Who Knows the Rules?
Variation in Traditional Board Games in Azerbaijan

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The authors examine various rules for three broadly defined games—*nərd*, *dama*, and mancala-style games—among players in Azerbaijan. They find differences among those who play the games and the rules by which they play. More formalized player communities, such as *nərd* players, regulate the rules for the games they play more strictly than the casual player communities of mancala-style games, who exhibit more variety in the ways they play. Materiality also plays a role in the rule making, because the ad hoc nature of mancala-style game boards allow for changes in the boards themselves. The authors conclude that these variations may result from the differing forms of many-to-one cultural transmission of these player communities. **Key words:** Azerbaijan; backgammon; board games; checkers; cultural transmission; ethnography; mancala; player communities

Board games have been a part of the cultural heritage of humanity for at least fifty-eight hundred years, but we are just beginning to understand this heritage in many places. Indeed, a long-standing Euro-American societal attitude that devalues play as frivolous and uninteresting has led to the present situation in which traditional forms of play have not been documented or studied (Cross 2008; Crist 2023). Compounding the issue, increasing access worldwide to digital games, along with the status and community membership associated with playing them, puts traditional board games at risk of being lost forever because of their ephemeral nature and the process of oral transmission that sustains their playing communities. As the precarity of traditional board games increases, documentation of the various ways to play them becomes ever more crucial.

Documenting such traditional board games preserves these forms of play and highlights how player communities are defined and how rules vary in different contexts (Pearce 2011). Such research provides insight into the mechanisms

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by which games are transmitted and played among communities. To this end, we consider traditional board games as living and evolving practices rather than as fossilized remnants of the past, and we examine three classes of traditional games (backgammon, checkers, and mancala) in Azerbaijan as a case study. We demonstrate how materiality and strong player communities constrain the cultural transmission of traditional games, explaining variations in the rules of these games. We also offer a model for researching and documenting traditional board games as living and evolving processes rather than as static behaviors.

Traditional Games

Traditional games comprise a loosely defined category of those kinds of play sustained by continual engagement within a particular community (however broadly or narrowly defined). An important feature of the rules for traditional games, one distinguishing them from commercialized games, is that the rules are primarily propagated through cultural transmission (de Voogt et al. 2013), meaning that they are taught person to person and they can be nebulous and determined by agreement among the players, often without a document that can serve as an authority. To a certain degree, in the Euro-American context, games such as Monopoly and Uno approach our definition of traditional games despite being commercial products, because individuals rarely learn them from the rules included in their packaging but rather by playing them with people who already "know" the rules. Conversely, chess, which has a deep history and tradition in many cultures worldwide, has developed into a game with rules governed by an international body. These variations show that traditional games have different player communities that behave in different ways, and this can lead to different degrees of homogeneity among games.

Cultural Transmission of Games

Cultural transmission theory (Cavalli-Sforza and Feldman 1981) provides one explanation for how games change through time as they are learned and taught through the experience of playing them. This theory stems from the work of de Voogt and his colleagues (de Voogt et al. 2013), which examined a corpus of West Asian and Northeast African game boards from the second and first mil-

lennia BCE. They found that innovations in games largely had been transmitted with a high degree of fidelity, but also that some cross-cultural exchanges led to innovations. While this approach is promising, it relies on innovations derived from the boards themselves. Because the rules for these ancient games have not been preserved and thus cannot be analyzed, quite different rules could have been played on the same boards in different places. De Voogt (2018) also suggests that player communities can be considered communities of creation that own intellectual property communally. Under this model, "innovation in games that occurred in history [is] rarely attributable to individual players as the success of the innovation is dependent on the players group that needs to test and accept such a change before anything changes within the community of players" (25).

We raise some questions about the applicability of these assertions to traditional board gaming communities. To what degree do manufactured game sets entangle (Hodder 2012) their players and rules with particular objects? Conversely, do ad hoc games played on the ground with readily available objects allow for more freedom and the exploration of affordances fundamental to play (Bogost 2016)? Is a vertical transmission model sufficient to explain how games are transmitted and maintained within a group? Can the places in which play happens and the social value placed on games have an effect on the receptiveness of the player community to change?

To examine these questions, we documented the rules for traditional board games in Azerbaijan. We surveyed the Azerbaijani ethnographic literature for information on game rules. We also interviewed players from the regions of Baku, Salyan, Sheki, Nakhchivan, Gobustan, and Karabakh (figure 1) to document the rules known for the games of *nərd* (backgammon), *dama* (checkers), and the mancala family of games (which go by several names). We identified players of these games in several ways. We contacted individuals with a known interest in preserving games generally (including sports). We traveled to places where individuals were playing, and we interviewed them. We also discussed games with those with whom we spent some time in our daily travels, especially other scholars and taxi drivers. In our search for mancala-style games, we interviewed shepherds herding their flocks when we saw them as we drove, but we also contacted those known to players of other games. We asked all for the basic rules of a game and to clarify particular situations in a game. When possible, we observed games directly or played them ourselves with players to create particular game play situations requiring clarification. We discussed the rules for *nərd* and *dama* with people who still played the game, although our

Figure 1. Map of Azerbaijan indicating places mentioned in text. The Karabakh region includes Aghjabadi and Eyvazlılar and extends west and northwest to the border of Armenia.

informants who knew the mancala-style games were all older men who had played in their youth.

Board Games in Azerbaijan

Ethnographic research in Azerbaijan has described a considerable number of folk games and sports throughout the country, but board games have received much less attention. Only a few board games have appeared in the ethnographic literature (Abbaslı et al. 2005; Ahundov 1978; Gözəlov et al. 2017; Nəbioğlu et al. 2005). Board games are an important type of play to study because their material components and mathematically contingent rules allow them to be traced across time and space. They can thus be used as evidence of interconnections between cultures and the forms of interactions in which they engaged (Crist, de Voogt, and Dunn-Vaturi 2016; Crist, Dunn-Vaturi, and de Voogt 2016).

Azerbaijan lies at the nexus of some of the more consequential board gaming traditions in world history, which are reflected in the games played there today. Perhaps the most important game in Azerbaijani culture is *şahmat*, chess, a game so valued that teaching it has become part of the educational curriculum. Special *şahmat* schools can be found in most cities in the country. Azerbaijani players can be found among the top-ranked players in the world. Because the rules of chess are regulated by the Fédération Internationale des Échecs (World Chess Federation, FIDE) and formally taught at educational institutions, we did not study it directly, but discuss it later in comparison to other games.

We sought to document the board games taught and spread traditionally by playing with players who already know how to play them. Two board games fitting this description are commonly known: *nərd* and *dama*. Another broadly defined game that few of our informants knew belongs to a family of games called in games literature "mancala" (Murray 1951). This kind of game has many different names in Azerbaijan.

Nərd

Easily the most commonly played of these games is *nərd*, which belongs to a family of games that also includes backgammon. It can also be called *nərd-taxta* ("wooden *nərd*"), also specifically used for the board itself. While it enjoys a long history in Azerbaijani culture (Quliyev 1985), its origins probably lie in Sassanian Iran (Panaino 2017). In Azerbaijan men most often play *nərd* in *çayxana* (teahouses). These are places where men, particularly older men, gather to socialize. Women also play the game, but they typically do so at home rather than in such public settings. The *çayxana* usually provide boards on which people can play, but people also usually possess their own boards, which they can sometimes bring with them to the *çayxana* or use to play at home. Even when playing at home, some often opt to play outside.

Players identified three types of *nərd*: *şeş-beş*, *döymə*, and *gülbəhar*. All these games are played on boards similar to backgammon boards: wooden boxes with the game on the interior (figure 2). In Azerbaijan most boards retain a feature known from the medieval period, as shown for example in the *Libro de los Juegos* of Alfonso X (Golladay 2007). These have socketed spaces along the edge indicating where to place the game pieces. Sometimes, the points commonly used elsewhere to indicate playing spaces are also included on the board. Each player uses fifteen game pieces to play. All versions of the game use two cubic dice numbered one through six, which must be thrown into the box making up

Figure 2. *Nərd taxta* (wooden board for nərd) from Azerbaijan. This example was made and played in Salyan. Photo by author

the board—and land inside it—for the dice throw to count. The value of each die individually dictates a move and cannot be subdivided among pieces. In all games, the goal consists of moving from one's starting position around the board to bear off (remove from play) all fifteen pieces, which can be achieved first by moving all of them into the final quarter of the board, then by moving them off with an exact throw if possible.

Aside from these rules, important differences exist between the three games that distinguish them, and they enjoy different degrees of popularity among players (figure 3). *Şeş-beş* is the preferred version of the game throughout Azerbaijan. In Nakhchivan, this game is known as *uzun nərd* ("long *nərd*") after the long line of pieces in the starting position. In this game, the pieces start as shown in figure 4 and move in a counterclockwise direction. Throwing doubles with the dice allows a player to move the value of the throw twice. Pieces cannot occupy a space in which an opponent's piece rests. When rolling six and five, a player moves a piece directly from the starting position to the bar. From there

	Board	Pieces	Starting Position	Direction of play	Dice	Hitting	Bear off
Seş-beş							
Salyan/Baku	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Nakhchivan	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Karabakh	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Döyməə							
Salyan/Baku	Inside of box; twelve sockets on each side	15	As in backgammon	counterclockwise	2xD6; play each die individually, doubles = play twice	Yes; reentered as in backgammon (pieces placed outside of board rather than on bar)	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Nakhchivan	Inside of box; twelve sockets on each side	15	As in backgammon	counterclockwise	2xD6; play each die individually, doubles = play twice	Yes; reentered as in backgammon (pieces placed outside of board rather than on bar)	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Karabakh	Inside of box; twelve sockets on each side	15	As in backgammon	counterclockwise	2xD6; play each die individually, doubles = play twice	Yes; reentered as in backgammon (pieces placed outside of board rather than on bar)	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Gülbahar							
Salyan/Baku	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice and all doubles going up to six	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Nakhchivan	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice and all doubles going up to six	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off
Karabakh	Inside of box; twelve sockets on each side	15	All in one socket	counterclockwise	2xD6; play each die individually, doubles = play twice and all doubles going up to six	No	Once all pieces in final half of box; by exact throw or by furthest able to bear off

Figure 3. Rules for nərd variants

the player moves it into the third quarter of the board on a subsequent throw. Typically, game play occurs in rounds, where each win scores one point. Players win by scoring three points. When a player bears off all their pieces before their opponent has borne off any, this is called *mars* and the player scores two points.

Gülbahar (Persian "Spring Rose," a woman's name) is a variation of *şeş-beş* in which doubles are played differently. When doubles are thrown, players play that set of doubles but also play as though they threw all the sets of doubles with a value greater than that value—for example, throwing double fours allows a player to play as though they threw double fours, double fives, and double sixes. Not everyone that we spoke to played this game, but they all had at least

Figure 4. Starting position for *seş-beş*. Photo by author

Figure 5. Starting position for *döymə*. Photo by author

heard of it. Those who played it said it encourages gambling, adds excitement, or provides a change of pace, but nobody claimed to play it frequently.

Döymə, "hitting" in Azerbaijani, closely resembles the style of backgammon that is popular in Western Europe. Figure 5 indicates the starting position, and the pieces move in a counterclockwise direction. *Döymə* has the same rules for doubles as *şeş-beş*, but it differs from *şeş-beş* because a game piece that is alone on a space can be hit by one of the opponent's pieces when the opponent's piece lands on that space. When the piece is hit, the player to whom it belongs holds it in one hand, and throws the dice. If the dice allow the player to enter the piece, play continues as before. If not, the player places it on the inner right-hand edge of the board (with respect to the player to whom it belongs) and must reenter the piece on the board before being able to move any of the other pieces. A piece can be reentered on a given spot allowed by the dice throw in the first six spaces

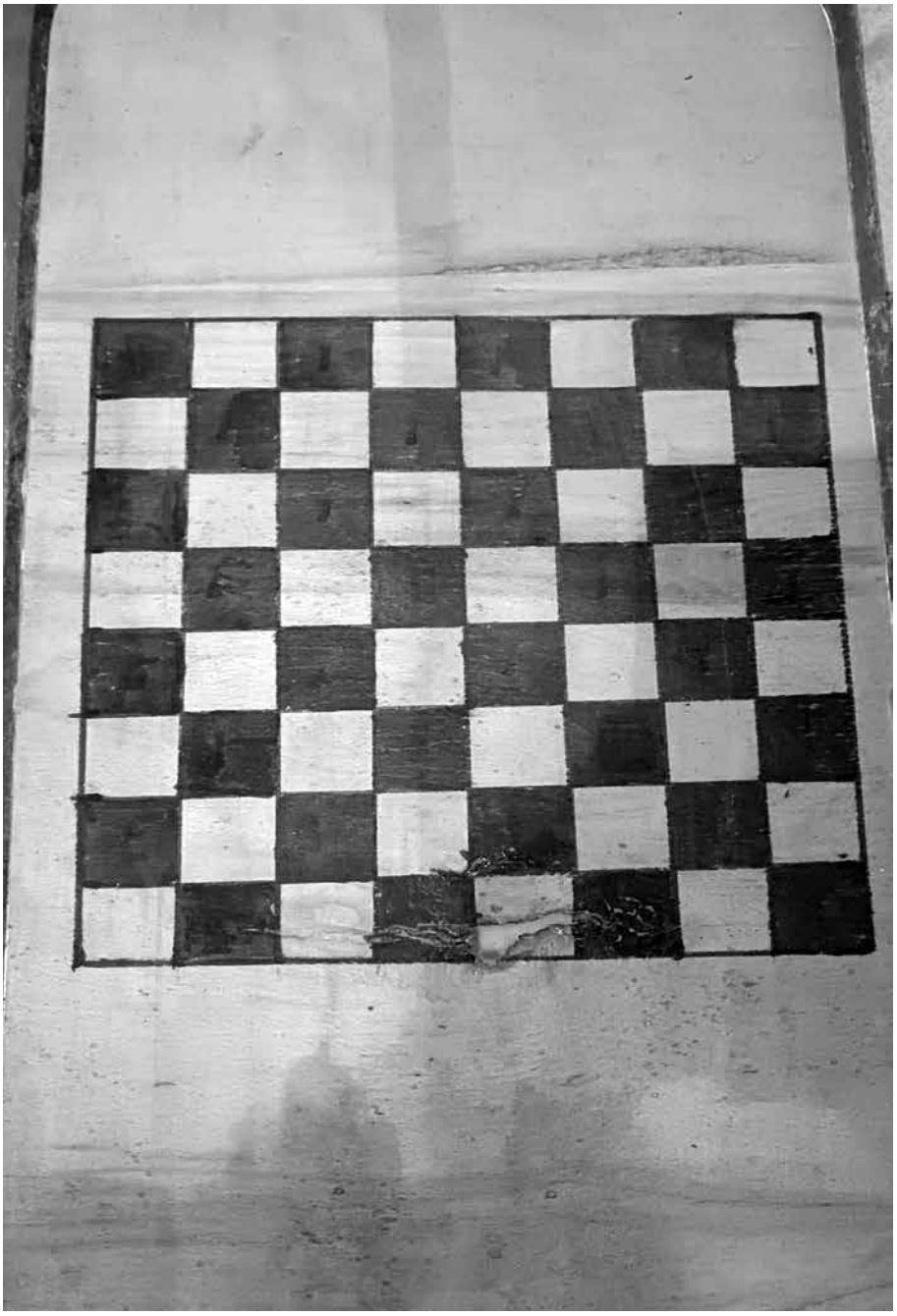

Figure 6. *Dama* board playable on the same box as in figure 2 when closed. Photo by author

of their track as long as it either is empty or occupied by another of the player's pieces. Although the game is widely known, players universally described it as rarely played and perceived it as less interesting than *şeş-beş* because it takes too long or involves too much luck.

These three games, with identical rules, appear in the only known scholarly work on *nərd*, the comprehensive *Nərd Oyunu* by Şəhriyar Paşa Quliyev (1985). This work also described two other versions of the game that we did not encounter.

Dama

Boards for *nərd* often have a board for the game *dama* on the outside (figure 6), allowing it to be played when the box is closed. The game is also commonly called *şaşki*, which comes from the Russian name for the game, шашки (*shashki*). This game is typically not played in *çayxana* but rather at home.

The core rules for the game were standard in all places (figure 7). The board consists of an eight-by-eight checkered grid of black and white squares. The bottom left square of the board is white. Each player has twelve disk-shaped game pieces, each with two distinguishable sides. One player plays as white, and the other as black. The pieces begin the game on the black squares on the three rows closest to the player to whom they belong.

The pieces can move diagonally forward one space, but not backward. Pieces may hop over an opponent's piece when there is an empty space beyond it, thus capturing the opponent's piece. If it is possible to capture an opponent's piece, the player must do so. Multiple captures are also possible: a piece having just made a capture hops over another of the opponent's pieces if such a move is available, and this continues until no captures are available. When presented with two options for capturing, it is not required to choose the option that results in the greatest number of captures. During capturing moves, pieces can change direction, thus effectively moving backwards, though this is not allowed for moves that do not involve capturing the opponent's pieces.

When a piece reaches the opponent's edge of the board, this piece is flipped, thus promoting it to *dama*. A *dama* moves diagonally in one direction over any distance. It also can hop over a piece that has an empty spot beyond it, but the *dama* does not have to land directly on this spot and can end its hop on any empty space beyond the vulnerable piece, provided it is not blocked by two pieces in a row. The *dama* can also make multiple captures and change direction during the captures. No rule says a player must capture a *dama* if another option

	Board	Pieces	Movement	Capture	Required Capture?	Multiple capture?	Maximum capture?	Promoted piece movement	Promoted piece capture	Promotion during capture sequence?	Huff rule?	Win condition
Dama												
Salyan/Baku	8x8	12	Diagonally forward	Jump diagonally forward	Yes	Yes	No	Diagonally any distance	Long jump; can overshoot	Yes	Yes; *fuk*	Capture all
Nakhchivan	8x8	12	Diagonally forward	Jump diagonally forward	Yes	Yes	No	Diagonally any distance	Long jump; can overshoot	No	No; correct the opponent's mistake	Capture all
Karabakh	8x8	12	Diagonally forward	Jump diagonally forward	Yes	Yes	No	Diagonally any distance	Long jump; can overshoot	Yes	Yes; *puf*	Capture all

Figure 7. Rules for *dama* variants

exists, but our informants universally emphasized that such a move would be correct strategically.

The player who captures all of the opponent's pieces wins. Sometimes, players will recognize that a game cannot be finished, and they will call it a draw. Players may also call the game a draw when the same move is repeated after an agreed upon number of times (three and five were indicated to us).

Apart from these core rules, some differed regionally. One important rule involves players missing the fact that they were supposed to make a capture on their turn but did not. In Salyan (and the Baku region), the opponent allows the player to make the erroneous move, then declares *fuk*, which indicates the player should have made the move to capture the piece. The opponent then removes the piece with which the player should have made the capture. The opponent then begins a proper turn. Karabakh refugees also employ this rule, but instead of *fuk* they say *puf*. In English, this is known as the huff rule (van der Stoep 1984). In Nakhchivan this rule is not used. The opponent merely corrects the player, forcing the move that should have been made.

Another difference in rules regards the creation of a *dama* during a sequence of captures. When a piece lands on the edge of a board in the middle of a sequence of captures, as reported by Karabakh refugees and in the Salyan and Baku area, the piece is promoted to *dama* and continues capturing, moving as a *dama* normally does. However, in Nakhchivan, when the piece reaches the edge of the board, it is promoted to *dama* and the move ends, regardless whether more captures would otherwise be available.

Mancala Family of Games

Less commonly played are the mancala family of games, which go by several names and show variations in their rules (figure 8). In these games, the playing spaces contain multiple counters that are sown—dropped one-by-one along a sequence of holes—with the purpose of capturing counters from the other player.

These games are played much more ad-hoc than *nərd* or *dama*. They seem to be most popular among shepherds, as reported both in ethnographic literature and by our informants. Players make the game board on the ground by digging holes, and they use dried sheep droppings as game pieces. Therefore, there is no permanent equipment for the game, and the physical components of the game exist only during the moment in which it is played, making it feasible only for certain environmental and social contexts. Thus we had more difficulty finding those who played the game. Because these games are less commonly played in

	Number of holes	Arrangement of holes	Counters per hole	Extra holes?	Sowing	Capture	Rounds	Win
Qığ mərə								
Gobustan	6	2x3	7	No	counterclockwise; first sown into origin hole	Final hole = 2 or 4	Yes	Opponent cannot fill a hole
Karabakh	12	2x6	8 or 10	No	counterclockwise, first sown into origin hole, predetermined first move	Final hole is in opponent's row	No	Capture majority of counters
Aghjabadi	12	2x6	2	No	Left to right and back only in player's row	Dexterity game, sow all counters fastest, capture counters from holes with with only one counter from opponent and corresponding holes of the player's own	Yes	Capture majority of counters
Eyvazlılar	6	2x3	7	Yes; in center for storage of pieces	clockwise; first sown into origin hole	Final hole = 2; then final hole =4 possible, then final hole =6 possible. When final hole = 2, previous hole =4, previous hole =6, they all can be captured.	Yes	Opponent cannot fill a hole
Merekōçdū								
'Azerbaijan'	3 per player (up to 4 players)	circle	7	No	Direction not specified; first sown into origin hole	Final hole = 2 or 4	Yes	Opponent cannot fill a hole
Zəngəzur	6	not specified	7	No	Direction not specified; first sown into origin hole	Final hole = 2; when final hole = 2, previous hole =4, previous hole = 6, they all can be captured.	No	Capture majority of counters
Mərə-quyudibi								
Xaçmaz	6	circle	5	Yes; in center, starting with 6 counters	Direction nor sowing into origin specified; one counter taken from well for the sowing while they last	Final hole =2	No	Capture majority of counters

Figure 8. Rules for mancala-style games

Azerbaijan and because their ephemeral nature makes them vulnerable to being forgotten, it is worth describing their rules in more detail.

Qığ mərə

Despite asking everyone we interviewed, we were able to find only three individuals who knew how to play this type of game. They called the game *qığ mərə*, after the sheep droppings they used for the game pieces and the holes they dug into the ground to play the game (*qığ*: sheep droppings; *mərə*: holes).

A nomadic shepherd with his herd near the Jingirdagh-Yazilitepe rock art site in the Gobustan Preserve gave us the clearest set of rules (figure 9). The game allows two players, and the board consists of two rows of three holes dug into the ground; both players—typically shepherd boys—have one row of holes belonging to them. Seven droppings are placed in each of the holes. Players alternate turns taking the seven droppings out of one of their holes and placing them one by one in a counterclockwise direction, dropping the first into the hole from which it came. When the final counter falls into a hole, thus causing it to contain two or four droppings, these droppings are captured. Play continues until all the droppings are captured. Then players fill up their holes with the counters they captured. If players cannot fill one or more of their holes, these holes are eliminated from play, and then the players commence playing as before. Play continues in such rounds until one player cannot fill any of that player's holes.

The man from Karabakh who knew the game was also a shepherd, but he provided different rules. Two rows of six holes are dug into the ground. Both players own the row of holes closest to them. Both players gather sixty pieces and place ten in each of their holes. Alternatively, both can collect forty-eight pieces and place eight into each of their holes. On the first move, players pick up the pieces in their leftmost hole and sow them in a counterclockwise direction, dropping the first one into the hole where the sowing started. Our informant indicated that this first move should lead to dropping the final pieces into the opponents' final holes in their rows, thus allowing players to capture all the counters in these holes, but this cannot work mathematically because not enough counters exist to reach the opponents' final holes, though our source insisted they must do so. Regardless, both players in the game make this move on their first turns. After this move, players may choose any of the holes to begin their turn and sow these pieces in the same fashion—by leaving one in the original hole and proceeding in a counterclockwise direction. When the final counter lands in a hole in an opponent's row, the player captures all the pieces in that

Figure 9. Starting position for *qığ-mərə*. The player has not bothered to dig the typical holes in the ground that contain the counters. Photo by author

hole. If the final piece falls into one of the player's own holes, the turn ends. Play continues until one player has the majority of the counters.

Our informant from Aghjabadi described much different rules for *qığ mərə*. The game again consists of two rows of six holes with players owning the row of holes closest to them. In this game, each player has only twelve counters, which begin in the player's hand. This game is more a game of dexterity than one of mental strategy and calculation. Players sow their pieces starting from their leftmost holes and move to the right. Upon reaching the rightmost hole, they sow a second piece in that hole and proceed to the left, finishing back in the hole from which they started. In this manner, the players essentially race to place two pieces in each hole. Once a player has succeeded, that player wins the round and the opponent stops sowing. The player who wins then captures the pieces in each hole which still has only one piece, as well as the two counters in the same number of holes in the player's own row as well as any pieces left in the opponent's hand. So, for instance, if the round ends with the opponent having two holes with one piece, these pieces are captured, as are the pieces from two of the player's own holes, and the two pieces remaining in the opponent's hand. These pieces are then removed from play. Play then continues in another round in the same manner, using an appropriate number of holes for the remaining counters. Once one player has the majority of the counters, that player wins. All our informants indicated their games were played by shepherd boys in the fields while watching their flocks.

We had another informant who remembered playing the game during her childhood, which she knew as *qığ-pulası*. She played it in Fatmayı, a village outside of Baku, approximately seventy to seventy-five years ago. Although she did not remember the rules, she did recall playing with her grandmother, who created holes by pressing her fist into the sandy soil and using sheep droppings as counters. They played among their fig trees, which they were guarding from thieves. This game seems to be related to the other games described here, and interestingly, her account is the only one we have that specifically documents women playing the game.

A man in Eyvazlılar village also described *Qığ mərə* as being played by shepherd boys in Karabakh (Gözelov et al. 2017). In this game, the players each have three holes in their rows and dig a larger hole between the rows to function as storage for the pieces. Each player has twenty-one pieces, placing seven into each of their holes. To determine who goes first, one player hides something, e.g., a stone or a stick, in one hand and asks the opponent to guess which hand

holds it. If the opponent guesses correctly, the opponent plays first. Players sow in a clockwise direction from one of their holes, leaving one in the origin hole. When the final piece lands in a hole, making it contain an even number, these pieces are captured. However, players must capture a hole with two before they can capture a hole with four and must capture a hole with four before they can capture one with six, and so on. If they capture a hole with two, and then the hole behind it has four, they may also capture these four, and if the previous hole has six, they may also capture these. Play continues until all the counters are captured.

Then another round is played. The players fill up their holes again with seven pieces per hole, the player with more counters lending opponents the necessary pieces to fill their holes. Play continues as before. Starting with the next round, the player with fewer pieces fills up as many of the holes with seven as that player can, leaving the remainder in the next hole in the sequence. Play continues as normal, except any hole that starts with fewer than seven cannot be sown into by the opposing player, only by the player to whom it belongs. Furthermore, a player cannot sow from a hole that started with fewer than seven until it contains seven counters, at which point it enters play. If players accidentally sow into one of these holes when they are not supposed to, the player to whom the hole belongs calls *puf*, and the remaining pieces in the player's hand are placed in this hole and the turn ends. Play continues until one player cannot fill any of that player's holes, then that player's opponent wins.

Mereköçdü

The latter set of rules just discussed for *qığ mərə* are largely the same as those reported in the 1970s (Ahundov 1978) for a game called *mereköçdü* (hole-moves), although we do not know where the game was played within Azerbaijan. The rules allow two to four players to play the game, with three holes per player. The holes are arranged in a circle, with seven pieces per hole. The direction of sowing is not specified, but the first piece is left in the origin hole as in the above games. Captures can be made when the final piece lands in a hole causing it to contain two or four pieces (it is not stated that a player must capture two before capturing four). The game is also played in rounds. Players fill up as many holes as they can with seven counters and then own all of these holes, after which play continues as before. Players are eliminated when they cannot fill a hole with seven counters. This seems to be the same game we observed at Gobustan, but with the possibility of playing with more players and with the holes arranged in a circle rather than in lines.

Another incompletely described game with this name was played in the Zəngəzur region, situated adjacent to where the modern borders of Azerbaijan, Armenia, and Iran meet (Nəbioğlu et al. 2005). Again, there are two players with three holes each and seven pieces in each hole. Players sow in the same manner, leaving one in the origin hole, but the direction of sowing is not specified. Pieces are captured when the final piece falls into a hole containing two; if this happens and the previous hole contains four, it is also captured, and if the previous hole to that one contains six, it is also captured. Play continues until all the pieces are captured and the player who captured the most wins the game.

Mərə-quyudibi

Another, similar game known by the name *mərə-quyudibi* (*quyudibi*: "bottom of the well") is played in Xaçmaz village of the Oğuz district (Abbaslı et al. 2005). There are again two players, with three holes per player, and with five pieces per hole, this time played with stones rather than sheep droppings. In the center, six stones are placed, which serve as the "well." Players sow from one of their holes, but the account (Abbaslı et al. 2005) does not report whether or not a piece is left in the origin hole. Additionally, for sowing, a player takes one stone from the well. When the final counter lands in a hole causing it to have two stones, they are captured. The player who captures the most counters wins.

Cultural Transmission and Game Variation

Cultural transmission theory offers an explanation for why these differences in rules among the different communities that play these games exist. Traditional games and the communities of players that play them have particular cultural practices transmitted and maintained through particular mechanisms. Rules are taught and learned through the act of play. The game rules exist in the minds of the players and are enacted when they mobilize the game equipment to enact the game. Players therefore typically learn by playing with another player, who is usually an older family member (sibling, cousin, parent, grandparent). These players teach not only the mechanisms of the game play to the players, but also the etiquette of how to play. For example, our informants stressed—and we observed—that throwing the dice onto the board, rather than gently rolling them, was the appropriate way to play *nərd*. Teaching the game may not be a one-time act. Multiple games may need to be played for a player to observe all

of the particular outcomes or scenarios encountered during a game, such as *mars* in *nərd*, and to learn them properly.

Modes of Transmission

Previous research (Guglielmo et al. 1995) found that types of games fall under a cultural diffusion model in which traits originate in one place and are transmitted to nearby groups. This implies a vertical transmission model for children learning games from their parents (de Voogt 2018). This model may describe the initial moment of transition when someone first becomes a player of a particular game (or perhaps the process on a large scale when communities interact and transmit a game from one to the other), but it does not reflect how traditional games are learned, played, and maintained between individuals of a playing community. Transmission is thus not a single event, but rather a continual process by which the rules of the game are continually produced, enacted, and reinforced between players. The modes of transmission can probably best be considered a form of group or many-to-one transmission, in which the community of experienced players transmit the game to novices and as a group maintain the fidelity of the rules so that the game remains playable between members.

Hewlett and his associates (2014) describe three modes of transmission useful for this discussion because they were built from observations of hunter gatherers who transmitted culture through face-to-face interactions much like game players. The modes are conformist bias, concerted transmission, and cumulative transmission. Conformist bias describes a situation in which a young person copies the actions most common among adults and peers (Boyd and Richerson 1985). In concerted transmission, the members of a group decide which individuals need to learn (Hewlett et al. 2024). Cumulative transmission is transactional—cultural traits are reinforced by the group as individuals attempt to reproduce acceptable behavior, modifying their actions according to the new interactions and observations they make. Hewlett and his coauthors argue that these three modes result in a low degree of variation and, for concerted and cumulative transmission, "conservative" culture change. Conformist bias, however, can lead to rapid change.

Player Communities

These mechanisms can describe the ways that children learn these games, but the nature of the player communities seems also to have a strong effect on the form of transmission a game is subject to, which consequently has an effect on

the flexibility of the rules. Game rules can change through time, whether because of player preferences, improvisation, and misunderstandings or through the purposeful invention of players. However, whether such innovations survive is largely determined by the degree to which they are accepted by the community that plays the game. An improvised rule created to accommodate an uncommon situation in the game when it is first encountered may be acceptable play among novice players, but when played in a community with many experienced players, such rules will be corrected by those who have encountered them before.

Stenros and Montola (2024) provide a useful schema for discussing how communities enforce the formal rules of games. They largely ignore the ways that traditional playing communities govern rules in favor of commercially designed games (with the exception of chess). Nevertheless, they describe formal rules that can be authoritative as those which can be refereed by a designer or as codified rules, or as situational, shared rules by the players in a particular instance of a game, all of which are applicable here. They contend that, because games require two or more participants in order to be played, social pressure exists among players to play according to agreed-upon rules—otherwise, the game cannot be played. This social pressure can be experienced in different ways, including by playing with respected, experienced players, by playing in public with bystanders, or by acquiescing to the consensus of other players.

Material Constraints

Another factor that has a profound effect on the transmissibility of rules and the exploration of affordances during play are the materials used during play. Game sets—manufactured boards with a set number of pieces and dice—entangle players with the rules they use. Any alteration of the rules is therefore bound by the particular material affordances of these game sets. The concept of entanglement as used by Hodder (2012) posits that the "source of transformation and constraint in human society is not in the material facts of existence but in the dependencies between humans and things" (97). For board games, this means that players depend on the equipment necessary for a particular game, as well as on the fact that the game requires the objects. When the objects become fixed, as in manufactured game sets, the exploration of affordances that emerges naturally as players invent new games becomes limited. The space in which the pieces move, as well as the material properties of the pieces and dice are fixed, likewise limiting experimentation. For example, in medieval Spain, multiple *nərd*-like games were documented in

the *Libro de los Juegos* of Alfonso X that use the same board, number of pieces, and cubic die used today.

On the other hand, ad hoc games allow more experimentation and exploration of affordances. In this sense, the nature of the equipment, like the rules of play, exist in the minds of the player and can be reproduced exactly or altered according to the player's whim when the board is created on the ground and objects are collected to use as pieces. When game sets are manufactured, these rules are made concrete, fixed within limits, but when they are played ad hoc, they are governed to a greater degree like playing rules, because decisions about how the board is made and how many playing pieces to use are agreed upon at the inception of each game. Further, these decisions may be refereed by the player community. The games may be fixed, but there certainly is more room for experimentation should the players choose and depending on the setting in which the game is played.

The degree to which player communities operate to regulate these rules seems to differ. In comparing the different games documented in our study, we can see differences in such regulation among the different types of games that arise from the social approaches to rule negotiation and from the spaces and materiality of the games. As a result, games can evolve. There are various factors that affect the changing game rules—some of which allow for more variation, others which impose regularity—at different levels among the three types of board games observed in Azerbaijan. Further quantitative data collection and analysis may provide confirmation and further elaboration, but at present we identify a range of variables we observed at work in these changes.

Rule Negotiation

The four traditional games played in Azerbaijan contain a spectrum of rules from formal to situationally negotiated. Chess provides the most formalized traditional game in the country. Part of the school curriculum (and with schools in major towns and cities devoted to teaching chess), the rules are uniform and governed by international organizations and formalized environments such as tournaments. Official rules and extensive literature on strategy and historical matches can be consulted if there are ever any disagreements. The chess-playing community also values the prestige associated with the game, highly regulates its play, and transmits its rules in such a formal way that it provides the most obvious example of concerted transmission that has a high degree of vertical transmission with little to no variation.

The community of *nərd* players is less formalized than that for chess, though we observed no difference in the rules for *şeş-beş* throughout the country. Even the less commonly played *döymə* remained uniform in this player community. *Gülbəhar* similarly was uniformly played by those who knew the game. These rules are governed by a strong tradition of playing at *çayxana* among groups of experienced players, usually older men, exerting social pressure to play correctly. Such play can be seen as a performative demonstration of belonging to the community, much like that documented among Greek backgammon players (Malaby 2003). All this aligns with the mode of cumulative transmission because of the social pressure to play correctly increases as the community continually reinforces it through individual acts of play.

Chess, *nərd*, and *dama* are all played on manufactured game sets with fixed geometries for the board and a set number of specific types of pieces. Materially, *dama* is linked to the *nərd* playing community since the *dama* board appears most commonly on the outside of boxes containing *nərd* boards. Both use the same pieces, and the same people know how to play both. Still, the player communities and the transmission of rules sometimes differ because of the lessened social pressure during game play. Since *dama* is played more frequently at home than at *çayxana*, the player communities are more disconnected because *dama* players do not meet in large groups and are thus not as subject to the social pressures facing *nərd* players in regard to the enforcement and authority of playing rules. The rules for *dama* become less conservative for all communities, as we saw in variations of acceptability concerning the huff rule or when a piece is promoted to *dama* during a sequence of captures. It is also key to note that the differences in rules apply to situations that are not particularly common during game play. It is also perhaps notable that the rules played in Nakhchivan— an exclave since 1991 only accessible to the rest of Azerbaijan by plane—were distinct from those in contiguous Azerbaijan. Perhaps the geographic isolation and the private setting in which games are played lead to these rule changes, in contrast to the public play of *nərd,* which is more susceptible to governance by respected players in group settings. Cumulative transmission also makes sense in this player community, though perhaps with a greater degree of horizontal transmission leading to more rules innovations because there are fewer experienced players within a community to govern unusual situations in which rule variation manifests, but still enough to maintain the main playing rules.

Mancala-style games sit at the opposite end of the spectrum from chess. The playing communities are largely restricted to shepherd boys who play while

together in small groups supervising their herds, or girls who played while supervising orchards. Indeed, although most people seemed to know chess, *nərd,* and *dama,* very few of those we talked to knew the mancala type of games. Admittedly, the informants we identified had played the games decades before, so some of the differences could result from incomplete or incorrect recollection. Despite this, the fact that those to whom we spoke produced playable games (with the exception of the opening move discussed previously that one informant seemed to be struggling to recollect) indicates that these were probably faithfully recounted.

The performative aspect for the mancala-style games appears largely absent in the isolated, rural spaces in which the game takes place. There are no tournaments or regular public gatherings for these games. Whereas people meet specifically to play chess or *nərd*, mancala-style games are played while engaging in another activity in order to pass the time. The rules are thus situational and seem to be governed through the negotiation of players who have an understanding of the intended rules for the game, although these rules differ among communities.

There seem to be some core rules for these games: three holes per player, usually seven counters per hole, sowing into the origin hole first, and capturing from holes with even numbers of counters. There are, though, some variations in the ways that the even-hole capturing manifests. There are also more dramatic deviations from the more common rules, such as the use of a central well, whether the game employs rounds, and the dexterity game played in Aghjabedi. The materiality of the game as an ad hoc creation in the ground with available materials used for counters also provides greater affordance to alter rules in ways that manufactured game sets do not allow. For example, some versions of this game allow for different numbers of players, which can be accommodated on a larger board with a larger number of counters.

Some conservatism does seem imposed by modes of transmission. The board size having a multiple of three holes, the number of pieces per hole, and capturing an even number of counters seem to be rules transmitted with considerable fidelity across groups. This seems to fit a mode of transmission with a higher degree of horizontal transmission, since the playing community largely seems to consist of boys, and the ad hoc rather than formalized social circumstances in which the games are played provides a level of freedom to explore the affordances of this game type. The flexibility in the size of boards seen in these games cannot be achieved easily with boards and counters that come together in a set—and much less so when there is a community of players

with concerted, vertical transmission. Nevertheless, a degree of conservatism does exist, so conformist bias seems to be present, as people experiment within a set of possibilities.

Our research highlights the ways that traditional board games can be transmitted and maintained within player communities. It emphasizes the fact that some communities remain robust and very active, such as those of chess and *nərd* players. Other communities are less connected, and thus the process of transmission may not be able to maintain player communities. Such is the case for mancala-style games, as younger generations abandon nomadic lifestyles. While confirmation of our observations would require mathematical modeling and a more quantitative data collection, our framing of traditional board games in terms of the communities that play and maintain them offers a first indication for how the results of these processes may be detected in the state of the rules played within these communities.

Nevertheless, traditional board games are living practices that are never static but under constant negotiation, though their player communities can at the same time conserve rules over long periods of time. Further threats to such traditional games, including video and electronic games, may replace some of these playing communities altogether. There is thus a need for the documentation for the rules of these traditional games, because their sole existence inside the minds of their players renders them endangered.

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