islamic chess, see especially Stamma (1840); van der Linde (1874a and b); Murray (1913), Part I, ch.x; Wieber (1972); Eales (1985). For chess literature in specific libraries, see *Bibliotheca* (1955), containing c.6,500 entries; Frankfurt (1982); and Vickery & Webb (1977) and Massmann (1982), mainly concerned with the game.
3. A few early Islamic representational pieces have survived. A mounted knight, in ivory, found at Samarkand: Orbeli (1936), 144-45, fig.14, 8th or 9th century; Wilkinson (1943), 279; Linder (1964), fig at 15; Kühnel (1971), 30, Taf.V, 16a-b. An ivory elephant, Florence, Museo Nazionale del Bargello (fig. 2): Kühnel (1971), 29-30, Taf.VI, 14a-b, Iraq, probably late 9th-early 10th century; Grube (1993). An ivory elephant, Paris, Cabinet des Médailles, which bears the kufic inscription *min'amal Yusuf al-Bahili*. The piece has been ascribed different dates: for a 15th-century attribution, see Barrett (1955). Kühnel considered the inscription authentic and identified the artist with a 9th-century Indian sculptor: Kühnel (1971), 30-31, Taf.VI, 17a, VII, 17b-c. Scholars now tend to a date in the late 9th-early 10th century. In Europe such pieces began to appear in the 12th and 13th century, including the so-called Charlemagne pieces in Paris, Cabinet des Médailles, reputedly a gift from Harun al-Rashid: on these and others in the Bargello, Florence, see *Pièces d'Echecs* (1990); Pastoureau (1990). On the famous Lewis chessmen, British Museum and National Museum of Scotland, see Madden (1832), 203-91; Dalton (1909), 63-73, pls XXXVIII-XLVIII; Murray (1913), 758-61, drawing at 763; Liddell (1938), 136-42, and fig. facing p.15; Taylor (1978).
4. Scholars tend to attribute the appearance of abstract pieces to the Islamic rejection of representation: see, for example, Liddell (1938), 26; Wichmann (1964), 16. The accepted theory has been that figurative pieces were used in India; that, with the advent of Islam, they became abstract; and then figurative again in Europe, with the Lewis chessmen. As is well known, however, secular art was widely representational from the very beginning of Islamic times.
5. It has been suggested that the Sassanian stone elephant, 6th or 7th century, New York, Metropolitan Museum of Art, inv. no.48.154.8, could have been a chess piece: Herzfeld (1931), 27; Sarre (1939) I, 593-600, and IV, pl.169b; Wilkinson (1968), xxvii and fig.1; Harper (1978), 172-73, no.89. See also van Lohuizen de Leeuw (1981), for an ivory piece from Mantai, 2nd-3rd century AD.
6. Contadini (1993), no.6, 71-72; Sanvito (1988); Sanvito (1992). Führmann (1941), 616-29, figs 121, 122 and Chicco & Rosino (1990), 7, figs 1, 2 date the former 2nd century AD and the latter 5th-6th century AD on archaeological grounds, but in fact their context is not clear. A date to the late 10th-early 11th century is now confirmed by the result of the examination at radiocarbon accelerator conducted on the pieces at two different laboratories, in Naples (Italy) and Sydney (Australia), yielding the same results. See *Venafro* (1994).
7. A figural chess set found at Afrasiyab, Samarkand, during excavations in 1977, datable not later than the 7th century AD: Buryakov (1980), 162-72, and figs. To the Afrasiyab pieces it is possible to relate an ivory chariot (Rook), British Museum, Oriental Antiquities (inv. no. OA 1991.10-12.1), reportedly from Samarkand area (fig.3); and two figural pieces, British Museum,

- John Addis Islamic Gallery, one of ivory, in the form of an elephant with mahout, probably a King or Rook, allegedly from Nishapur (inv. no. 1980.7-30.1), the other of red unglazed terracotta, possibly an elephant (inv. no. OA+7838); see also the ivory piece in New York, Metropolitan Museum of Art (inv. no. 65.53), which Wilkinson (1968), no. 3, dates to the 11th century; and an ivory rider on an elephant (Christie's (1994), lot 337, 12th-13th century).
8. Reference to chess in Indian literature goes back to the first half of the 7th century: Thomas (1898), 272; see also MacDonell (1898), 117-41; Murray (1913), 51-56. The earliest references to chess in Persian literature are from the Sassanian period: *Kamamak-i-Artakhsatr-i-Papakan*, written between 590 and 628, referring to an earlier date: Nöldeke (1878); see also Murray (1913), 149. For the *Chatrang-namak*, see Nöldeke (1892) and Murray (1913), 149. For the pahlavic text, see Pagliaro (1951), 97-110. For the game in Persian literature, see Bland (1852), 1-70. For the *Shahnama*, see note 17. On the ancient history of the game: Pagliaro (1940), 328-40. In the Islamic period there are references to chess in Arabic literature from Umayyad times: al-Qadi (1992), 230, 243; also al-Mostatrafi (1902), Vol. 2, 637-39.
9. Inv. no. 40.170.148-151. See Wilkinson (1943), and Wilkinson (1968), xxviii, fig. 2.
10. Inv. no. 50 Sb. The Lothar Schmid Collection, Bamberg, contains a turquoise glazed pottery Knight, with a completely abstract conical body, but the stylized head of a horse. This piece, whose provenance is unknown, is attributed to the 9th-10th century: Petzold (1987), col. ill. 7.
11. For the names of the game and the pieces in Arabic and other Oriental languages, and their development and transformation in the West, see Hyde (1694), Libro I, 1-30; van der Linde (1881), 15; Murray (1913), 421-28; Wilkinson (1968), xxv-xxvi.
12. The manuscript, *Libro del Ajedrez, tablas y dados*, with 150 miniatures, is in San Lorenzo del Escorial, Biblioteca Real, no. T.I.6. For a black-and-white facsimile, see White (1913), and in colour, *Libro del Ajedrez* (1987). See also Janer (1874), 3, 225-55; White (1913); Steiger (1941); Garcia Morencos (1977).
13. In Murray (1913), 769 there is a diagram of chess pieces represented in certain European manuscripts, starting with the Alfonso manuscript.
14. Fol. 3r. The miniature shows both the preparation of the board and the manufacture of the chessmen.
15. Heidelberg, University Library, Pal. Germ. 848. The part of the manuscript with this miniature can be dated to the first quarter of the 14th century: Wichmann (1964), 287, col. ill. 61; Petzold (1987), col. ill. 37. In the depiction of medieval European courtly life we frequently encounter, as part of the process of courtship, a scene of a couple playing chess: see ivory plaques in *Gazette des Beaux-Arts*, CXVIII, November 1991, fig. 3. See also Simons (1993).
16. Kassel, Landesbibliothek, the 'Willehalm-Codex', MS Poet. et roman 1, fol. 25r. See Petzold (1987), col. ill. 43.
17. The *Shahnama* (early 11th century) gives two stories about chess, one relating how chess was invented in India, the other, derived from the *Chatrang-namak*, telling how chess passed from India to Persia around the mid-6th century AD: see Murray (1913), 156-57. The Arabic sources and the Alfonso manuscript agree with the attribution to India, while Cessolis (see note 22) ascribes it to Babylon. On the origins of the game in the Empire of Elam and China, respectively, see Wichmann (1964), 9, note 4; Bidev (1972) and Dickens (1973). Neither hypothesis has found general acceptance.
18. For example, two illustrated leaves from a 14th-century *Shahnama*, New York, Metropolitan Museum of Art, Joseph Pulitzer Bequest Fund, inv. no. 34.24.1, 34.24.2: Wilkinson (1968), xii, xiii. For an illustrated, probably 16th-century, Persian treatise on chess in the Royal Asiatic Society: Codrington (1892), 532, no. 211; Golombek (1976), fig. at 31, and col. ill. at 36 and 53. For the manuscript, see Bland (1852), 1-17; Murray (1913), 177.
19. Deutsche Staatsbibliothek, respectively MS Or. Bl. 26ob, fol. 4255 and MS Diez A, Bl. 68ob, fol. 1: Petzold (1987), nos 2, 4, for colour illustrations.
20. For this shape, see a Spanish representational ivory Queen, 12th century, in the Walters Art Gallery: Randall (1985), fig. 254; see also the Mozarabic ivory King, 11th century, in Boston, Fuld Collection: Wichmann (1964), 280, fig. 21.
21. For the ivory pieces in Bamberg, Sammlung Lothar Schmid, reported to have been found in the area of Nishapur, see Petzold (1987), col. ill. 6. See also the 7th-century AD pieces found at Afrasiyab (note 7) and the wooden Ghazni piece published here for the first time at fig. 11.
22. As represented in the Alfonso manuscript. In the West this kind of set is well exemplified by the

engravings in Caxton's (1480) English translation of Jacobus de Cessolis's *Liber de moribus hominum et officiis nobilium* (second half 13th century): Murray (1913), 542-43.

23. See English medieval bone pieces in the British Museum: Dalton (1909), nos 229, 233-238, 239; Dalton (1927), 77-86; or the four ivory pieces excavated at Châtenois (Vosges), Paris, Musée de Cluny (inv. nos 14422-14425), for which see Wichmann (1964), 278, figs 10-11. For a 17th-century set based on Arabic prototypes, see Petzold (1987), col. ill. 19. A tentative development of shapes in Europe derived from Arabic originals has been outlined: Murray (1913), 770-74; Petzold (1987), 75.

24. Thirteen bone pieces, 8th/9th century, Nuremberg, Germanisches Nationalmuseum (cat. no. H. G. 2172-85): Wichmann (1964), 275, fig. 6.

25. Appendix I, style set A.

26. Appendix I, no. 4. In Europe, see the sixty-seven bone chessmen reported to have been found in the 12th to 14th-century levels at Novgorod: Linder (1964), figs at 72-73 and Thompson (1967), fig. 102.

27. For two Ottoman sets of the 16th-17th century in the Treasury of the Topkapi Sarayı Museum, in rock crystal, and gold and agate, see Rogers (1987), col. pls 120, 121a, 121b; *Soliman* (1990), 224, no. 238.

28. One is published in Dalton (1909), no. 603. In the British Museum, Medieval and Later Antiquities, there are several abstract Islamic ivory chess pieces: cf. Dalton (1909), pl. CXXV. This large and interesting collection shows a close similarity with that in the Ashmolean Museum. Henceforth I refer to these pieces as BM Dalton plus number.

29. See, for example, Murray (1913), figs on 361.

30. For Revd Chester, see Budge (1920), 84-85, note 1; James (1981), 20-23.

31. By Rupert A. Housley, at the Research Laboratory for Archaeology and History of Art, Oxford University, September 1991. The range given has a 95% probability of accuracy.

32. See for example a Turkish set of the 17th century in Hyde (1694), Libro I, 133. Also an Indian set of the 18th century in the Metropolitan Museum of Art: Wilkinson (1968), no. 9.

33. *Schachspiele* (1987), col. ill. 032.

34. The term 'draughtsmen' has no connection with the modern game of draughts, but rather with *nard*, which corresponds to backgammon. On the pieces see Stoep (1984), which is based mainly on

Murray (1952) and Kruijwijk (1966).

35. See, for example, the draughts datable to the 3rd-4th century AD in the Vatican Museum in Rome: Morey (1936), Tavv. IV, VI.

36. Bone and glass draughts with this shape and decoration were found at Karanis (now Kelsey Museum of Ancient and Medieval Archaeology, Michigan). The Karanis material includes many bone dice, and is in the process of being studied.

37. For example, one from an ivory set in the British Museum, Indian Gallery, inv. no. OA 1939.6-19.336.

38. See note 35, and the Roman dice in the Walters Art Gallery: Randall (1985), figs 98-100.

39. For example, Dalton (1909), 83-84.

40. For these games, see Murray (1952), 2.8.3, 4.1.3, 6.1.2.

41. There is no monograph devoted to Islamic dice, but see Culin (1895 and 1897) and van der Heijdt (1990).

42. On gambling, see Rosenthal (1975).

43. Culin (1897), 826-27, fig. 147.

44. The orthodox transliterations would be: *ka'ab*, *ka'abatan* and *ka'abat*.

45. Culin (1897), 829.

46. See Murray (1913), 46-50.

47. See Murray (1913), 340-41.

48. According to a common distinction, chess is considered a war game, and *nard*, or *tavula*, or backgammon, a race game. Awerbach (1991) has proposed recently that chess derives from a race game: for an English translation, see J. Finkel ed., *Board Games in Perspective* (forthcoming).

49. Whether the two-handed game or the four-handed dice chess came first is still a matter of controversy: see Jones (1790), 159-65; Murray (1913), 68; Rosenfeld (1960), 24. See also Ghosh (1936), a manual of four-handed dice chess which, however, I was not able to consult. Awerbach (1991) has suggested that the two-handed game derives from four-handed chess and that, in this development, dice were abandoned.

50. The game of *Chaturanga* is described in detail in the *Bhavisya Purana*. It is not certain from this whether the die was employed after the opening move. See Culin (1897), 857, no. 45.

51. Al-Biruni (1958). See the translation by Sachau (1888), 183-85. For al-Biruni's account, see Murray (1913), 68-69.

52. For these games, see Murray (1952), 6.4.6, 6.4.3, 6.4.1, and fig. 59, where it is specified that they are played with two or three long dice, faces

- numbered 1-6, 3-4, or 1-6, 2-5. See also Culin (1897), 825, no.13, and 855, no.40, and discussion at 858 regarding the similarity of *pachisi* to four-handed chess. For the use of dice in Ancient India, see Lüders (1907); Vreese (1948).
53. Murray (1952), 95.
54. See Murray (1913), 74, where he quotes the account given by J. Cresswell in the *British Chess Magazine*, 1900, 6.
55. Fol. 4v, see Steiger (1941), 24.
56. See Gamer (1954), 739.
57. Fol. 96r, see Steiger (1941), 380.
58. Barbier de Meynard (1864). See Murray (1913), 340.
59. *Kitab al-shatranj mimma allafahu al-'Adli wa al-Suli wa ghairuhuma* ('Book of the chess from the works of al-'Adli, al-Suli and others'), 'Abd al-Hamid I Library, MS no.560, dated 535/1140. See Murray (1913), 171.
60. The Arabic master al-'Adli was at the height of his fame around AD 840. His chess work is unfortunately lost, although parts of it may be preserved in later manuscripts. In al-Nadim's *Kitab al-fihrist* (377/988; see Flügel (1872)), a section devoted to the authors of books on chess is headed by al-'Adli, who is also mentioned as having written a *Kitab al-shatranj* ('Book on chess') and a *Kitab al-nard* ('Book on nard'), both lost. See Murray (1913), 169.
61. See Murray (1913), 339-41.
62. Murray (1952), 114, suggested that the earliest literary reference to *nardshir* may be in the Talmud (compiled between AD 300 and 500).
63. Ahmad ibn Abi Ya'qub ibn Wadih al-Ya'qubi, *Tarikh*; see Houtsma (1883), 99-102. For an account in English, see Murray (1913), 208-11.
64. According to him, the invention of *nard* is Indian and not Persian, and precedes the Indian invention of chess (rather than following it, as the Persian sources report).
65. In the Islamic tradition, in ascending order from the earth: Moon, Mercury, Venus, Sun, Mars, Jupiter, Saturn.
66. The rule was not always followed, as in the case of an oblong stone die said to come from Akhmim, now in the Ashmolean Museum (acc. no. X 3317), which has on the opposite faces the following numbers: 1-2, 5-6. The symbolism of the die is briefly treated in Buchenmatth (1990).
67. Add. MS 7517 Rich., dated 655/1257, fols 5v-6v. The manuscript has been translated into Spanish, with a transcription of the Arabic text and critical notes by Pareja Casañas (1935). See also Murray (1937), 169-76, a review of this book.
68. Hyde (1694), Vol.II, 255-56.
69. Nöldeke (1892), 23.
70. On backgammon, see Raverty (1903); Meadows (1931); Jacoby & Crawford (1971); and Obolensky & Jones (1971).
71. See Barakat (1974). Murray suggested that the name derives from the Byzantine-Greek *tabla*. But the matter deserves further investigation: *tawula* might also be a relatively modern borrowing from Italian *tavola*. This is the only etymology offered in Hinds & Badawi (1986).
72. See Scanlon (1981), 62. No illustration is given.
73. The piece was found during the 1972 expedition at Fustat, on the surface of area XXI.5. Scanlon (1981) does not mention it.
74. The identification of a bone object excavated at Fustat as a chess piece is dubious (fig.41). It resembles one of the pieces found at Mansura (see below), now thought to be a finial. It has been dated to the 9th-10th century: Scanlon (1974), pl.XVI-7.
75. See Wilkinson (1943), 271-79; fig. at 274; also Wilkinson (1968), no.2.
76. Grabar *et al.* (1978), Vol.I, 189, Vol.II, figs 81-83.
77. Cassavoy (1988), 28-29.
78. Found with four cylindrical wooden objects, each with a hole on top, thought to be gaming pieces, in Site E, corresponding to the 15th-century buildings. See Whitehouse (1969), 39-62, pl.V (c). It is not clear from his account whether the 15th-century date applies to the gaming pieces.
79. Tampoe (1989), 19, and fig.16, 193.
80. The piece was found in the Citadel Platform, room 5: Bivar & Fehérvári (1974), 107-40.
81. See Jenkins (1983), col. ill. at 60. For a history, literature and drawings of the pieces, see Murray (1913), 764-66; Lamm (1929-30), 2, Taf.77; Wilkinson (1943), 276. The plain pieces are much smaller than the others and must belong to a different set.
82. Murray (1913), 765-66, fig. facing 766; Lamm (1929-30), Vol. 2, Taf.76, nos 7-18; Wichmann (1964), 275-77, fig.7.
83. Lamm (1929-30), Vol.1, 101-102; Vol.2, Taf.31, nos 8-16; Wilkinson (1943), 278. There are other marvered glass pieces: a King or Queen, New York, Metropolitan Museum of Art, inv. no.1972.9.3;21, 10th century (Jenkins (1986), col. ill. on 52); two Pawns, Washington, DC, Freer

Gallery of Art, inv. nos 09.779, 09.980, ascribed to Egypt, 10th-12th century (Ettinghausen (1962), figs 69, 70). On the dating, see James Allan's article in this volume.

84. Samples were taken (in October 1971) from a turquoise-glazed King and Queen and one of the manganese purple-glazed Pawns for testing by thermoluminescence at the Research Laboratory of Archaeology and the History of Art, Oxford University. The tests showed that the pieces were last fired between AD 1081-1531, a result consistent with the suggested period of manufacture (12th century).

85. Nine published in Hoare (1985), col. ill. 62. The present location of these pieces is unknown to the writer. There are also two turquoise and cobalt blue glazed ceramic gaming pieces in the Ashmolean Museum, acc. nos 1986-42, 1986-43, of which one seems to be a chess piece, possibly a Bishop.

86. Dalton (1909), pl. XLVIII for nos 225 (King or Queen, 62.8-9.2), 226 (King or Queen, acquired in Sicily, 77.8-2.8), 228 (Knight, 81.7-19.47). Compare also an ivory Knight in New York, Metropolitan Museum and a King in Berlin: Kühnel (1971), 28, figs 9, 10; and Pinder-Wilson (1973), 233-34, pl. LXXXIVa, for dating.

87. Location unknown. For a comparative design, see the frieze on the marble panel from Afghanistan, of the Ghazni period, early 12th century, in the David Collection, Copenhagen: von Folsach (1990), back cover.

88. See Scanlon (1976), 75, fig. 14.

89. Cassavoy (1988), 28 and fig. on 29.

A bronze cube found in the ship is reproduced on 29. Because of the strange sequence of numbers on its side (from a maximum of 14 to a minimum of 5), it is now supposed to be a weight. It is worth noting the possibility, however, that this cube is a fortune-telling die: see Culin (1897), fig. 139.

90. Jenkins (1986), col. ill. at 52.

91. Ascribed to Egypt, 10th/11th century.

However, it has the same peculiar arrangement of decorative concentric circles as the bone die found at Fustat in the 9th-10th-century level (see note 88).

92. The piece has the numbering 2-5, 3-4.

93. Williamson (1972), 177-78, pl. XIIa. Together with the die, two other bone objects were found which look like gaming pieces.

94. Bellasis (1856). See also *The Illustrated London News* (1857); Elliot (1867-77), 369.95. Murray (1913), 89-90, and fig. at 88. Bell (1979), 58 gives a drawing of a hypothetical reconstruction of six of them, but the drawing is not accurate and the reconstruction most unlikely.

95. Bellasis does not specify how many fragments he saw, saying only that he took drawings of 'most' of the relics found at Bambra-ka-thul, including the chessmen.

See Bellasis (1856), 18.

96. Bellasis (1856), 9-12.

97. Pathan (1978), 269-78.

98. Hobson (1932), 8-10, fig. 14.

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