What’s Left of Games are Boards Alone: on Form, Incidence, and Variability of Engraved Game Boards at Vijayanagara (c. AD 1350-1565)

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Abstract: Ancient remains of game boards have been relatively little researched in archaeology. A common view holds that such finds represent somewhat periphery, less informative artefacts. Another established tendency is to approach them out of classificatory, game-typological aims. This paper argues that both perspectives have isolating effects on the finds, thereby making the field archaeologically difficult to access. Based on a study of engraved game boards documented at the site of the ancient city of Vijayanagara (c. AD 1350-1565), this paper offers a more empirically grounded path by, rather than identifying the boards as games, focusing on them as primarily archaeological objects with distinctly archaeological attributes. This has made visible some distinguishing traits, which may not have been as easily detected with a game classificatory approach.

Keywords: South India, Vijayanagara, Game Boards, Gaming Remains, Rock Engravings, Ancient Play, Karnataka

Introduction

Ancient game boards engraved in rock and stone appear in different places around the world (eg. Schädler 1995; Shimizu & Miyahara 2002; Simpson 2007; Uberti 2012; de Voogt 2012). On the Indian subcontinent, such engravings are relatively common and found in various places. Notes on incised boards were sometimes included in the works of scholars undertaking historical and ethnographical studies on Indian board games already in the beginning of the twentieth century (for a collection of such works, see Ray & Ghosh 1999). Particularly large numbers of engraved board diagrams appear at the site of the ancient city of Vijayanagara (eg. Vasantha 2003; Fritz & Gibson 2007).

However, the study of engraved game boards or of ancient game play in general has traditionally gained relatively little attention in archaeological research (cf. Hillbom 2005; Rogersdotter 2011; Widura 2015). In excavation reports and research papers, game-related finds may have been mentioned in passing, or alternatively been used to illustrate other, non-game-related dimensions in the past, for example as signifiers of
specific cultures, indicators of long-distance contacts, or markers of social status (eg. Mackay 1931; Dales 1968; Schlüter 1970), while their significance as objects for game play has largely been ignored. Why is that so? Obviously, this may be due to several reasons and be explained in different ways. Finds of gaming have among other artifact finds tended to been seen as traces of more or less ‘useless’ pastime activities, without any significant value from an informational point of view (eg. Schädler 2007). Also, although board games in pre-modern times are known to have largely belonged to the world of adults, game utensils have nonetheless often been “…lumped together with children’s toys with the implicit conclusion that they are all somewhat ‘childish’ or at least the domain of children” (Finkel 2007: 1). A third reason for the disregard can be seen in the everyday-like character commonly ascribed to these kinds of finds. The ‘ordinary’ being a comparably low-esteemed area of research in established archaeology, remains such as these may be easily overlooked, among others by ambitions to establish larger overarching categories (Gero 2007).

In contrast to these views are those found within board games studies, where finds of gaming are placed in center of the research. In this field, much focus has been on the subject of classification, which still remains an important issue (Finkel 2007). Other questions gaining much attention are those on origin and transmission (eg. Digby 2006), and on understanding how particular ancient board games may have been played (eg. Hoerth 2007; Kendall 2007). Specialized research on specific board games or groups of games is also frequently found. Hence, in general, rather object-centered views have dominated this field.

In the first case, while rated secondary and ignored, the finds tend to be perceived as homogenous groups of artefacts, indifferent in shape and externally detached from the dynamics of ‘real’ life. In the second case, the individually presented find may appear as a solitary and isolated phenomenon, thereby becoming as alienated and derived of any dynamics as in the first case. Hence, a further reason for the scarcity of board game research in archaeology may be seen in the established standpoints themselves, in which the objects of study are made distant and obscure. By closer examination, this creation of distance and obscurity can be noted to incorporate some characteristic and recurrent traits of problematic constitution for the accomplishment of archaeologically adequate research. A first trait can be suggested in a commonly seen tendency to identify and catalogue ancient game utensils in terms of games, and often by simplified analogy with modern classifications of game types or modern conceptions of what constitutes ‘traditional’ games. This mix-up of game materials and games may lead to flattened views of past processes of game play and game histories. It can also lend one’s approach an unprofessional air as it ignores the archaeologically conditional distinction between what remains to be studied and what has actually disappeared. A second trait can be noted in common ways of presenting game-related finds with little regard to internal frequency or variability. This trait can be presumed largely as following from the first one, since the aim of categorizing game artefacts according to established game types may make it more important to identify the presence of these
types at a given site than noting interrelated features of the actual finds at hand. This tendency becomes particularly aggravating when game-related finds are depicted individually as it creates a distorted image of the overall pattern of gaming remains in a given context. A third trait, probably also resulting to a significant part from the first one, can be identified in general relatively, is little attention given to find context. As concerns the first of the two standpoints, gaming remains tend to be curtained behind broader frameworks intended to define larger and more formal structures and functions. In accordance, information on the context of game-related finds may either be absent or consist of rather general notes, for example that the finds are found in this or that particular area or building complex without providing exact contexts. The second, object-centered standpoint also shows little interest for the find-spot of the remains and for considering them in relation to other game-related objects in their immediate surroundings. A fourth trait, lastly, can be summoned from recurrent statements as to the futility and impossibility to provide spatial and chronological frames for these kinds of finds. As such statements seem often to take the form of presuppositions rather than appearing as results from thorough investigations into this subject, they may be thought of as considerably linked to the previous traits. On the one hand, the uniform, anonymized groups of game-related finds necessarily come to mirror static and timeless activities. On the other hand, the individually presented game objects become as inevitably impossible to anchor spatially and temporally.

Aims and Method
How can this distance be reduced and these types of finds become scientifically more accessible? Starting from these questions, this paper tries to find ways of circumventing the deadlock and integrating remains of game play more successfully into archaeological research. For this purpose, remains of engraved game boards at the site of the late medieval city of Vijayanagara in present-day Karnataka will be used as case study.

Out of this paper’s framework, the above described impediments and their consequences can be summoned as follows: gaming remains become uprooted from their archaeological ground, after which they become difficult to meaningfully identify within contexts of ancient game play. In consequence, game play as such will appear without space and meaning in larger non-game-specified connections. Thus the problematic approach is seen to be gradually built up and as originating from the ways the remains are encountered as archaeological objects. The problematics can hence be emphasized as basically archaeological in constitution. What, then, is happening in these encounters and how can that be analyzed by more explicitly archaeological terminology?

Chippindale, in the wake of the Post-processual school of work, argued against the idea of approaching artefacts in the manner of texts, emphasizing that “[a]rchaeology is its own subject, with its own, largely artifactual world to study” (Chippindale 1992: 273). He maintains that while texts and artefacts are different things, with a different
genesis and basis of study, one cannot read the meaning off artefacts just as one would do with texts. Artefacts, Chippindale asserts, concern shape, which is central for archaeology’s inverted way of work. He reminds us that while studies of contemporary things or the designing of objects in present time are always informed and formed by their social context, by ascribed meanings or intended functions, there will be nothing left of this kind in archaeology but the artefacts. Since inferences therefore must be drawn in the opposite direction, from the artifact to society, form and not meaning is what needs to be studied. Such a focus, termed by Chippindale as formal, is concerned with the study of regularities and variability in shape and so is archaeologically secured in empirical evidence. An informed approach, on the other hand, which equalizes artefacts with texts and thereby ignores the artifactual aspect, is lacking in this archaeological anchorage. The ‘meaning’ thus obtained will consequently acquire an archaeologically uncertain structure. It will be built on presumed knowledge and refer to what people thought of or intended to do with their objects, by which they may become rather universal or superficial in content (Chippindale 1992).

Transferring this reasoning to our subject, the ordering of game utensils according to established types of games and the labelling of themes if they were games can be understood as a representation of the text-oriented or informed approach as outlined by Chippindale. Admittedly, games are not the same as texts. However, this ordering and labelling tend mainly to be based on written sources, among them ethnographical works, historical records, and catalogues on traditional games. This tendency can be presumed to result from the general and recurrent dominance of text over material evidence, a frequent issue of discussion in historical archaeology (cf. Moreland 2001). Another cause can be seen in the fact that many studies on old games and game materials have been carried out by other disciplines than archaeology, mainly history and ethnography. Certainly, textual sources cannot be dismissed from archaeological work on game-related artefacts; on the contrary, they often prove vital for the strenuous work of piecing together past gaming practices. The crux of the matter is what this kind of text-based ordering entails archaeologically. To use Chippindale’s terminology, by way of ‘reading off’ the game artefacts according to what established game types they can be grouped into, one would obviously ignore the artifactual aspect. Whether the game identifications would be right or wrong, the artifacts would be robbed of their particular archaeological anchorage, insofar as attributes such as form, frequency, internal variation, and find-location would not be paid any particular attention. Hence what is at stake is not that game artefacts and games would have nothing to do with each other, but rather that they represent different things, with different methodological requirements, and therefore need to be analytically separated in order not to let the archaeological aspect be obscured by the textually informed one. For with this view, the ordering based on game classifications will doubtless have archaeologically perceptible consequences. The classified, yet unsecured artefacts will introduce elements of uncertainty into one’s work. Dislocated and deprived of their attributes, they will become difficult to trace spatially, temporally, and socially. Their
'meanings' will be equated with their game identifications and hence primarily refer to what games they were intended for or imply that people played games in the past. Thereby, they may end up appearing quite self-explanatory, superfluous or poor in archaeological information.

The formal method as outlined by Chippindale (1992) has a strong emphasis on geometries and grammar and is beyond the scope of this paper. However, it stresses certain points of methodological interest. The purpose of the study of form as Chippindale formulates it is to explore significant variability, which concerns those distinguishing characteristics which can provide information about the generation and use of the artifacts under study. The point lies hence not in the characteristics as such, but in the inferences that can be drawn from them as to the past life of the artefacts and past societal settings. A study of form is furthermore systematic, and leads among others to an emphasis on the particular in shape. The exploration of variation within specific classes of forms is also highlighted, by which the nature of similarities and differences can be analyzed more deeply, and ranges of possibilities can be outlined and compared with those that were actually chosen. Through such detailed aspects, the artifactual can be consistently centered on, and social consequences be studied from there, that is to say, be explored as following from the artefact form rather than from ‘...any dynamic internal to the society’ (Chippindale 1992: 262). This provides a clearly gradual procedure of work, where, in short, a descriptive study of the characteristics of form lies beneath and paves the way for a subsequent investigation of inferences (Chippindale 1992).

Here, these points can be viewed as lodestars and afford a tool for approaching the findings throughout from the artifactual view. The analysis becomes grounded in empirical evidence and can be carried through within an explicitly archaeological context. This will create more solid opportunities for subsequent, contextual and social interpretations. In accordance with this, this paper suggests that questions such as what games people played on the game boards at Vijayanagara, or what social interactions may have developed from the playing of games on them, or what roles they played in the urban context in which they were created, may be more properly addressed by a preceding, descriptive study in the way Chippindale advocates. A systematic mapping of artifactual details of the boards, which would also involve a methodological (temporary) separation of the boards from the possible games that may or may not have been played on them, may uncover a supposedly rich material basis from which to subsequently proceed in various more interpretative directions. This paper will constitute such an initial descriptive stage of work. Keeping in-between the established standpoints presented above, it will on one hand leave the larger context out of consideration, on the other hand undertake a broader, systematic exploration of the boards. Centered on form, it will focus on the variables of layout, frequency, and internal variation in design with the aim of defining regularities and distinguishing features of the boards. The purpose is hence not to elucidate what in board games the boards were intended for, but to outline an archaeologically reliable setting of game
boards. As this makes it possible to approach the boards analytically as independent objects, the study strives to provide for explorations of meaning and function at deeper and more empirically based levels. Perhaps somewhat paradoxically, then, by keeping the boards apart from the board games, the study may open for a more tangible contextualization of the boards in board game-play, and a more perceptible way of locating them spatially and temporally.

The material basis of the study stems from a field documentation of the game boards undertaken by the author at the site of Vijayanagara. The site and material is suitable for the aims due to the large number and variety of game boards found, and also because common ways of handling them are illustrative of some of the above presented problematical traits. For example, as elsewhere, the boards have usually tended to be presented according to established game classifications. The study will start from these classifications, after which it will proceed to analyze layout, frequency, and internal variation of the boards. A concluding section will summarize the results and suggest some ways in which these can be used for further explorations.

Characteristics of the City of Vijayanagara

The ancient city of Vijayanagara, today constituting a well-known archaeological site also known as Hampi in central Karnataka, was built in a geologically outstanding setting of boulders and steep hills of granite on the southern bank of the Tungabhadra River. It emerged around 1350 and became the capital of the South Indian Hindu Empire known as Vijayanagara, which during its peak in the early sixteenth century covered the whole of South India. At its height, the city is estimated to have had between a quarter and half a million inhabitants, representing one of the largest cities of the world at the time. Serving as a seat of royal manifestations, it was endowed with royal palaces, richly decorated temple complexes and large bazaar areas. It also constituted an important pilgrimage center, a hub for trade and commerce, and a military stronghold, and was protected by massive fortifications that took advantage of the natural rocky surroundings (Fig. 1). However, in 1565, after having lost a battle against an alliance of the Deccan sultans, the city was captured, burnt down, and subsequently abandoned (eg. Sewell 2006 [1900]; Frobenius 2011 [1930]; Venkata Ratnam 1972; Fritz 1986; Stein 1993; Wagoner 1996; Verghese 2000; Fritz & Michell 2001; Sinopoli & Morrison 2007; Mack 2010; Verghese & Dallapiccola 2011; Brubaker 2015).

The site has been the focus of intensive research by programs such as the “Vijayanagara Research Project” (VRP), which has conducted a large-scale mapping project of the 25km² core of the city with the aim to systematize all kinds of visible remains. In this connection, the site has been divided into broad zones that correspond with the types of structural remains and former divisions of the city, such as the sacred center, the royal center, and the urban core. Besides large structures like temples and palaces, the mapping has included all kinds of surface features such as smaller shrines and inscriptions (eg. Fritz et al. 1984; Michell 1990; See also Verghese & Dallapiccola
Among these features are large numbers of engraved game boards, which were also included in the survey. However, due to the large scope and general character of the documentation project, and the rather unexpected appearance of that many game boards in the field, the boards were not consistently systematized nor recorded in full. A subsequent field study covering the core area of the site (including both structures and the natural landscape) was therefore later undertaken by the author within the frames of the VRP project and by the invitation of Dr John M. Fritz, to continue the systematic documentation of the boards. The work also consisted of the documentation of previously noted but not identified boards, and the localization and identification of previously unknown boards, partly in areas not surveyed by the mapping project. Special concern was given to context and formal variation. The game boards appear in the shape of non-portable engravings and can be found both in solid rock and in various structural foundations. They have been etched or pecked into the ground in the form of either lines or pits and display different kinds of board diagrams.

Figure 1: A glimpse of Vijayanagara: the rocky hills and broken ground adjoining one of the ruined temples at the site, the Tiruvengalanatha or Achyutaraya’s temple (photo by the author).

Previous Works on Game Boards at Vijayanagara
Occasional notes on the presence of game boards can be found in connection with, the extensive works on the architecture of the site (eg, Fritz et al. 1984), and in studies on
other archaeological data such as ceramics and grinding stones (Mack 2010). But significantly little attention has been given to the game boards in specific. Depictions of two game boards from Vijayanagara, one made up of lined squares and the other of pits, are referenced in an article by Marin (1942) on the development of race games, with a particular focus on a type found as incised diagrams at sites in southern India (the depictions are reproduced, albeit not fully accurately, by Murray [1952: 140 A and F]). One particular race game board, reported as of unique form, is also included in an article on rock-cut features at Vijayanagara (Smith 1999). Sadanandan (1963-64) wrote the first article devoted entirely to the game boards at Vijayanagara, illustrated with line drawings of selected boards. In a further article, Vasantha(2003) provides a systematic presentation of the types of boards found at the site, grouped according to game class. Each section also includes examples of find location, local names of corresponding games, rules of play, and notes on social groups traditionally playing the games. Photographed examples illustrate the types. Fritz and Gibson (2007), in a preliminary report based on the results of the large-scale mapping of the site, provide summaries on find context and distribution of boards and board types. The latter are identified in terms of types of games, and illustrated with line drawings of selected boards. Preliminary results from the subsequent field documentation directed specifically towards the game boards is also given by Rogersdotter (2010). Besides presenting board types, the paper informs about the working process of the documentation and some of the contextual and distributional patterns of the boards. Board types and find locations are exemplified in photographs (more recently, game boards from Vijayanagara has also been used in connection with a paper discussing relations between archaeology and creation; Rogersdotter 2014).

As noted, a recurrent feature in the mentioned works is a typological organization of the boards according to game types. With some variation, this ordering rests on a well-established categorization of board games developed by Murray (1952), who aimed to develop a universally applicable system of classification according to five main classes. It was based on his idea that games represent early activities of humans, such as hunting, battling, and arrangement. The categorization rests on differences in movement, ways of capture, and so on, and constitutes five main classes: games of alignment and configuration (eg. Noughts and Crosses; Nine Men’s Morris); hunt games (eg. Tiger and Cows; Fox and Geese); war games (eg. Chess; Draughts; Go); race games (eg. Pachisi; The Game of Goose); and mancala games (eg. Wari; Pallanguli). It represents a widely accepted system within board games studies, albeit it has also been critically revised and critiqued among others for being inadequate (eg. Bell 1979; de Voogt 1995; Parlett 1999). It has also established itself as a convenient way of structuring and making sense of past remains of game boards. Hence, by following this classification, it can be shown that all of the established categories of games are represented at Vijayanagara, demonstrating great variability of board games at the site (e.g. Vasantha 2003; Fritz & Gibson 2007; Rogersdotter 2010). However, the system also provides some dilemmas. For one, there is no absolute correspondence between different types of board games and different types of boards; one and the same type of
board may for example be used for more than one type of game and vice versa, or identical types of boards may be differently used in different parts of the world. As to ancient boards, the ordering becomes more misleading since there is no (archaeological) way of knowing for certain what game or games a particular board was used for. Furthermore, by describing the boards as if they were games, they become implicitly interpreted in terms of modern or what is commonly referred to as ‘traditional’ games (which usually denote games that are known to have been played until recently or may still be played today). Thereby, the time gap that may exist between the games and the actual boards is paid no attention to as a subject of concern.

Secondly, since the primary task becomes the portraying of board types that are representative of the established classes, this kind of game-related typological outline may also become confusing or misleading. Among the categories of types listed in the above works or types chosen for illustration, some types appear that may be typical of certain game categories or exemplify well-known and traditionally highly esteemed games, at the same time as they are obviously rare at Vijayanagara and thus in reality are not particularly characteristic. One example refers to a type of board commonly identified as a Pachisi board, which, despite being rarely seen at the site (Fritz & Gibson 2007), is repeatedly referred to and included among board types selected for illustration (e.g. Sadanandan 1963-64; Vasantha 2003; Fritz & Gibson 2007). Presenting distinct types in schematically identical ways or illustrating them side by side regardless of whether they are common or not, give a misleading impression of equivalency as to presence and representability of board types. Questions on differences in frequency have on the whole been relatively little attended to in the above mentioned works or have at least not constituted the main topic. The concern for identifying types corresponding to main game categories appears further to have led to that relatively little emphasis has been put on investigating internal variations in layout. On these points, therefore, the accounts become somewhat unclear. For example, are the two types that are sorted by Vasantha (2003) as games of alignment (a board consisting of a 2x2 grid and another board known as a larger merels board) found with equal frequency? And do the two different variants of mancala boards that appear at the site – noted as sometimes equipped with trays and sometimes not (e.g. Sadanandan 1963-64; Fritz & Gibson 2007) – differ in number? Furthermore, are the varying shapes of triangular boards, commonly ascribed to leopard-type games (e.g. Fritz and Gibson 2007) and depicted with differing numbers of intersecting lines and/or with rectangular or square extensions, equally common in the area?

When taken together, the illustrations of boards that accompany the works would seem to point at a few inconsistencies. The specimens chosen to typify the noted, larger merels board can for example be seen to slightly differ in design in different works (e.g. Sadanandan 1963-64; Fritz & Gibson 2007; Rogersdotter 2010). Are thus all of them equally representative? Or may one or the other have been chosen exactly because of some anomaly in form? Other depictions implicitly hint at considerable variability in outline. Such is the case with a type of board commonly referred to as a single-track
The totality of illustrations of this type in Marin (1942), Sadanandan (1963-64), and Smith (1999), for example, provides a rather bewildering image of a kind of board that would have seemed to be formed into just any meandering shape, with differing numbers of squares, with or without cross-marks, or other features (Fig. 2). Is that so, or may some kind of repetitive features be hidden under the disparateness as well? Another board, commonly known as being of the alquerque-type and grouped as a hunt game, is depicted differently and with different numbers and kinds of variations in different works. The three exemplars illustrated in Fritz and Gibson (2007) differ from the two versions of the board in Sadanandan (1963-64), and are distinguished from each other by a decreasing number of features characteristic of this board. Do all of these variants appear at the site? It can further be asked whether there may be other significant varieties or other types of boards present at the site that for some reason have not been mentioned. The question seems reasonable since, except for Fritz and Gibson (2007) and Rogersdotter (2010), the works are not based on systematic explorations.

The typological descriptions also allow little space for concerns about find context, spatial distribution, and temporal issues. The available information is of a rather wide-ranging, general kind. Among others, some typical common features regarding find location are accounted for, and the distribution of boards in relation to the established zones of the city is outlined. Notes on chronology also appear, in which it is suggested that the majority of boards may belong to the lifetime of the city, on the basis of patterns of consistency seen in variables such as type of board, type of find location, and manner of engraving (Fritz & Gibson 2007; Rogersdotter 2010). The relatively short and broad character of these descriptions may lend the impression of a somewhat indifferent and uniform contextual picture overall. One reason for this vagueness may naturally lie in the meager attention given to these issues in comparison to the identification of board game-types. But it can also be asked whether the search for game typologies in itself, and the lack of importance this involves as to detailed studies of form and internal variation, may play a part– a spatial patterning may not become anything more than sweeping if the boards that are to be patterned are not more than generally depicted. May it hence be presumed that a study of artifactual aspects can constitute a way into more deepened explorations of the spatial and temporal domains as well?

The Assemblage of Boards – A General Description

The systematic recording and documentation of the engraved game boards at Vijayanagara, conducted more generally during the VRP mapping project and more specifically in the subsequent field documentation by the author, have shown a total number of 965 boards within the core area. This study will concern an assemblage of 580 boards (boards of clearly modern date, such as found scratched into modern concrete, are not included in this group), which were documented in the field by the author and of which there exists particularly extensive information in the form of photographs, drawings/rubbings, measurements, and detailed notes relating to
Figure 2: The four versions of single-track race games illustrated by Sadanandan (1963-64) (redrawn by the author, from Sadanandan1963-64: Figs. 1-3, 8)
variables such as layout, special features, kind of engraving, wear, immediate environment, exposure, visibility, adjacency of other boards, and further. Among these boards are 177 previously unknown boards that were found and identified by the author.

The boards are generally found in situ, with only a few exemplars being engraved in stone blocks that have apparently been removed from their original locations. With one or two exceptions, the boards are horizontally laid out (sometimes on sloping surfaces; the point here is that the boards are not found in vertical positions), and almost always appear in places with opportunities to sit, technically speaking (in a few cases, boards are found in spots with very low ceiling heights, hidden under boulders and only reachable by lying down). On the basis of consistency in location and an overall absence of ‘odd’ placement, boards found in cut stone slabs in connection with structures seem generally not to indicate the possibility of having been incised ‘previously’, into the natural rock from which the slab was once cut. Rather, they appear to have been made after the slab was shaped and put in position. In contrast, some boards found inside buildings like small temples and shrines lacking particular flooring may, due to being rather awkwardly positioned (such as partly hidden under a wall or a pillar), be presumed to have been engraved into the rock before the building in question was erected thereupon. The boards originate from all over the studied area, including all of the established zones among which they are rather evenly distributed. They are found in various places, including the rugged and steep, boulder-strewn terrain and the stone basements of different ruined buildings. They are generally not dispersed one by one but tend to form concentrations. These may be small – consisting of two or three boards – or be much larger, counting up to fifteen boards or occasionally more, and may consist of different types of boards. The boards display great variety in size and come in different states of wear. Some exemplars are very well-preserved; others are more faded in appearance.

Forms of Boards
This section will follow an outline that starts with grouping the boards of the assemblage in line with the conventional typology and game classifications seen in the above mentioned works. Each type will be individually approached. Out of practicality, the established standards of designating the types will largely be kept. If it is customary to refer to a particular type with a specific name, such as ‘the larger merels board’, the type will be labelled as such. If not, the type will be designated in terms of its layout. Short briefings will introduce the respective types and associated games in more general terms, after which the corresponding actual boards will be detailed as to number, layout, and internal variation. For the larger groups of boards, internal variation will be outlined with the view of identifying possible standard types, sub-types, and unique variants, and also to schematize the generation of variations. The sorting of the types according to game category will mainly be based on the categorization that is found in the work by Vasantha (2003), but the terminology and categorization of Fritz and Gibson (2007) will also be referred to. The terms used for
defining the layouts of boards will partly be borrowed from the working typology by Finkel (2011).

Games of Alignment and Configuration
The aim of these games is to align a given number of one’s pieces into a line by placement and/or rearrangement according to the squares or intersections of the board, while at the same time preventing the opponent’s pieces to form lines by blocking them (Murray 1952). At Vijayanagara, two types of boards can be found grouped into this category:

The larger merels board (sorted into games of alignment by Vasantha and by Fritz and Gibson; the term ‘larger merels’ is from Fritz and Gibson). This square-formed board is also labelled a triple mill board (Parlett 1999). It is widely known and associated with the family of Merels games or ‘three-in-a-line’ games (e.g. Berger 2004; Uberti 2012). The version played on this board has many names, among them Larger Merels/Nine Men’s Morris. In Kannada it is known as Paggada ata/Sett ata (Kulirani & Vijayendra 2011). It is played with nine pieces each on the twenty-four intersections or points. Besides the forming of lines, the game also includes the removal of the opponent’s pieces (Murray 1952), but it exists in many versions (see e.g. Parker 1982 [1909]). The board is principally possible to use for other types of games as well, like blockading games (Parlett 1999).5

The total number of larger merels boards in the assemblage is 103. The basic layout consists of three concentric squares with lines intersecting the first two squares on each side of the board. 69 boards display this pattern. 18 boards are of the same layout but have a central point added to the innermost square. In 3 boards, which are also of the same layout, the four intersecting lines are seen to proceed into the innermost square. Among the remaining boards, 5 boards have unique features. One of these boards has a different form with triangular additions.6 The other ones show smaller modulations such as extensions of particular lines or a lack of some characteristic feature. 8 boards are too indistinct to be further detailed. The noted variations in form allow for a sorting of the boards into a standard type, consisting of those with the basic layout and making up 73% of the total of boards possible to categorize (95); a sub-type defined by the boards with a central point (18%); and a unique type comprising the specimens with crossed central squares (3%) (Fig.3). The sub-type and unique type can be described as generated by means of addition to the standard theme, either by adding extra features (the central point) or by reduplicating existing features (the intersected square).

The 2x2 board (sorted into games of alignment by Vasantha). This square-formed board is defined by Vasantha (2003) as Mooru mane ata, a local name of an alignment-type of game. According to her description, this board would similarly be associated with the Merels games, representing a smaller, also well-known version played by three pieces each on the nine intersections (e.g. Murray 1952; Berger 2004; it is among
others known as a single mill board [Parlett 1999]). The same type of game is also reported from Tamilnadu (Balambal 2005). Gupta (1926), however, described a different game for the board, *Tre-guti*, of a hunting character and noted by him in Punjab.

![Figure 3: The larger merels board diagram according to defined standard type (left), sub-type (center), and unique type (right)](image)

The total number of 2 x 2 boards in the assemblage is 2 (a few more boards were found which were clearly modern). Both boards display a plain 2 x 2 grid. No variations can be noted. Some boards that at first sight seemed to represent this layout, were by a closer look found to be parts of other, now very faint, board-diagrams such as alquerque-type boards (see below) or single-track boards.

**Hunt games**

The aim for one of the players of these games, having a fewer number of pieces than the other player, is to capture the opponent’s pieces by leaps. The aim for the other player, with a larger number of pieces, is to corner and immobilize the opponent’s pieces (Murray 1952). At Vijayanagara, three types of boards can be found grouped into this category:

*The alquerque-type board* (sorted into hunt games by Vasantha and into hunt games/war games by Fritz and Gibson; the term ‘alquerque-type’ is borrowed from Fritz and Gibson). This square-formed board is well known and exists in many versions. In its standard form it is also termed quadruple mill board (Parlett 1999). The name Alquerque refers to a war game family, but in South- and Southeast Asia, the board is also widely used for hunt games, sometimes referred to as Asian Tiger Games (Parlett 1999). These games are mostly played on this kind of board or on triangular types of boards. This board may often have small triangles attached to its sides, of which the most commonly found version in India is one with two triangles (Finkel 2006). Several types of hunt games played on different versions of the board have been noted both from India, Sri Lanka and Nepal (e.g. Parker 1982 [1909]; Gupta 1924, 1926; Averbakh 1995). In southern Karnataka, a board with four triangles is used for the game *Huli-kavilemaneata*, which is played with two ‘tigers’ and twenty-four ‘cows’ on the 49 points (Kulirani & Vijayendra 2011). War games are also played on the board; for example, as noted from Gujarat (SonI & Bagchi 2011), Mewar (Samanta 2011), and Sri Lanka (Parker 1982 [1909]).
The total number of alquerque-type boards in the assemblage is 75. The basic layout consists of a 4 x 4 grid in which each of the four squares is diagonally bisected. Four horizontally and vertically bisected triangles are attached to the outer sides. 51 boards display this pattern. 9 boards display a variation of this layout in which the triangles are of a curved form. Among the remaining boards, 5 boards have unique features. Two of these boards have other and individually different forms, such as in one case an enlarged layout. The other ones show smaller modulations or a lack of some characteristic feature. 10 boards are too indistinct to be further detailed. Besides the two mentioned variations in layout, no further recurrent variant were found during documentation. In contrast, it was noted that a number of boards due to their faint outlines were only seemingly displaying other variants. By closer examination, most of these boards could in fact be identified as belonging to either one of the two noted variations. Others could not be identified due to heavy wear. The defined variations can be sorted into a standard-type, constituted by the boards of the basic layout and accounting for 79% of the totality of boards possible to categorize (65); and a sub-type comprising the boards with curved triangles (14%) (Figs. 4 and 5). The sub-type can be described as generated by means of variation to the standard theme (re-shaping the triangles).

Figure 4: The alquerque-type board diagram according to defined standard type (left) and sub-type (right)

The triangular board (sorted into hunt games by Vasantha and by Fritz and Gibson). This triangular-formed board is commonly associated with Asian hunt games as noted above. The games played on these boards were grouped as Leopard games by Murray (1952). Both games and boards appear in many versions; the latter may be internally subdivided, while many others are both subdivided and have extra areas added to them. These areas may constitute circles or squares attached to the point, or appear as extensions on the sloping sides of the triangle, by which the triangle appears to be overlaid with a crossing rectangle (e.g. Finkel 2006). One example, known in Karnataka
as *Ane-nayiata*, is played with three ‘elephant’ pieces and thirteen ‘dog’ pieces on the 19 points of a board with a rectangular extension (Kulirani & Vijayendra 2011). In contrast, the game *Hat Diviyan Keliya* in Sri Lanka was noted by Parker (1982[1909]) to be played with one ‘tiger’ and seven ‘leopards’ on aboard only internally divided, by one vertical and two horizontal cross-lines.

![Figure 5: Example of an alquerque-type board with curved triangles, Vijayanagara (photo by the author)](image)

The total number of triangular boards in the assemblage is 63. The basic layout consists of a triangular form that is vertically bisected as well as horizontally intersected twice. Various internal variations can be noted. The main difference is the one between boards being only internally subdivided and boards having additional rectangular extensions. In order to go through the variants more systematically, it may be convenient to have separate looks at these two main groups:
The triangular boards with no rectangular extension amount to 56 boards in total. 36 of these boards display the basic layout. 11 boards show a layout that is both vertically and horizontally bisected, that is, they exhibit one instead of two horizontal cross-lines. Among the remaining boards, 8 boards have unique features. Three of these boards have other and individually different forms, such as in one case a small circle attached to the point of the triangle. The other ones show smaller modulations such as extensions of particular lines. 1 board is too indistinct to be further detailed. A standard type can be distinguished out of the boards displaying the basic layout, accounting for 65% of the totality of boards possible to categorize (55); and a sub-type comprising the boards with one horizontal cross-line (20%) (Fig. 6). No further recurring type can be noted. The sub-type can be described as generated by means of subtraction from the standard theme (removal of one of the horizontal lines).

![Figure 6: The triangular board diagram according to defined standard type (left) and sub-type (right)](image)

The triangular boards with rectangular extensions constitute 7 boards (a few more boards were found which were clearly modern). The basic layout of the rectangular-formed extension is shaped by extending the two horizontally intersecting lines at both sides, closing the short ends, and adding a third line bisecting the rectangle horizontally (Fig. 7). 3 boards display this outline. The remaining 4 boards display individually different forms. In one of the cases, the extension takes the form of two separated rectangles; in another, the triangular form is duplicated. A standard pattern can be distinguished but is not so relevant since the specimens are few and display relatively much variation. At any rate, the group is considered too small to be further subdivided. No general pattern can be seen regarding the generation of variations, which can be described as created by random additions and variations (like adding a second triangle, or varying the rectangular form).

Notable differences appear for the two triangular types as to degree of internal variation and patterns of grouping. The first type has less variation and can be clearly subdivided into a standard- and a sub-type. The second type exhibits more variation and no consistent grouping. Differences can also be seen in the way the internal
variations are generated. It is therefore suggested that the triangular boards become divided into two separate layout-groups, henceforth termed the triangular board and the triang-rectangular board, respectively.

Figure 7: Example of a triangular board with a rectangular-formed extension (this one also has an extra intersecting line), Vijayanagara (photo by the author)

The blockade-type board (sorted into hunt games by Vasantha and into hunt games/war games by Fritz and Gibson; the term ‘blockade’ is from Fritz and Gibson). This board is defined by Vasantha (2003) as Huli-mekeata, a local name of a type of hunt game, which in its simple form is played only with one and three pieces each, respectively. Fritz and Gibson (2007) provide the board with the designation blockade game and suggest a link to the game Do-guti. As a blockade game, it would not have that specific hunting character. The aim of these games is to block the opponent’s pieces while they have no element of capture (Murray 1952). Parlett (1999: 160) depicts Do-gutias a “minimalist” type of blockade game. Found in among others India, China, and Korea, it is played with two pieces each on the five points of a board consisting of a diagonally crossed square with one side being omitted. Gupta (1926) reported on this game from Punjab. Other examples include the game Be Kakari from Gujarat (Soni & Bagchi 2011), and Billi-kulhatfromMewar (Samanta 2011). A different game, of war game-type, is noted from Haryana, Sher-bakri, where the aim is to capture the opponent’s pieces (Sinha & Biswas 2011).

The total number of blockade game boards in the assemblage is 49. The basic layout is made up of pits. Four pits are placed so as to form a square while a fifth pit constitutes its intersection. The type is hence different from the lined diagram referred to above, including also having no sides marked out. 40 boards exhibit this basic outline. The
remaining 9 boards display unique features. Six of these boards have other, individually different arrangements of holes, and may have either more or fewer holes than five. The other ones show smaller modulations, such as one exemplar being surrounded by a square-formed frame. Most boards fall into a standard type, accounting for 82% of the totality of boards (Fig. 8). No further recurring type can be noted and no sub-type defined. The unique examples appear too disparate to form a group by themselves. At the same time, since these boards constitute 18% of the totality of boards, the disparate appearance may imply a significant scope for sporadic variation. No general pattern can be seen regarding the generation of variations. The unique features and modulations can be described as created by random additions, subtractions, and variations.

![Figure 8: The blockade-type board diagram according to defined standard type](image)

**War Games**

The aims of these games are to capture and/or immobilize the opponent’s pieces or to control as much territory as possible of the board (Murray 1952). At Vijayanagara, one type of board can be found grouped into this category:

*The 8 x 8 board* (sorted into war games by Fritz and Gibson; referred to as a chessboard by Vasantha and by Fritz and Gibson). This square-formed board is commonly associated with the game of Chess. The typical board associated with Indian Chess/Chaturanga is unchequered and has 16 cross-cut squares (eg. Parlett 1999). The standard outline, with 12 of the cross-marks placed in the outermost rows and four in the centrally located squares, is taken to represent an original board for race gameplay; Murray presumed that race games played on square boards on the whole could
be of an Indian origin (Murray 1952). The 8 x 8 board can also be used for other types of games. A game of capture, played on a plain board with 40 pieces each, was for example noted by Datta (1999 [1939]). In a treatise on board games from the nineteenth century, the *Kridakaushalyam*, a hunt game is mentioned as played on a board with eight cross-marks (Finkel 2006).

The total number of 8 x 8 boards in the assemblage is 5. The basic layout consists of a plain 8 x 8 grid. 3 boards display this pattern. The remaining 2 boards have unique features. One of these boards has a grid with 16 cross-marks, somewhat differently distributed than in the outline described above. Another board with a plain grid is surrounded by a square-formed and decorated frame. No further variations can be noted.

**Race Games**

The aim of these games is to be the first player to complete a particular course stipulated by the board. This is mainly based on the element of chance as the racing is accomplished by the throwing of a dice or other kinds of lots, such as cowries (Murray 1952). At Vijayanagara, three types of boards can be found grouped into this category:

*The single-track board* (sorted into race games and referred to as a single-track race game by Vasantha and by Fritz and Gibson). This meandering form of board is noted as not being known locally or used any longer for game play (Vasantha 2003). Marin (1942), in his documentation of various engravings of this type at sites in South India, made the same remark. But he also referred to a notation by Parker concerning a game that was according to him still played in Sri Lanka on a similar type of board, *PanchaKeliya* (the Five game). The board for this game constituted a single row of squares, laid out according to six courses forming a zigzag-like track with cross-cut squares at each bend. One of the courses was duplicated; it served as the starting line and players entered from opposite ends. This race game was played with three pieces each, and by the throwing of six cowries the goal was to be the first to go out of the last square (Parker 1982 [1909]). Marin (1942), who also illustrates a variant of the board that is made up of pits, emphasizes some typical components in this type of games, such as the marking out of places of safety and the possibility of sending back the opponent’s pieces to the start.

The total number of single-track boards in the assemblage is 203. The basic layout consists of a single track that is composed of six successive courses, each new course causing the track to bend in a zigzag-like way. The first course (which according to Parker’s description would be the starting line) is duplicated. The track continues from the center of this course and at right angles to it. It takes a curve either to the right or left and thereafter goes straight forwards until it ends. The track may be made either by lines, forming a single row of squares, or by pits laid out one after another. Irrespective of that, according to the basic layout, each course is constituted by five squares/five pits (except for the first, duplicated course which also has an extra
square/pit) (Fig. 9). However, much internal variation can be noted. In order to go through this more systematically, it may be convenient to have separate looks at the type made up of lines and the one consisting of pits:

![Figure 9: Example of a single-track board made up of pits and displaying the basic layout, Vijayanagara (photo by the author)](image)

The type made up of lines amount to 93 boards. 21 boards are of the layout just described. 22 boards have the same layout to which is added an extra course of five squares. This course extends from the center of and at right angles to the ‘starting line’, in opposite direction from the main track. 23 boards that are also of the same layout are exhibiting cross-cut squares (mostly at each junction), and/or small square- or circular-formed extra areas added to the starting- and end squares. Most boards in this particular group, 16, also have the extra course. 9 boards in this group are equipped with all three features; the cross-cut squares, the extra areas, and the extra course. Among the remaining boards, 9 boards display differently meandering forms. All are individually different; in two cases, a looping form is included. In some cases they may also have the extra course, the cross-cut squares, or the extra areas. 18 boards are too indistinct to be further detailed. In somewhat contrast to these variations, it can furthermore be noted that among the boards of this type that are clearly identified and are not of the unique forms, only a few boards (6) display fewer or more squares than
five in one or more than one of its courses. A ‘shortened’ layout with fewer courses than six can only be seen in one of the clearly distinguishable specimens. As to internal grouping, a standard type can be distinguished out of the boards of the basic layout, accounting for 28% of the totality of boards possible to categorize (75). A second standard type can be defined by the boards with an added extra course (29%). A sub-type can be summoned out of the boards that display all of the features of the extra course, the cross-cut squares, and the extra areas (12%). The boards of different meandering forms, while individually unique, may as a whole, due to their shared type of difference (alternative meanders) and their distinct number, be suggested to comprise a further sub-type (12%) (Fig.10). The sub-types can be described as generated by means of addition to the standard theme, both by adding extra features (the cross-cut squares and the extra areas) and by reduplicating existing features (the extra course), and by means of variation (varying the meandering form).

The type made up of pits amount to 110 boards. 73 boards are of the standard pattern. 19 boards have the same pattern to which is added an extra course of five pits (similar to the extra course of the lined type). Among the remaining boards, 12 boards have unique features. Two of these boards have other and individually different meandering forms. One board has an extra area added to the end pit. The other ones show smaller modulations, such as slightly curved shapes or a few square-formed pits. 6 boards are too indistinct to be further detailed. It can furthermore be noted that among the boards of this type that are clearly identified and do not have unique features, only a few boards (3) display fewer or more pits than five in one or more than one of its courses. A ‘shortened’ layout with fewer courses than six cannot be seen in any of the clearly distinguishable specimens. The boards can be sorted into a standard type, consisting of the boards of the basic layout and accounting for 70% of the totality of boards possible to categorize (104); and a sub-type defined by the boards with an added extra course (18%) (Fig. 11). No further recurring type can be noted. The sub-type can be described as generated by means of addition to the standard theme, by reduplicating existing features (the extra course).

Hence, while the two single-track types display clear similarities in outline, they also exhibit notable differences as to degree of internal variation and patterns of grouping. The first type shows greater variation in form and more possibilities of subdivision, appearing in two standard- and two sub-types. The second type is more uniform in shape with a majority of specimens exhibiting the standard outline. Differences can also be seen in the way the internal variations are generated. It is therefore suggested that the single-track boards become divided into two separate layout-groups, henceforth termed the single-track lines board and the single-track pits board, respectively.

The pachisi-type board (sorted into race games by Fritz and Gibson; referred to as Pachisi/Chaupat by Vasantha and by Fritz and Gibson). This cruciform board is linked to a characteristic and traditional game of India, Pachisi/Chaupat. It constitutes a race game for two to four players (if the four-armed type of board is used, which is the most
common one), having four pieces each. Using two four-sided long dice, the players move their pieces round the board and then up the middle lane with the goal of reaching the central square (Kulirani & Vijayendra 2011). In Karnataka, the game is known as Pagadeata and played on two versions of boards. In one version, each arm consists of 3 x 8 squares, of which six are cross-cut; in the other, each arm has 3 x 7 squares and three cross-marks (Kulirani & Vijayendra 2011).

Figure 10: The single-track lines board diagram according to defined standard types (left top and bottom) and sub-types (right top and bottom)
Figure 11: The single-track pits board diagram according to defined standard type (left) and sub-type (right)

The total number of Pachisi boards in the assemblage is 2 (a third board was found which was clearly modern). Both boards exhibit a four-armed cruciform layout, the grids of each arm displaying some cross-cut squares. They are individually different. In one of the boards, each arm consists of $3 \times 8$ squares. The cross-marks are unevenly distributed and appear to be more than 25 (they are partly indistinct). In the other board, each arm consists of $3 \times 7$ squares. Cross-marks can be seen in three of the arms, four in each. This board also has a crossed central square and extra features radiating from each of the arms. No further variations can be noted.

The oblong board (different sizes of oblong boards have been sorted into race games by Fritz and Gibson). Several variants of race games on oblong boards can be found. One example is Thablaata from Karnataka. It is played on the points of a board of $3 \times 11$ squares. The game also includes capturing the opponent’s pieces and may be associated with the family of Tab games (Kulirani & Vijayendra 2011). These are also termed Running-Fight games, combining elements of race games and war games (Bell 1979). While mainly played in northern Africa, the Middle East, and on the Indian subcontinent, games of this group are also found for example in Scandinavia (see eg. Michaelsen 2001).7

The total number of oblong boards in the assemblage is 9. The basic layout constitutes a plain $3 \times 12$ grid. 4 boards display this pattern. Among the remaining boards, 3 boards have unique features. Two of these boards have other and individually different forms, in one case extra areas of rounded form attached to the ends and in
another a 3 x 13 grid with an extra area of pointed form. One board shows some cross-cut squares (which due to wear cannot be counted in full). 2 rather indistinct boards may have more than 12 columns. These boards are on the whole quite faded in appearance (Fig. 12). Although a standard pattern can be distinguished, the group is regarded as too small to be further subdivided.

Figure 12: Example of an oblong board, of faint appearance and with some indicated cross-marks, Vijayanagara (photo by the author)

Mancala Games

The aim of these games is to capture as many as possible of the pieces (or a particular piece), which are not divided between the players but neutral. By way of lifting and distributing the pieces one by one along the rows of the board, the pieces will be possible to successively remove from the board (Murray 1952). At Vijayanagara, one type of board can be found grouped into this category:

The mancala board (sorted into mancala games by Vasantha and by Fritz and Gibson). Mancala boards are distinguished by rows consisting of scooped out holes or depressions, of which the type with two rows is the most common one. Mancala games are mainly played in Africa, the Middle East, South- and South East Asia, the Caribbean, and parts of South America (e.g. de Voogt 1999). In India, the version with two rows is used, and the boards may sometimes have larger holes or trays added at either end of the rows for holding pieces not at play (e.g. Murray 1952; Parlett 1999). The number of holes per row may be seven, but other varieties can sometimes be found, such as six holes (e.g. Gupta 1923), or five holes (e.g. Gupta 1926). Occasionally, other types can be found; Balambal (2005) depicts an unusual, triangular board-form from Tamilnadu. The mancala games, which are usually played by two players, come in many versions, and are grouped and referred to by different names, such as Pallanguli in Tamil (e.g. Durai 1928; Bell 1979), and Cenne mane in Tulu (e.g. Claus 1986). Kulirani and Vijayendra (2011) list several versions of mancala games played in Karnataka, among which Arasaata can be noted for involving three players sharing territories rather than sides, and Sithata for constituting a solitaire version.
The total number of mancala boards in the assemblage is 52. The basic layout consists of two rows having seven holes in each row. 24 boards exhibit this basic layout. 9 boards have trays added to either end or, in a few cases, to one of the ends. 4 boards have one or two trays located between the rows. Among the latter boards, some individual differences can be noted. One specimen is for example surrounded by a rectangular frame. Among the remaining boards, 1 board of otherwise basic layout has a unique feature in the form of four square-rather than circular-formed holes. 14 boards display an ‘incomplete’ outline, that is, are composed of fewer holes than fourteen. All differ internally in arrangement. Possibly, some of these could represent mancala boards of other versions than the 2 x 7 pattern (for example, in one case a 2 x 5 outline, in another a 2 x 6 version). However, since almost all exemplars of this group are very faded, such suggestions remain somewhat speculative. At any rate, no recurrence of alternative versions can be noted. Taken as a whole, few mancala boards appear with distinctly unique features, but the appearance of holes and outline of rows is noticeably varying. The boards can be sorted into a standard type, comprising those of the basic layout and accounting for 63% of the totality of boards possible to categorize (38); a sub-type constituting the boards with trays at one or both ends (24%); and a unique type defined by the boards exhibiting trays between the rows, although these boards at the same time display some individually different features (11%) (Fig. 13). The sub-type and the unique type can be described as generated by means of *addition* to the standard theme, by adding extra features (tray or trays), and by means of *variation* (locating the trays differently).

Figure 13: The mancala board diagram according to defined standard type (left), sub-type (center), and unique type (right)

**Previously Not Categorized/Published Board Types**

In the assemblage, four types of boards appear which have not been included in the mentioned previous works on game boards from Vijayanagara (with one exception that is found in Sadanandan 1963-64):

**The square-track board:** This square-formed board shares features with the single-track board, but the track is of a square-rather than meandering outline. From his documentation of engraved boards, Marin (1942) illustrates two variants, one from the site of Badami and made up of pits, and another, more elaborate example from Sri Lanka constituted by squares. Culin, according to Murray (1952), refers to a variant of the board from Sri Lanka, and the game played on it is similar to *Panchakeliya* (described above with the single-track boards).
The total number of square-track boards in the assemblage is 4. The basic layout is constituted by courses made up of five pits each (except for the first course which has an extra pit). The first course (the ‘starting line’) is duplicated. The track continues from its center and at right angles to it and develops into a square, each side consisting of duplicated courses. Another course continues straight forwards and ends inside the square. The starting points and those dividing each section may be enlarged. 3 boards display this outline. The one remaining board has the same outline but has a unique feature in the form of two possible depressions inside the square. No further variations can be noted. According to the above, this type would fall into the category of race games.

The 5x5 board: This square-formed board with five cross-cut squares is associated with a race game commonly played in India, like in Gujarat (Soni&Bagchi 2011) and Orissa (Mukhopadhyay&Basu 2011). Played with four or eight pieces each and using lots such as cowries, the aim is to be the first to reach the central square. Known among others as Chowkabara in Karnataka, it may also be played on 7 x 7 boards (Kuliirani&Vijayendra 2011). From Tamilnadu, where these games are known as Tayam games, Balambil(2005) mentions a further variant played on 9 x 9 boards. The total number of 5 x 5 boards in the assemblage is 1 (a few more boards were found which were clearly modern). This one board exhibits a grid with five cross-marks placed in the known fashion, one each at the center of the outermost rows and one in the central square. According to the above, this type would fall into the category of race games.

The pentagram board: A grid in the shape of a pentagram is depicted by Sadanandan (1963-64). This outline can be used for different kinds of games. Parlett(1999) mentions the possibility of using it for both the alignment- and the blocking type of games. Balambil (2005) informs about a solitaire variant of game played on this board in Tamilnadu. Gupta (1924) depicts a pentagram board with one extended point in connection with an Indian hunt game, Karooa.

The total number of pentagram boards in the assemblage is 3. The basic layout shows a pentagram with each of the five points being equally large. All boards display this outline. No variations can be noted. Since many varieties of games can be played on this diagram, the type will not be sorted into any specific game class.

The “10 x 10 Board”: This unclear designation denotes a grid that is larger than 8 x 8 squares. Such large grids may be associated with different kinds of games. The remark by Murray (1952) may for example be reminded upon, regarding that race games have been played on cross-marked square boards of different sizes generally in India. One example is the above noted 9 x 9 board used for the playing of Tayam games (Balambil 2005).

The total number of “10 x 10 boards” in the assemblage is 1. This one board is very faded and therefore difficult to determine in detail. It consists of an apparently plain
grid of presumably 10 x 10 squares or, alternatively, 9 x 9 squares. Being vague, it will not be sorted into any specific game class.

**The undefined board:** A few boards of the assemblage are of unfamiliar shapes. These comprise 4 boards, among which two exemplars constitute a plain 4 x 4 grid to which are added 2 x 2 grids on three sides. These are collectively termed *the undefined board*.

**Boards of Uncertain Form/Uncertain Connection to Board Games**

Inevitably, some exemplars are too faded to become further distinguished, while other ones are too unspecific to become properly identified as game boards. The former applies to 2 diagrams of a grid-like form, and the latter to 2 diagrams of a circular shape with individually different features. These are termed *uncertain boards*.

These constitute the types of layout found in the assemblage under study. The outline shows that no further variants of, for example, square-formed or oblong grids have been recorded. As exemplified during documentation, it was frequently noted that boards due to their degree of wear would often seemingly appear to display an array of outlines (say, a 4 x 4 or 5 x 5 grid pattern), while closer examination would reveal that several such boards in fact represented one of the already well-known forms (say, the alquerque-type diagram). In contrast, a few previously not recognized types have been presented here, and it has also been suggested that the single-track- and triangular types become divided into two separate groups, respectively.

**Frequency of Boards**

The way the presentation of board types is structured, confirms previous reports that all the five main classes of games established by Murray are represented at Vijayanagara. *Games of alignment and configuration* would include the larger merels board and the 2 x 2 board; *hunt games* the alquerque-type board, the triangular board, the triang-rectangular board, and the blockade-type board; *war games* the 8 x 8 board; *race games* the single-track lines board, the single-track pits board, the pachisi-type board, the oblong board, the square-track board, and the 5 x 5 board; and *mancala games* the mancala board. An *unspecified class* would include the pentagram board, the “10 x 10” board, and the undefined board, whereas the uncertain boards would be left out of the sorting.

The summary shows that the category of race games with six types constitutes the largest class, while hunt games with four types becomes the second largest. We can also tabulate and graphically outline the frequency and distribution of boards per game class to see whether the pattern will reiterate (Table 1 and Fig. 14) (the uncertain boards have been omitted in order to obtain valid percentage). The results show that a vast majority of boards, 219, fall into the category of race games, whereas hunt games again represent the second largest group with 187 boards. War games make up the smallest portion with only 5 boards. Mancala games can also be noted as a quite underrepresented category.
Table 1: Frequency of boards per game class

<table>
<thead>
<tr>
<th>Game Class</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Games of alignment</td>
<td>105</td>
<td>18.23</td>
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<tr>
<td>Hunt games</td>
<td>187</td>
<td>32.47</td>
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<tr>
<td>War games</td>
<td>5</td>
<td>0.87</td>
</tr>
<tr>
<td>Race games</td>
<td>219</td>
<td>38.02</td>
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<tr>
<td>Mancala games</td>
<td>52</td>
<td>9.03</td>
</tr>
<tr>
<td>Unspecified class</td>
<td>8</td>
<td>1.39</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>576</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Figure 14: Bar chart of frequency of boards per game class

However, besides the problems already discussed with this game-based classification, it also conceals possible differences in incidence between types within a particular class. Under- or overrepresented types cannot be distinguished. A different way of presentation is therefore to look at the distribution of boards per board type or defined layout group. In total, 16 such groups have been defined. This creates a different kind of distribution pattern (Table 2 and Fig. 15). If we keep to the game class-based view for a while, we can note that the most frequently found type, the single-track pits board (110 specimens), and the third most frequent one, the single-track lines board (93), still point at a leading position for the class of race games. However, by way of emphasizing the types separately, distinguished by layout, the overwhelming occurrence of this class is at the same time somewhat reduced, since almost as many exemplars of the larger merels board (103) appear as boards of the single-track pits type. The high number of larger merels boards can in turn be taken to point at a more manifest appearance of games of alignment and configuration than the game-based categorization showed. Mancala games seem also to rise to a comparatively more notable occurrence than in the previous sorting. While these conclusions still rely on the game-based classification though, what may perhaps be more noteworthy is what this arrangement according to board types shows regarding the pattern of distribution overall.
Table 2: Frequency of boards per board type

<table>
<thead>
<tr>
<th>Board type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The larger merels board</td>
<td>103</td>
<td>17.88</td>
</tr>
<tr>
<td>The 2 x 2 board</td>
<td>2</td>
<td>0.35</td>
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<tr>
<td>The alquerque-type board</td>
<td>75</td>
<td>13.02</td>
</tr>
<tr>
<td>The triangular board</td>
<td>56</td>
<td>9.72</td>
</tr>
<tr>
<td>The triang-rectangular board</td>
<td>7</td>
<td>1.22</td>
</tr>
<tr>
<td>The blockade-type board</td>
<td>49</td>
<td>8.51</td>
</tr>
<tr>
<td>The 8 x 8 board</td>
<td>5</td>
<td>0.87</td>
</tr>
<tr>
<td>The single-track lines board</td>
<td>93</td>
<td>16.15</td>
</tr>
<tr>
<td>The single-track pits board</td>
<td>110</td>
<td>19.10</td>
</tr>
<tr>
<td>The pachisi-type board</td>
<td>2</td>
<td>0.35</td>
</tr>
<tr>
<td>The oblong board</td>
<td>9</td>
<td>1.56</td>
</tr>
<tr>
<td>The square-track board</td>
<td>4</td>
<td>0.69</td>
</tr>
<tr>
<td>The 5 x 5 board</td>
<td>1</td>
<td>0.17</td>
</tr>
<tr>
<td>The mancala board</td>
<td>52</td>
<td>9.03</td>
</tr>
<tr>
<td>The pentagram board</td>
<td>3</td>
<td>0.52</td>
</tr>
<tr>
<td>The 10 x 10? board</td>
<td>1</td>
<td>0.17</td>
</tr>
<tr>
<td>The undefined board</td>
<td>4</td>
<td>0.69</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td><strong>576</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

As observed in the above section, the types show obvious differences in frequency. In tabulated form, it can clearly be discerned that totally 7 types stand out as being much more frequently represented. In numerical order, these comprise the single-track pits board, the larger merels board, the single-track lines board, the alquerque-type board, the triangular board, the mancala board, and, lastly, the blockade-type board. Reading
off the cumulative percentage of these types, a distinctly uneven distribution can be noted where these types account for slightly more than 93% of the total number of boards. What is furthermore striking with this pattern is the absence of more gradual differences in frequency. Plainly said, the 17 board types can be divided between being either commonly or not commonly found at the site. In order to look closer at this imbalance and clear-cut divisions, we can reorder the types into four groups designated by degree of frequency. These can be termed A, B, C, and D, where A comprises the board types with the highest frequency and D the ones with the lowest occurrence. If we draw a (somewhat arbitrary) line of division for group A at more than 90 boards and one for group D at less than 5 boards, the grouping will be as follows: A) (highly frequent types) the single-track pits board, the larger merels board, and the single-track lines board; B) (frequent types) the alquerque-type board, the triangular board, the mancala board, and the blockade-type board; C) (infrequent types) the oblong board, the triang-rectangular board, and the 8 x 8 board; and D) (rare types) the square-track board, the undefined board, the pentagram board, the 2 x 2 board, the pachisi-type board, the 5 x 5 board, and the “10 x 10” board. A bar chart based on this grouping (Fig. 16) graphically depicts the resulting asymmetrical pattern, with groups A and B incorporating an overwhelming majority of boards (while the most commonly found value of the observations actually constitutes group A). However, based on the same grouping, we can also construct another bar chart, which in contrast illustrates the frequency of board types per group (Fig. 17). Here, we see an almost inverted pattern with group D displaying the highest bar and thus comprising the highest number of types. Together, groups C and D hold a majority of the types, which means that a majority of board types found at Vijayanagara are represented by boards which are actually infrequent or rare. That in turn emphasizes that the majority of boards at the site – those which are actually typical – are in reality representing a very limited number of types. With this angle, ‘common’/‘uncommon’ becomes a significant marker for the boards.

![Figure 16: Bar chart of frequency of boards per frequency group](image-url)
Table 3: Distributional relations of internal variation in common board types

<table>
<thead>
<tr>
<th>Board type</th>
<th>Total (countable number)</th>
<th>Standard type (%)</th>
<th>Sub-type (%)</th>
<th>Unique type (%)</th>
<th>Generation of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The larger merels board</td>
<td>95</td>
<td>73</td>
<td>18</td>
<td>3</td>
<td>Addition</td>
</tr>
<tr>
<td>The alquerque-type board</td>
<td>65</td>
<td>79</td>
<td>14</td>
<td>-</td>
<td>Variation</td>
</tr>
<tr>
<td>The triangular board</td>
<td>55</td>
<td>65</td>
<td>20</td>
<td>-</td>
<td>Subtraction</td>
</tr>
<tr>
<td>The blockade-type board</td>
<td>49</td>
<td>82</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>The single-track lines board</td>
<td>75</td>
<td>28 resp. 29</td>
<td>12 resp. 12</td>
<td>-</td>
<td>Addition; Variation</td>
</tr>
<tr>
<td>The single-track pits board</td>
<td>104</td>
<td>70</td>
<td>18</td>
<td>-</td>
<td>Addition</td>
</tr>
<tr>
<td>The mancala board</td>
<td>38</td>
<td>63</td>
<td>24</td>
<td>11</td>
<td>Addition; Variation</td>
</tr>
</tbody>
</table>

**Internal Variation of Boards**

The fact that the boards which are commonly found at Vijayanagara represent a limited number of the defined board types point at a lesser diversity than the initial game-related sorting may have given at hand. Instead, a more homogenous and coherent pattern emerges. This may lead us back to the notes on internal variation for each of the seven board types now defined as the common ones. While the previous presentation indicated a number of variations, consistent features could also be found that allowed for a systematical sorting. The following table summarizes the results, showing the relative sizes of the defined standard-, sub- and unique types of the respective board types and the noted ways of generation of internal variation (table 3).
The outline indicates some noticeable similarities as to internal arrangement. Almost all types can be divided into rather clearly distinguishable standard- and sub-types, in two cases also into unique types (comprising only a few specimens). The two most numerous types, the single-track pits board and the larger merels board, can be noted for showing similar distributional relations (with a standard type making up 70% and 73%, respectively, and a sub-type accounting for 18% of the total number of countable boards), and similar ways of generating internal variations (by addition), despite constituting markedly different kinds of layout. Differential features also become evident with this outline, demonstrating for each type a particular and perhaps in some cases somewhat unexpected character. For example, the blockade-type board is the only type having no defined sub-type, whereby it comes to represent the relatively most uniform type (with 82% of the boards exhibiting the standard layout). As to the mancala board, it can not only be seen that boards without trays are in clear majority, that is, constitute a distinct standard type (63%); the relatively evenly distributed internal variations of this type also implies the presence of further and finer variations.

The alquerque-type board shows a relatively high percentage of specimens of a standard form (79%), whereas only a few exemplars display a variant of that basic layout and no unique variant is present. The larger merels board, while generally known as a rather standardized diagram, indicates in fact comparatively more variation in form than the alquerque-type board. The single-track lines board stands out by exhibiting more variants but also by having a less hierarchical structure, building on two equivalent standard types (28% and 29%), and sub-types (12%), respectively. A systematization of internal variation also allows for the distinguishing of what is not consistent or recurrently appearing. Thus it can be observed, for example, that the triangular board is not regularly displaying other variants than the one, single sub-type generated by subtraction, and that single-track boards in general are not repeatedly showing further variants (that would for example have been constituted by fewer courses than six, or courses built on other numbers than five). Occasional findings of individually different forms or other unique features, lastly, can with this arrangement be plainly differentiated as outliers.

Conclusions
In this paper, I have aimed to study the material remains of game boards at Vijayanagara not primarily as replicas of board games, but as archaeological objects. Text-based typologies have been reoriented towards a focus on form. A detailing of layout has led among others to the separation of some of the known types due to divergences in internal variation, and also indicated a lower degree of variation than has generally been presumed. A cause for such presumptions has been suggested in the fact that many boards display markedly faint contours. Degree of wear has thereby implicitly been emphasized as an integral part of both the objects and of a study of their artifactual aspects. A study of frequency of the defined types has demonstrated a marked inequality as to their representability. Denotations relating to frequency may
hence in this context be proposed archaeologically more useful than those of board type per se or game category. Lastly, a systematization of internal variation noted for the common types, including also the means by which these were generated, has resulted in rather orderly groupings. This has indicated the presence of quite consistent ranges of variation among the boards rather than sporadic alterations in design. Studying the objects from the artifactual point of view has thus made visible some distinguishing traits, which may not have been as easily detected with a primarily game historical, or informed (Chippindale 1992), approach. Some markedly regular and repetitive features in form, along with some consistent divergences, can be noted as distinctive for the assemblage. The pattern of common versus uncommon boards appears as a significant characteristic. The schematized generation of internal variation indicates that features of repetition also appear in the ways board layouts were shaped and transformed. This may be taken to point at the defined regularities as something more deep-going, a recurrent theme rather than a surface pattern visible to the eye. ‘Form’ turns out not only to be a matter of form; in this context, it constitutes a more grounded level from which to start exploring the boards in other, more contextually orientated and interpretative directions. The defined patterns of regularity and variability may hence serve as guidance for more specified inquiries. With a continuous focus on the artifactual, the patterns themselves will become further accentuated, out of different angles and with exponentially growing consequences.

One way to proceed is to return to the issue on the spatial arrangements of the boards. The material evidence can be used for more detailed explorations regarding spatial localization, with more concretely formulated questions. May uncommon board types be found to be atypically located as well, for example? May regularities in form correspond with consistencies in space? With an archaeologically more grounded approach, a second way to continue is to think of ways of ‘returning’ the boards to their former contexts of board game-play, investigating whether and in what ways such contexts can be materially manifested. Here, it can be asked whether the point of significance of the infrequent and rare board types is not that they are represented at the site, but rather that they are uncommon, perhaps indicating that they for some reason were not particularly favored? And may features of regularity solely be seen as signs of deep-rooted game-traditions, or can they also be viewed as traces of consistent behavior, following from the success and thus firm establishment of particular games and game practices? A third way of direction may lead towards the subject of time and questions regarding temporal changes, and whether such can be materially distinguished. The identification of features of consistency in form may encourage searches for patterns of consistency in regard of temporal enquires as well. Inversely, the systematization of particularities in shape may provide possibilities to explore features of time at very detailed levels. A question is whether internal variations in layout may be accompanied by other kinds of variations, ranging from type of engraving to dateable find spots to internal spatial arrangement, for example? And whether possible detections of non-identical patterns may allow for temporal differentiations or suggestions of actual date ranges?
In this connection, however, a fourth way of proceeding can be discernible, which not only concerns the question of time but also the issues of space and the localizing of meaning and function. With a firm basis in empirical evidence, concordances can be searched for out of a variety of variables, which may enable the identification of larger situations based on internal and temporary, instead off actual and formal, spatial and temporal frameworks. Rather than establishing actual chronologies, focus can be laid on locating shifts inhabits of gaming or changes in places of game play, for example. With such an approach, time and chronology cannot be attended to as isolated phenomena and need therefore not be regarded as in surmountable obstacles. From the spatial point of view, the boards need furthermore not be adjusted to the formally defined urban context in order to avoid isolation. They can be studied as part of the ancient city first and foremost through their own distinctive order and complexity.

Acknowledgements
For inviting me to undertake the field documentation of the engraved game boards at the site of Vijayanagara, and providing me with plentiful support, I especially wish to thank Dr John M. Fritz at the University of Pennsylvania Museum of Archaeology and Anthropology, co-director of the Vijayanagara Research Project. My gratitude also goes to the late Dr. RangacharVasantha, former Head of the Department of History, Sri Krishnadevaraya University, Anantapur, who generously gave me a little of her great knowledge in regard of the game boards and games. My special thanks to M. Esrama, Hampi, Wim van Mourik from the Royal Dutch Draughts Association, Veenendaal, and the game historian Peter Michaelsen, Rønne, for much appreciated discussions and advice on particular types of boards and games.

Notes
1 For explanations of board types and games see below under ‘Forms of Boards’.

2Since the subject of spatial and temporal localization is not in focus for this paper, these issues are only briefly referred to here. For more information, see the stated references.

3As this theme is not of prime consideration in this paper, these will be of broad and exemplifying nature and are only meant to provide some game-related background to the boards. For more comprehensive information on the games, their rules, and histories, the reader is advised to consult the stated references.

4‘Internal variation’ refers in this case to variations in layout. Besides such variations, the boards under study also exhibit variations in for example size and regularity. Important as they are, however, such features would need their own space to be adequately dealt with and will therefore not be detailed here.

5In Hampi, the author was shown how this type of board could also be used for the playing of hunt games.

6The variations in layout seen here, as well as in the following type descriptions, may naturally
represent diagrams that were used for other game varieties or totally different kinds of games. Central points in merels boards, for example, do not usually play a part in Merels games (pers. comm. Wim van Mourik, La Tour-de-Peilz 2015). But central points may perhaps be thought of as more significant if the board was used for hunt games. As for the board with triangular additions, it is among others known as Cher par in Telugu and represents a larger Merels game played with twelve pieces each (pers. comm. M. Esrama, Hampi 2007). However, discussions of this kind are beyond the frames of this paper.

Due to their mixed composure, these games have been somewhat overlooked in scholarly work (pers. comm. Peter Michaelsen, La Tour-de-Peilz 2015).

References


