Split Appearance. Patchy and Coherent Features in Fragments of Gameplay, Mohenjo-daro, Sindh

Elke Rogersdotter

Department of Archaeology and Ancient History, Uppsala University, Sweden

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This paper centers on ancient, generally rather scattered and elusive remains of gameplay. Focusing on a discrete assemblage of game-related artefacts from the Bronze Age Indus Valley urban settlement of Mohenjo-daro, it conducts a detailed study of some of the patchy features to see whether more structured elements thereby can be distinguished. The finds are approached situated in a broader, game-related context through a short recapitulation of findings at roughly contemporary sites in Egypt, Western Asia, and Iran. Thereafter is intra-site, spatial features of the finds explored, as well as particularities in appearance. While the playing of games is a rather universal human enterprise, its forms and expressions may likewise be seen as highly sensitive to the specific, social environment and fluctuations. Because of this intra-societal affiliation, identifying patterns of ancient gaming is suggested to contribute both to site-specific inquiries and investigations of interregional distinctions and influences.

Keywords: *Mohenjo-daro; Indus Valley; Gaming remains; Game of Twenty Squares; Play Theory*

Introduction

Material remains of gaming constitute an area of research that has been relatively little studied in archaeology, even though the playing of games forms an almost universal element in human social life. Albeit varying in appearance, pattern and degree, it recurs in different times and places as something rather fundamental, which, according to the well-known play theorist Huizinga, "…cannot be reduced to any other mental category" (Huizinga 1955: 3). Such a quality may on the other hand complicate a study of gaming remains. Since, in principal, anything may be used as a game utensil, and the playing of a particular game, due to its improvisatory character, may occur in just any place, it is often difficult to distinguish explicitly game-related finds in a material assemblage (cf. Finkel 2007a) (fig. 1). Conversely, and in particular when working with very ancient remains, it is difficult to identify what artefacts may have been used for gaming purposes, or what games may have been played in more specific on the basis of fragmented pieces of dice or game boards of rather common appearances. It inevitably provides the field a vague and subtle character.

Furthermore, as play- and game objects, these kinds of artefacts have in several cases traditionally not been regarded as particularly important, and even been seen as more or less "childish" (Finkel 2007a: 1). This may particularly apply to earlier excavation reports, where in some instances such finds may accordingly have been more or less disregarded. In other cases, specimens of particularly elaborate or otherwise noteworthy features may very well have been published as game-related objects, although mainly as culture-bearing artefacts with less attention given to the supposed, game-related dimension (Rogersdotter 2011; see e.g. Marshall 1931a). This kind of treatment may of course also contribute to a scattered appearance of this category of finds. Another factor, which concerns the remains discussed in this paper, is that a number of these finds, originating from well-known, 'legendary' sites in for example ancient Egypt, Mesopotamia, or the Indus Valley, were excavated a long time ago with, in view of modern scientific standards inadequate methods. A number of such previously excavated objects, in particular 'small' finds of seemingly mundane appearance, may moreover, in a number of instances, only be available for research through the documents from early excavations, that is, through secondary, historical sources, due to a subsequent disappearance or simply loss of context of the primary, material record. Game-related artefacts may thus seem patchy also from a research historical point of view.

*Corresponding author. E-mail address: elke.rogersdotter@arkeologi.uu.se



Fig.1: *A game board sketched on the ground will not endure in time and consequently never be found by archaeologists. The example derives from Hampi in Karnataka, India (Photo: E. Rogersdotter).*

A third feature of elusiveness follows from established suppositions that remains of game- and play character appear scattered around in more or less haphazard ways, seemingly lacking any noteworthy connections to other features or dimensions of the ancient settlement in question. Possibly, such assumptions may follow from prevailing ideas as to the insignificance of items belonging to play and gaming.

Is it against this background at all reasonable to expect to distinguish any kinds of regular expressions when studying this kind of find material? If so, in what forms are they to be searched for? Is it at all worth the effort to trace that kind of vague, past human activities?

For finding answers, it may be suitable to turn to the relatively small, yet distinctly interdisciplinary research field of ancient games and gaming. Remains of gameplay have been found in different places around the world and been variously in focus for archaeological, historical and ethnographical research. Early, now classic works include the studies by Culin (e.g. 1993) on Chinese, traditional North American, and European games; Lüders' (1907) work on Indian dice games through Sanskrit sources; and the attempt of Murray (1951) to catalogue all the known board games of the world. More recently, the field has been further deepened by comprehensive anthologies and various problem-oriented, thematically focused works on ancient games (e.g. Bhattacharya *et al.* 2011; Eder 1992, 2010; Finkel 2007b; Rogersdotter 2011; Schädler 2007; Topsfield 2006a; Widura 2012). Recent studies tend repeatedly to include ideas from play theory, which broadly refers to the thinking concerning the essence of play (e.g. Csikszentmihalyi and Bennett 1971; Fritz 2004; Huizinga 1955; Scheuerl 1954).

Inspired by this kind of reasoning, the aim of this paper is to consider some of the above outlined subtleties by a detailed study of a limited and discrete assemblage of finds of game-related character. These originate from the ancient site of Mohenjo-daro in present-day Sindh, southern Pakistan (urban phase set to about 2500-2000 B.C.), which is the largest urban settlement of the Bronze Age Indus Valley hitherto excavated. Similar to other categories of finds and structural remains, game-interpreted artefacts were mainly unearthed during the large-scale excavations of the site about 80-90 years ago. The objects themselves have since then to large parts disappeared or been variously de-contextualized. The main data of these items is therefore found in the written documents from the excavations, mainly field registers and excavation reports. This paper attempts to contextually anchor the selected finds by use of these sources. In that way, both patchy and repetitive tendencies may become identifiable, and can be discussed with regard to the supposed, game-related aspect. It starts with the endeavour to situate the finds in a broader, regionally based, game-related context. This is followed by a brief, intra-site concern for their spatial context, and a systematization of some of their features in shape and appearance. It concludes with some remarks concerning the implied results in relation to a hypothesized, socially embedded and game-related environment.

Context of Gaming Remains: A Regional Anchoring

The central areas of the Bronze Age Indus Valley are located within the river systems of the Indus and the Ghaggar-Hakra in what is today Pakistan and

parts of India. Major urban centres are Mohenjo-daro, Harappa, Ganweriwala, Rakhigarhi and Dholavira (fig. 2). Mohenjo-daro, which was once situated close to the west bank of the river Indus, had an inhabited area greater than 250 hectares, and a population probably over 35,000 inhabitants (Jansen 1986; Kenoyer 2000; Possehl 2002; Wright 2010). The excavations conducted at the site in the 1920s and the 1930s were led by the archaeologists Sir John Marshall and Ernest J. H. Mackay, and resulted in comprehensive excavation reports were both structures and finds were described in detail (Mackay 1938a; Marshall 1931a). Artefacts that became interpreted as game-related objects such as different kinds of dice, gaming pieces and game boards, were presented in separate chapters, named *Games and Toys*. The presentations are markedly object-centred, with little or no consideration of find context. The lack of contextualization, naturally, contributes to the mentioned, scattered impression. However, the reports contain in fact several passages where the artefacts and their supposed, game-related purpose are compared with similar finds discovered in other excavations at that time, mainly at Mesopotamian and ancient Egyptian sites (Mackay 1931a; 1938b). Here, attention will be put on such broader, regional context of gaming through a brief review of some of the classic discoveries from ancient Egypt and Mesopotamia originating from approximately the same period of time, and the ways the gaming record of Mohenjo-daro was mirrored through these contemporary findings. Thereafter, some more recently unearthed, game-related finds and modern research considerations relating to parts of Western Asia, Iran, and South Asia will be shortly noted.

Among previously excavated, game-related remains, different kinds of game boards are

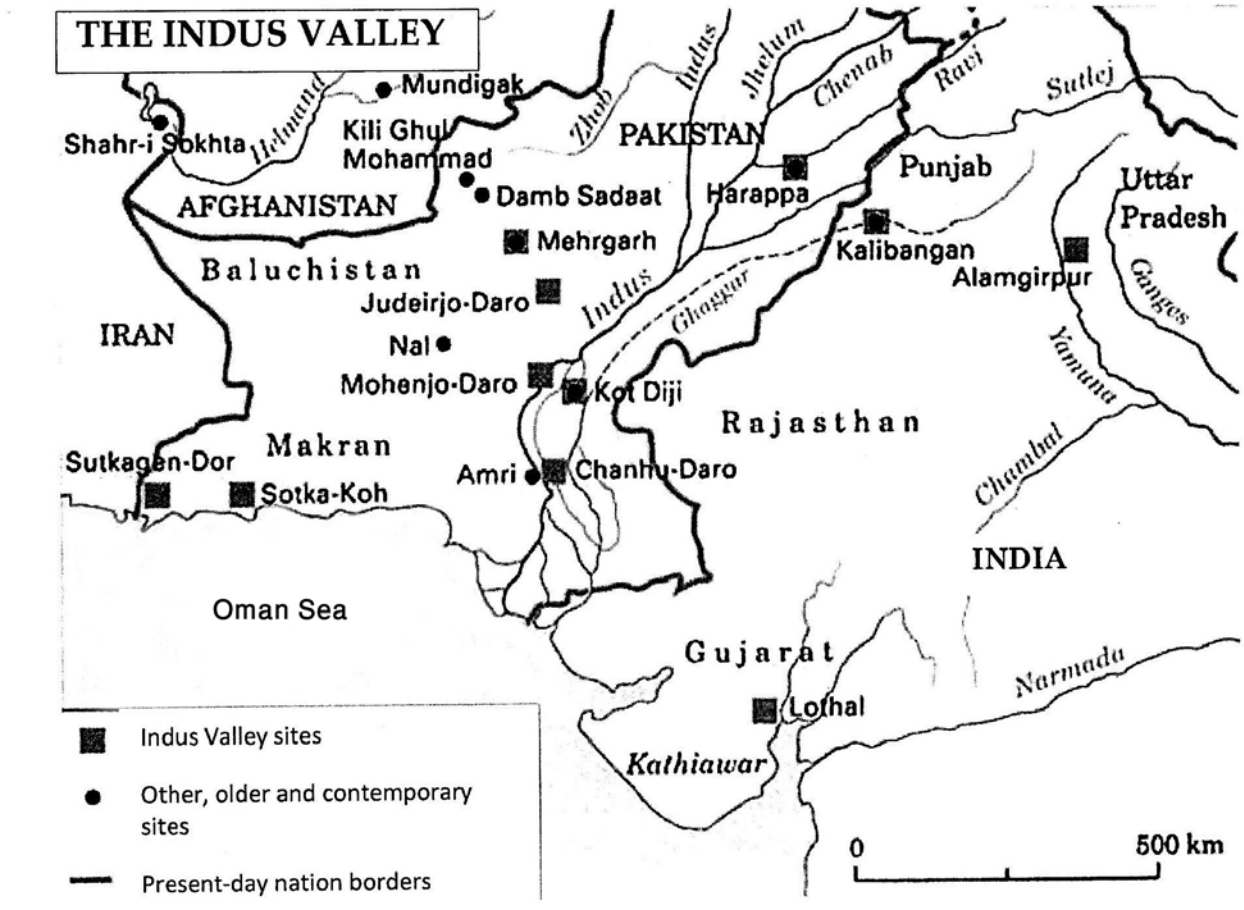


Fig.2: *Map of the Bronze Age Indus Valley with some Indus settlements and other sites depicted.*

probably the most well-known finds. At the Royal Cemetery of Ur in present-day Iraq, Sir Leonard Woolley made his famous discovery, in 1926, of some richly decorated game boards with inlays in lapis lazuli and carnelian; the *Royal Game of Ur* (fig. 3). The graves dated to about 2600 B.C., and the outline of the boards, consisting of one block of three rows of four, one block of three rows of two, and two extra compartments bridging the two blocks, became known as an original outline for a type of board that later developed into a grid made up of three rows of four, from which a single row of eight compartments extends. Also known as the *Game of Twenty Squares*, the boards from Ur were accompanied by gaming pieces and dice, the latter either in the form of sticks or of a tetrahedral shape (Finkel 1999). The later form of the board was in turn found in among other places the similarly legendary tomb of Tutankhamun in ancient Egypt, were it appeared on a game box that also depicted another board known as *Senet*. Its time bracket was set to the 26th and the 17th centuries B.C., and it was accompanied by two sets of five gaming pieces and two astragals (the knucklebones from animals such as sheep, and often used as dice) (Pusch 2007). Examples of the *Senet* board, consisting of a rectangular grid of three rows of ten, appeared in several excavations, implying that is was a well-known board game throughout ancient Egypt (Kendall 2007). Discovered by Howard Carter in Thebes, another type of game board became known as *Hounds and Jackals*, or alternatively *Pegs and holes*, or *the 58-hole game*. As the name suggests, it has an outline of 58 holes and was played by two sets of five pegs. Probably a race game, it is supposed to have spread from Egypt as far east as Iran sometime after 2100 B.C. (Hoerth 2007). Besides game boards, several Egyptian tombs also yielded balls in large numbers, made of straw, wood or clay and in some cases interpreted as having belonged to a game similar to bowling (Decker 1992).

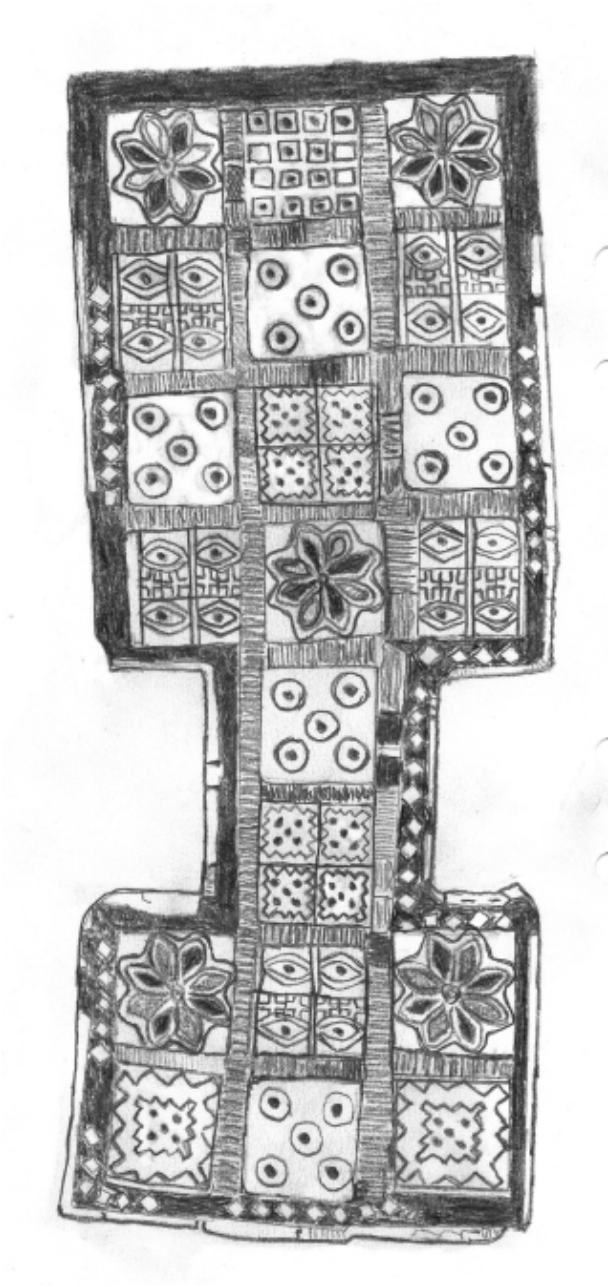


Fig.3: *The outline and pattern of the Royal Game of Ur found in Iraq (Drawing :Anke Jönsson, After: Murray 1951: Fig. 8).*

Turning to the gaming record of Mohenjo-daro, the few game boards found at the site are noted in the reports as somewhat striking, considering the number of such objects found further westwards. Only two fragments of supposed game boards, both scratched in brick, have been listed. One of the remains displays a grid of rectangles. It seems to have had three rows of four, of which one compartment displays a cross-mark. Since the fragment probably formed part of a pavement, it was assumed by Mackay to have extended to the bricks on either side, possibly with a similar outline as the recently discovered *Royal Game of Ur* (fig. 4). The other fragment has four rows of shallow holes, and a fifth row with square-formed hollows. The best preserved row exhibits fifteen

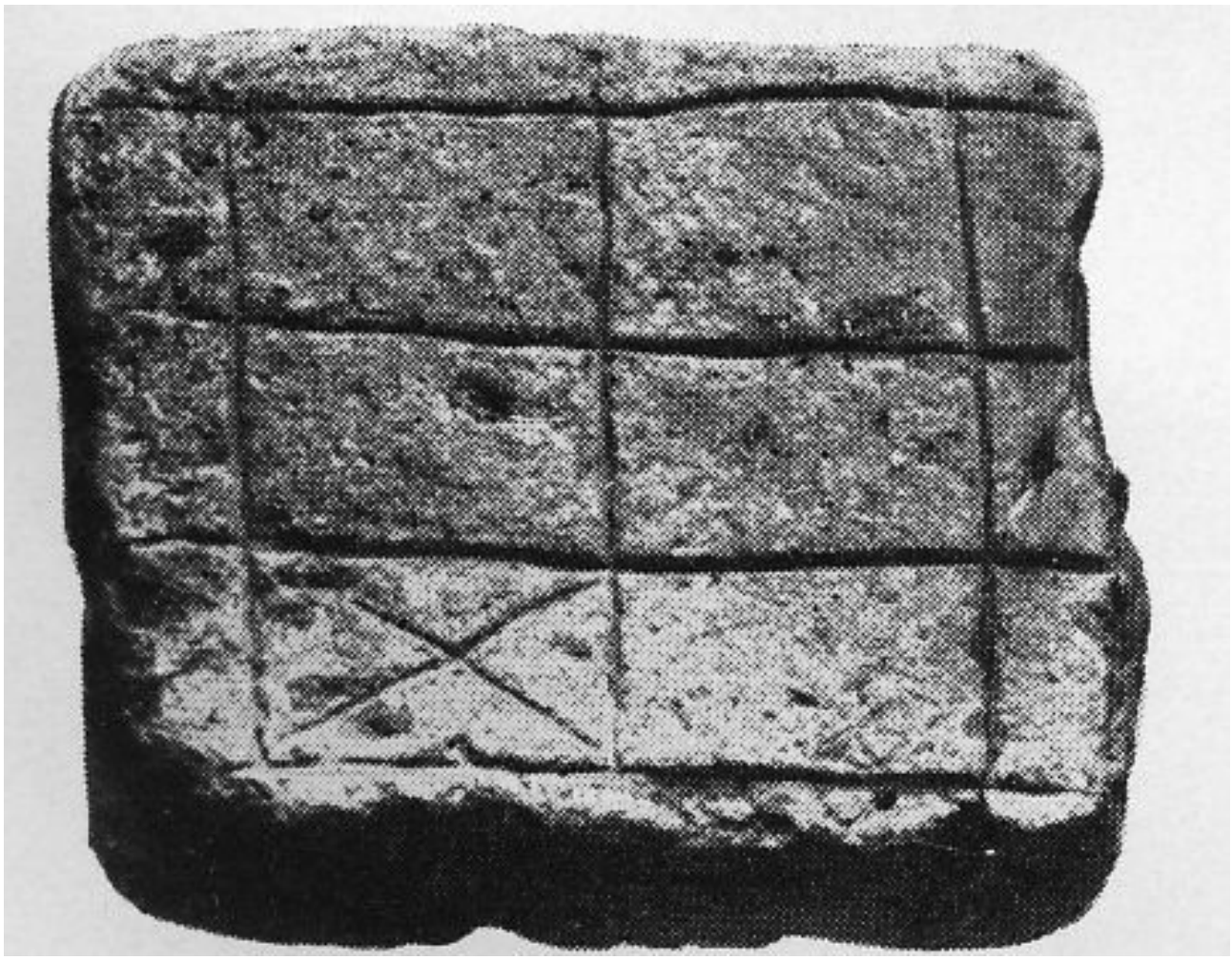


Fig.4: *Brick with scratched grid of rectangles, suggested by Mackay as part of a game board; from the site of Mohenjo-daro (After: Mackay 1938a: Plate CXLII.82).*

holes. Although rather small (the size of a brick), the item was compared with game boards used in Uganda (Mackay 1938b); that is, with boards of the large family of games known today as *mancala* games, and widely played in different parts of the world (fig. 5). A group of finds that was frequently discovered though were small objects interpreted as gaming pieces of different material and shape. Most examples are of various cone forms, such as one type with incurved sides that was noted to resemble items found by Petrie in Egypt. Another type displays in contrast a tetrahedral shape, and was compared by Mackay with among other objects the specimens from Ur. While the latter exhibit rounded corners with small pieces of inlay, and were thought of as dice, the Indus variants, in general lacking these features, became interpreted as gaming pieces (Mackay 1931a; 1938b) (fig. 6).

Another type of artefact found in large quantities was a small, cone-shaped object with an elongated, pointed top, mostly in terracotta and of three different types. Similar objects were according to Mackay also present at other sites outside the Indus Valley, like Jemdet Nasr, Ur, Warka, Nippur and Khorsabad. In fact, as he maintained, as the items from Jemdet Nasr very much resembled the specimens from Mohenjo-daro, they seemed to him to indicate a "definite link" between Sumer and the Indus Valley (Mackay 1931a; 1938c: 409). There use, however, was stated "an enigma" (Mackay 1931b: 277). One of the suggestions of the items from Mohenjo-daro was that they were used in



Fig.5: *Mancala games are played in many parts of the world, on a variety of boards of both small and large size. This picture is from Maputo, Mozambique (Photo: E. Rogersdotter).*

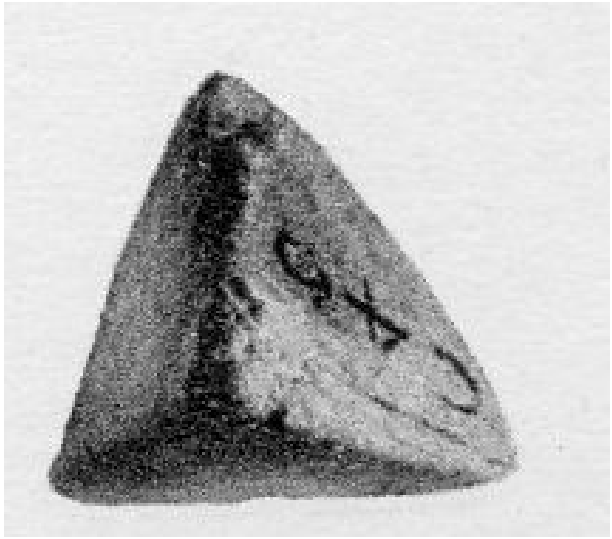


Fig.6: *Example of an object of tetrahedral shape from the site of Mohenjo-daro (After: Marshall 1931a: Plate CLIII.41).*

some game, albeit unknown, and perhaps meant to be thrown, since they were baked very hard and almost always exhibited a broken point (Mackay 1931c; 1938c). Concerning dice, the absence of knucklebones was mentioned as somewhat strange in light of the abundance of those finds outside the Indus Valley (Mackay 1931a). In contrast, both Mohenjo-daro and Harappa yielded cubical dice, a type of object that was rarely found at sites further westwards. The items are in terracotta, different kinds of stone and other materials, appear in different sizes and, by means of dots, are generally numbered from one to six, although in varying arrangements (apparently, only one dice, from Harappa, was reported as marked in the same way as modern dice, with the opposite sides adding up to seven [Vats 1940]) (Mackay 1931a) (fig. 7). Also, and in even larger number, stick dice and other

stick-shaped objects appeared. Mostly of ivory, sometimes of bone, these are in most cases either square or triangular in section with square-cut ends and ornamented with incisions. The sides of the stick dice appear to display different numbers, such as the numbers one, two and three, while a large number of other items in this category in contrast have the same patterns on all their sides. The function of the latter, according to the reports, is not clear, but they are suggested to have been used in some game of chance. They are compared with roughly similar finds from ancient Egypt (the First Dynasty). In a footnote, a reference is also made to a kind of 'throwing-sticks' that were found with a game board in the tomb of Tutankhamun. The sticks displayed the same pattern on all their sides and had according to Mackay been thought of to have been used in some game, with the possible purpose of being dropped or thrown, thereby observing their ways of falling. Similar items had however not been observed in Mesopotamia or Elam (Mackay 1931a; 1931d; 1938b) (fig. 8). Balls, marbles and rattles were also reported from Mohenjo-daro. Balls and marbles are of different materials, such as terracotta and different kinds of stone, while some balls are of shell. The latter, and some terracotta balls, have incised ornamentation. Marbles were compared with similar items from Jemdet Nasr,

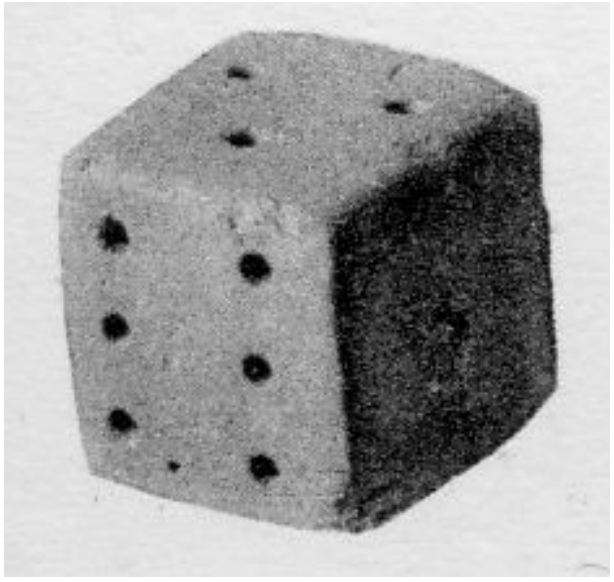


Fig.7: *Example of a cubical dice from the site of Mohenjo-daro (After: Marshall 1931a: Plate CLIII.8).*

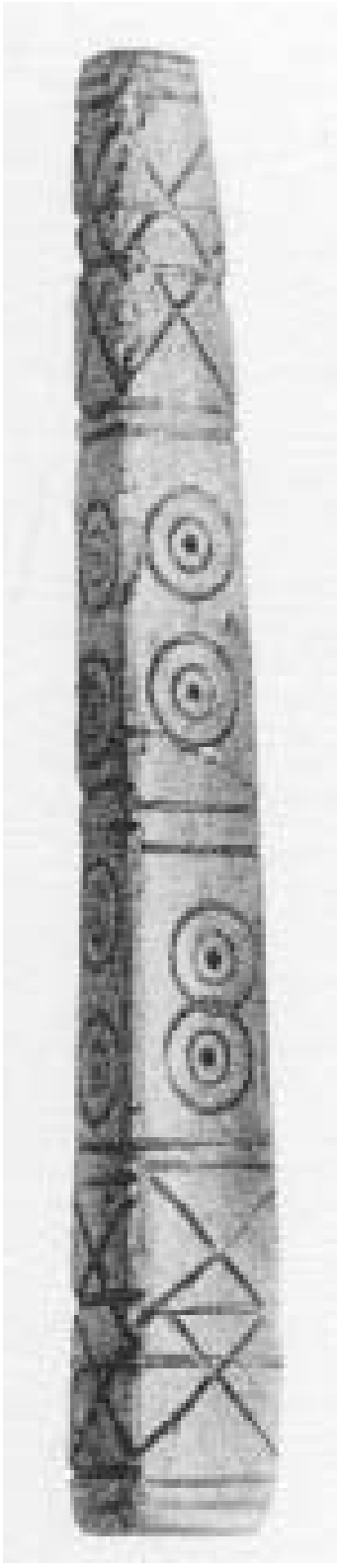


Fig.8: *Example of a stick object with triangular cross-section and the same pattern depicted on all its sides, from the site of Mohenjo-daro (After: Marshall 1931a:Pl. CXXXII.22).*

and noted to be more carefully made than marbles from pre-dynastic graves in Egypt. Small balls of clay were noted as possibly used as sling pellets. Except perhaps the finest examples, marbles and balls were seen as items for marble games, or for hitting small skittles and the like. Rattles are hollow balls in terracotta containing a few clay pellets, and sometimes adorned with painted lines in red. Their ball-like shape was noted as simple, and unlike the rattles found elsewhere. They were thought of as toys for children (Mackay 1931a; 1938b).

Since then, new discoveries in regard to gaming remains have been made in the above areas, and new or revised interpretations have been put forward of which only a few, with some relevance to Mohenjo-daro, can be mentioned in this paper. One case concerns further finds of boards displaying the earlier and later outline for the *Game of Twenty Squares*. At the site of Shahr-i Sokhta in Sistan, Iran, a carved wooden board resembling the outline of the board from Ur has been found in a tomb of roughly contemporary date. The coiled body of a snake forms the twenty squares of the board, which was found together with a basket with 27 gaming pieces and four long dice (Finkel 1999; Piperno and Salvatori 1982; 1983) (fig. 9). Other boards with a similar, reptile surface, but in the shape of eagles and scorpions and depicting the later layout of the game board, come from the site of Jiroft in the region of Kerman. They belong to the third and second millennia B. C. and suggest a close link between gaming and divination (Dunn-Vaturi and Schädler 2006). Ritual connections have more recently been considered for other boards of this type as well, such as the game boards from Ur (Becker 2007). What is specifically accentuated in these cases is among other things the burial context of the items. The role of this particular type of board in gaming has however also been further elaborated. Based on the reading of ancient, cuneiform tablets, Finkel suggests details as to the rules of play for the later version of the board, assumed to have functioned as a kind of race game. Its apparent popularity, seen in the great number of boards of the later layout that has subsequently been found as far westwards as Crete and as far northwards as Turkey and dated to the second and first millennia B.C., is also emphasized (Finkel 2007c). In this connection, Finkel conjectures that the fragmentary game board

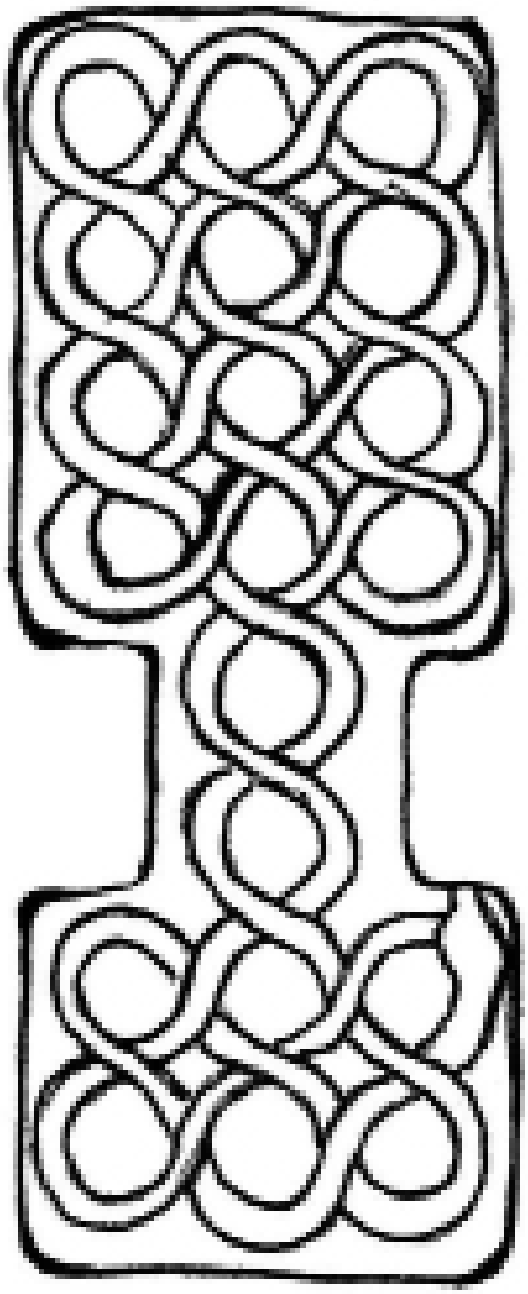


Fig.9: *The outline of the game board found in Shahr-i Sokhta, Sistan, Iran (Schematic Drawing :Anke Jönsson, After: Piperno & Salvatori 1983: fig. 6).*

from Mohenjo-daro displaying a grid may have been of the same family of board layout. Since the types of dice that were found with the boards from Ur, of long and tetrahedral form, were uncommon

in a Mesopotamian context, he proposes a route for the board game from the East, via Iran, to Ur (Finkel 1999). In an earlier article, *Of Dice and Men*, cubical dice from the Indus Valley sites of Mohenjo-daro, Harappa, Alamgirpur and Lothal were in a similar way considered by Dales in light of the few specimens of cubical dice found at Mesopotamian sites, thought to have had an external origin. Dales proposed the items as that kind of "mundane objects" through which questions concerning long-distance contacts and interaction between the two regions could be materially verified (Dales 1968: 23). Dice as part of merchandise displaying the nature and width of exchanges between Western and South Asia has also been stressed in more recent time (e.g. Ratnagar 2004). As concerns game boards, on the other hand, these objects have more recently been stated as on the whole rather seldom found in the Indus Valley (Topsfield 2006b).

It is lastly to be noted that some of the early archaeologists' suggested game classifications have since been doubted, while new ones have been added. The cones with elongated, pointed tops, the stick objects except those interpreted as dice, and some of the subtypes of the gaming pieces are illustrative. The present author has for example been informed that the elongated cones may have been used as gaming pieces meant for a specific type of game board in wood and pierced by holes (the late Rangachar Vasantha, personal communication 2008), and, differently, that the finding context of the cones in Harappa suggest that they have been used as instruments for the construction of buildings (Jonathan Mark Kenoyer, personal communication 2010). On the other hand, pottery discs, made from re-used potsherds and smoothed to a more or less rounded shape, received only little attention in the reports, but have later been noted from many, both Indus Valley- and other sites, and been frequently referred to the realm of play and gaming (e.g. Kenoyer 2000; Rogersdotter 2007, 2008; Rydh 1959) (fig. 10).

In sum, then, although very briefly sketched and mainly based on old sources, a larger, geographic context can be outlined in which the game-related finds from Mohenjo-daro can be situated. The noted

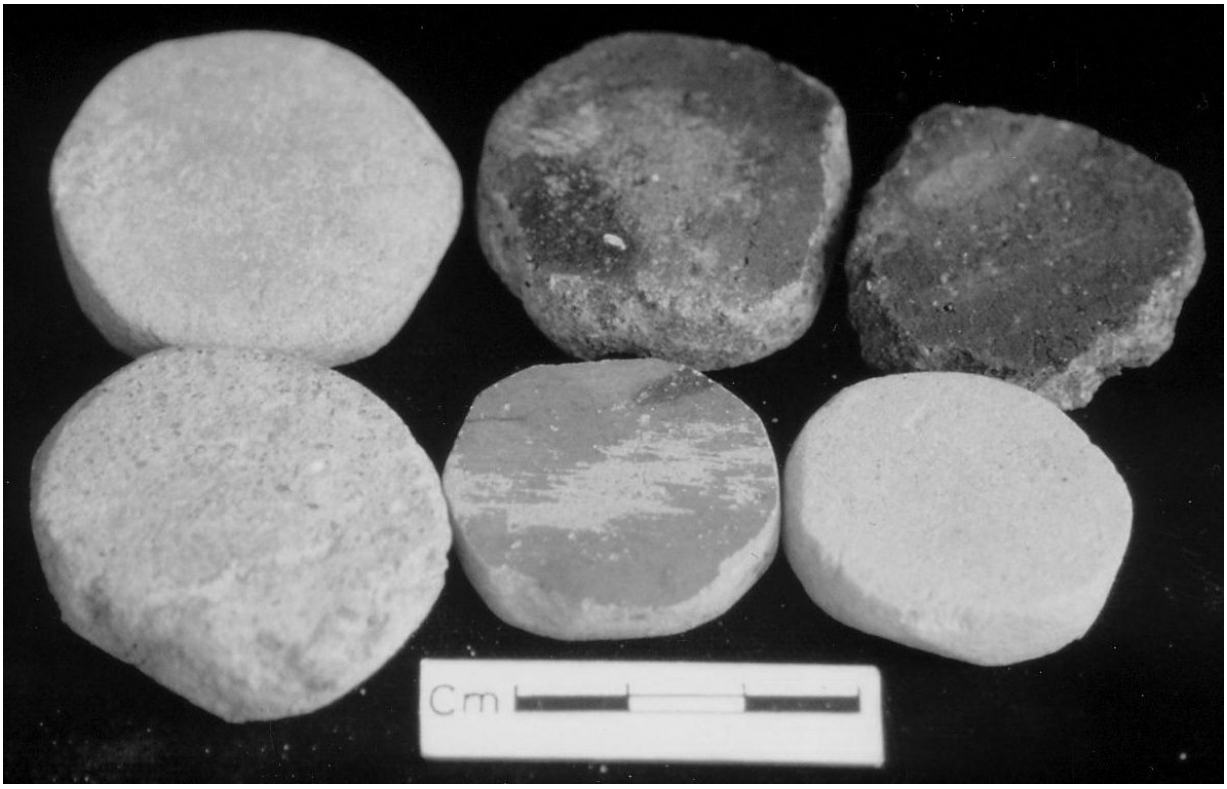


Fig.10: *Smoothed pottery discs, found at the Indus Valley site of Bagasra in Gujarat, India (Photo : E. Rogersdotter).*

similarities and differences display on the one hand irregular features, such as a variety of sub-types and obscure absences of finds, which provide some of the remains an ambiguous character. On the other, unique forms can be suggested to come forward more clearly, at the same time as noteworthy reappearances of items and shapes can be distinguished. A point of significance in this review is naturally the fact that the finds from Mohenjo-daro are found in a settlement context. Since settlements represent the very environment in which gameplay was supposedly realized, the finds are provided a distinctly different, spatial dimension than specimens from burials.



Fig.11: *A lane with mudbrick buildings in the DK-G area, Mohenjo-daro (Photo : E. Rogersdotter).*

Distribution of Gaming Remains: a Spatial Anchoring

The structural remains of Mohenjo-daro have generally been perceived of as consisting of two parts, an 'upper town' and a 'lower town'. The former part has for different reasons been thought of as having served public functions. The mounds of the lower town spread out towards the east. They comprise hundreds of clustered remains of mudbrick buildings in densely built and separated neighbourhoods, intersected by broad, roughly parallel streets and narrow lanes (Jansen 1993; Saeed 1998) (fig. 11).

The comprehensive descriptions of selected finds in the excavation reports include, besides intercultural comparisons, also notes on location and frequency, among other details. However, there is in general little mentioning on temporal or spatial variations of find assemblages. Rather, statements can be found that imply distinctly even distributions: "/.../the minor antiquities at Mohenjo-daro exhibit so little variation in type, that it is hardly possible to discriminate those of one stratum from those of another/…/" (Marshall 1931b: 10). The types grouped as items of gaming are mostly reported as common and to appear more or less everywhere. This is the case for gaming pieces, rattles, cubical dice, stick dice and other stick objects. Balls and marbles are noted as not so numerous, but found at all levels, while stick objects are mentioned to apparently disappear at the end of the period defined as the Late Period (Mackay 1931a; 1938b). Notwithstanding the shortcomings of the written sources, though a more detailed consideration of the spatial distribution described for these objects can be attempted through a more in-depth study of some, selected areas of the site. Here, the DK-C, HR, and DK-G areas will be considered. The approach is based on a previously undertaken, spatial analysis that took use of the data available from the excavation reports and field registers (Rogersdotter 2011).

The DK-C area was excavated in 1924-1925 and again, and on a larger scale, in 1925-1926. The excavations were led by the archaeologist and Sanskrit scholar K. N. Dikshit (Marshall 1931b; Lahiri 2006). It is about 7,800 square metres in size, located in the eastern part of the lower town, and consists of remains of mudbrick buildings separated by a few streets and lanes (Mackay 1931a; Scholz 2005). Concentrating on the find register from the first season of excavation, totally 3,294 entries can be found (Rogersdotter 2011). The recordings are generally of meagre constitution as they in many cases only specify the material of the find or finds in question. This makes it sometimes difficult to determine in detail what kind of object a particular entry is supposed to represent. Entries designating 'cones', for example, can only be broadly defined as representing the types interpreted as gaming pieces. The definition is among other things based on the discovery that one of the entries denotes a find

that subsequently became published in the earlier excavation report, and therefore with certainty can be stated to correspond to one of the sub-types (Mackay 1931a: 558). However, the entries of cones are not possible to decipher in detail, and it is likely that they also refer to the type of cone with elongated, pointed top. Still, and in general, most of the game-related finds listed in the reports can be found in the field register: cubical and stick dice, other stick objects, balls and rattles, a type of gaming piece termed 'chessman' that possibly signifies the type with incurved sides, as well as the gaming piece of tetrahedral shape. In total, the entries sorted out constitute more than 280 finds (for more details on the entries, see Rogersdotter 2011).

The HR area is located in the southern part of the site. Almost 20,000 square metres in size, it constitutes the second largest excavated area (Jansen 1993). The archaeologist H. Hargreaves started excavating parts of this area in 1925-1926 (Marshall 1931b). The field register from these excavations has been published (Jansen and Urban 1985), and therefore provides somewhat easier reading. The entries are furthermore consisting of more standardized terms, while more finds were selected for publication in the reports. The register consists in total of 6,332 entries, of which 552 entries can be found corresponding to the presented gaming remains. Except for game boards and some types of gaming pieces, all of the categories can be recognized for this area.

The DK-G area, situated in the north and encompassing 28,000 square metres, represents the most extensively excavated area, including large-scale deep-digging (Jansen 1993). The excavations were led by Mackay, and were mainly conducted between 1927 and 1931. Game-related objects are most easily searched for through the published, later excavation report, which mainly considers this area (Mackay 1938a). Since the report contains already selected artefacts, a disadvantage is that no 'complete' assemblage of finds can be obtained. On the other hand it provides , very detailed descriptions of the objects, including depictions. In fact, these finds represent to a large part the basis for the game-related type descriptions by Mackay. In total, 331 game-related designations can be found, including the two fragments supposed to be game boards.

The results accordingly indicate that gaming remains appear rather evenly distributed in terms of being found in all of the studied areas. If, however, on the basis of the field registers, relative numbers of game-related types are considered, it can be noted that the DK-C area yields a greater number of dice, stick objects, and gaming pieces of other materials than terracotta and probably with incurved sides, while the HR area displays a relatively larger number of cone-shaped gaming pieces in terracotta. Studying the spatial distribution within each sub-area, further uneven features appear in the seemingly even distribution. Indeed, the information on find location in the field registers and the excavation reports has several limitations due to the old excavation techniques, which refers to relocating both the horizontal and the vertical locations of finds in more detail (for more on this, see e.g. Ardeleanu-Jansen 1985; Ardeleanu-Jansen *et al.* 1983; Jansen 1986). It is nevertheless possible to retrieve some of the spatial data through the available sources.

In the field register for the DK-C area, horizontal orientation was mostly denoted with point coordinates, which allows for almost all gaming remains to become spatially plotted. The results indicate on one hand that the finds were found in most parts of the area, on the other that they were not evenly distributed but mainly appeared in clearly discernible concentrations in distinct localities, each composed of specific types of game objects. This is most clearly seen for the stick dice and other stick objects, which appear markedly close together, and notably separated from the other types. Concentrations with these types of finds appear furthermore differently located than concentrations mainly composed of cones. The vertical orientation system consisted of relative depth measurements, that is to say, measured from the surface and downwards, by which consequently any vertical, comparative studies of finds from different locations cannot be made. However, by sorting the various designations of level of the game-related entries into four different depth intervals of about one metre, a few distinguishing features can be recognized. Among other things, entries that

represent different types are observed to display different and differing numbers of depth intervals. For example, cones and gaming pieces of the type presumed to have incurved sides largely display the same, or similar, point coordinates, thus indicating that the finds originate from the same location. Yet, the specimens of the former type display either the third or the fourth depth interval (which appears to be the case for most entries of this type), while the finds of the latter type are of the first depth interval (which seems typical for most entries of this type).

Find location for artefacts in the HR area was denoted by different kinds of horizontal orientation systems, whereby a number of specimens with undefinable notations have to be omitted from the study. Due to several complexities in the denotations of level, vertical aspects are furthermore not possible to include within the frames of this paper. Spatial features can therefore only be two-dimensionally considered. Among the horizontal denotations there is an area coordinate system that allows for an approximate, spatial relocation of most of the entries. Markedly few finds emerge in the north-western and south-western parts of the western section, while, in the central and eastern parts, a number of grouped concentrations appear. Stick dice and other stick objects turn out to be similarly clustered as in the DK-C area, in localities where few other game-related types are seen.

The spatial distribution of remains from the DK-G area has naturally other kinds of limitations. Any observed patterns become imprecise due to the limited, already selected assemblage of finds. Nonetheless, a similar, spatial disproportion as in the other two areas seems to be indicated for this area as well. Only a small number of gaming remains derive from the south-western and central western parts, while a lot more finds are concentrated to the east, forming distinct concentrations. Again, stick objects appear rather separated in space when compared with the other types of finds. Vertical levels in the DK-G area were established through absolute depth measurements, which accordingly allows for a more thorough study of vertical aspects. A few further, differentiating features can thereby be observed, such as the tendency of stick objects to shift spatial location in horizontal direction (for more on the results and methodological details of the three, spatial considerations, see Rogersdotter 2011).

Thus, from an intra-area perspective and different from established ideas of overall even or static, spatial distributions of the finds, the historical sources at hand indicate a varied distribution of differently composed concentrations. These provide the different types an ordered or repetitive appearance, with few finds left seemingly randomly scattered. The patterning opens for further questions, such as whether the finds themselves, that is, their various forms and appearances, can indicate features of coherence as well.

Materials and Forms of Gaming Remains: An Anchoring in Appearance

Although game-related artefacts were considered as relatively insignificant in comparison to other categories of remains, the reports provide substantial descriptions of the finds as to material, measures, form, pattern and wear. As is obvious, several of the game-related types of finds exhibit great variation in shape and appearance. Gaming pieces, for example, come in many different shapes, material, colour and finish. They range between 0,4-1,95 inches in height, and besides the most common object, the cone with incurved sides, there are round topped cones, pointed cones, straight-sided cones with definite head, regular tetrahedral items, and, in less number, flat triangular, bobbin-shaped, cylindrical, cubical ones and a few other types. The materials include terracotta, faience, shell, ivory, alabaster, and various kinds of stone. Some specimens have been given a slip, or different kinds of ornamentations. The stick dice and other stick objects constitute another illustrative example. Besides displaying different cross-sections, they vary in length between about 2-4 inches and their incisions may include simple, double or triple circles, cross patterns, or lines forming curves or going in a parallel, longitudinal direction. The objects that come with the same pattern on all their sides point at even more variety in shape and ornamentation than the dice. Varied features can

also be seen in the differently arranged, numbered sides of the cubical dice, and in the different, plain or ornamented surfaces given to balls and marbles (Mackay 1931a; 1938b). Several specimens reveal also a markedly elaborate constitution. The linear and circular incisions of the stick objects, which according to Mackay appeared strikingly regular and were probably once filled in with black or red pigment, the carefully smoothed marbles in stone, the exceptionally polished examples of cubical dice, and the mostly well-made gaming pieces, like an example adorned with trefoil ornamentation (Mackay 1931a; 1938b), all imply much effort and skill. By this, then, rather distinct appearances can be noted for a number of finds. When studying each category separately, the varied display may furthermore be put forward as rather structured in appearance, expressed in the possibility to arrange the finds into sub-types, and in the reappearing patterns of ornamentation for particular types, for example. By these features, the different categories of finds can in turn be suggested to become more clearly separated, from each other as well as from other, non-game-related objects. A noticeable observation in this connection is the statement by Mackay that ivory, the most commonly used material for the stick objects, was otherwise rarely used in Mohenjo-daro (Mackay 1931d). The items thus seem to have been made from a rather extraordinary material.

Accordingly, when systematically studying the finds, some degrees of consistency emerge amidst the significant variations, by which a repetitive appearance also can be noted in such things as shape and finish. Taken together, such patterns seem to indicate ambitions of providing these objects rather regular features. It can be added that a majority of the finds show traces of much wear, which mostly tend to be of similar constitutions. One such example is seen in the stick dice, which obviously, through frequent use, have received a bluntly pointed end (Mackay 1931c; 1938b). A consistency in usage seems therefore implied as well, which is further hinted at by the spatial distribution.

Conclusions: Patterning Ancient Gameplay

The common character of a number of the discussed remains, or the lack of complete 'sets' of gaming equipment found during excavation, turns the identification and research of ancient gameplay in Mohenjo-daro ambiguous. As some researchers suggest, some of the defined types may perhaps not have been used in games. Any repetitive patterns of such finds may consequently originate from other, non-game-related activities. Conversely, the significantly provisory character of gameplay may lead to that a number of game-related traces, in the form of potsherds or pebbles or the like, have not been possible to retrieve from the written documents, whereby the material record may likewise have become underestimated. As seen, the first attempt, the anchoring of the finds in a broader, regional context, must navigate through various source critical difficulties. Like the finds from Mohenjo-daro, a number of remains mentioned in the section were for example found many years ago, and several of the examples derive from burial contexts. The observed differences and similarities can at the same time be suggested to hint at certain, region-based regularities. As concerns the spatial consideration, this also, in a first glance, implies a somewhat ambiguous character. From a larger perspective, the distribution may appear rather even. However, by a narrowed approach, distinct differences are indicated, in-between as well as within the three areas. An estimation of the appearance of the objects, lastly, is when taken as a whole also rather difficult to overview. When studied carefully, more structured variation and features of repetitiveness in material and form can be noted though.

The observed, patchy features can naturally be linked to the overall improvisatory character of gameplay. However, against such a background, the identification of coherent elements seems to become the more noteworthy, and may be relevant to consider in light of play- and game theoretical reasoning. In some of these lines of thought, a rather intimate connection is stressed between different kinds of gaming and their specific (social) environment, despite the overall universal character of games. Furthermore, besides the flexibity of gameplay,

a significantly repetitive, almost conservative character of gaming is emphasized by a number of scholars. Specific habits of playing games can for example be noted to be kept for prolonged periods of time, or only change little by little (e.g. Fritz 2004). To attain the necessary 'play experience', it may moreover be important to separate a particular game from the routines of everyday life, by for example using specifically designed objects, or by always playing it in a specific locality, whereby it is provided with a special atmosphere (Csikszentmihalyi and Bennett 1971). The defined, repetitive features of the assemblage in question may thus, in-between factors of uncertainty, imply kinds of gameplay that could not have occurred by chance alone, in environmental isolation, or in unplanned manners, since such, if working at all, would probably have brought about different, more incoherent patterns of spatial distribution or appearance.

There is probably too little evidence to suggest in more specific how the different objects, like the dice or the various gaming remains, were utilized in Mohenjo-daro. It therefore seems more fruitful to approach the remains by use of broader terms, such as reflecting upon their social meaning and significance. The noted, elaborate constitutions or the observed unevenness in spatial distribution, may for example be suggested to signal socially differentiating habits or preferences. Connections between gameplay and social status have been noted by various researchers in the field of traditional games and gaming (cf. Eliade and Adams 1987). Significant parts of the social structure of the Indus Valley realm are on the whole rather elusive and the subject of on-going debate (see Rogersdotter 2011 for an overview). The elusiveness partly follows from such things as notable absences of buildings of decisively religious or monumental character, or 'great', massive finds like large statues. However, an Indus hallmark is in fact the numerous small-sized finds, frequently with elaborate appearances. More recently, this feature has been pointed to as distinctly characteristic for this realm (Ardeleanu-Jansen 2002; Clark 2003; Ratnagar 2001). It has also been suggested that social differences may have been made apparent in differences in access, such as to different kinds of buildings or categories of artefacts (Wright 2010: 234). In line with such thoughts, it could be asked whether there may have existed differences in the access to certain kinds of games, and whether gaming practices may have functioned as social rituals. If so, a further question is whether certain games may have had rather complicated structures. It can be exemplified with the various games involving dice and counters, common throughout the world and frequently consisting of intricate systems of points (cf. Culin 1895; Lönnqvist 1992). May such kinds of gameplay possibly have existed, traceable in for example the stick dice and other stick objects?

A related, yet different point of view is to emphasize the noted degree of wear, the spatial frequency, and the temporal continuity of the finds . The features can be interpreted as signs of successful gaming, that is, of games that managed to survive and stay popular. On these grounds, the remains can alternatively be approached with a more pronounced focus on the gaming for enjoyment and fun. Among the play theoretical ideas outlined by Fritz (2004), two ways of encountering the field of gaming out of this perspective can be found. The first approach emphasizes the different areas of orientation of games; symbols, rules, bodily movements and thought processes, which refer to capabilities such as imagination, bodily control, memorizing, or counting skills. Although all areas must be included in order for a functioning construction of play to take shape, different kinds of play and gaming position themselves differently depending on which area or areas they are being drawn to. The second approach concerns the diverse, yet interplaying 'powers of attraction' that are needed for a particular game to survive. These may range from risk-taking to entertaining, and most games, according to Fritz, consist of combinations of several powers. Thereby, one and the same game can imply different meanings for different individuals, and, so, attract different partakers, from active participants to spectators. Card-playing, chess and domino are well-known, modern day examples of games that are orientated towards several kinds of skills, and usually attract various partakers (fig. 12.). Other, well-established types of games are memory- and guessing games, which particularly require memorizing and counting skills. According to Pusch (2007), guessing games constitute a category of games popular to many

societies around the world. Broadly speaking, these concern the hiding and the subsequent detection of a specific object and appear in many variants. Among the Dogon in Mali, for example, a complex guessing game exists that is known as *Sey*. One of the players may let a stone secretly slip between the fingers and into one of several small holes dug in the sand for example, while at the same time covering the holes with sand again. In finding out in which hole the stone has landed, the opponent needs sharp observation skills and, in most cases, may use the assistance of engaged spectators (e.g. Grunfeld *et al.* 1978). In a group of guessing games reported by Culin to have traditionally been played by North American tribes, sticks were used that were made of wood or cane and ornamented in different patterns. A bundle of sticks was divided and partly concealed in the hands of one of the players. The opponent had to guess in which hand one particular, oddly marked stick was hidden, or in which hand an odd number of sticks were held. The game demanded a 'quick eye' and the ability to count fast, and it tended to gather large numbers of spectators, sometimes the whole village (Culin 1993).

Although the way the North American sticks were patterned bears some noteworthy similarities to the stick objects from Mohenjo-daro, it is naturally far-fetched to state that the latter therefore specifically would represent the playing of guessing games. However, the point is that the uneven, yet repetitive, spatial distribution hinted at by the studied objects, with this hypothesis, can be interpreted as the visible remains of deeply embedded, habitual gaming



Fig.12: *Gaming may frequently attract both participants and spectators, like in this game of domino in Beijing, China (Photo: Roger Jönsson).*

practices, which managed to maintain excitement through certain, required skills and specific kinds of attraction, and were perhaps played out in distinct localities that may not necessarily have conformed to established, societal or habitation-related divisions. As is indicated by the studied remains, such practices may have changed in later time, or even, ultimately, vanished, as may for example be indicated by the possible disappearance of the stick objects. If so, such shifts may not only mirror changeable preferences in games to play or kinds of game utensils, but more fundamental changes of whole 'worlds of play', in turn reflecting more deep-going, social alterations. The distinguished, patchy and coherent patterns would with this reasoning imply a distinct, social sensitivity, indicating a close link between the particularities of the finds and their specific environment; the urban settlement of Mohenjo-daro. While interpreted as game utensils, the remains would turn into signs of social and societal character, such as people's habitual movements in and use of space.

The proposed connection to the specific, social environment may become more clearly distinguished and perhaps also appear of greater significance when approached from a broader, interregional perspective. Since the finds with this kind of reasoning do not primarily appear as more or less passive consequences of societal structures and modifications, but as the remains of socially loaded practices that would have been actively involved in the maintenance and reshaping of such phenomena, a more thorough review of the interregional comparisons made by Mackay, by use of modern, more source-critical methods and techniques, seems a promising theme for further research. Somewhat paradoxically, the study of gameplay would thereby have the potential to consider different, intercultural inquiries, for example regarding long-distance influences, from markedly intra-focused perspectives.

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