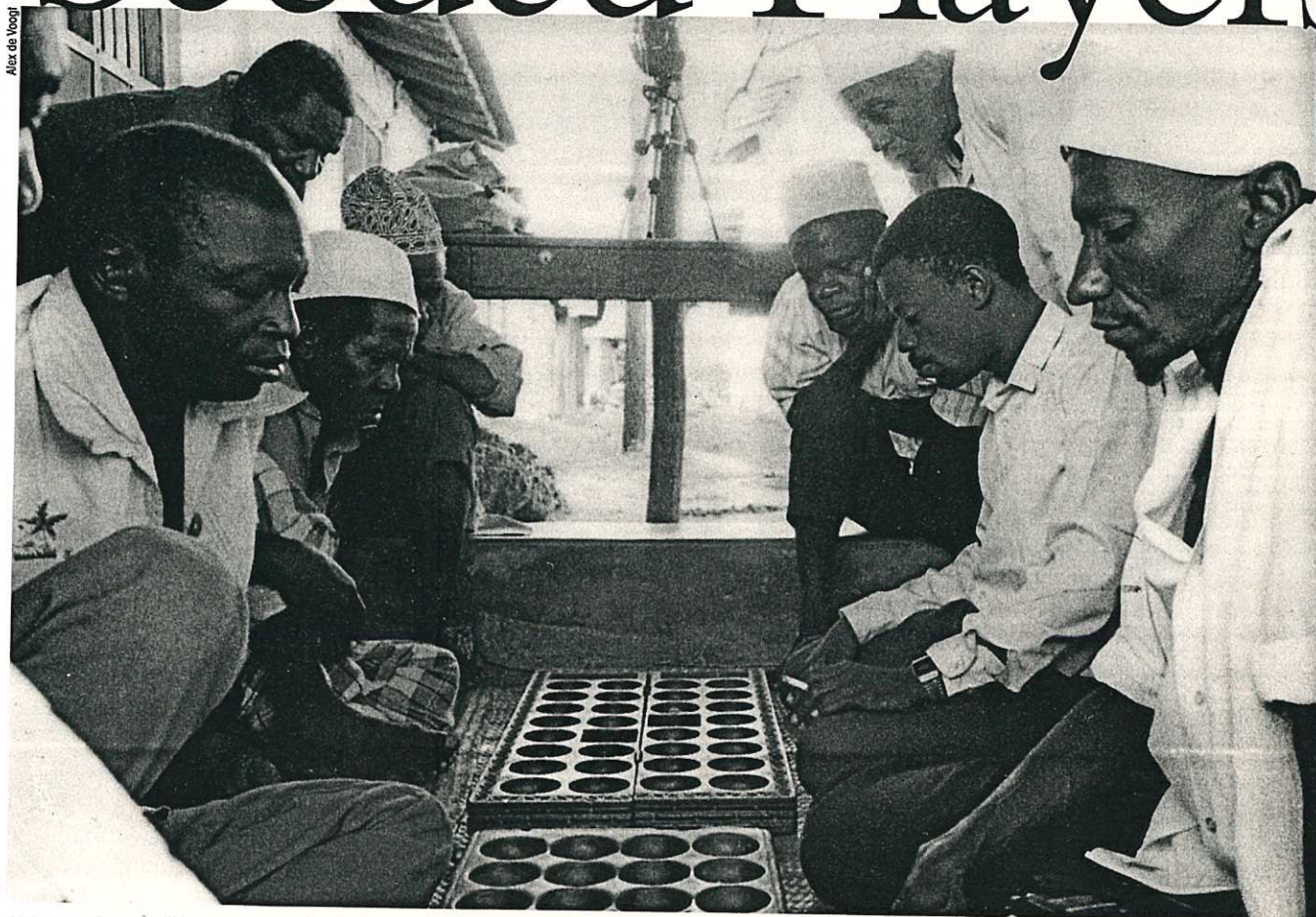


African Game.

Seeded Players



Master players of bao, a game in the mancala family, compete in a tournament in Zanzibar.

The East African game of *bao* tests the limits of the human mind.

By Alex de Voogt

More than four thousand miles away from his native Zanzibar, Abdulrahim Muhiddin Fom sat with his back to two wooden game boards, taking on two opponents in the complex East African game of *bao*. This exhibition of a master's skill, held in the Netherlands in 1997, was the first-ever attempt by a "blindfolded" *bao* player to play more than one game simultaneously. The audience,

composed more of curious observers than of knowledgeable *bao* players, watched in silence as Abdu pondered his next move. He dictated "six left," and someone behind him distributed seeds as instructed into the holes on one of the boards. Meanwhile, the adversary at the second board announced his move: "Five right." Even the audience members who had received only a cursory introduction to the rules were dazzled by the rapidly changing positions projected for them on video screens.

Invited to play at an international conference and various universities in the Netherlands, Abdu had found it difficult to concentrate in the foreign land's

unfamiliar, fast-paced surroundings. In his first attempts at blindfolded play, Abdu had preferred a casual, noisy atmosphere to soothe his nerves. But now he needed silence to create the peace of mind in which to plan his strategy. In the end, neither game ended in victory for Abdu, but the experiment proved that blindfolded *bao* was possible. Afterward, Abdu presented his analysis, not only playing the moves from memory but also retracing them backwards—a difficult feat in *bao*.

Abdu's accomplishment resembled that of Said bin Jubair, a seventh-century black African who was the first recorded chess player to compete with his back

the board. But some people in Zanzibar do not believe that Abdu's demonstration in the Netherlands ever took place. It is not the sort of stunt he is likely to duplicate back home, since no local player would risk the humiliation of losing to a man who is not even looking at the board. In any case it would be an open invitation to cheating, which is not unheard of in bao strategy.

Bao involves distributing, capturing, and redistributing sixty-four seeds on a game board with four rows of eight holes. It is part of the mancala game family, which consists of many variants with different numbers of rows (usually two, three, or four), holes per row (three to twenty-four or more), and a proportionate number of counters (usually seeds or cowrie shells). The rules also vary, but all mancala games involve a dis-

matter for speculation. Variants of mancala have a long history in most areas of Africa, in large parts of South and Southeast Asia, and in the Middle East. Africans introduced the game to the Caribbean and parts of South America. Mancala also has followers in Western Europe and North America, mainly as a result of its recent commercial introduction.

Only two mancala games have an established tradition of championship competition: *warri* (also known as *awèlè*, *awari*, *oware* and *wari*) in West Africa and the Caribbean, and *bao* (also known as *solo*, *bau*, and *mbau*) in East Africa. Warri has two rows of six holes and relatively simple rules, while bao has four rows of eight holes and many complicated rules. An



A 2 x 3 + 2 Javanese mancala board

tinctive way of making moves, which is by spreading counters, one by one, into consecutive holes.

Mancala is one of the oldest board games in the world, although no one knows how old. It may have begun as a game played in holes scooped in the sand or earth (as it often still is today), or on wooden boards not likely to survive the centuries. Some modern packagers of mancala claim it was played in ancient Egypt, but the evidence for this is questionable. The first solid evidence consists of first-century boards from Africa and the Middle East.

Despite considerable research, the geographic origin of the game also remains a

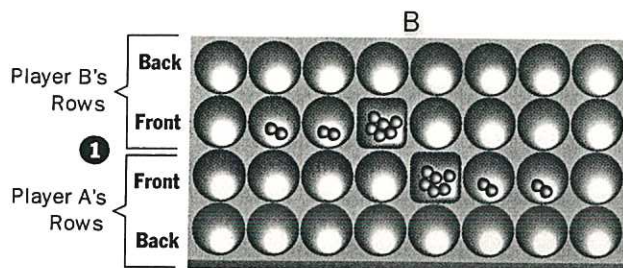


Tuareg nomads in Niger play a 2 x 4 mancala game.

One theory is that mancala is an African invention, perhaps from North Africa. While Asian mancala is played predominantly by women and children, African mancala is played mostly by men, including kings and chiefs as part of royal ritual. Complicated variants have been described in West and East Africa, and beautiful boards from these regions are found in various museums. Recent investigations in Asia, however, have revealed many previously undocumented variations, a wide geographical spread, and elaborately carved boards. Even mancala games with four rows, like bao, may be found in China, while they were once thought to exist only in Africa.

important characteristic of bao is that captured seeds are immediately reentered into the game. As a result—unlike chess, checkers, or warri—the game does not diminish much in complexity toward the end. All the seeds captured from an opponent may be lost again; only when the opponent has no more seeds in playable position does he lose the game.

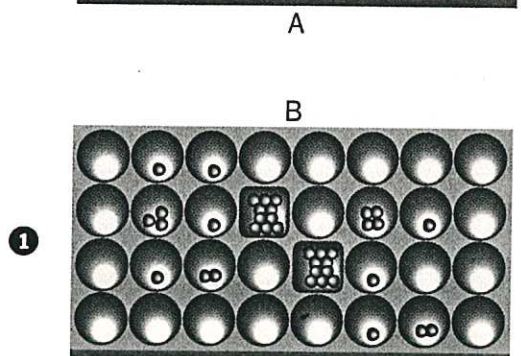
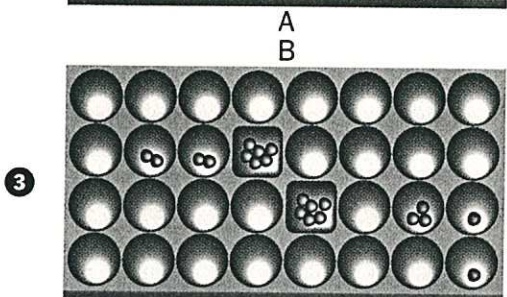
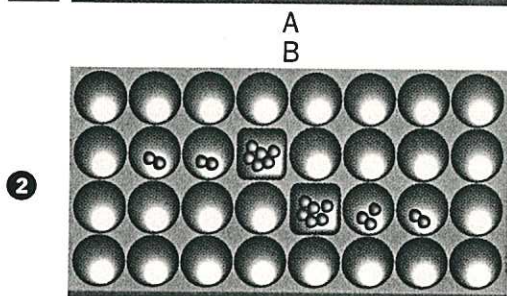
Each move typically involves a sequence of picking up and spreading the seeds around the board. Once a move is initiated, its end position is calculable, provided one knows the complete hierarchy of rules. Those who become bao masters usually begin to learn the game in their early teens, as do masters of other



Stock: 22 **An Opening Move**
1 Initial position: Each player (A or B) has a front row and a back row in which to play and thirty-two seeds, ten of which are distributed as shown. During the first stage of the game, the players take turns distributing the remaining stock, seed by seed, into some occupied hole, until all seeds are in play.

Stock: 22 **2** Player A begins this game by throwing one seed (shown in red) from his stock into one of the occupied holes in his front row. Here the player has chosen the third hole from the right.

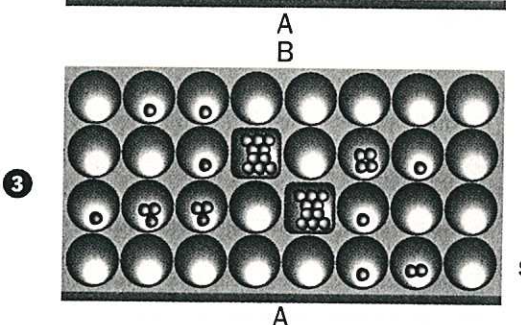
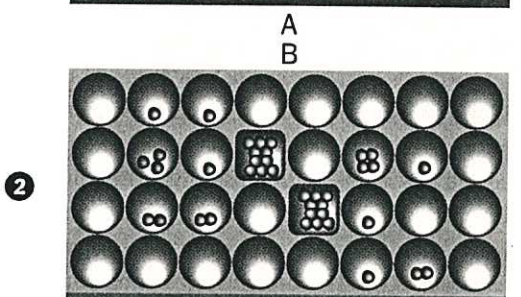
Stock: 21 **3** The three seeds in that hole are then picked up and distributed one by one into the adjacent and consecutive holes in either a clockwise or counterclockwise direction. (Whichever direction is chosen, it must be followed during the remainder of the player's move.) Here Player A has spread the seeds (shown in blue) clockwise. Because the last seed has fallen into an empty hole, this move is now over and it is Player B's turn.



Stock: 13 **Capturing**
1 A player can move to capture seeds in an occupied hole in his opponent's front row if that hole is opposite an occupied hole on his own front row. If a player cannot initiate a capture, he simply spreads seeds throughout his turn. But if a player can initiate a capture, he is obligated to do so, and this also entitles him to make additional captures during the turn. Here it is Player A's turn to enter a seed from his stock.

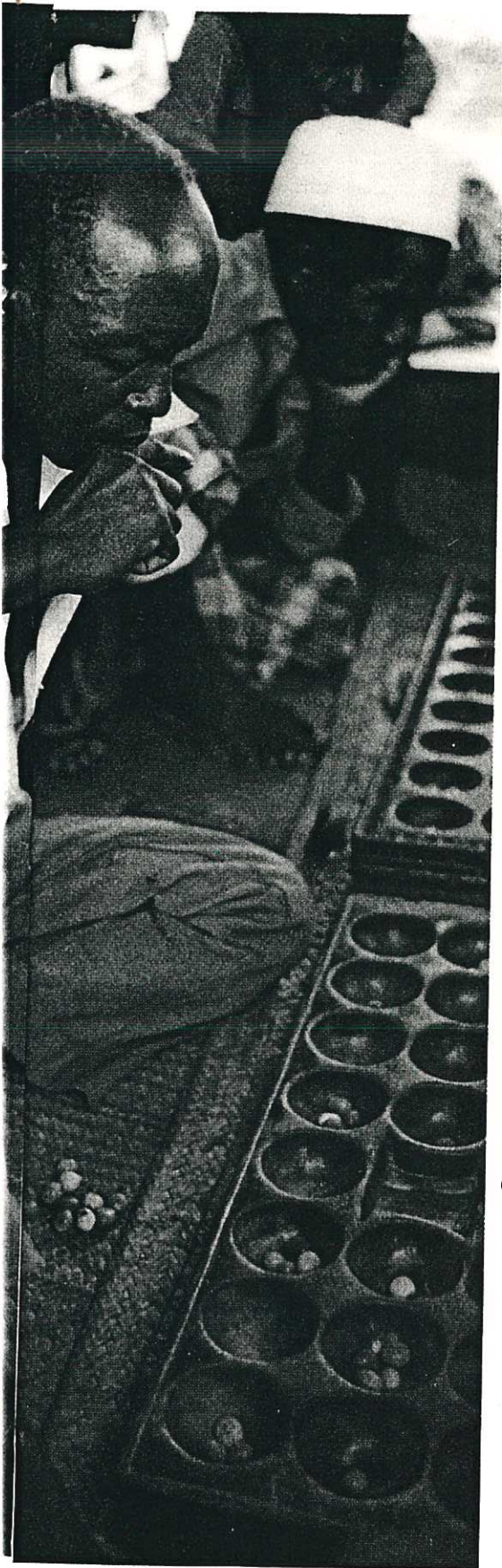
Stock: 13 **2** Player A adds a seed (shown in red) to the front-row hole second from left. In so doing, he captures his opponent's three seeds (these are shown in blue) in the hole opposite.

Stock: 12 **3** Player A has to distribute any captured seeds starting at one end of his front row. Because in this turn he chooses to move clockwise, he must start at the left. The last captured seed falls in an occupied hole opposite one of his opponent's occupied holes, resulting in the capture of an additional seed (shown in green). This seed must also be entered in the front row. The move will continue with spreading and capturing seeds until a last seed falls in an unoccupied hole.

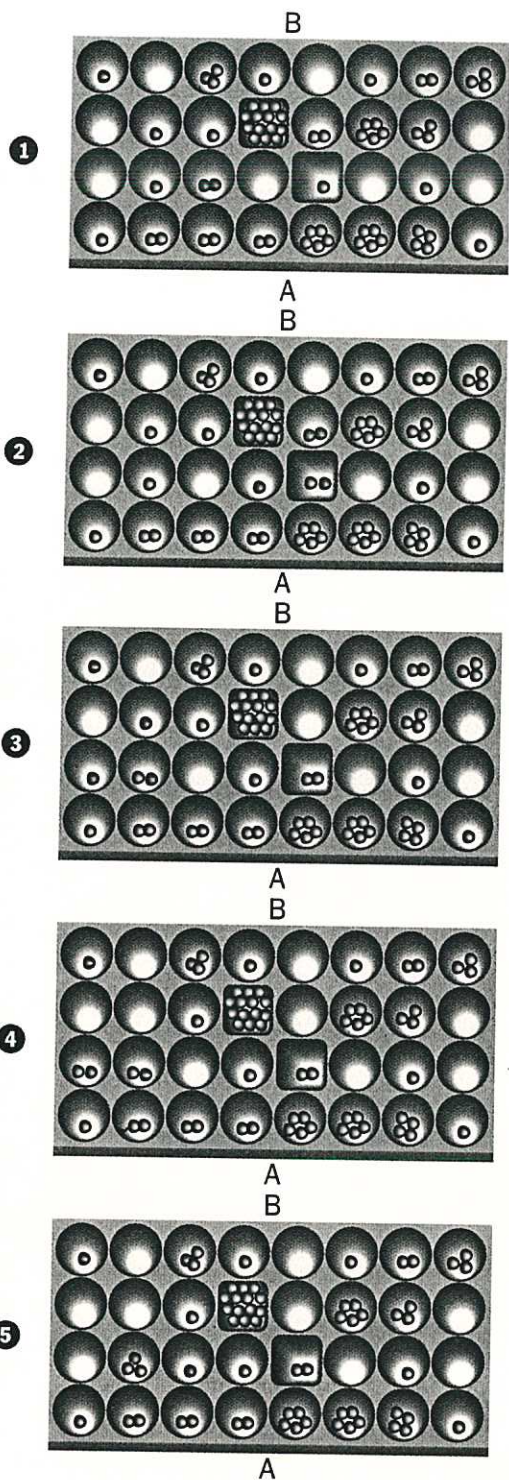


Alex de Voogd

Nasoro Othman



Zanzibar master tournament



Diagrams by Joyce Pendol

When All Seeds Are in Play

1 With no stock left to add, Player A must spread the seeds from a hole that contains more than one seed. (A single seed cannot be moved by itself.) If he cannot initiate a capture, he simply spreads seeds, starting with a hole in his front row, if possible. However, he must initiate a capture if he can, and in this case he can. Here he chooses to spread the two seeds (shown in red) in the third hole from his left.

2 Spreading the seeds clockwise results in a capture of two of his opponent's seeds (shown in blue).

3 The two captured seeds are placed in Player A's front row, in this case necessarily beginning at his left-hand end because he is already moving clockwise. The second seed falls into an occupied hole opposite one of the opponent's seeds (shown in green). This seed is therefore also captured.

4 The newly captured seed is placed in the front row, again starting with the hole at Player A's left.

5 The two seeds in that hole are now picked up and spread clockwise (they are shown in red). No new capture is made. The last falls in an empty hole, and the move is over.

Losing and Winning at Bao

These three sample moves illustrate only the main rules and some of the complexity of bao. A player loses if at any stage of the game his front row becomes empty. In the second stage of the game, when all the seeds are in play, a player will also lose if he has no holes containing more than one seed, since at that point he is unable to move.

Reading and Games

Limits of the Mind: Towards a Characterisation of Bao Mastership, by Alexander J. de Voogt (Leiden: CNWS Publications, 1995) and *Mancala Games*, by Larry Russ (Copyright 1995 by Larry Russ,

613 Hudson Street, Hoboken, NJ). Commercial game boards and computer interactive versions of mancala are available, but they do not have the complexity of bao. Web sites that provide playable or downloadable mancala games include:
www.cs.ruu.nl/people/hansb/d.gam/mancala.html
www.elf.org/Mankala.html
tft.www.media.mit.edu/courses/tft96/Students/ridleyb/assignments/toy1.html#4
inls.ucsd.edu/y/OhBoy/Mancala/index.html
members.aol.com/GBShare/awale.htm

board games. East African children—boys mostly—play at bao clubs before the older men arrive, learning the rules and strategies.

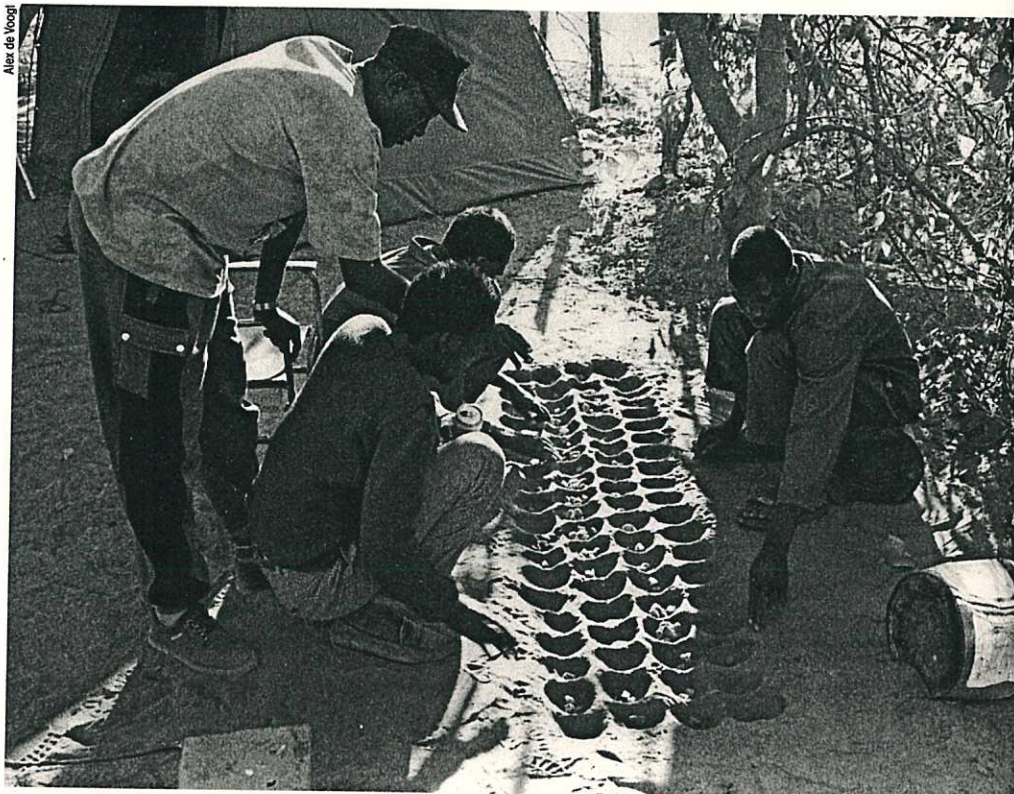
Calculating elaborate moves and orchestrating complicated captures several moves ahead are central to the art of a bao master. Such skills cannot be acquired after a few months of looking at the game but require the kind of dedication and talent characteristic of chess masters. The two games differ greatly, but both are at the upper limit of complexity that humans can master. Games with more complicated moves can easily be devised and can be calculated by computers. But if the moves are generally too difficult for the human player to calculate, the game becomes one of chance, in which players move randomly without making a serious effort to calculate. At the other extreme are games in which the calculations are too easy for the experienced player. Such games, like tick-tack-toe, may satisfy children but otherwise result in a pointless series of draws.

When the bao master has reviewed all possible moves and decided on the best or trickiest one, he will spread the seeds at high speed, frequently throwing three or four at a time. Only five or six turns later are the master's plans revealed, and a beginner will find that he could not even have calculated the first, let alone the subsequent moves. A mediocre player will use other means to win a game. Teasing, joking, and challenging the opponent are a matter of course. Or a player might hide a seed in his palm, make advantageous "errors" in distributing seeds, or intimidate his opponent with the rapid and forceful spreading of seeds. But nothing

will disturb a master, who will calculate the moves and corner the challenger.

A memorable duel of wits occurred in the semifinals of a bao masters tournament held in Zanzibar in 1994. Masoud Hassan Ali (known as Kijumbe), played Ali Maulid Hussein (known as Maulidi) in what turned out to be the tournament's longest match. Either could take

ponent not one or two but tens of. Capturing is obligatory, and the opponent is force fed into a position where he will easily lose his wealth again. Kijumbe got spectacular wins, but on the following day his strategy turned against him, and the younger man went on to win the nationals. Kijumbe had not played at so demanding a level in twenty years, and



In Namibia, two teams of Yei-speaking men play xwine (also called owela).

the match simply by winning two games in a row, but on three successive days they won one game each. Their engagements began at four o'clock in the afternoon—just after their prayers in the local mosque—and continued until dawn. Kijumbe, the most respected player of the tournament, whose fame dates from the 1960s but whose age is not exactly known, slowly began to show signs of fatigue. His passion for the game and determination to beat his twenty-six-year-old opponent was getting the better of him.

Kijumbe's plans in the semifinals consisted of some intricate gambits known as *tapisha bao* (vomiting bao). Anticipating moves way ahead, a player offers his op-

ponent, one cannot always master bao, they say in Swahili, *bao mguu wa sheti* (bao is a leg of the devil).

The host of this championship tournament was the Mikunguni bao club, one of about sixteen such clubs on the island of Zanzibar. The grandmasters of Zanzibar also compete in tournaments with representatives from nearby Pemba Island and from Dar es Salaam, on the Tanzanian mainland. The genius exhibited in this region will awe anyone who has attempted to learn the game. Whether or not mancala originated in Africa, the continent has assuredly given us some of the world's most extraordinary players.