DISCOVERING DADU: A LUDEMIC ENIGMA FROM SOUTH ASIA

Jacob Schmidt-Madsen
Max Planck Institute for the History of Science (MPIWG), Berlin
jschmidtmadsen@mpiwg-berlin.mpg.de

Abstract. Dadu is a traditional board game exclusively played within the Muslim Dawoodi Bohra community in South Asia. Most households have their own hand-stitched cloth board, together with a set of wood-turned playing pieces and cowrie shells for dice. Though formally a two-player game, it is commonly played in large teams during family gatherings. Non-community members rarely take part and the game remains virtually unknown to outsiders. Descriptions of the game are absent from the scholarly literature and it does not find mention in any of the major game encyclopedias. Surviving boards and communal memory trace the game back to the early 20th century, but the hybrid nature of the game and the origin of the Dawoodi Bohra community in Yemen suggest that it may go back several centuries further. The present article uses ludemic theory to analyze the constituent elements of the game and demonstrate their affinity with elements in other games both inside and outside South Asia. The findings are contextualized within the wider history of the Dawoodi Bohra community, suggesting that Dadu may have resulted from the adaptation of a West Asian Tab game to a South Asian single track race game. A detailed set of rules gathered from interviews with members of the Dawoodi Bohra community is appended to the article.

Keywords: Dadu, Dawoodi Bohra, Digital Ludeme Project, Kiôz, Kös, Ludeme, Ludii Database, Single Track Race Game, South Asia, Tab, West Asia

Abbreviations
Ar. = Arabic
Guj. = Gujarati
Hi. = Hindi
Kan. = Kannada
Lat. = Latin
Mar. = Marathi
New. = Newari
Per. = Persian
Sin. = Sinhala
Skt. = Sanskrit
Tam. = Tamil
Tel. = Telugu

Introduction

In late December 2022 I visited the board game shop Bored Game Company in Pune, Maharashtra. I had been doing fieldwork on traditional games in West Bengal, Odisha, and Telangana for a few months and wanted to finish off my trip with a brief look into the world of contemporary Indian board games. Toward the end of my conversation with company manager Moiz Mansur I told him about my research on traditional games. He responded by showing me a hand-stitched version of a board game that in more than a decade of research in South Asia I had never encountered before (fig. 1). He explained that it had been played in his family for as long as anybody could remember and that it was extremely common in the Muslim community to which he belonged. Even though it was formally a two-player game, they would usually play it in large groups at family gatherings. Nerves would be on end and things could even get a little heated, Moiz confided.
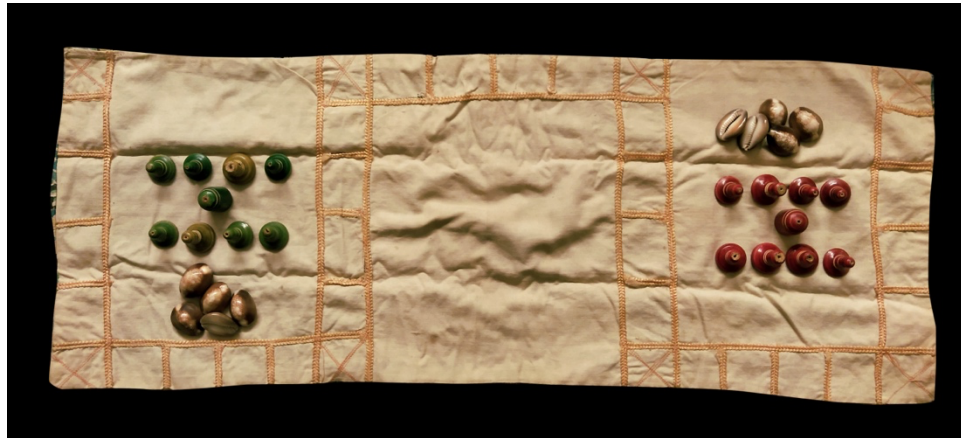

Figure 1: Hand-stitched Dadu board from Dawoodi Bohra household in Pune with wood-turned pieces from Channapatna in Karnataka and two sets of cowrie shells. Private collection, Pune. Mid-20th century. Photo by Moiz Mansur.

The game of Dadu (Guj. *dādu*) is exclusively played within the Muslim Dawoodi Bohra community in South Asia, whose members primarily reside in the Western Indian states of Gujarat and Maharashtra. The game combines elements of luck and skill and may be superficially compared to more popular games such as Ludo and Backgammon. However, a closer analysis reveals it to possess several unique characteristics hinting at a

complex history of origin, transmission, and development. Surprisingly, the game remains almost completely unknown to board game scholars and does not even find mention in major encyclopedic works such as *A History of Board-Games Other Than Chess* (Murray 1952), *Board and Table Games From Many Civilizations* (Bell 1969, 1979), *Histoire des Jeux de Société* (Lhôte 1996), and *The Oxford History of Board Games* (Parlett 1999, 2018).[1] The lack of awareness about the game may be due to the close-knit and sometimes secretive nature of the Dawoodi Bohra community and the fact that ethnographers only began studying the community in the late 20th century.[2]

This article aims at introducing Dadu to an academic audience and situating it within the wider history of traditional board games. Due to the lack of publications and references, I have relied heavily on information gathered from interviews and conversations with members of the Dawoodi Bohra community. This has provided me with a detailed understanding of the formal rules of the game and the social contexts in which it is played. None of the Dawoodi Bohras I spoke to were able to trace the game back further than two or three generations and neither did they possess any knowledge of the early history of the game. This does not necessarily mean that the game is a modern invention, especially considering that it has already gone undetected by board game scholars for at least a century. The game of Aasha, which may have descended from the ancient Mesopotamian Game of Twenty Squares, was only discovered to be played within the Jewish community of Kochi in Kerala in the late 20th century.[3]

The Digital Ludeme Project headed by Cameron Browne at the University of Maastricht from 2018 to 2023 has developed a set of theoretical and analytical tools that make it possible to form credible hypotheses about the origin, transmission, and development of little known games such as Dadu.[4] The project database Ludii correlates detailed ludemic information on more than a thousand traditional games from

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[1] The only reference I am aware of is found in a conference paper by Raamesh Gowri Raghavan who accidentally misspells the name of the game as *dāḍu* instead of *dādu* (2020: 213). Upon request the Digital Ludeme Project has now added the game to their database Ludii (https://ludii.games/details.php?keyword=Dadu). A digital app for the game was developed by Farooq Ahmed Dehlvi in 2021 but never officially released (https://www.dehlvi.dev/past-work/dadu).

[2] Blank 2021: 256.

[3] Finkel 1999.

[4] http://ludeme.eu/index.html

around the world, allowing researchers to establish connections between individual games and game families and trace their movement across space and time. This is especially helpful in the case of Dadu, which, as we shall see, appears to be a hybrid game combining elements from different types of games primarily associated with West and South Asia.

The article begins with a brief introduction to the concept of ludemes and an overview of the formal rules of Dadu. It continues with a detailed ludemic analysis of the game, highlighting key affinities between Dadu and other traditional games both inside and outside South Asia. It then goes on to situate Dadu in the context of the Dawoodi Bohra community and its long history of exchange between Yemen and Gujarat. It is suggested that key ludemic idiosyncrasies in Dadu may have been influenced by the Tab (Ar. *ṭāb*) family of games especially popular in North Africa and West Asia. This opens up the possibility that Ismaili missionaries from Yemen not only brought a new religious sect with them to Gujarat, but also a new type of game that merged with local traditions of play to foster the creation of Dadu. The article is supplemented by an appendix providing a detailed overview of rules and variants as described by Dawoodi Bohra informants.

Ludemes

The term *ludeme* has been around since the 1970s, but it has only recently gained traction among board game scholars. It was coined by Pierre Berloquin on analogy with structuralist terms such as phoneme, morpheme, sememe, and mytheme, indicating the smaller parts of a larger whole.[5] Just as phonemes are the building blocks of language, and mythemes the building blocks of myth, so ludemes are the building blocks of games. They include everything from mechanics to components, and they can be as small as the throw of a die or as large as an entire game system.

The two main proponents of ludemic theory are David Parlett and Cameron Browne. Parlett first defined ludemes in an article in 2007:

> [A] ludeme or 'ludic meme' is a fundamental unit of play, often equivalent to a 'rule' of play; the conceptual equivalent of a material component of a game. A notable characteristic is its

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[5] Depaulis 2019.

mimetic property - that is, its ability and propensity to pass from one game or class of game to another.[6]

Browne recently expanded the definition to include material components as part of ludemic structures and clarify the formal distinction between atomic and compound ludemes:

> A ludeme is a discrete unit of information relevant to any game, which may be atomic or compound in nature, and which can be readily transferred between games to change the function of the game in at least one plausible case.[7]

The concept of ludemes as discrete units of information allows us to break down games into their constituent parts and analyze them in great detail and with great precision. It is a powerful tool for understanding games and the complex relationships that exist between them, but it also carries with it the danger of disappearing too far into the details. While it is important to understand the concept of atomic ludemes as irreducible units, it is often more helpful to talk about the compound ludemes that would actually be recognized by players and designers. Browne uses the knight's move in Chess as an example of a compound ludeme made up of atomic ludemes signifying the path of movement, the adjacency of squares, the ability to jump over other pieces, and so on.[8] If we were to study the history of the knight's move, we would need to be able to refer to it as a ludemic unit in its own right, even though it is in fact composed of a series of smaller ludemic units. In order to avoid unnecessary hair-splitting, the preferable solution, also hinted at by Browne, is to continue the common, if not always conscious, practice of applying the term *ludeme* to both atomic and compound ludemes, only distinguishing between them as and when required.

Another key characteristic of ludemes is their ability to travel between games. It was this that led Parlett to conceive of them as *ludic memes* on analogy with the concept of cultural memes first introduced by Richard Dawkins in 1976.[9] The memic approach allows us to trace the history of

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[6] Parlett 2016[2007]: 82.

[7] Browne 2022: 16.

[8] *Ibid*. 4, 7-8.

[9] Parlett 2016[2007]: 81.

individual ludemes and identify shared pools of ludemes that different games and game families draw from. While certain ludemes tend to cluster around certain games, it only takes a single ludeme to change a game. Playing Ludo with one piece per player instead of four would change it into a game of pure chance, while moving pieces in the same instead of opposite directions in Backgammon would fundamentally change the strategies for winning. Dropping, modifying, and adding ludemes is how new variants of existing games are created, and when a variant becomes sufficiently distinct we call it a new game instead. As we move away from the idea of games as self-contained monolithic entities and toward an understanding of them as interconnected ludemic composites, we begin to see a web of ludic forms and practices extending seamlessly across perceived boundaries of space, time, and cultural identity.

The Digitial Ludeme Project was an attempt at mapping the spread of ludemes from the earliest times to the present and develop an artificial intelligence capable of utilizing the data to further our understanding of the history of traditional games. It resulted, among other things, in a repository of more than a thousand traditional games complete with ludemic information backed by historical evidence.[10] The Ludii database is neither as exhaustive nor as approachable as one might have wished, but it provides a large enough data set that meaningful ludemic analysis becomes possible.[11] More importantly, it allows us to think beyond existing and largely arbitrary categories of traditional games and begin considering aspects of variation and transformation closer to historical reality.

The application of ludemic theory and analysis to Dadu helps us make sense of what might otherwise be considered a mere anomaly in the history of games. Following the widely accepted categories of H.J.R. Murray, developed over the course of the first half of the 20th century, Dadu sits uncomfortably between a race and a war game and possibly even between

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[10] https://ludii.games/library.php

[11] The Ludii database server was recently moved from the University of Maastricht in the Netherlands to the Université Catholique de Louvain in Belgium in an effort to secure its survival beyond the Digital Ludeme Project. An initiative to further develop and expand the database is currently being undertaken by the GameTable COST Action (2023-27) which involves around 200 AI and game researchers from around 50 different countries (https://www.cost.eu/actions/CA22145).

West and South Asia.[12] Only when we subject it to careful ludemic analysis do we begin to understand the process of how it may have come to be. This can then be correlated with historical evidence to form a plausible hypothesis about its origin, transmission, and development. Additional information is still required to confirm, modify, or reject the hypothesis, but the research presented here is an important first step and clearly demonstrates the value of a ludemic approach to board game history.[13]

Playing Dadu

Dadu is a traditional race game played within the Dawoodi Bohra community in South Asia (fig. 2). It is formally designed for two players but usually played in teams during social gatherings. Each side controls eight standard playing pieces and one special playing piece referred to as a king piece for the purposes of this article.[14] The pieces begin outside the gameboard, consisting of a linear track with designated safe squares where pieces are free from capture. The two sides enter their pieces from opposite ends of the track and move them forward according to the throw of five cowrie shells. The first side to get all their pieces through the track and exit them from the opposite end wins the game. As with most traditional games, the rules are transmitted orally and subject to variation from region to region and even from household to household.[15] A detailed overview of all

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[12] Murray separates traditional games into five broad categories reflecting "the early activities and occupations of man": alinement and configuration, war, hunt, race, and mancala (1952: 4). The categories have often been criticized, but no alternative system of classification has as yet been agreed upon.

[13] Obvious places to search for additional information about the early history of Dadu would be the Bohra archives and centers of learning in Western India and the small Bohra community still living in Yemen. Unfortunately, archival access to primary sources is severely limited and relevant secondary sources remain few and far between (Blank 2001: 301-7). A recent study by Olly Akkerman (2022) provides an important exception, but her work focuses on the manuscript archives of the Alawi Bohras and does not include references to games and play.

[14] The special playing piece is called *nakta* by community members. See the section on *Household Games* (pp. 112-114) and the appendix for further discussion of the term and its possible meaning.

[15] I am only aware of three written rule sets for Dadu, none of which go back more than a few years. Two are printed in leaflets accompanying handmade versions of the game produced by Sophie Johari in Mumbai and Ramsons Kala Pratishtana in Mysore. The latter is directly based on the rules collected by myself and presented in the appendix to this article. A third rule set is the on-screen instructions for the unreleased digital app mentioned above (see fn. 1).

rules and variants communicated to me by my informants are given in the appendix.
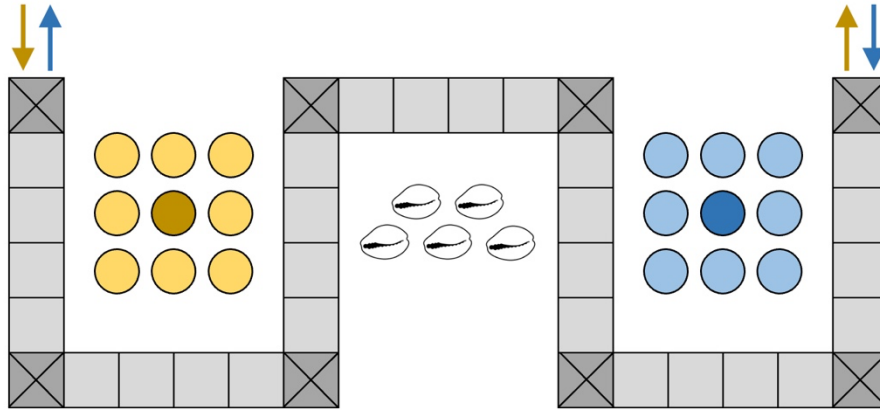

Figure 2: Dadu game track with cross-marked safe squares, two sets of eight standard pieces and one special piece, and five cowrie shells used as dice. The arrows show the entry and exit points for the yellow and blue player, respectively. Graphics by the author.

The main drama of the game comes from the fact that it is played in teams. During a team's turn, every player on the team gets to throw the dice and move the team's pieces. With an average of 3-4 players per team, and sometimes as many as 8-10, pieces can cover a lot of track in a single turn, resulting in big swings back and forth across the board. This is further exacerbated by the awarding of extra throws, allowing a single player to throw the dice several times in a row. The only caveat is that pieces can only enter the track on a throw of 1 and that players on a team cannot move any pieces before they have thrown a 1. This means that fewer players are likely to move pieces in the beginning of the game and that turns may become unbalanced as more players get to move pieces on one team than the other.

None of my informants could remember playing the game with just two players, several of them saying that they thought it would be boring and lack the social interaction and group dynamics that they consider key to the game. Similarly, no one complained about the game becoming unbalanced when playing in large teams, as every player has an equal chance of throwing the 1 required to enter the game. One informant said that a player who did not manage to throw a 1 for an entire game would sometimes be

branded as unlucky and have a difficult time getting picked for the next game. Several informants also mentioned cheating as a viable strategy as long as players were not caught doing so. This would seem to underline the playing of Dadu as a social event above and beyond a strictly competitive game of winning and losing. Several examples of flipping the board and unsettling the pieces were also mentioned, without necessarily leading to the exclusion of players from future play.

It should be noted that team play similar to that described for Dadu is a common yet underreported phenomenon especially in traditional race games.[16] Since team play is rarely implied by game equipment or spelled out in formal rule descriptions, it tends to be overlooked even when it radically changes how a game is played and experienced. This challenges the often repeated observation that early board games were almost exclusively designed for two players.[17] While that may be true from a formal perspective, as in the case of Dadu, it may not accurately reflect how games were engaged with in the past.[18] As Jaakko Stenros and Markus Montola have recently demonstrated, formal rules only form part of the many different types of rules that govern gameplay.[19]

Analyzing Dadu

Even a cursory glance at Dadu makes it apparent that it shares the majority of its ludemes with other South Asian race games such as Pancha Keliya (Sin. *pañca keḷiya*), Ashta Chamma (Tel. *aṣṭācemma*), and Pachisi (Hi. *paccīsī*). One might even be forgiven for dismissing it as yet another variant of the same. Closer inspection, however, reveals the presence of several

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[16] Examples from South Asia include Pancha Keliya from Sri Lanka (Parker 1909: 610) and a wide range of dice-based games from South India (Balambal 2005: 44ff.). Examples from outside South Asia include Zohn Ahl from North America (Culin 1898: 687-88), Bul from Central America (Verbeeck 1998: 87), and certain Tab games from North Africa (Murray 1952: 96-97). The examples given here are by no means exhaustive.

[17] See, for example, Finkel 2006 (p. 61).

[18] It should be noted that even from a formal perspective exceptions can easily be found. Vedic sources dating to the first half of the 1st millennium BCE describe a ritual dice game for four players (Lüders 1907: 51), lending support to the argument that four-player race games were known in Asia since the earliest times (Murray 1913: 37-40). The medieval period provides several more examples, including seven-player astronomical games (Schädler 2000) and four-player games of Chess (Sachau 1910: I, 183-85) and Chaupar (Schmidt-Madsen 2022).

[19] Stenros & Montola 2024. The other types of rules are identified as internal rules, social rules, external regulation, and material rules.

ludemes that seem to point in altogether different directions. These include the configuration of playing pieces, the direction of movement, and the rules of capture.

The following sections analyze key ludemic properties of Dadu and discuss them in the wider context of other traditional games both inside and outside South Asia. The purpose is not to present an exhaustive analysis of all the ludemes that make up Dadu, but to identify specific ludemes that may help us tell a more complete story of the game than the one currently available.

Gameboard

The gameboard in Dadu usually consists of seven five-square segments arranged one after the other at perpendicular angles to form a serpentine track (see fig. 2). Each segment begins with a marked square followed by four unmarked squares, with a final marked square added at the end of the track for symmetry. Sometimes two additional segments are added to lengthen the track, resulting in a series of nine five-square segments. The marked squares indicate safe squares where pieces are free from capture. The empty quadrants formed by the track at either end of the board are sometimes used to hold the pieces before they enter the track, while the empty quadrant formed in the center of the board can be used to hold pieces that have entered the final square of the track and are waiting to be borne off (see "Existing Pieces" under *Basic Rules* in the appendix).

The board is reminiscent of a family of single track race games primarily known from graffiti boards in caves, temples, ruins, and other structures across Central and South India.[20] The most widely attested design among the graffiti boards is identical to Dadu, except that the final segment is placed at the beginning, forming two separate lead-ins to a shared track (fig. 3). The game is often referred to as Pancha Keliya, or the game of five, following Henry Parker who documented a version of it in Sri Lanka in the early 20th century.[21] It is unclear what exactly the number five refers to, but

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[20] See, for example, Elke Rogersdotter's survey of graffiti boards in the ruined city of Vijayanagara in Karnataka, which shows that single track race games were the most common by far (2015: 486).
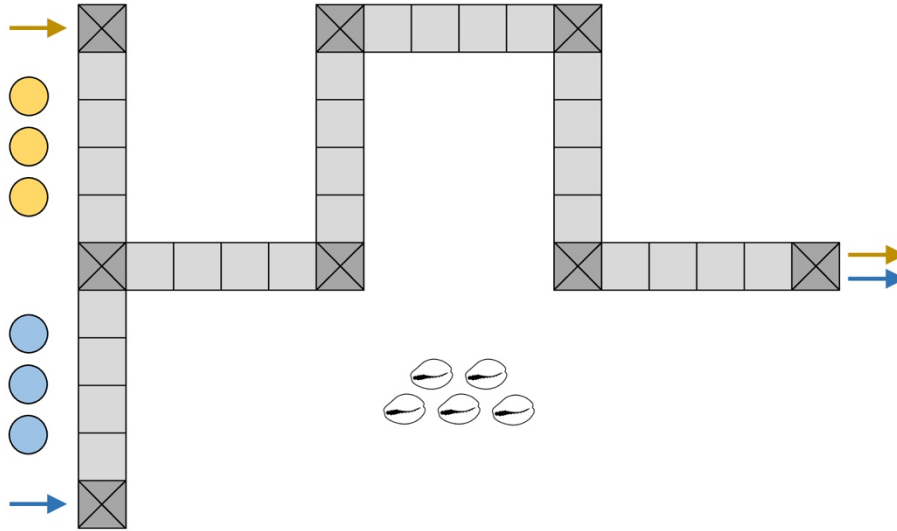[21] Parker 1909: 609-10.

Figure 3: Pancha Keliya as described in Singh et al 2016 (pp. 55-56) with the lead-in for a third side removed for clarity. Played with three pieces on each side and five cowrie shells as dice. The arrows show the entry and exit points for the yellow and blue player, respectively. Graphics by the author.

given the common practice of naming traditional games after special throws, it is likely that it refers to the throw of five cowries faceup.[22]

The main difference between Dadu and Pancha Keliya is that pieces in Pancha Keliya move in the same direction along the track and do not include any king pieces. Pieces in single track race games also tend to be fewer in number than the eight included per side in Dadu, with Parker mentioning three for Pancha Keliya, and Wodeyar five for Panchi (see fn. 22). Parker notes that Pancha Keliya is often played in teams of two to four players, but he does not specify whether all players get to throw the dice during their team's turn as in Dadu. An earlier description of the same

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[22] This is also suggested by Parker, together with the somewhat less likely possibility that five refers to the number of safe squares on the board that he documented (1909: 609). Another version of the game described by Krishnaraja Wodeyar III in a manuscript from 1843 CE is simply called Panchi (Kan. *pañci*), also indicating a game of five, but includes seven cowries and twelve safe squares. Throws of 1, 5, and 7 are all considered special throws used to enter pieces onto the track (Rangachar 2006: 32). Yet another possibility would be that five refers to the distance between safe squares throughout the track.

game, referred to as Panchy, notes that any number of players can participate and that "players on each side play alternately."[23]

The perpendicular arrangement of track segments is particular to South Asian race games and points to an Indian origin for the Dadu board. Despite great variation in design across known single track graffiti boards, the exact design used in Dadu is not found anywhere else.[24] This would seem to indicate that the Dadu board was deliberately modified to distinguish it from other single track games, possibly by moving one of the two beginning segments in Pancha Keliya to the other end of the track. This would also offer a natural explanation for the opposed movement of the pieces, though, as we shall see, there are other reasons why opposed movement might feature in Dadu.

Dice

Dadu is played with five cowrie shells used as binary dice. The number of cowries that land faceup equals the number of squares that a piece can move, with the exception that five cowries faceup grants a move of 10 squares. Additionally, throws of 1 and 10 award an additional throw, allowing players to accumulate multiple results before moving any pieces. If all cowries land facedown, the player must stop throwing and forfeit their turn without applying any results previously obtained. A throw of 1 is called a *da* (Guj. *dā*) and is required for a player to enter the game and for a piece to enter the track.

The use of cowries in Dadu closely resembles that of many other race games in South Asia. The number of cowries and the calculation of scores may vary, but the requirement of special throws to enter the board, the awarding of extra throws, and the doubling of values for certain throws are all part of a common ludemic pool. Square race games, such as Ashta Chamma, are usually played with four cowries, while cruciform race games, such as Pachisi, are usually played with six or seven cowries. Games played with five cowries like Dadu usually belong in the category of single track race games, such as Pancha Keliya, whose board is clearly reminiscent of Dadu.[25]

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[23] Ludovici 1873: 35.

[24] See, for example, Murray 1952 (pp. 140-41), Rogersdotter 2015 (pp. 467, 479-80), and Singh et al 2016 (pp. 55-60).

[25] Parker recorded Pancha Keliya as being played with six cowries in Sri Lanka, while Wodeyar described the related Panchi as being played with seven cowries in Mysore, but

Two things that stand out with regard to the value of the throws are that the count of the cowries is doubled when they all fall *faceup* and that a player forfeits their turn when they all fall *facedown*. The more common practice is to double the count when they all fall *facedown* and *not* to double it when they all fall *faceup*. Counts of 0 are rarely found in South Asian race games, though Parker does in fact record it for Pancha Keliya when all cowries fall facedown.[26] It is not apparent from his description whether players forfeit their turn as in Dadu, or whether they simply stop throwing and apply any results previously obtained.[27] Forfeiture on a throw of all cowries facedown appears to be implied in Bheri Bakhri (Hi. *bhēṛī bakrī*), or sheep and goat, recorded in the western Himalayas in the 1920s.[28] Despite the name, usually associated with hunt games, Bheri Bakhri belongs to the predominantly West Asian and North African family of Tab games, the South Asian variants of which often include throws with a value of 0.[29]

We will have more to say about Tab games and their possible influence on Dadu later. Here it should just be mentioned that with regard to dice the main difference between West Asian Tab games and South Asian race games lies in the materiality. Tab games generally use throwing sticks as dice, while South Asian race games generally use cowries, seeds, or similar, but whatever the material object the counting is always binary. South Asian Tab games usually retain the throwing sticks, though the use of cowries in Bheri Bakhri mentioned above shows that this was not always the case. If Dadu originated as the result of influence from West Asian Tab games, any throwing sticks originally involved could easily have been replaced with cowries. Given the obvious influence from single track race games, it is also quite possible that Dadu was always played with cowries.

Playing Pieces

The single most unusual feature of Dadu is the inclusion of king pieces. Differentiated pieces with differentiated powers are rarely found in

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in both cases the emphasis remained on the throw of five cowries called *pancha* like the game. The additional cowries were likely introduced to speed up the game, and Singh et al do indeed describe both games as being played with five cowries (2016: 55-58).

[26] Parker 1909: 609. He notes that the throw is called *bokka*.

[27] It should be noted that the rule of forfeiture is not always applied in Dadu. This may also have been true of Pancha Keliya as Parker documented it.

[28] Das-Gupta 1929: 298-99.

[29] Depaulis' catalogue of Tab games also lists a Moroccan and a West Saharan variant with throws of 0 (2001: 62-63).

traditional race games. The power of stacked pieces in Backgammon to block entry into their square, or the power of twinned pieces in Pachisi to move as one and avoid capture by singletons, are purely situational and not inherent to any individual piece itself. The earliest example of a race game that may have used differentiated pieces is a variant of the Game of Twenty Squares described on a cuneiform tablet dating from the 2nd century BCE.[30] The pieces are identified with different birds or planets, each associated with a specific throw of the dice which may have been required for them to enter the board or move. Details, however, are lacking, and it seems likely that the text is describing something more akin to a ludic method of divination rather than a traditional race game.[31] I am therefore hesitant to claim, as others have done before me, that the text provides the first known example of a game with differentiated pieces.[32]

Later examples include a family of astronomical games first referred to by the Arab author al-Masudi in the 10th century and later expanded on by the lexicographer al-Amoli in the 14th century.[33] There the different playing pieces are clearly identified with celestial bodies, each associated with a specific number on a die as in the Game of Twenty Squares, though it remains unclear whether the ultimate purpose of movement is to race or position the pieces. In a late 13th-century variant described by King Alfonso X of Castile, the goal is to create auspicious planetary constellations with the pieces, forcing other players to pay out stakes. The loosely related Dice Game of the Nine Celestial Bodies (Skt. *navagrahākṣakrīḍā*), invented by Maharaja Krishnaraja Wodeyar III in 19th-century Mysore, presents itself as a race game, but the design is highly idiosyncratic and unlikely to have traveled far beyond the gates of Mysore Palace.[34]

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[30] Finkel 1995, 2007. Earlier still would be the ancient Egyptian game of Mehen which may have included two different types of pieces. Nothing is known for certain about how it was played, but it may be reflected in a North African family of spiral race games first documented in the early 20th century (e.g., Voinot 1909: 133-34; Kendall 2007: 43-44). A seemingly related group of North African race games, documented from the mid-20th century onward, also makes use of differentiated pieces (see Es-Sîg, Siryu, Sig wa Duqqan (Houmt al-Arbah), and Sig (El Oued) in the Ludii database).

[31] A similar conclusion is reached by John Z. Wee in his detailed reevaluation of Irving Finkel's pioneering work on the game (2018: 837).

[32] See, for example, Schädler 2000 (p. 207).

[33] *Ibid*. 207-11.

[34] Described in the Kautukanidhi section (9.18) of the *Śrītattvanidhi* (Wodeyar III et al 1901). A full translation from the original Sanskrit is under preparation by the author.

The only realistic candidate for a race game with differentiated pieces that might have influenced Dadu is Bhadrakattam (Tam. *patrakaṭṭam*) from Thanjavur District in Tamil Nadu.[35] It is a single track race game for two players or teams of players each controlling five different pieces. Each piece is associated with a specific result on a throw of five cowries, and only when that result comes up is the piece allowed to move.[36] This, however, is clearly different from Dadu which only has two different types of pieces, both of which move in the same way according to the same die rolls. As there are no known connections between Dadu and Bhadrakattam, it seems highly unlikely that one should have developed under the influence of the other.

Contrary to race games, hunt and war games often make use of differentiated pieces. Hunt games represent asymmetrical conflicts where each player has their own unique set of pieces with their own unique set of powers. In North European Tafl games, combining elements of hunt and war games, one player even controls a king and a host of soldiers as in Dadu, but there is no deeper connection between the games beyond the surface resemblance of the pieces. War games are most commonly identified with Chess, whose apparent origin in North India in the mid-1st millennium CE makes it the earliest example of a game in which differentiated pieces with differentiated powers can be clearly documented.[37] If we imagine a standard set of Chess pieces without the officers, we end up with a king and eight pawns on each side, corresponding to the distribution of pieces in Dadu. Interestingly, in both games the king piece is a liability rather than an asset. In Chess it has limited powers of movement and can lose a player the game, whereas in Dadu it takes all other friendly pieces on the board back home with it if captured.

As a hybrid game incorporating ludemes from different sources, it is indeed possible that Dadu borrowed its pieces from Chess, and perhaps

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[35] Raghavan 2020: 213. The game was documented in local households by Sreeranjini who now sells hand-crafted copies of it from her store Kavade in Bangalore (https://kavade.org/store/bhadrakattam-game).

[36] This is clearly reminiscent of the astronomical games described above. Bhadrakattam literally means "auspicious square," indicating that it may have been associated with a form of divination similar to that found in the Game of Twenty Squares, which it should be noted also has a historical presence in India (Finkel 1999).

[37] A king piece is sometimes included in reconstructions of the Ancient Roman game of Ludus Latrunculorum predating Chess with several centuries (e.g., Bell 1969: I, 84-87), but this is not supported by available evidence (e.g., Parlett 1999: 236; Schädler 2001: 10).

even literally from actual Chess sets available in Bohra households. However, the lack of any further correspondence between Dadu and Chess suggests that we should continue our search for the origin of the king piece in Dadu elsewhere. We will do so below with the help of the Ludii database, but first we need to look at a final aspect of Dadu to help us define its key characteristics more clearly.

Gameplay

South Asian race games come in many different shapes and sizes, yet most conform to the same core set of ludemes. Players move their pieces along a track according to the throw of dice, competing to be the first to complete the track with all their pieces. If a piece ends its move in the same square as another player's piece, it captures that piece and sends it back to start. Certain squares are marked as safe, indicating that pieces resting on them are immune to capture. And that is really it. The rest is variation. The choice of dice, the calculation of throws, the number of players, the design of tracks, and many other variables along the same line may change how a game is experienced but not how it is played at its core. That only happens when something completely new, such as a king piece, is introduced into it.

One of the key ludemic variations that sets Dadu apart from most other South Asian race games is that players move in opposite directions along the same track. This is most commonly associated with race games belonging to the Tables family such as Backgammon. The Persian game Nard (Per. *nard*), often considered an ancestor of Backgammon, may have entered South Asia sometime around the mid-1st millennium CE. It was popular as Sarikrida (Skt. *sārīkrīḍā*) and Pashakakrida (Skt. *pāśakakrīḍā*) among Hindus until the early centuries of the second millennium, after which it was mostly confined to Muslim communities.[38] It would therefore be possible to see Dadu primarily as an adaptation of Backgammon to the board of a single track race game.

The view is indeed supported by the fact that pieces in both games are allowed to stack in the same square, but other ludemes indicate a different, or at least a more complex, origin for Dadu. First, the direction of movement in Dadu is *toward* the other player's home row rather than *away from* it. Secondly, rather than starting *outside* the board, pieces in Backgammon usually begin the game in various fixed positions *on* the

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[38] Soar 2007; Topsfield 2006.

board.[39] Thirdly, while a stack of pieces *blocks* the entry of opposing pieces in Backgammon, it *allows* entry and even capture in Dadu. Fourthly, pieces in Dadu can be borne off anytime after capturing at least one opposing piece, not only when they have all been gathered in the last segment of the board. And last but not least, there are of course no king pieces in Backgammon.

As will be discussed in more detail later, the family of Tab games popular in North Africa and West Asia also features opposed movement along a single track. While not exclusively focused on moving and exiting pieces like Dadu and Backgammon, there are other ludemic and historical reasons why Tab remains an attractive candidate for having played a key role in the development of Dadu, including suggesting the opposed direction of play.

Key Ludemes

The above analysis has shown that the ludemic makeup of Dadu does not conform to that of any other known game or family of games. It is played on a single track board (like Pancha Keliya) with kings and pawns (like Chess) moving in opposite directions (like Backgammon). An obvious conclusion would be to suggest that Dadu is a hybrid of these three games, as they are the ones that it appears to have the most in common with. Another and more satisfying approach would be to begin looking for other games that share in its idiosyncrasies. And this is exactly what the Ludii database allows us to do.

The ludemic combination that sets Dadu apart from most other traditional games is the pairing of a track with a king piece. The track is usually associated with race games, while the king piece is usually associated with hunt or war games. If we search the Ludii database for games combining the two, we only get three results other than Dadu: Chong, Kiôz, and Sáhkku. The three games belong to widely different regions, with Chong hailing from Sakhalin in North-East Asia, Kiôz from Palestine in West Asia, and Sáhkku from Sápmi in Scandinavia (fig. 4). Yet they all belong to the same family of games known as Tab.

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[39] This is also true of the South Asian race game Chaupar, which eclipsed Backgammon as the game of choice among Hindus sometime in the first half of the 2nd mill. CE and was famously endorsed by the Mughal emperor Akbar in the second half of the 16th cent. CE (Blochmann 1873: 303-304). Just as Backgammon may have suggested the opposed direction of play in Dadu, it may also have suggested starting with pieces on the board in Chaupar.

Before we follow the lead from Ludii further, we need to get a better understanding of the socio-historical context surrounding Dadu. Only then can we properly evaluate the results of the ludemic analysis. Now we therefore turn our attention to the Dawoodi Bohra community and the role of Dadu within it.
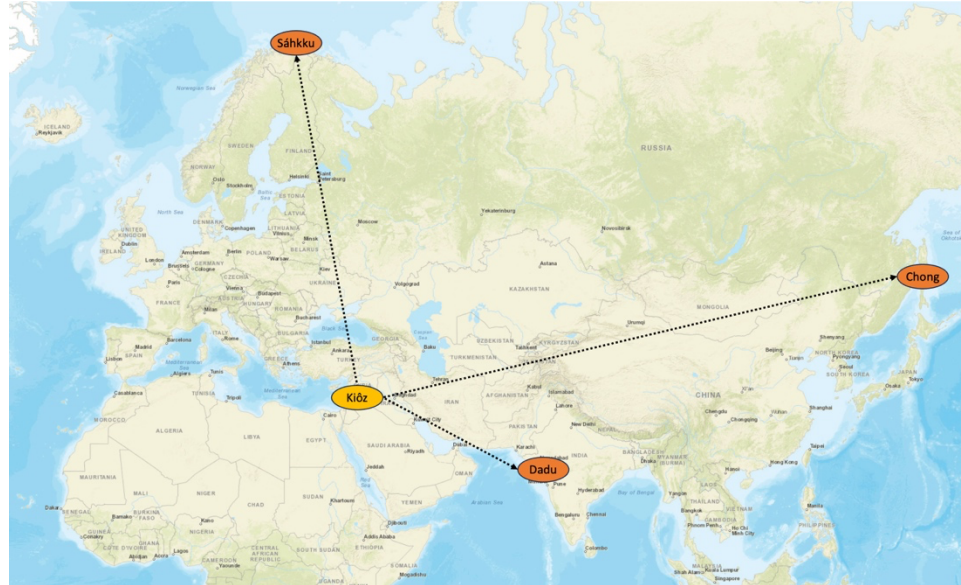

Figure 4: Map showing the geographical attestations of the four games in the Ludii database that are played on a track with a king piece. Arrows indicate suggested directions of influence. Modified world map from the Ludii website (https://ludii.games/worldMap.php). Graphics by the author.

Tracing Dadu

It is important to recognize the inherent limitations of ludemic research. Games are cultural artifacts that facilitate social interaction, and while we can learn a lot from studying the formal systems that govern them, we can only fully grasp the functions they fulfil and the experiences they provide by studying the communities of play that surround them. And in the case of Dadu, the community is really all we have. Not only is it key to accessing and learning the game, it is also key to understanding the history of the game and its role in bringing people together and establishing a shared cultural identity.

The following sections situate Dadu in the context of the Dawoodi Bohra community and the individual households where it is played. They discuss the privileged position of the game and the social dynamics at play

when engaged in by families and friends. In highlighting the close ties that exist between Yemen and Western India in Dawoodi Bohra history, they also pick up where the ludemic analysis left off and suggest the influence of West Asian Tab games on the development of Dadu.

The Dawoodi Bohra Community

The Bohra community belongs to the Ismaili branch of Shia Islam and traces its history back to the Fatimid Caliphate which existed between the 10th and 12th centuries. The religious headquarters of the community were originally located in Yemen, but missionary and mercantile contact with Gujarat, beginning as early as the 11th century, resulted in the transfer of the headquarters to Ahmedabad in the mid-16th century. This was followed by a schism in the late 16th century, which resulted in a split between the majority Dawoodi Bohras, primarily located in Gujarat, and the minority Sulaymani Bohras, primarily located in Yemen.[40] Today the headquarters of the Dawoodi Bohras are located in Mumbai, with most community members living in Gujarat and Maharashtra. A small group still resides in Yemen, and a sizable diaspora has built up in East Africa since the 19th century and in Europe and North America since the 20th century.[41]

The Dawoodi Bohra community shares its history of persecution at the hands of especially Sunni Muslim groups with other Ismaili communities. Often they were forced into adopting the position of *taqiyya* which involves hiding one's religious beliefs and practices from the outside world. This meant, on the one hand, limiting contact with non-community members and maintaining a high level of secrecy, and on the other hand, assimilating to foreign cultures and adopting foreign languages and customs. A good example is the name used by the community to describe itself. The word *bohra* derives from Gujarati *vahoravuṃ* which means "to trade" and indicates the primary profession within the community. The qualifier *dawoodi* (Guj. *dāūdī*) indicates that the community follows Daud bin Qutubshah (1539-1612) who was the Dai (Ar. *dāʿī*), or spiritual leader, at the head of the schism which lead to the formation of the Dawoodi Bohras.

Most Dawoodi Bohras in South Asia trace their lineage back to converts from the Hindu merchant class known as Vaishya (Skt. *vaiśya*). This means,

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[40] For a comprehensive history of the Bohra community, see Daftary 2007 (pp. 238-300). For a history focused on the Dawoodi branch, see Blank 2001 (pp. 13-52).
[41] See, for example, Gay 2009.

as Blank points out, that "[a] central portion of Dawoodi culture and identity is native Indian rather than pan-Islamic in origin."[42] Bohras have their own language called Lisan ud-Dawat, which is based on Gujarati but incorporates many Arabic, Persian, and Urdu loan words and is written in Arabic script. Their dress and customs mix elements from Muslim and Hindu traditions, and despite having been settled in Western India for centuries they remain conscious of their origin in Yemen and maintain strong ties with the small community still residing there. It is this unique position at the interface between regions and cultures that I believe may shed light on the hybrid nature of Dadu and help explain how ludemes from one family of games can suddenly and without precedence appear in another.

Household Games

Playing traditional board games is a common pastime among Dawoodi Bohras. As mentioned in the leaflet accompanying the hand-stitched Dadu boards created by Sophie Johari, she grew up in a Dawoodi Bohra household in Gujarat in the 1960s and 70s playing games such as Kola Daan (Guj. *koḍā dān*), Chaupar (Hi. *caupaṛ*), and Dadu.[43] Kola Daan and Chaupar belong to well-known families of games played throughout India, while Dadu is particular to the Dawoodi Bohra community. Every household is said to have its own hand-stitched board, complete with wood-turned pieces and cowrie shells.[44] The game is mostly brought out during social gatherings with family and friends, but only when exclusively attended by community members. My informants struggled to remember playing the game with non-community members, some explaining that they did not have a lot of close friends outside the community, others that it would be difficult for people who did not grow up playing Dadu to understand the game and the social dynamics around it.

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[42] Blank 2001: 64.
[43] SoSophie, n.d. Kola Daan is a Gujarati name for the previously mentioned square race game known as Ashta Chamma in Telugu.
[44] Dadu does not appear to have been marketed as a commercial product until very recently, probably because women in Dawoodi Bohra households traditionally craft their own gameboards. One informant remembered seeing textile boards for sale near a mosque in a Dawoodi Bohra neighborhood in Mumbai, but even then they were hand-crafted by members of the community and targeted at community members.

Contrary to Chaupar, which is often played during the Hindu festival of Diwali, Dadu is not associated with any particular festivals or holidays.[45] The game is seen as a social event in its own right capable of bringing community members together across age, gender, and profession. It involves everyone present and commands their full attention, with some informants stressing that it is never played casually alongside meals or over conversation. Most informants regarded four to six players per team as the norm, with eight to ten players per team as the maximum. The high player count not only increases the drama but also the length of the game, resulting in it often lasting an entire evening. Some informants reported having to wrap up games before finishing them, with one informant explaining that they would sometimes take photos of an unfinished game and continue playing it the next time they met up.

It is interesting to note how the formal rules of Dadu are impacted by the social context in which it is played. As Stenros and Montola point out, the social rules that inform the way we play games are intentionally vague and should not be considered rules as much as "values that guide play."[46] We have already seen that players are willing to engage in the game even though they may not be able to finish it. This indicates that the act of playing is considered more important than determining who wins and who loses, even though, from a formal perspective, those are the only two meaningful outcomes of the game. Another example is the rule that a king captured by another king should return to start together with all other friendly pieces, even if they have already exited the game track. Everyone I spoke to about the game knew the rule, but since it effectively resets the game for the side whose king is captured, several people chose not to play with it, citing fear of causing rifts in the social fabric as the main reason. This indicates that in order to fully understand variability in formal rules, we need to take social contexts of play into consideration.

The exclusivity of Dadu to the Dawoodi Bohra community and its position as the pastime of choice at social gatherings are indicative of the special status awarded to it. Unfortunately, the reason for the status was not clear to my informants. They did not attribute any symbolic or ritual value

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[45] Some informants mentioned playing Dadu during the Muslim festival of Eid al-Fitr or on New Year's Eve, but only because it was obvious occasions for the family to be together and engage in social activities.

[46] Stenros & Montola 2024: 87.

to the game, and they were not aware of any legends or stories in which it played a prominent role. One informant suggested that the king pieces might be seen as reflecting the emphasis on spiritual leaders in the community, with their opposed positions in the game possibly hinting at the many schisms that have occurred throughout history. The view was indirectly supported by another informant who suggested that the word *nakṭa* applied to the king pieces might derive from Hindi *nakṭā* (Guj. *nakṭuṃ*), meaning "one whose nose has been cut off." As Blank notes, the Dawoodi Bohra community seems to have earned a reputation, whether deserved or not, for cutting off the noses of dissenters.[47]

Perhaps the most likely explanation for the privileged position of Dadu is that it has a long history within the community and functions as a marker of identity and tradition. This increases the likelihood that it was specifically invented as a Dawoodi Bohra game and that it deliberately incorporates ludemes that link the Western Indian community to its Yemenite origins. We will therefore now return to the formal properties of the game and explore the ludemic connections between West and South Asian games that Dadu seems to embody. This allows us to formulate the central argument that Dadu is a hybrid game existing at the interface between two distinct regions and cultures linked by a thousand-year long history of Ismaili activity. We begin with a short philological digression to understand what the word *dādu* actually means and where it may have originated.

Playing in Arabic

The origin and meaning of the word *dādu* is unclear. Most informants had never considered it to hold any meaning beyond that of the game. Johari understands it as a combination of the Gujarati words *dā* and *du*.[48] *Dā* is the technical term for the throw of 1 required to enter a piece onto the track, and *du* literally means "twice."[49] Dadu would then translate as "one-two," indicating the throws of one and two cowries faceup. Just as some traditional games, such as Pachisi (lit. "twenty-five"), are named after a special throw, others, such as Ashta Chamma (lit. "eight-four"), are named after two throws. The two throws usually carry some special significance, as

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[47] Blank 2001: 46.
[48] SoSophie, n.d.
[49] *Du* might also be understood as cognate with Hindi *do*, meaning "two." Two in Gujarati is *be*.

in Ashta Chamma where they indicate throws of all four cowries landing either faceup (4) or facedown (8). This would not be the case if we were to understand Dadu as "one-two," since a throw of 2 does not hold any special significance in Dadu. It therefore seems likely that the popular etymology given by Johari was suggested by the phonetic similarity of *dā* and *du*.

Another possibility is to derive *dādu* from Portuguese *dado*, meaning "die." Portugal dominated the Indian Ocean trade during much of the 16th century when the Bohras established themselves more firmly in Western India. The Portuguese State of India relocated its capital to Goa in 1530 and expanded its influence northward to Maharashtra and Gujarat in the following decades. As Sebastião Rodolfo Dalgado's study of Portuguese influence on Asiatic languages shows, the word *dado* entered into several languages in South and Southeast Asia. The languages include Konkani, spoken in and around Goa on the mid-western coast of India, and Sinhala, spoken in Sri Lanka where Pancha Keliya is played alongside a dice game called Dadu Keliya (Sin. *dādu keḷiya*, "game of dice").[50] It would be difficult to argue for the introduction of *dādu* into Bohra vocabulary via Konkani or Sinhala, since the community has no obvious connection to the regions where those languages are spoken. However, if Dadu were already being played in the Bohra community in the 16th century, it is possible that the Bohras, as an important trading community, had contact with the Portuguese, and that the Portuguese would have referred to the game as *dado*. This, of course, would not explain why the Bohras would choose to adopt a foreign name for a game exclusively tied to their own community.

Perhaps the simplest and most obvious solution would be to derive Dadu from Arabic *dadu* or *dadun*, meaning "diversion," "sport," or "play."[51] This does not answer the question of potential West Asian influence on the game, but it does open up the possibility that Dadu, or at least some earlier variant of it, was played in the Bohra community in Yemen before it transferred its religious headquarters to Ahmedabad in the mid-16th century. The true meaning of the word may have been forgotten over time as the community became increasingly integrated in Western Indian society and further

[50] Dalgado 1936: 131-32. There is little information available about Dadu Keliya, but an entry in the online *Sinhala Dictionary* (Sin. *siṃhala viśvakōṣaya*) suggests that it is a pure dice game played with two six-sided dice (http://encyclopedia.gov.lk).

[51] Lane 1863-93: I, 862. I am grateful to Anuj Misra for helping me with the Arabic etymology. A museum of childhood called Dadu is currently under development in Qatar (https://qm.org.qa/en/about-us/dadu-childrens-museum-qatar).

removed from its origin. If the etymology is correct, it could suggest that Dadu goes back much further than the 20th century, and much farther than India.

Tab Games with King Pieces

Tab designates a family of games primarily played in West Asia and North Africa. Murray classified them as "war games played with lots or dice," but today, following the suggestion of R.C. Bell, they are more commonly referred to as "running-fight games."[52] Thierry Depaulis, whose catalogue of known Tab game variants remains the most comprehensive to date, has even argued for their designation as "jeux de parcours," or race games plain and simple.[53] The ambiguity arises from the fact that they are played with dice along a linear track and that their win conditions alternate between elimination and positioning of pieces.[54]

Tab tracks are folded in upon themselves to form a rectangular board of varying size, usually with three or four rows and between ten and twelve columns, though especially the number of columns tend to vary greatly (fig. 5). The two players or teams of players begin with their pieces placed in squares at opposite ends of the track, corresponding to the two outermost rows on the board. Movement is largely boustrophedon with opposing pieces snaking their way toward each other row by row. Special rules indicate when pieces must circulate the central rows between the home rows and when they are allowed to enter the opposing side's home row. The goal is either to eliminate all the opposing side's pieces or to have the most pieces reach their home row.

Tab has several interesting similarities and differences with Dadu, but the main ludemic concept I want to discuss here is the inclusion of king pieces. While there are no formal king pieces in Tab, Thomas Hyde recorded in the late 17th century that a stack of friendly pieces in a single square was called *mālik* in Arabic, meaning "king."[55] The advantage of making a king is that all the pieces in the stack can move as one, though that also means that they can all be captured as one. The latter rule is

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[52] Murray 1952: 94-95; Bell 1969: I, 87.

[53] Depaulis 2001: 54.

[54] Parlett classifies them as "linear war games" and suggests that they represent a transitional stage from race to war games (1999: 226).

[55] Hyde 1694: 219. *Mālik* is also used to describe the king card in traditional Persian playing cards known as Ganjifa (Per. *ganjīfa*) (Leyden 1982: 4).

reminiscent of what happens when a king piece is captured in Dadu, taking all other friendly pieces on the board back home with it.

As previously mentioned, three Tab variants in the Ludii database include actual king pieces. In Sáhkku there is only a single king which changes hands between the players when they land on it with their other pieces. It is the most powerful piece on the board as it can move in any direction orthogonally, thus ignoring the usual restrictions of the linear track in Tab games.[56] In Chong each player has their own king which begins at the far right end of the central row relative to the positions of the players. It is severely limited in movement and mainly serves to indicate which other pieces have been activated by gradually moving backward as other pieces step forward.[57] In both cases the function of the king seems to have been inspired by games other than race games. The areal movement of the king in Sáhkku is reminiscent of most war and hunt games, while the restrictive movement of the king in Chong is reminiscent of the limited powers of the king in Chess.
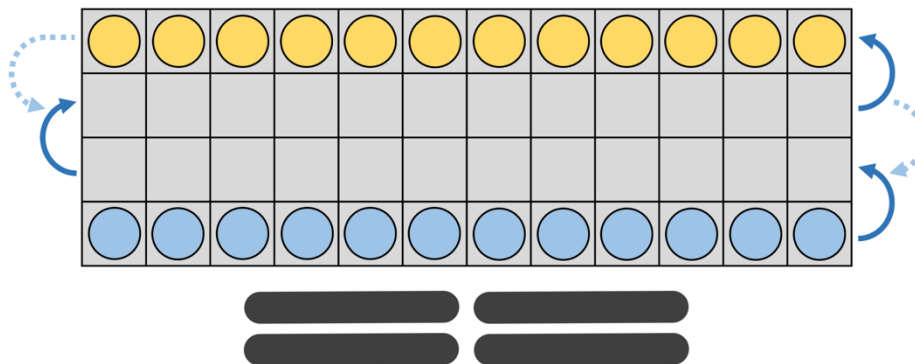

Figure 5: Sample Tab game with four rows and twelve columns. Played with twelve pieces on each side and four throwing sticks as dice. The blue arrows indicate the direction of movement for the blue player, with the dashed arrows indicating directions that are available in some but not all Tab variants. The movement of the yellow player mirrors that of the blue player. Graphics by the author.

[56] For more details on Sáhkku, see https://ludii.games/details.php?keyword=Sahkku.
[57] For more details on Chong, see https://ludii.games/details.php?keyword=Chong%20(Sakhalin).

The geographical location of the third game Kiôz in West Asia makes it more immediately relevant to the present study than Sáhkku and Chong as this is where the community of the Dawoodi Bohras originated.[58] Kiôz was played in Palestine in the late 17th century with eighteen standard and four king pieces on either side of the board (fig. 6). According to Hyde, the kings (Lat. *rex*) behaved exactly like the other pieces referred to as soldiers (Lat. *miles*).[59] A possible explanation for this apparent anomaly could be that Hyde's information about the game was incomplete, or perhaps that any difference between the king and the soldiers was not readily apparent to himself or his informants. This would certainly be the case for a casual observer of Dadu where the distinctive quality of the king only becomes apparent when it is captured.
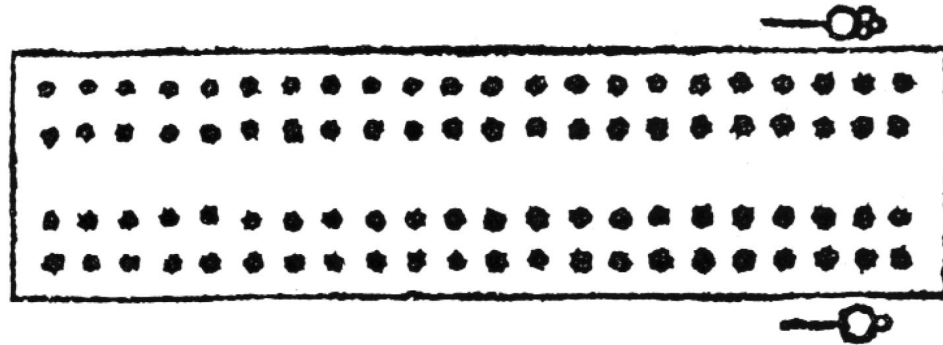

Figure 6: Kiôz as depicted in Hyde 1694 (p. 224) with four rows and twenty-two columns. Each side begins the game with four king pegs (depicted above the board) and eighteen soldier pegs (depicted below the board) stuck into the outermost rows of holes.

It is, of course, also possible that Hyde was correct in his observation. This is suggested by a recent ethnographical study of the Turkish game Kös undertaken by Ergin Tatar (Fig. 7).[60] Like Dadu the game is absent from the scholarly literature, but due to a recent surge in popularity several brief articles in Turkish can be found online.[61] It is clearly related to Kiust Oyun, or the game of Kiust, first recorded by Margaret Hasluck among the

[58] For more details on Kiôz, see https://ludii.games/details.php?keyword=Kioz.
[59] Hyde 1694: 224.
[60] The study still remains to be published. I am grateful to Tatar for sharing the information presented here.
[61] See, for example, the article by Şevkiye Kazan Nas on Kös Oyunu, or the game of Kös, in the online *Encyclopedia of Traditional Sports and Games* which includes several references to other sources on the game also written in Turkish (Nas, n.d.).

Turkish population in Greek Macedonia in the early 20th century.[62] An important difference is that several variants of Kös documented by Tatar are played with a single king piece on each side. The king piece begins in the far right side of the home row at the head of the other pieces, but moves and captures in the exact same way. If it can be said to have any distinction at all, it is as a visual clue to which end of the home row new pieces should enter the central rows from.

The lack of distinction between king and standard pieces in Kiôz and Kös suggests a closer connection between the two games, as does the likely correlation between their names. The words *kiôz* and *kös* both refer to the throw of 1 needed to activate pieces in the home row, and *kös* further indicates the four throwing sticks used as dice.[63] It is likely that *kiôz* also refers to the sticks, as Hyde gives the meaning of the word as "walnut" (Lat. *nux juglans*), likely indicating the material from which they were made.[64] In Kös, the sticks are indeed made from various types of nut wood, and the phonetically related Turkish word *koz*, possibly cognate with *kiôz*, not only means "walnut," but also "a trump in cards," conceptually comparable to a throw of 1 in Kös. Though it is impossible to fully piece the linguistic puzzle together, it would be erring on the side of caution to not at least suggest a common origin for Kiôz, Kiust, and Kös.

From West to South Asia

The evidence presented above suggests a continuous yet underreported tradition of playing Tab variants with king pieces in West Asia from at least the 17th century onward. Tab also traveled further east to South Asia where it took on new forms, though never with king pieces. The most frequently cited example is the South Indian Tablan (Kan. *tāblā*) documented by Bell in 1960, though a description of the variant Tabul Phal (Mar. *tābūl phal*) from Maharashtra had already been published in Marathi in 1905.[65] Both games are played on a 4 x 12 board like Kiyus and Kös, but the rules differ in several respects.

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[62] Hasluck 1930: 157-58.

[63] Nas notes that Turkish *kös* derives from Persian *kūs*, meaning a "large kettledrum" used in military campaigns, festivals, and ceremonies, and suggests that the word *kös* was applied to the throwing sticks on analogy with the wooden mallets used to play the drum (Nas, n.d.).

[64] Hyde 1694: 224.

[65] Bell 1969: I, 87-89; Devdhar 1905: 359-64.

Figure 7: Kös game with four rows and twelve columns hand-crafted by Ergin Tatar. The game begins with one special peg and eleven standard pegs positioned in the outermost rows of holes as shown in the photo. Movement is controlled by the four throwing sticks. Private collection, Turkey. Photo by the author.

Another early example is the previously mentioned Bheri Bakhri, or sheep and goat, played in the western Himalayas in the 1920s. The game is unusual in carrying a name otherwise associated with hunt games, though Tatar reports similar names being applied to the two sides in Kös, suggesting that Bheri Bakhri may represent the eastern frontier of Kös. It should also be noted that similar to Dadu, players in Bheri Bakhri control eight standard pieces each and forfeit their turn on a throw of all cowries facedown.

A further cross-over between game families is seen in the Game of Twenty-Four Squares (Skt. *caturviṃśatikoṣṭhaka*) described in a Sanskrit game encyclopedia from 1872.[66] The game is played with 2 x 8 pieces on a 3 x 8 board like Bheri Bakhri, but the central row contains two safe squares reminiscent of South Asian race games, and pieces move in all directions

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[66] Sharma 1982: 123-24 (incl. illustration).

and capture by jumping over other pieces as in South Asian war games.[67] A variation called the Game of Fifty-One Squares (Skt. *ekapañcāśattamakoṣṭhaka*) is played on a 3 x 17 board with a single safe square in the center and eight pieces lined up on either side of it.[68] Examples of Tab games with safe squares in the central row are attested for South Asia, suggesting that this may have been the original use of the boards in the games of twenty-four and fifty-one squares.[69] Still, it does not explain why the boards were adopted for a war game, as those are usually played on the points rather than the squares in South Asia and do not include safe squares.

The collective evidence indicates that Tab games were played throughout South Asia since the late medieval or early modern period, but never achieved widespread popularity comparable to other games such as Sarikrida, Chaupar, Ashta Chamma, and Pancha Keliya.[70] This may be because Tab was primarily considered a Muslim game and did not transfer easily to Hindu communities.[71] A case in point is the Tab variant Sonaikkattam (Tam. *sōnaikkaṭṭam*) said to be exclusively played by the Muslim community in Rameshwaram in Ramnad District in Tamil Nadu.[72] A circumstance that calls to mind the exclusive association of Dadu with the Dawoodi Bohra community in Western India. Sonaikkattam is played by two players or teams of players on a 5 x 8 board with eight pieces on each side. An even larger variant called Tayakaram (Tam. *tāyakaram*) is played in Nellai (a.k.a. Tirunelveli) District on a 9 x 12 board by two teams of six

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[67] A graffiti board with an identical layout was documented by Swapnesh Samaiya in a temple in Khajuraho in central India. I am grateful to Samaiya for sharing a photo of it in the *bgs4ever* google group (https://groups.google.com/g/bgs4ever). Another example of uncertain relation from 5th century Uzbekistan was published by Grigori L. Semenov (2007: 171, fig. 21.4).

[68] Sharma 1982: 124 (incl. illustration).

[69] See, for example, the Nepalese game of Kasimala Pay (New. *kasimalā pāṁy*) played on three-row boards with safe squares, a 3 x 12 graffiti board with safe squares in a rock cave near Murbad in Maharashtra (Bhosale 2020: 166, fig. 164), and another 3 x 12 graffiti board with safe squares found together with similar boards without safe squares in the ruined city of Vijayanagara in Karnataka (Rogersdotter 2015: 480-81, fig. 12). The graffiti boards are reported as Tab boards, but may now have to be reconsidered as war games similar to the games of twenty-four and fifty-one squares.

[70] Tab games do not receive any mention in Sharma's encyclopedic game text from 1872.

[71] It should, however, be noted that Tab games do not appear in the otherwise detailed list of games popular among South Indian Muslims in the early 19th century (Shurreef & Herklots 1832: App., lii-lvii).

[72] Balambal 2005: 59-61; pers. comm. with Raamesh Gowri Raghavan.

players with twelve pieces each, though it is unclear whether that, too, is exclusive to the Muslim community.[73]

The picture that emerges is one of great variation among Tab games in South Asia, with the games of twenty-four and fifty-one squares as the most radical examples. If they represent an attempt at adapting a South Asian war game to a Tab board, as seems likely, it is equally possible that Dadu represents an attempt in the opposite direction at adapting a Tab game to the board of a South Asian single track race game. The king piece would have played an essential part in the adaptation, as king pieces are already implied in Tab games that allow stacking, and even physically present in certain West Asian variants such as Kiôz, Kiust, and Kös.[74] A plausible hypothesis would therefore be that Dadu resulted from the encounter between two related yet distinct traditions of playing board games on either side of the Western Indian Ocean, brought together by centuries of interaction facilitated by the missionary and mercantile activities of the Dawoodi Bohra community. The exclusivity of the game and its function as a cultural identity marker separate from other games played more widely in South Asia indicate that it was likely invented within the community itself, possibly even as a deliberate attempt at bridging the two different traditions of gaming that existed within it.

Conclusion

A recent study by Olly Akkerman shows how the Bohra community managed to secretly move entire libraries of Fatimid manuscripts from Yemen to Gujarat following the transfer of their religious headquarters in the 16th century. The manuscripts were originally stored in "cupboards, chests, pouches and boxes," and together formed a mobile treasury of books traveling between local communities in coastal Gujarat.[75] Thinking about the mobility of objects in the Indian Ocean trade, it is easy to imagine how games in general and Dadu in particular might have figured among those

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[73] Balambal 2005: 45-47.

[74] Depaulis asserts that stacking is only a feature of Tab games in West Asia and North-East Africa (2001: 54). If this is true, the rule that allows multiple pieces in the same square in Dadu may represent a further example of influence from West Asian Tab games. It should also be noted that the presence of four kings on each side in Kiôz may have resulted from a variation over a smaller game with just one king on each side. One of my informants reported playing Dadu with two kings on each side and shared a photo of their private game set with a total of four kings and sixteen standard pieces.

[75] Akkerman 2022: 6.

objects. Games are often said to travel with soldiers and merchants, and in
the case of an entire community shifting their focus from one part of the
world to another, it seems obvious that they would not only bring their
sacred texts but also their pastimes. The hand-stitched gameboard that
Moiz Mansur showed me that afternoon in Pune was something very
different from the endless rows of modern board games that lined the shelves
of his store. It was part of a tradition that connected him to a community
and a history weaved into an intricate pattern whose primary defining
characteristic is its continuity.

In this article I have tried to highlight the diverse historical, social, and
ludic factors that may have contributed to the development of Dadu as a
quintessential Dawoodi Bohra game. The aim has not only been to add
Dadu to the growing pool of ludemes shared by board game scholars around
the world, but also to exemplify what ludemic research might look like from
a game historical perspective. Starting from a proverbial blank slate given
the lack of any previous evidence for the game, the article has demonstrated
just how far a purely ludemic analysis is able to take us in terms of situating
an isolated game object in a larger board game historical context.
Importantly, it has also shown the need for a socio-historical framing of the
object to properly evaluate the numerous ludemic connections suggested by
the analysis.

Ludemic theory and analysis are among the most promising advances
in the field of board game studies in recent years. The flagship Ludii
database is a powerful tool for historical research and has the potential to
finally supersede Murray's long outdated yet still heavily relied on *A History
of Board-Games Other Than Chess* (1952). This will require continued support
and maintenance by a community of scholars devoted to improving
accessibility and functionality, while at the same time making sure that data
is continuously added and expanded upon. The task is daunting but it seems
almost impossible not to undertake it. As for Dadu, hidden deep within the
secret traditions of the Dawoodi Bohras for centuries, the game is now
finally commercially available on the handicraft market.

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Appendix: Rules of Play

Overview

Dadu is a race game for two players or teams of players (see fig. 2). The two sides enter their pieces from opposite ends of the track and move them toward each other according to the throw of dice. Opposing pieces can be captured and sent back to start, but the ultimate goal is to exit one's own pieces from the entry point of the opposing side. The first side to exit all their pieces wins the game.

It is important to note that the rules of Dadu are oral in nature and subject to much variation. In my interviews with members of the Dawoodi

Bohra community, I have not come across two households that play with exactly the same rules. In an attempt to honor the inherent instability of the rules, I have divided the appendix into basic and optional rules. The basic rules describe a comprehensive set of rules shared across a majority of households, while the optional rules list a variety of isolated rules only adopted in a minority of households. I make no claim that the rules presented here are exhaustive, or that a larger sample of informants would not result in some rules being transferred from basic to optional and vice versa.

Components

1 single track gameboard with safe squares (*macho*)[76]
2 x 1 special playing piece (king piece, *nakta*)[77]
2 x 8 standard playing pieces (*kaangi*)[78]
5 binary dice (cowrie shells, *kodi*)[79]

Setup

The players are divided into two sides of equal size. If there is an odd number of players, one side will have one more player than the other. Each side takes 1 king piece and 8 standard pieces of the same color. They place their pieces in the empty quadrants at opposite ends of the gameboard. The pieces will enter the game track from the first square of the nearby outermost row. This row, consisting of six squares, is known as their home row (*ghar*).[80]

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[76] Guj. *māco*, lit. "raised platform," also used to indicate a home row in *sogaṭā*, or Chaupar, according to *The Modern Gujarati-English Dictionary* (Mehta & Mehta 1925: 1186).

[77] Unknown origin and meaning. Possibly from Hi. *naktā* (Guj. *nakṭuṃ*), lit. "having the nose cut off," possibly with reference to a dissenter within the community. Another possibility would be derive it from Ar. *nuqta* (Guj. *nukto*), lit. "dot, point," possibly in the sense of a leader.

[78] Guj. *kāṅgī* (Mar. *kāṇḍī*), cognate with *kāṅkarī*, lit. "pebble," also "playing piece."

[79] Guj. *koḍī*.

[80] Guj. *ghar*, lit. "house." One informant applied it to safe squares rather than home rows. A more common application than either would be to an individual, unmarked square.

Sequence of Play

The two sides alternate taking turns. They decide by mutual agreement or randomization who will take the first turn. If playing in teams, every player on a team will get a chance to throw the dice and move the pieces during their team's turn. If there is an unequal number of players on the teams, one player on the smaller team gets two chances each turn. The teams have shared ownership of their playing pieces, meaning that any player on a team can move any piece belonging to that team. However, only players who have thrown a 1, called a *da*, are allowed to enter, move, or exit pieces.[81] Until a player throws a 1, they cannot apply the results of their throws to the pieces on the board (see *Throws* below).

Throws

The five cowrie shells used as dice can either land faceup or facedown. Only the number of cowries landing faceup are counted. The six possible results are interpreted as follows (see below for details):

> 0 cowries faceup = forfeit turn
> 1 cowrie faceup (*dā*) = 1 (enter/move/capture) & throw again
> 2 cowries faceup (*du*)[82] = 2 (move) & stop throwing
> 3 cowries faceup = 3 (move) & stop throwing
> 4 cowries faceup = 4 (move) & stop throwing
> 5 cowries faceup = 10 (move) & throw again

Extra throws are awarded on a throw of 1 or 10 or when a piece captures an opposing piece. Extra throws awarded by a throw of 1 or 10 are made before any throws are applied to the pieces on the board. An extra throw awarded by capturing an opposing piece is made immediately after the capture and added to any remaining throws.

***Example:** A player throws a 1 awarding them an extra throw. They follow up with a throw of 10 awarding them yet another throw. They then throw a 2 which does not award them any more throws. The resulting series of throws is 1-10-2. The player*

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[81] Guj. *dā*. Cognate with similar words across a wide range of North and South Indian languages. Alternately used to designate a game, a turn in a game, and a special throw in a game.

[82] Guj. *du*, lit. "twice." Probably part of a false etymology that derives Dadu from *dā* (one) and *du* (two).

first uses the 10 to move a piece onto the square of an opposing piece and capture it. This awards the player an extra throw which they must make immediately. They throw a 10 which awards them another throw. This time they throw a 4 which does not award them any more throws. They now have a series of 1-2-10-4 at their disposal.

Basic Rules

Players can apply the throws of the cowries to their pieces in different ways. Throws can be applied in any order regardless of the sequence in which they were thrown. Only one throw can be applied to one piece at a time, though multiple throws can be awarded to the same piece successively. All throws must be applied if possible, but because players determine the order of application themselves, it is sometimes possible to manipulate which throws can be applied and which cannot.

Entering Pieces

Pieces can only be entered onto the game track on a throw of 1. If a player throws a 1 while any of their pieces remain to be entered, the throw *must* be used to enter one of those pieces. Players can decide for themselves whether to enter the king piece or a standard piece.

Exiting Pieces

Pieces can only be exited from the game track on an exact throw of the dice. If a piece lands on the final square of the track, corresponding to the opposing side's entry point, it is moved to the central quadrant of the board between the two quadrants where the pieces begin the game (see *Setup* above). From there it can only be exited on a throw of 1. Note, however, that throws of 1 cannot be used to exit pieces as long as any other pieces remain to be entered (see *Entering Pieces* above).

Moving Pieces

Pieces entered onto the game track can move forward as many squares as the result of any throw applied to them. Pieces are allowed to enter and end their move in squares with other pieces. If they end their move in a square with one or more opposing pieces, they will automatically capture one of them (see *Capturing Pieces* below). The only exception is that pieces cannot end their move in a safe square if it already contains one or more

opposing pieces. Pieces are also forbidden to enter the opposing side's home row until their own side has captured at least one opposing piece.

Capturing Pieces

If a piece ends it move in a square with one or more opposing pieces, it captures (*maravum*)[83] one of them and returns it to start. Standard pieces are always captured before the king piece. The returned piece will have to be reentered onto the track with a throw of 1 as usual. If a piece shares a square with one or more opposing pieces, it can use a throw of 1 to capture one of them instead of moving. Note, however, that throws of 1 *must* be used to enter pieces onto the game track if possible (see *Entering Pieces* above).

King Pieces

King pieces function exactly like standard pieces with a few important exceptions. If a king piece is captured by an opposing standard piece, it is returned to start together with any friendly pieces currently on the game track or in the central quadrant of the gameboard (see *Exiting Pieces* above). If a king piece is captured by the opposing king piece, it is returned to start together with all friendly pieces, including any that may already have exited the game track. Additionally, when a king piece is captured, its side will have to make another capture before they are allowed to enter the opposing side's home row (see *Moving Pieces* above).

Optional Rules

The basic rules described above are subject to variation. They may be dropped, changed, or added to depending on the players and the context of play. The list of optional rules presented below is not meant to be exhaustive, and for certain players some will invariably be considered standard.

Components

Gameboard. Gameboards can be physically scaled to lengthen or shorten the play time. They can be upscaled by adding two additional segments of squares to one end of the board for a total of 9 instead of 7

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[83] Guj. *māravuṁ*, lit. "to kill."

segments. They can be downscaled by reducing individual segments from 1 safe square and 4 unmarked squares to 1 safe square and 3 unmarked squares. In the latter case the game is played with four dice instead of five, with a throw of four dice faceup counting as 8 and awarding an extra throw.

Pieces. Games can be shortened by reducing the number of standard pieces from 8 to 4. One informant reported playing the game with 2 standard and 1 king piece, but said that it lacked drama and excitement. Another informant reported playing the game with 2 kings on either side.[84]

Dice. The five binary dice can be replaced by a single six-sided die. The number of pips corresponds to the number of binary dice landing faceup, with the exception that six pips correspond to all binary dice landing facedown, causing the player to forfeit their turn. While this variant does not impact the range of possible throws, it does impact their statistical distribution. The probability on a six-sided die is equally distributed across all results, but the probability on five binary dice is distributed in a bell curve from all dice facedown to all dice faceup.

Players

Team Leader. When playing in teams, one player on each team is designated as the team leader. The other players throw the dice during their turn and can suggest how they should be applied, but only the leader is allowed to physically move the pieces on the board. While this variant does not formally impact game play, it is sometimes used to reduce confusion and prevent cheating.

Throws

Triple 1s and 10s. This rule can either be applied to throws of 10 or to throws of both 1 and 10. In the first case, if a player throws three 10s on their turn, whether in sequence or not, they are all cancelled. The player is still allowed to use any other throws made before or after they threw the third 10. In the second case, the same rule can either be applied to 1s or 10s separately or in combination (see examples below).

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[84] I am grateful to Mariam Degani for sharing an image of her Dadu set with two king pieces on either side.

Example (rule against triple 10s): A player throws a series of 10-10-1-10-1-10-3. The first three 10s are lost, but the remaining 1-1-10-3 can still be used.

Example (rule against triple 1s and 10s in isolation): A player throws a series of 10-10-1-10-1-10-3. The first three 10s are lost, but the remaining 1-1-10-3 can still be used as they neither constitute a triplet of 1s or 10s.

Example (rule against triple 1s and 10s in combination): A player throws a series of 10-10-1-10-1-10-3. The first triplet of 10-10-1 and the second triplet of 10-1-10 are lost. Only the remaining 3 can be used.

Never Forfeit. When all cowries land facedown, it counts as 0 and the player must stop throwing as usual, but they still get to apply any results previously obtained during their turn.

Entering Pieces

Forced Reentry. This rule only applies if a side has a piece in the central quadrant of the board waiting to be borne off (see *Exiting Pieces* above). According to the basic rules, if a player throws a 1 and no other pieces are in their home quadrant awaiting entry, the throw *must* be used to exit the piece in the central quadrant. However, following the optional rule of forced reentry, if the same player throws two or more 1s and any of the additional 1s cannot be applied to any other pieces on or off the board, the player *must* use it to immediately reenter the exited piece at the beginning of the track.

Exiting Pieces

License To Exit. A side can only begin exiting pieces from the board once all players on the side have thrown a 1.

Moving Pieces

Touch-Move. If a player touches a piece during their turn, they must move that piece if possible. This applies even if they touched the piece by accident or for any other reason than movement.

Shortened Move. If the only possible use of a throw is to move a piece into a safe square occupied by one or more opposing pieces, the throw can

be used to move that piece to the square immediately before the safe square. Note that this is not allowed if a player has another throw available that could be used to make a legal move instead.

Capturing Pieces

License To Kill. A side can only begin killing opposing pieces after they have moved at least one piece of their own beyond the second safe square at the end of their home row.

Mandatory Killing. If a player can use a throw to kill an opposing piece, they must do so. This only applies to the standard pieces, not to the king piece. Note that a player with multiple throws at their disposal may be able to use them in a sequence that avoids an unwanted kill.

One Piece, One Kill. A player who uses a piece to kill an opposing piece cannot move that piece again for the remainder of their turn.