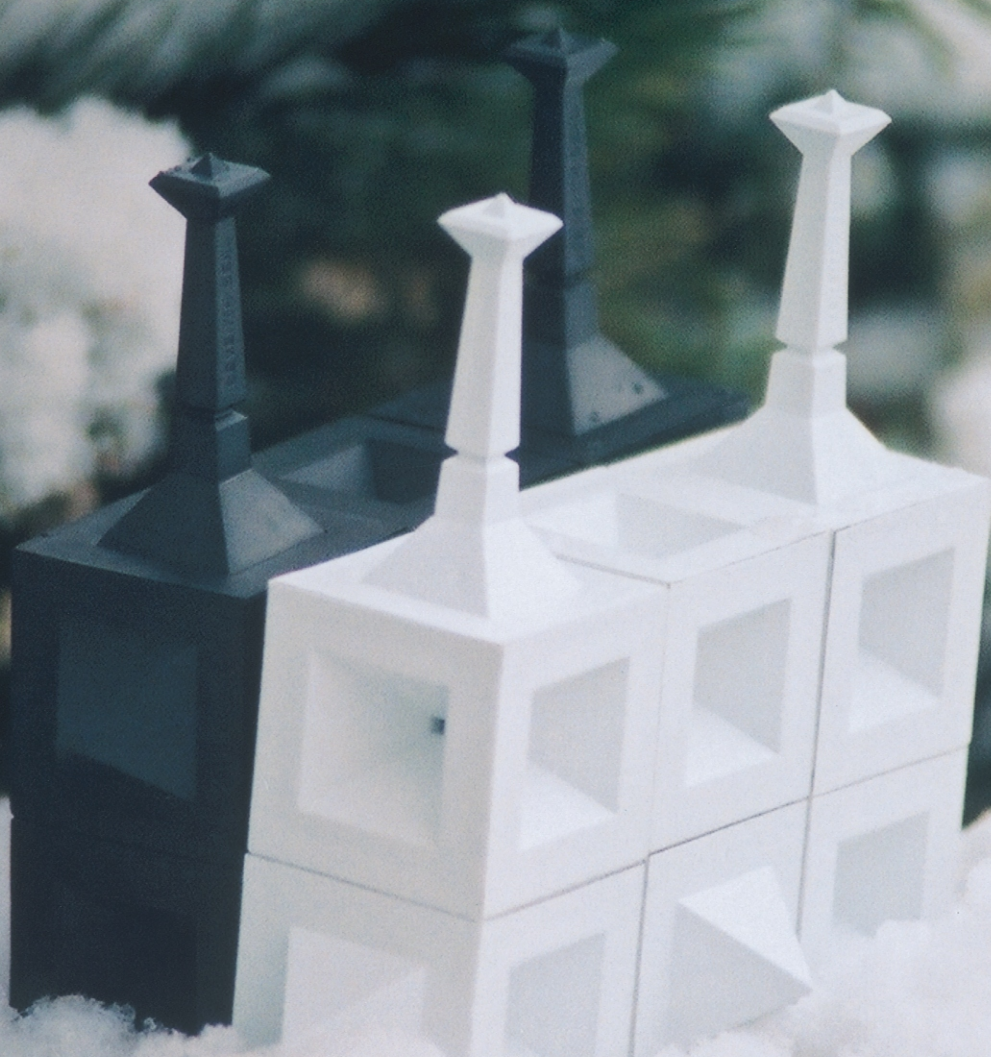


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# *Abstract Games*

... for the competitive thinker



- ~ Interview and new game by Reiner Knizia
- ~ New games Arimaa and Capitalist Sprouts
- ~ More strategy for Havannah and Bashne
- ~ A first look at Amazons and Tablut
- ~ Plus the usual reviews!



### Front Cover

Axiom is a game designed by Michael Seal in 1988. The version shown on the front cover is the second edition, produced in 1993. The inventor plans to produce a third edition, Axiom 3000, with slightly different design.



Axiom is one of the most unusual games I have ever played. The board consists of 12 cubes, 6 in each of the two colors. There are pyramids on some of the faces of the cubes, which are designed to fit into the recessed faces of other cubes. Each player also has two scepters, which are very cleverly designed to lock into the recessed faces of the cubes and remain in place in any orientation. The front cover shows the starting position. The objective is to move a friendly scepter onto a cube (of any color) occupied by an enemy scepter.

Each turn a player can move a cube or a scepter of his own color. A cube can be moved if it is not occupied by any scepters and provided that it is not supporting other cubes. It can be placed in any new position on the board so that at least one edge touches the edge of another cube. A cube can be moved on top of another cube, and must lock its pyramid into the recess of the cube below. The scepters move over the faces of the cubes like Chess Queens, provided that they remain in one plane. It is quite possible, however, to move scepters all around the board through different planes, and in this case the scepter is restricted to moving like a Chess Rook. Scepters may not be moved over other scepters or cube pyramids. When a scepter is moved from an enemy cube to a friendly cube, the enemy cube is captured and eliminated from the game, provided it is not under another cube. The set comes with a turntable so that players can rotate and view the board from any direction.

There are many 3D games, but nearly all of them are extensions of 2D games into three dimensions. Many versions of Chess, Checkers and Tic Tac Toe, for example, have undergone this treatment, and we have discussed some of them in this magazine. On the other hand, there are pseudo-three-dimensional games in which pieces can be stacked one upon another, and again we have covered some of these. Axiom, however, is a true three-dimensional game in that firstly it has no 2D precursor, and secondly it is not a simple stacking game because of the ability of the scepters to be affixed to the sides of the cubes. Axiom must be almost unique in this respect. In addition, Axiom has graspable strategy and tactics, and the 3D aspect does not introduce unmanageable combinations, which can be a failing of 3D games.

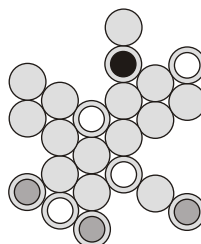
There is more information about Axiom at Michael Seal's web page at <http://www.lumicube.com/pages/axiom.html>, and Axiom can be played at <http://www.lumicube.com/axiomplay/axiom15.htm>. — KH.

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**Problem** by L. Lynn Smith



Standard game. Player 1 has 3 Black balls. Player 2 has 1 White, 1 Gray, and 2 Blacks. Player 1 to move and win in two turns. (*First correct solution will win a Chebache game!*)

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**A Note on Gender**

Pronouns "he," "him," etc. have been used in many non-gender-specific situations. We realize that women play games, too, and this is merely to avoid awkward constructions such as "he/she."



# Editorial

This issue marks the end of our fourth year of publication. We apologize for the delay in distribution. There is no danger to the continued printing of the magazine, merely that this last quarter was overfull with challenges, both health and professional. When *AGI* was printed we decided to name it "Spring 2000" rather than "Winter 1999" in order to give us a little leeway for just such an eventuality. We intend to catch up over the next year.

Our subscription costs have remained steady throughout the first four years, despite three price hikes by Canada Post and an increase in printing costs. In addition to this, our expenses are in Canadian dollars, although most of the income is in American dollars, and the Canadian dollar has been much stronger recently. We have no choice but to make a moderate increase in subscription costs, and we know you will understand.

Onwards and upwards! There is a long review of Reiner Knizia's cooperative game *The Lord of the Rings* in this issue, along with an interview with the man himself. We've hosted a sporadic discussion in this magazine on the merits of abstract games versus theme games, and Dr. Knizia further addresses this topic.

Despite the popularity of theme games, for many people the most satisfying gaming experiences are still to be found among abstract games. I have been playing more Onyx recently. The beauty of this game for me is twofold. Firstly, there is a collection of really nice tactical motifs, similar to the shapes that one can learn in playing Go, but with a great deal more clarity than is easily achievable in Go. Secondly, with a little experience it is not too difficult to follow potential lines of play through many moves. I feel it is far more difficult in Twixt, for example, to reach the level of expertise where alternative lines of play can be analyzed

with any accuracy. This does not, however, detract from Onyx's obvious strategic depth. A theme in a game like this would surely be distracting and unnecessary, and the player of Onyx faces the geometry of the board and an extremely compact, elegant rule set. Aesthetically, the game is perfect, and the same can be said of other abstract games. (Everything has its place, nevertheless, and Connie and I have been having fun recently with some of the Kosmos line of two-player theme games, including *Hera & Zeus*, *Caesar & Cleopatra*, *Lost Cities*, and let's not forget *Odin's Ravens*.)

Dr. Knizia's most compelling argument in favor of thematic games is the role-playing aspect. Imagine, for example, that you are in a game in which the players are warlords in medieval Japan. There are a couple of factors that may guide your actions in the game. Imagination can tell you what would be a smart course of action for the Japanese warlord. On the other hand, a close reading of the rules and the victory conditions may lead to formulation of a winning strategy. If these two possible guides to good play agree closely, then it is a good theme game.

It is purely a matter of personal preference and mood whether one wants to play a good abstract game or a good theme game. As far as game design is concerned, however, the big game publishers seem to be intent on marketing theme games, so that it would make sense to develop only theme games. Obviously publishers perceive that the public wants theme games above all. This may well be true to a large extent, but I can't help thinking that at least part of this demand is created by the publishers themselves through their marketing investment decisions. It's a chicken-and-egg question.

We are ever grateful to our faithful readers and supporters, and wish you all the very best in the upcoming year.

Happy gaming!

**Notation**

A standardized notation is used for all games when possible. In diagrams, squares are named using an algebraic system. Starting from the bottom left of the diagram, columns are identified by the letters a, b, c ... and rows by the numbers 1, 2, 3 .... A colon ":" is used to indicate captures. A threat to win, or check, is indicated by a "+" sign after the move.

Moves in Chess variants are indicated by the initial letters of the name of the piece moving together with the destination square. ("N" is used for knights, and sometimes the "P" for pawn is omitted.) Sometimes the start square is indicated to avoid ambiguity. Captures are noted with "x."

With Shogi variants we will follow the traditional Japanese way of identifying squares. From the top right, rows are a, b, c ... , columns are 1, 2, 3 .... If the value of a piece changes at the end of a move, we will use "=" and the new value; a plain "=" at the end of a move indicates a piece choosing not to promote. "+" is used for promotion in the Shogi variants (and Checkers variants). "x" indicates capture, and "x!" capture by *igui* in Chu Shogi.

# Letters

Abstract Games welcomes your views. We wish to reflect accurately the concerns and interests of the readership. Letters may be subject to editing for clarity and brevity.

You may be right about simultaneous play not inherently adding all that much to a game. Simultaneous play is a strict subset of games with hidden information, and a very restrictive one at that. The game I came up with, too late for the submission deadline, could also reasonably be called a children's game.

In your last letters to the editor, Patrick Mouchet wondered about Hex variants played on a hexagon. One can construct such a game that never has any draws if one is willing to make the winner to be the first player to construct a winning position. There must be cases in which, if play were allowed to continue, the position would be drawn (assuming that winning is only based on what edges are connected). Significant variation of the rules is possible, but the following seems to making winning the game the most difficult.

*The winner is the first player to construct any of the following:*

- A single group that touches four or more edges.
- Two separate groups, one of which touches three adjacent edges and one of which touches three edges not all adjacent, and which have exactly one edge they both touch.
- Two groups, each of which spans three edges, and a third group that spans two non-adjacent edges not spanned by either of the other two. The third group may touch more edges as well.

Bram Cohen, USA

In the last issue of *AG* Paul Yearout discusses how the rules of various games deal with repeating positions. I fear that what he says about how such positions are treated in Go may have misled some readers.

First, he states, "the actual rule [bans] loops of any size." To prove this, he quotes from the Official American Go Association Rules of Go, which do indeed ban loops of any size. However, only a tiny proportion of the world's Go-players use these rules. Most use the Chinese, Japanese, or Korean rules, which do not ban loops with cycle-length more than two moves. With Chinese rules if a game enters a loop of

length more than two, the game is considered a "shared victory." With Japanese and Korean rules such a game is considered a "non-event," and has to be replayed. The commonest (though very rare) way of achieving this is by there being three *ko*'s on the board at the same time, with neither player being willing to play anywhere except in one of these *ko*'s. Tradition relates that such a game was played in 1582 on the eve of the assassination of Nobunaga, the first of the three great unifiers of Japan, and triple *ko* is therefore considered unlucky in Japan.

Later he writes, "No 'other repetitive position' has ever been shown to me." I wonder if he ever tried to look for any? A google search for "repeating Go positions" finds the page <http://www.britgo.org/rules/molasses.html>, which shows several.

Nick Wedd, England

In your latest issue there were a couple of letters regarding Multi-Player Abstract Strategy Games. I have seen the occasional four-player game, usually played with partnerships, and I've seen games such as Chinese Checkers that can accommodate several players, but I've never seen any abstract strategy game specifically for three players, outside of Chess variants. Are there any?

Jason McGruther, USA

Your review in *AG15* of Moyer's *Rithmomachia* makes no mention of the research done by Boutin (in French) and Lewin (in English) nor the books published in German. *Rhythmomachia* (sic), a large-format book, was published by Hugendubel of Munich in 1987. It is a collaborative work by five authors: Detlef Illmer, Nora Gädeke, Elisabeth Henge, Helene Pfeiffer, and Monika Spicker-Beck. *Rithmomachia* by Jurgen Stitger (1990) was deeply researched. There appear to be other books in German.

David Pritchard, England

Thank you for referring in *AG14* to my "staggeringly positive review" of Bin'Fa. As you suggest, Bin'Fa is "big and colorful" and surely that is one of the features of its appeal. I'd like to comment briefly on your suggestion that the element of luck is very great for such a pseudo-war game.

Unquestionably there is a great deal of die rolling. Interestingly, sometimes the more you roll the dice, the less luck there is. In other words, if there is enough die rolling in a game, the rolls balance themselves out, especially when the die

rolling is a way to set the conditions of the game, as opposed to resolving situations. I believe that in Bin'Fa, there is a good enough balance between "conditions" and "resolutions" so as to neatly balance excitement and skill. Surely, the pure abstract games player will find too much of a luck element in Bin'Fa. But I am convinced that the skillful, experienced player will almost always prevail.

Interestingly, despite the veneer of "pseudo-war," I've never seen Bin'Fa as a war game. I suppose one of our shared pleasures in abstract games is that you can imagine moving pieces and shifting structures however you choose. I've always seen Bin'fa as a game of organisms moving across habitats, an almost ecological/evolutionary dynamic. I realize that the inventor's "tao of war" description colors how we view the game. But Bin'Fa is similar to Go in that they are both games of territory that rely on archetypal relationships. Some see the vying for territory as clashing armies, but why not view them as organisms and ecosystems? The ultimate ancient Chinese game/knowledge system/oracle is the remarkable I Ching. I can think of no better template for an abstract game, and I'm hoping for the day when someone can devise an I Ching game.

Along these lines, you suggest that it seems incongruous for a game using the veneer of ancient Chinese landscape battles to use a vortex. Perhaps it would make more sense if the vortex represents the magic of Taoist sages, who can transport themselves between places. Thus Bin'Fa becomes a timeless blend of the future and past. But we can also see the vortex as representing winged flight and the ability of an organism to move quickly between landscapes.

Thanks again for your absolutely superb magazine.

Mitchell Thomashow, USA

*The Reiner Knizia interview in this issue provides an interesting commentary on this topic of the suitability of theme. —Ed.*

## Corrections from *AG15*

1. On p.12, under Clarification 2, "Condition 1(b) comes into play here" should read, "Condition 2 comes into play here."
2. On p.14, under References, the spelling of "Machatcheck" should be "Machatscheck."
3. On p. 21. "If it is Black's turn, he should play at C or X" should read, "If it is Black's turn, he should play at C."



# Game Review

## 10 Days in Africa



Designed by Alan Moon and Aaron Weissblum

10 Days in Africa did not seem like much of a game when I first looked at it. After all, the sole purpose of the board is as a map, and all the play of the game happens with the deck of cards, or tiles, showing African countries. Since the cards contain capital cities and population numbers, I assumed it was a game for the classroom. I should have realized there was more to it because of the usual quality of Alan Moon's games as well as the Out of the Box line in general. (10 Days in Africa, incidentally, is reminiscent of Elfenland, another journey game by Alan Moon.) At the end of one evening four of us, not all avid gamers, were casting around for a game to play that was simple and quick. We gave 10 Days in Africa a try, and everyone was pleasantly impressed.

The board is a map of Africa, with the countries each colored in one of five colors. The deck consists of 60 thick cards, or tiles; 45 of the tiles have countries marked on them; the remaining 15 contain either a neutral-colored automobile or an airplane in one of the five colors. The remaining equipment is, for each player, a rack with ten spaces, representing ten days, into which the tiles can be fitted.

The objective is to get ten tiles arranged in one's rack giving a coherent itinerary for a ten-day journey. Two countries next to each other on the map are connected because one can simply "walk" from one to the other; two countries with one country separating them can be connected via an automobile tile; lastly, any two countries of the same color can be connected by an airplane tile of that color.

The game starts with each player selecting ten tiles randomly and placing them one by one in his rack. Once a card is placed in the rack it cannot be moved. In the second phase of the game the players take turns to draw a tile, replace one of the tiles on their rack with the new tile, and discard the unwanted tile. There are three face-up discard piles and one face down draw pile. A player can pick a new tile either face down or from one of the three face-up discard piles.

It seems like a very simple game with little interest until you actually play it. Then you realize that it has the character of a tricky, interactive puzzle. It quickly became apparent that the secret to success is flexibility. In other words, a player who can complete his journey with any one of four cards has an obvious advantage over a player who needs one specific card. One trick, therefore, is to place airplane tiles or automobile tiles in the second- or ninth-day positions. Then the first- and tenth-day positions may be filled by a variety of choices. In fact, it is probably best to start with solid connections in the middle portion of the journey and work outwards. The necessity to maintain flexibility reminded me very much of the strategy required in games like Gin Rummy. It seemed that there was little player interaction, but this may be simply because we were not playing the game at a high enough level to make defensive management of the discards necessary.

Ostensibly, the game is for two to four players, although I think that an entertaining solitaire game could be played if you

found a good way to handle the three discard piles.

10 Days in Africa is educational, but as one of our group remarked, "It doesn't hit you over the head with it." It's good to have at one's fingertips that fact that Ouagadougou is the capital of Burkina Faso, even if one cannot pronounce it. 10 Days in the USA is already available, and apparently a Middle East version is being planned.

The quality of the equipment, as we have come to expect from Out of the Box, is superb. The colors and design are first rate. 10 Days in Africa is a fine, challenging puzzle game.

— KH

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## Blokus

Designed by Bernard Tavitian

Blokus is a territory game that looks like it fell out of a Tetris screen. It comes with the twelve pentominoes plus all the shapes using four or fewer squares for a total of 21 pieces in each of four colors. The pieces are made of transparent plastic, and they click into a silver plastic grid that has a very space-age look.

As strange as the board and pieces look, the rules are even more unusual. I cannot think of any other game where all connections must be diagonal. You cannot play flat against your own pieces, but must connect the corners. This means that when you wall off an area, your opponent can always slip through if he has the right pieces left. Although it is a novel idea, I found it frustrating, because it is hard to gain a decisive advantage.

Each player starts in a corner and builds his way to the middle of the board. There is some tactical maneuvering as the players come into contact, and then the endgame becomes a packing puzzle. Further practice may reveal a richer layer of strategy.

Another unusual feature is the number of players. With four colors of pieces, two players can play two colors each or four players can take one each. Three players take turns playing the fourth color. However, the strategic clarity of the game is impaired with more than two players.

The box claims an age range of five years and up, but that seems a stretch to me. Younger children might like making patterns with the pieces, but put the small pieces aside so they do not get lost or swallowed. I think 12-year-olds would enjoy it, but it depends on the child. Some might find it too slow.

Blokus won the Spiel des Jahres award in 2002, and I have heard that it is hugely popular in Europe. Luckily, you can try it for yourself at <http://www.blokus.com> and make up your own mind. They have a reasonably good computer opponent, as well as a game room where you can challenge other players.

If you like the game, I do recommend buying the real thing because it is very attractive, and you can use the four sets of pentominoes for puzzles and other games. You can find some pentomino puzzles and games at <http://www.puzzlecraft.com/solutions/pent/pentom/pentomin.html>.

— Don Kirkby

Blokus is distributed in the USA by Educational Insights, 18730 S. Wilmington Ave., Rancho Dominguez, CA 90220. Website: <http://www.educationalinsights.com>. Other distributors worldwide can be found at <http://www.blokus.com>.

# Lord of the Rings

## Friends and Foes Expansion

Designed by Reiner Knizia

When I was in my teens, I read Tolkien's *The Lord of the Rings* several times, and with gaming friends we engaged in table-top war gaming based on the battles of Middle Earth. I suppose it was inevitable that eventually I should gravitate to *The Lord of the Rings* cooperative game by Reiner Knizia, especially with the movie series awakening old memories. The basic game, played together with its first expansion, *Friends and Foes*, has turned out to be one of the best solitaire games I have encountered. It is very thematic, of course, but I considered that many *Abstract Games* readers would appreciate learning about an addictive solitaire game with real strategy and tactics.

Most readers, I am sure, will know the basic story of *The Lord of the Rings*: a group of little people, called hobbits, set off on a long journey from their home in the North West of Tolkien's imaginary realm of Middle Earth; their goal is to destroy the One Ring, a great source of corruption, in the fires of Mount Doom in the South East corner of Middle Earth, and thereby save the world from everlasting evil; along the way they have many adventures. In the game each player is a hobbit. There is a master board, consisting of a line of 16 spaces, upon which the hobbit figurines start at the "light" end; and the Dark Lord, Sauron, Master of the One Ring, starts at the "dark" end. During the game the hobbits gradually become seduced by evil, and "move towards the darkness on the Corruption line." Also, Sauron has opportunities to move towards the light, and eventually one or more of the hobbits may meet Sauron somewhere in the middle of the corruption line. Such hobbits are immediately destroyed, and their players are out of the game. At any given time, one of the hobbits will be the Ring Bearer, carrier of the One Ring. If the Ring Bearer meets Sauron, then the game is over and Sauron has won overall.

*The Lord of the Rings* is a cooperative game, which means that the hobbits must work together to defeat Sauron, or rather to defeat the game system itself. Players are awarded points at the end of the game depending on how close they get to defeating Sauron; everyone gets the same number of points, even those whose hobbits were eliminated. The mechanism of the corruption line is brilliant. It guarantees a steadily mounting sense of excitement and impending doom throughout the game, and a great deal of maneuvering by the hobbits to ensure the Ring Bearer is protected. There are often opportunities for hobbits to sacrifice themselves selflessly to Sauron for the good of the group as a whole, and this is completely in keeping with the spirit of Tolkien's story.

On the master board, too, is a line of locations along the journey, corresponding to major episodes from *The Lord of the Rings*. While the corruption line represents the hobbits' spiritual state, the journey line represents their physical location. It runs through Bag End, Bree, Rivendell, Moria, Lothlorien, Isengard, Helm's Deep, Shelob's Lair, and finally to Mordor itself, location of Mount Doom. Bag End, Rivendell, and Lothlorien are resting places, opportunities for the traveling hobbits to refresh themselves and gather new resources. There are separate scenario boards for each of the other locations, Moria, Isengard, Helm's Deep, Shelob's Lair, and Mordor.

When the hobbits reach a scenario location on the journey line, they must play through the scenario board before proceeding.

Each scenario board has one main activity line, two (and in the case of Mordor, three) other activity lines, and an event line. Markers are placed at the beginnings of these lines. Any of the hobbits may have the opportunity to move any of the markers as the game progresses in turns on the scenario board. The hobbits as a group have to move the marker to the end of the main activity line to complete the scenario and progress on the master board's journey line. But the hobbits may be forced to move the marker along the event line, and in this case they must complete a series of tasks that are increasingly onerous. The scenario also ends if the event line is completed, but in this case the hobbits may be almost destroyed in the process—they have allowed themselves to be "overtaken by events." The details of progressing along the activity lines are beyond the scope of this review. Suffice it to say that the game has lots of bits and pieces, and the players may call on the great wizard Gandalf and a host of other friends and allies to help them. The Ring Bearer, also, may aid the progression along an activity line once per scenario by putting on the Ring, but this is undertaken at the risk of further corruption. The scenario system breaks up the game into subgoals, and is an excellent way of enhancing player interest and excitement.

In the *Friends and Foes* expansion there is a deck of 30 foes. These are turned up for various reasons as the game progresses. The players have the opportunity to defeat these foes in their turns. They must continue to do this throughout the game, since if a hobbit finishes a turn and there are eight foes exposed, the game is lost overall. On the other hand, the hobbits can win a "military victory" by defeating all 30 foes. I think this is one point on which the designer has erred, because surely any military victory would be hollow if the One Ring still existed, inevitably to corrupt the new overlord of Middle Earth. I use a house rule whereby Sauron is sent back to the start of the dark end of the corruption line if all 30 Foes are defeated.

If a scenario ends with no Foes exposed, the hobbits may have the opportunity to skip ahead on the journey line by omitting a scenario. Up to two of the scenarios may be skirted by this method. The addition of the Foes is another master stroke by the game designer for three reasons: firstly, it can raise the level of excitement in the game as the number of Foes exposed rises towards eight; secondly, there are a number of new tactical considerations about when and how to defeat Foes; and thirdly, and most importantly, there is another whole layer of strategy as the players plan where and how to omit scenarios.

In fact, the more I play this game the more I appreciate just how carefully and cleverly it has been put together. It is superbly balanced. In any of my games the hobbits have only managed to reach Mordor completely exhausted and almost out of resources. They will need careful planning and some good fortune to finally destroy the Ring. Surely this is exactly how the game should resolve itself in the spirit of *The Lord of the Rings*. In about eight games, I have managed to get to the end and destroy the Ring just once. I expect that my win rate will rise with increasing experience of the game.

So far I have played the game just with two hobbits, Frodo and Sam. Sam is corrupted at a slower rate than Frodo, and so my strategy has been to aim for Sam to be the final Ring Bearer and destroy the Ring. Frodo I have used, rather heartlessly perhaps, as a "sacrifice hobbit," allowing Frodo to take the brunt of the Dark Lord's corrupting influence, while Sam keeps a safe distance from Sauron. At the last, a heroic Frodo, metaphorically, throws himself at Sauron while passing the Ring back to Sam. Perhaps Tolkien even considered this possibility for the book. After all, it would be in keeping with the book's message that the little guy can



save the world if Sam, a servant, would be the final destroyer of the Ring, rather than Frodo, one of the hobbit gentry. On the other hand, the book's final irony of Gollum's fall into the fire with the One Ring would be difficult to top. (Perhaps a minor failing of the game's theme is the relatively small part played by Gollum in comparison with his crucial role in the book.) One of the great things about this game is the opportunity for the players to rewrite *The Lord of the Rings*.

I played this game once with a group of people, and immediately recognized that "cooperative game" could just as well mean "solitaire." In any case, I imagine a common circumstance is that the game comes to be dominated by the person who knows it best, making it a *de facto* solitaire game even with a group of people. In addition, playing solitaire means it is unnecessary, for example, to spend time talking Frodo into "doing the right thing." Also, taking a crippled, demoralized group of hobbits into Moria after a run of bad luck in Bree is not much fun—with just one person playing it is easy simply to give up the game and start again. In fact, *The Lord of the Rings* cooperative game may well work best as a solitaire.

I strongly recommend playing with the Friends and Foes expansion because it adds the Bree and Isengard scenarios as well as greatly increasing the tactical and strategic choices available throughout the game. There is a second expansion, Sauron, enabling one of the players to compete against the hobbits by playing the Dark Lord. I have not looked at this yet, as it would no longer be a cooperative game and therefore no longer playable as a solitaire. However, I may get hold of that expansion anyway and see if there are any features in it that can be adapted for use in the solitaire version. Also, I have to try the game with up to the maximum of five hobbits, including also Merry, Pippin, and Fatty.

There is a fair amount of chance in the game, but on every move there are interesting, meaningful tactical or strategic decisions to be made. The scope of this review prohibits my going into any detail. Importantly, the spirit of the book is preserved—there is very much a sense of a dangerous, almost impossibly difficult quest against absolute evil. The little folk have some powerful allies, but ultimately they have to face the Dark Lord alone. Lastly, I should mention that the artwork by John Howe is wonderful. All of the components are very well designed, and in particular I loved the very menacing Sauron figure. The *Lord of the Rings* game is superbly put together on every level. I expect it will become a classic.

One last word: there are so many games now with the "Lord of the Rings" tag that if you do decide to buy this game, make sure you get Reiner Knizia's *Lord of the Rings cooperative game*! – KH

*Lord of the Rings* and the Friends and Foes are distributed in the USA by Fantasy Flight Games, 2021 W. County Rd. C, Roseville, MN 55113. Website: <http://www.fantasyflightgames.com/>. Price: US\$44.95 and US\$21.95, respectively, +S&H.

*"There was a roar and a great confusion of noise. Fires leaped up and licked the roof. The throbbing grew to a great tumult, and the Mountain shook. Sam ran to Frodo and picked him up and carried him out to the door. And there upon the dark threshold of the Sammath Naur, high above the plains of Mordor, such wonder and terror came on him that he stood still forgetting all else, and gazed as one turned to stone."*

*From the climax of The Lord of the Rings by J. R. R. Tolkien, Ch. 4, Book VI, after destruction of the One Ring.*

## Book Review



### *All About Mancala: Its History and How to Play*

Sue and Jon Hanson

Happy Viking Crafts, PO Box 35, Mahomet, IL 61853-3536, USA  
sfhanson@prairienet.org, US\$17.95.

As far as I know this is only the second book devoted entirely to mancala games, the first being Larry Russ's *The Complete Mancala Games Book* reviewed in AG2. Russ's book, while being a useful compilation of rules from different sources, tends to be a little dry in that it lacks any discussion of history or strategy. To an extent, this defect has been remedied in *All About Mancala*.

The book starts with a chapter on the history and culture of mancala games and a chapter explaining some terms and common features of all mancala games. Thereafter, about 50 games are distributed between chapters on American two-row games, African two-row games, Asian two-row games, and four- and three-row games. Numerous variations are presented, and the text is sprinkled with observations on the history and strategy of the various games.

So far, so good. There are some notable absences, including Boa (AG4, 5, 7), and also Ot-tjin (AG14) and Layli Goobalay (AG13), and any of the Chinese mancala games, for that matter. These games are included in the references cited by the authors, so one must conclude that the only games described are those that the authors actually played.

The selection criterion is understandable, and perhaps even laudable, but a more serious fault is that the division between authentic games and house variations is unclear. Concerning four-row games, for example, the authors state, "We found eight cups per row provides a good balance between challenge and a convenient size. Thus all games in this chapter have been adapted accordingly" (p. 105). On the other hand, a one-lap "simplified form of traditional Pallanguli" (p. 85) is described as the main variation, whereas it is always played in India, as far as I know, with multiple laps. I would far prefer the book to give authentic rules where possible, with house rules as variations. The chapter on American games is an intriguing addition, but the divisions between games brought by immigrants, proprietary games published by American companies, and the Hanson's own inventions are very fuzzy. One could nit-pick further and complain that the historical and cultural content is superficial or that none of the claims in the text is properly referenced, so that verification or further investigation by the reader is difficult.

On the plus side, the book is nicely produced and the rules are clearly presented with many examples. Obviously the book is of little use to the game researcher, but as a family game book that may be used, for example, to introduce children to mancala games and perhaps awaken a lifetime enthusiasm for this great family of games, it is unsurpassed. Even the serious gamer, no doubt, may discover nuggets of information or interesting opinions scattered throughout *All About Mancala*. Indeed, there are few books available on this topic, and I have no hesitation in recommending it even for serious gamers to add to their collections. – KH

# Interview with Reiner Knizia

by Clark D. Rodeffer



*Reiner Knizia is perhaps the most successful professional game designer in the world today. Most of Dr. Knizia's games are theme games, although their mechanisms often have the simplicity characteristic of abstract games. In this interview with Clark Rodeffer he explains the creative process, the role of publishers, and the relationship between game and theme. This should be of interest to all game players, whatever their preference, and it contributes to our ongoing discussion in this magazine about abstract games versus theme games. —Ed.*

AG: Which comes first, the mechanic or the theme?

RK: Neither. If you design a game every now and then, once every year or so, it doesn't matter where you start—you can have a fixed methodology. I very much like themes because themes inspire me. Others may start from a system because they're more analytical people. I know artists who design games by first drawing a map. They don't know what happens on this map, but they draw maps that inspire them. But what I'm really aiming for is innovation in games. If you're working professionally in the game business, you cannot have one fixed methodology, or else it will be turned into a science, and I believe game design is an art. If you start in the same corner all the time, you will always tread the same path and end up in the same direction. One of the big challenges with game design is to find new entry points, to start from new corners and directions. That always gives you the prospect to come up with something new. Theme first or system first, I think that it's not necessarily one or the other. But wherever a game starts, in the end it needs to melt together until you have a game that is harmonious and works well around itself.

AG: How do you decide whether to theme or not to theme?

RK: To theme or not to theme is a matter of taste and inspiration. The classical games have no themes. In a way, they still symbolize something, but they do so in a much more abstract way because the people didn't have the more sophisticated means of expressing things. But I think there's also another aspect to consider. If you use a theme, the theme eventually wears off and is no longer attractive, so then the players want to do something else. What I mean to say is that you sometimes have problems keeping a small themed game alive long-term. If you have abstract games, they have the potential to become classics because they do not have the problem of becoming old fashioned and out of date.

Conversely, without a theme, it's harder to grab the imagination of the players. You may aim to have a game that endures for a long time, but you may not get many players. I think that people today like fantasies, and they want to be inspired by modern stories. Then I think about how games reflect life, and this is often more important than trends and market demands.

Nevertheless, choosing between theme and no theme is a marketing decision more than anything else. But if you look a little bit deeper, the abstract games tend to be more analytical and strategic and the thematic games have more details and are a step closer to a simulation. Most of the time you don't have much choice. When you want to do something with a certain publisher, they need a clear understanding of how the game flows and how to market it. Everything ultimately depends upon whether or not the game can be sold.

AG: How do you or the publisher decide upon a theme?

RK: Except for pre-sold games, the designer decides. The game

is designed first, and before presenting it to a publisher, all of the aspects need to be there, including a good title and thematic positioning. You need to have a very clear theme and system that will attract all different types of people. You need an understanding of the artwork, although the artwork comes from the publisher. Essentially, the entire game has to be done before it goes to the publisher. They may come up with suggestions to change things, for example, to make it easier for kids. Then as the designer, I have to consider whether I think it's doable, or if I should find another publisher.

For me, a game is something like a child. You can guide it, but the child has its own development potential, and you can't push too hard in one direction without harming that development. Often I'll start designing a themed card game, and then while I'm working with the mechanics, I'll find that they don't fit the theme. So then I change the theme to fit, and then the new theme spurs on the mechanics, and then the theme changes again, and the next thing I know it becomes a board game or a tile-laying game. The game becomes more strategic, and the target age group changes. This happens very frequently, and I allow it to happen because I don't need any additional hurdles. Why should I artificially restrict my design process? Why not let the game lead the way and develop on its own? Sometimes so much goes into the design that by the time I show it to the publisher, the game is no longer a child, but an adult. You can't really change an adult; he has his own characteristics, and the publisher has to concentrate on the marketing and such.

The exception, of course, is if I'm talking with a publisher beforehand about a game that I am being commissioned to design. If the publisher says, "We want to have a game with such-and-such theme," then things are completely different because the publisher comes into the process much, much earlier.

AG: Now you're talking about licensed games, or what you referred to as "pre-sold games," right?

RK: Right. Licensing has become more and more important in our world of games. Strong licenses are what the distribution system calls "pre-sold." The game development process is very different, depending upon whether you are doing the design on your own, where you have a very free reign, versus the situation when you agree to design a game based on a license. There is no reason to do license-based games beforehand and then bring them to the publisher, because then you're suddenly under all kinds of pressures and restrictions.

AG: What kind of analysis do you perform to make sure your games work?

RK: There's a lot of thinking involved, but the core essence of it is play testing. However much experience we have, there are a lot of surprises you get from play testing, which is where we see what does and doesn't work. I have a very rigid daily schedule. I awake at four or five o'clock and work intensively. During this time I see what I want to test and work on those changes. Then, when we go into that night's play testing, I have a very good idea of what I have changed and how I expect it to work.

Having an appropriately balanced theme is a key part of the design. I can't have an insignificant theme that plays one and a half hours, and then have a big epoch theme that plays in ten minutes. The theme and the rest of the game should gel, but it often comes down to a judgment call where I look at the theme-game marriage and ask myself if it feels right. I can't condense several thousand years of Egyptian history into a ten-minute game.

AG: Can a poorly chosen theme hurt a game's reception more than choosing to make a purely abstract game?

RK: I think that there are two types of people. There are those



who are the scientists, who try to reduce redundancy and try to have general principles and essentially derive everything from obscure fundamental processes. And then there are the storytellers, who like to create redundancies. These are the fiction writers, and the people who pay attention to a lot of details. I've found that most people fall into one or the other category.

I fit into the category of an abstract scientist who tries to derive things from a set of principles, and you will see that in my rules. I try to keep my rules short, yet make the game play very deep, and if you know the fundamental rules, then you have a lot of choices. It's all derived from very few principles, and it gives you a lot of things to do. Now, I like that because it makes my rules short and makes entry into the game very easy. But some people say, "Hmm, this feels more abstract," and therefore some say, "Even if Reiner Knizia has designed a game with a theme, it always feels a bit abstract."

Then there is the other side, the people who prefer strongly themed games. Those people go to great lengths to capture the essence of a well-loved theme. But then of course, there are lots of individual rules and extra details, lots of little processes and exceptions because what they're trying to do is reflect a very complex theme. The storytellers may say, "Oh! Thematically speaking, that's very brilliantly implemented." But you may have a game that isn't very fun to play because, with all the details, you get lost in the whole game system.

I have my preferences, and other people have their preferences, and therefore talking about theme, choosing one theme over another, is equivalent to choosing one abstract game over another. It is very much a matter of taste. You can try to look at a game from many different angles, from the personal preferences of the players you play test with, from the possibilities on the market. But before publication, nobody really knows how successful the game will be. And there are many questions that need to be discussed. Do we make this game more abstract, or do we give it a stronger theme? Once you have a more abstract game, it's difficult to make it richly thematic, but you can go purely abstract. Or you go partially abstract and wrap it in a fairly thin theme. There really is no right and wrong. In the end, it's usually a decision the publisher takes. The publisher is taking the financial risk in deciding whether or not to pick up the game. Many times, thematic choices will depend less upon an individual game, and more upon that publisher's lines as a whole, where he wants to cast his lot and how the game should be positioned.

Let me say one more thing about it. The main decision happens during the development process because, once you have a game design that is richly thematic or fairly abstract, you can only change it and push it a bit in one direction or another. But the game as it stands is either very strongly themed, highly abstract, or somewhere in between. It would be impractical to totally redesign the game; I mean, the theme doesn't come after the game is finished. The theme has to be woven into the design process and into the mechanics, and you can't develop one in isolation from the other. Therefore, when the process is finished, it's difficult to really change that.

*AG: For the benefit of those of us who are more accustomed to abstract games, what do thematic elements add to a game?*

RK: It is a very different way of playing. A classical abstract game has open information and abstract pieces. It usually has no thematic links, or at least you don't think of them as a theme when you play. Essentially, it's almost a pure battle of the mind. You have a battle, you have to analyze the situation, and you try to use the rules to your advantage. Very often the rules will be very, very short. Think of Go. Go has very short written rules, but to master

the game, it takes a lot of experience. In this instance, Go is one of the archetypes of an abstract game. It is a scientific type of game where you have very few rules, from which everything develops.

Conversely, with a thematic game you live in the theme, and the theme will inspire you. If the theme is harmoniously interwoven with the mechanics, you will intuitively know what to do and what tactics will work best. If I'm the pharaoh in Egypt and I have these choices, what would I naturally do? In such a case, I would spend less time thinking about the game rules (which, of course, I need to play within), but I would spend more effort thinking of what I would do in my role as pharaoh. If the theme is interwoven nicely, then what makes good sense for you to do in your role will give you advantages with respect to the game rules. If you find yourself constantly stepping out of the theme or rebelling against the theme and trying to figure out how to use the rules to your best advantage, that indicates a weak thematic integration of the game system.

The attractiveness of a strongly themed game is the opportunity to identify with the person or party that the theme implies, to feel like I'm really making these weighty decisions just as the person in this role would. In themed games, I get the pleasure of having new worlds open to me, and I can try out new roles and experience many things which normal life doesn't offer me. In normal life, I'll never be a pharaoh in Egypt, but in a game, I could be, and that opportunity enriches my life in a different way. Themed games are less a battle of the mind, and more like plunging into a new world with new roles where I can try new things and experience new adventures.

*AG: Are you suggesting that there is a spectrum between totally abstract games on one end and role-playing on the other end, with various types of thematic games somewhere in the middle?*

RK: You could go even further and get into the role playing, free form games that go beyond what we call board games, but of course that's the other end of the spectrum.

*AG: How do two-player games differ from games for several players?*

RK: There is a big difference between them. A two-player game doesn't necessarily have to be abstract, but the mechanics are very different. Two-player games usually have a lot less interaction between players. With more players, there can be friction among factions, there can be subgroups and the player interactions change all the time. In such a game you may be able to form alliances against another player. Most two-player games are zero sum games. That means that one player's loss is the other player's gain, and vice versa.

I know from experience that two-player games are sometimes hard to sell, and there are only a few publishers who do two-player games, so I sometimes shy away from two-player games. Unless I have a really compelling idea, I can't really release a two-player game. Thematic games for only two players seem to be a bit lacking. There is, as I said, only a small market for two-player games, so I usually start with the goal of a multi-player game, usually three to five players. If a three-to-five player game happens to work with two players, it's usually due to a bit of luck. More often than not, the interactive elements within the multi-player game do not work for two players unless you start with a specific set of mechanics, which is the abstract approach.

If I begin designing either a two-player game or a multi-player game, the design paths take very different directions. After that initial kickoff, there's no way to jump from one size to the other, because the mechanics and the game situations are so different. If I'm designing for two players, I have a lot of fun with the game because fifty percent of the time I'm playing. On the

other hand, if I'm designing for multiple players, I need to think about down time between turns, especially if you play on your turn only. With five players, a great deal of the time there's nothing to do. So the mechanics are different. But on the other hand, introducing multiple players allows for other types of interesting mechanics, leading to more variety among games.

AG: How does the addition of a theme help a two-player game such as your own *Lost Cities*?

RK: At its core, *Lost Cities* is actually quite abstract. Its theme has less to do with the material and more to do with the feeling. Essentially, you just try to build up the number sequences of the cards. You're not really thinking about an archeological expedition. *Lost Cities* is a game that is heavily based on the mechanics, and optimizing the numbers of your cards. But the game parts and the theme were chosen very nicely, and the production is very attractive because the cards are big and create a certain atmosphere such that it's more inviting to play than a totally abstract game which just happens to use cards.

And that's the influence a designer might have when presenting to a publisher who says, "Oh, we'll just put numbers on there and call it an abstract game." That would be a mistake because then this game would not sell. All you have to do is put a nice flavor to the game. That invites people to play and creates quite an atmosphere. Nevertheless, all this doesn't really change the situation that *Lost Cities* is, at heart, a fairly abstract game.

AG: Is there anything else you'd like to add regarding the value of themes in games?

RK: We briefly touched on the subject of harmonizing theme and mechanics such that players can act intuitively from the role suggested by the theme. There's a wider aspect to this in that the selection of victory conditions is extremely important because the victory conditions will guide the players. If I want to win, I need to work toward the victory conditions. Abstract games have victory conditions that are usually well designed to give me focus. But in a thematic game, the victory conditions become much more important for binding the theme and the mechanics together. If I play a game according to its theme and the victory conditions, and guidelines, game play, and scoring all feel natural, then I think I've got a good theme. If I have to ignore the theme and think about following the rules to maximize points, then the theme is just a veneer. Don't underestimate the importance of victory conditions. I think you could categorize games by their victory conditions and determine how detailed they are or whether they focus on only one central goal. Such categorization is helpful in understanding whether the game play is focused and one dimensional, or if the victory condition can be reached by one of many different paths. The choice of victory condition is an essential part of the art of game design. How do I select the right system and the right theme, and then how do I gel them together by the right victory conditions? Over the years, I feel that I have become very sensitive about this aspect of working toward a harmonious whole, and this is one of my primary guides with respect to game design.

AG: I want to thank you for taking the time to do this interview.

RK: I thank you for your interest.

*The review in this issue of Dr. Knizia's Lord of the Rings game was written before this interview. In retrospect, the interview explains why the game works so well: good strategic choices arise naturally from the theme and one's role play of the hobbit characters rather than from a close reading of the rules. After this long discussion of theme games, opposite is a purely abstract game design by Reiner Knizia. It is reminiscent of Entropy, but definitely has its own flavor. Enjoy! – Ed.*



## PRISM

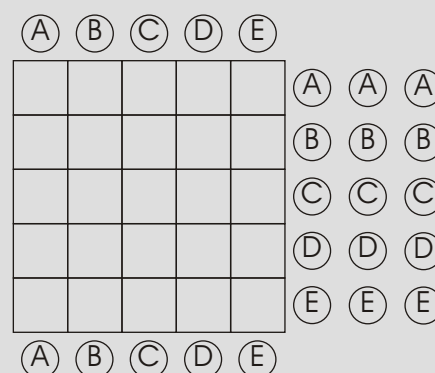
One player plays for the five rows, the other for the five columns of the board. Alternately, one piece is placed on an empty space of the board, until the board is filled. Players attempt to build valuable color combinations in their respective rows and columns.

Players	2
Playing Time	10 minutes
Components	Board (with 5x5 spaces) 25 pieces (5 pieces each in 5 different colors)
Copyright	Dr. Reiner W. Knizia, Julius-Marchetti-Strasse 3, D-89257 Illertissen, Germany All rights reserved. Rules and samples remain the property of Reiner Knizia.

### Preparation

Lay out the board and the pieces as shown in the diagram. Both players start with five pieces, one of each color. Decide who plays the rows and who the columns, and who starts.

*Second player*



*First player*

*Starting position.*

*The five colors of the pieces are represented by letters A - E.*

### Play

Play alternately. On your turn, place one of your pieces on an empty space of the board. Then refresh your pieces by taking one piece of *any* color from the layout. Once the layout is used up, pieces can no longer be refreshed. However, the game continues until all pieces are played and the board is completely filled.

### Scoring

At the end of the game, score points for the values of the five rows or columns respectively:

2 pieces of the same color	1 point
3 pieces of the same color	3 points
4 pieces of the same color	6 points
5 pieces of the same color	10 points

Pieces of the same color do not have to be adjacent. More than one point score may occur in one line. For example, the following line scores 4 points:



The player with the higher total of points wins the game.





Every now and then I meet a game which at first glance seems just too simple to be challenging. That was my first impression with Arimaa. I also began with the assumption that it was merely a variation on The Jungle Game. Then I actually played a few games. What begins as an attritional race quickly evolves into savage territorial power struggles laced with lots of puzzling obstacles.

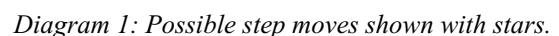
Omar Syed began the development of Arimaa in 1997. The concept was triggered by the Kasparov–Deep Blue Chess Tournament. When Kasparov lost the match, Omar felt that Kasparov was out-calculated and that success in the game of Chess was no longer enough to distinguish human intelligence from raw machine calculation. With his background in computer engineering and a master’s degree in artificial intelligence, Omar was aware that humans can easily solve many problems which computers have great difficulty with.

About a year and a half later, the idea re-surfaced while Omar was teaching his four-year-old son how to play Chess. He began with a game of Pawns and Kings. This gave him the idea of pieces with very simple movement, but also allowing multiple moves per turn. The resulting combinations would create a large number of possibilities for each turn, making it difficult for computers to perform a deep-move search.

Then he came across the Zillions-of-Games program. After a month of work and about fifteen different rule files, Omar developed a game that was “just right.” Arimaa was born in November of 2001. The name “Arimaa” was derived by adding another “a” to the end of his son’s name with the letters reversed.

Arimaa is a game for two players, Gold and Silver, on an 8x8 field. Upon the playing field, there are distinctly marked cells at c3, c6, f3, and f6, which will be referred to as “traps.” Each player has the following pieces: 1 Elephant, 1 Camel, 2 Horses, 2 Dogs, 2 Cats, and 8 Rabbits. The pieces are ranked in strength accordingly, with the Elephant as the strongest and the Rabbit as the weakest. Chess diagrams are used in this article, and the convention is as follows: Elephant = King, Camel = Queen, Horse = Knight, Dog = Rook, Cat = Bishop, and Rabbit = Pawn. This is a reasonable convention since most readers who try the game will be adapting a Chess set for play.

A simple step move is a move into an orthogonally adjacent vacant cell. Except for the Rabbit, all pieces are allowed to step in any orthogonal direction. Rabbits may not step backwards, toward the owner.



To push a piece, a friendly piece is moved into an orthogonally adjacent square occupied by an enemy piece. The enemy piece is then pushed out of its original square into an orthogonally adjacent vacant square. Only an opponent's piece of lower rank may be pushed. The destination cell of the pushed piece may not be the starting cell of the pushing piece, so that pieces do not swap cells. The destination square of the pushed

piece is chosen by the pushing player. In counting moves, a push counts as two steps, one for the friendly piece and one for the enemy piece that is pushed. If there is no vacant square for a piece to be pushed to, then the push cannot be executed.

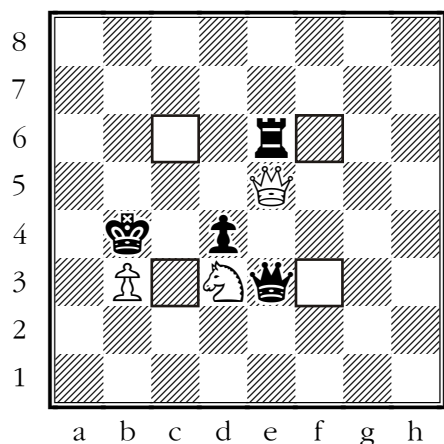


Diagram 2

With Diagram 2, Black can push the Rabbit on b3 with the Elephant on b4. The Elephant would move onto b3 and the Rabbit could be moved to a3, b2, or c3. In this position, the White Horse prevents Black from automatically capturing the Rabbit if it is pushed to the c3 cell. The Black Camel could subsequently push the White Horse to cell d2, and then the Rabbit on c3 would be captured. White is able to push the Black Dog on e6 with the Camel on e5. This push could be to d6, e7, or f6. The push to f6 would result in the immediate capture of the Black Dog. The White Horse is unable to move because it is frozen by the stronger Black Camel. But if Black moves that Camel, the White Horse would then be able to push the Black Rabbit on d4 to c4, d5, or e4.

To pull a piece, a friendly piece is moved into an orthogonally adjacent vacant square. An enemy piece that was orthogonally adjacent to the friendly piece before the friendly piece was moved is then pulled into the square vacated by the friendly piece. Only an opponent's piece of lower rank may be pulled. This counts as two step moves, one for the pulling piece and one for the piece that is pulled.

Continuing to use Diagram 2, White can pull the Black Dog on e6 with the Camel on e5. The Black Dog would move to e5, and the White Camel would move to d5, e4, or f5. The White Rabbit is not strong enough to pull the Black Elephant, and the White Horse is frozen by the Black Camel. But Black can pull the White Rabbit or the White Horse. The White Rabbit would be pulled to b4, and the Black Elephant could move to either a4, b5, or c4. The White Horse would be pulled to e3, and the Black Camel could move either to e2, e4, or f3. Of course, the Black Camel pulling to f3 would be captured since there are no friendly pieces orthogonally adjacent to this trap.

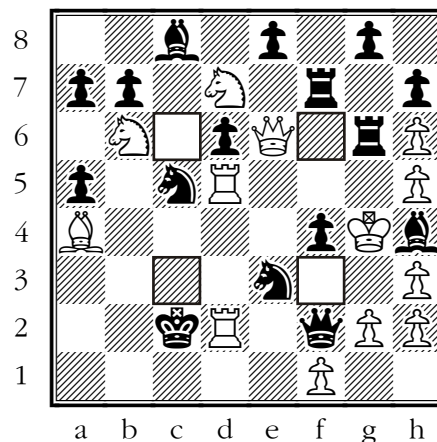
Pushing and pulling moves are performed separately. A piece can only push or pull one piece, and never does both at the same time. A player can only push or pull an opponent's piece, and never a friendly piece.

Any piece may be moved several times during a turn, and can freely change directions on each move. All conditions of the field, such as freezing and capturing, are determined with each move within the turn.

A player can perform any combination of stepping, pushing and pulling moves within a turn, as long as those moves do not exceed the total of four steps.

The game is won by the player who first moves one of his Rabbits onto a cell in the farthest rank, the 1st rank for Black and the 8th for White. When both players have no Rabbits left, the game is drawn. A player who is unable to make a move loses the game. If, after a turn, the same board position has been repeated three times, then the player creating this third repetition loses the game. A player may push or pull an opponent's Rabbit on and off one of its goal cells during a turn; the opponent only wins if the Rabbit remains on its goal cell at the end of the turn.

### A Puzzle Position



In the above position, the following pieces are frozen: Black Rabbit at a5, White Dog at d2, White Dog at d5, Black Rabbit at d6, White Rabbit at f1, and Black Cat at h4.

The White Cat at a4 could push/pull the Black Rabbit at a5. The White Horse at b6 could push/pull the Black Rabbit at b7. The Black Elephant at c2 could push/pull the White Dog at d2. The Black Horse c5 could push/pull the White Dog at d5. The Black Rabbit at d6 could be pushed/pulled by either the White Horse at d7 or the White Camel at e6. The White Rabbits at f1 and g2 could be pushed/pulled by the Black Camel at f2. The White Elephant at g4 could either push/pull the Black Rabbit at f4 or pull the Black Cat at h4. The Black Dog at g6 could pull the White Rabbit at h6.

If it were Black's move, Black could win in two turns. What would be those moves? If it were White's move, White could prevent the Black win. What would be those moves? Answers are at the end of article.

### Some Playing Tips

When placing pieces on the field, it is probably desirable to place a majority of the stronger pieces on the forward rank. A player might position the Elephant and Camel so that they each can command one side of the field, particularly for gaining control of traps. The second player might position the Elephant and Camel so that they either command the same or opposing sides of the field as their respective counterparts.

Attempt to freeze as many opponent's pieces as possible. Having a single piece freeze two or more opponent's pieces can be very advantageous. Frozen pieces can restrict the possible moves for the opponent and block potential paths of travel.

Concentrate on capturing Rabbits. They are the key to the game. But be on the look out for the possible capture of a strong piece. Taking out a Camel can definitely shift the balance of play. And watch out for the opponent's Elephant.

In the words of Omar Syed, "Arimaa game is a very interesting and suspenseful. This is very different from Chess, where once one



side has gained a material advantage, it usually results in a win for that side. Material advantage usually does not guarantee a win in Arimaa.”

### Game Notation

“M” is used for the Camel instead of “C” to avoid confusion with the Cat. Upper case letters are used for White pieces, and lower case for Black. Stepping moves are transcribed in three parts: piece type, field location and direction of move. So “Md2n” would mean the White Camel at d2 moved north to d3.

Pushing moves are transcribed as two distinct stepping moves, first the opponent’s piece, then the friendly piece. So “re6e-Ed6e” would mean the Black Rabbit at e6 is pushed east by White Elephant at d6.

Pulling moves are also transcribed as two distinct stepping moves, first the friendly piece then the opponent’s piece. So “Hf7e-cf8s” would mean that the White Horse at f7 moves east pulling the Black Cat at f8 south.

Captures are noted by the piece and location followed by a “x.” So “Ef3n-mg3w,mf3x” would mean that the White Elephant at f3 moves north, pulling the Black Camel at g3 west, resulting in the capture of the Black Camel on f3. There is the potential for multiple captures on a move.

When transcribing the opening placement of pieces, it is not necessary to note the location of the Rabbits.

### Sample Game

The following is a game between Omar Syed and Amira Syed, with commentary provided by Omar.

**1.Ee2/Md2/Hb2/Hg2/Df2/Ch2/Ca2/Dc2** (A typical setup for a defensive type of opening.) **1....ha7/hh7/db7/dg7/ed7/me7/cf8/cc8** (A typical setup for an offensive opening. Notice that 2 Rabbits are on the front row.) **2.Md2n/Ee2n/Hb2n/Hg2n** (A typical defensive start.) **2....ed7s/ed6s/ed5s/ed4e** (Black Elephant tries to block White’s development.) **3.Ee3e/Ef3n/Ef4n/Ef5w** (White appears to be switching to a more offensive approach.) **3....ee4s/dg7s/db7s/ha7s** (Black Elephant freezes the White Camel, though it is safe from being trapped.) **4.Re1n/Rd1n/Rg1n/Rb1n** (White is showing more signs of taking an offensive approach by advancing the Rabbits.) **4....Md3n-ee3w/Md4w-ed3n** (Black threatens to capture the White Camel in the NW trap.) **5.Ee5w/Ed5w/Mc4w/Mb4w** (White Elephant unfreezes the Camel so it can move away. A more offensive move would be to move the Camel to b5 so it can work with the Elephant to take over the NW trap.) **5....me7s/me6s/me5s/me4e** (Black develops the Camel, but it is still within range of the White Elephant.) **6.Re2n/Rd2n/Rd3w/Rc3n** (White is taking a very offensive approach by advancing the Rabbits so early. Since Rabbits cannot move back, they can easily get dragged into the opponent’s traps.) **6....mf4e/Hg3e-mg4s/ed4e** (Black appears to be interested in taking control of the SE trap.) **7.Ec5e/Ed5e/Ee5e/Ef5s** (White Elephant rushes over to the SE trap to keep it safe.) **7....Re3s-ee4s/re8s/re7s** (Black continues working on the SE trap while also preparing a Rabbit to run down the center.) **8.Rc4e/Rd4n/Rd5n/Rd6n** (White is becoming very offensive. Black is forced to use at least one step for defense now to prevent the White Rabbit from reaching the goal.) **8....cf8w/hh7s/hh6s** (The Black Cat blocks the White Rabbit and the Black Horse advances to help at the SE trap.) **9.Ma4n/Ma5e/db6n-Mb5n** (The White Camel freezes the Black Horse while making the NW trap safe for the Rabbit.) **9....ee3n/ee4n/ee5w/ed5w** (Black abandons the SE trap and looks interested in exchanging the Camels.) **10.Ef4s/Ef3n-mg3w,mf3x/Mb6s** (White accepts the exchange

and traps the Black Camel.) **10....ec5e-Mb5e/Mc5n-ed5w,Mc6x** (Black traps the White Camel. It would have been better if the Black Elephant had stopped on d6 after dragging the White Camel into the trap. That would have threatened the White Rabbit.) **11.Ef4w/Ee4w/Ed4n/Ed5n** (The White Elephant take the d6 square and secures the advance of the White Rabbit.) **11....ec5s/db7s/hh5s/hh4w** (Black is not taking the advanced Rabbit too seriously and continues to work on taking control of White’s traps.) **12.Hh3w/re6e-Ed6e/Ee6n** (The White Elephant begins trying to clear a path for the Rabbit.) **12....rf6s/rf5w/re5s/re4w** (Black advances his own Rabbit, still not taking the White Rabbit too seriously.) **13.Rc1e/ce8e-Ee7n/Rd7e** (The White Elephant continues clearing a path for the Rabbit, but putting the Rabbit behind the Elephant was probably a mistake.) **13....rc7e/hg4w/hf4w/he4s** (Black jams both the White Elephant and Rabbit. The Black Horse moves in to help clear the path for the Black Rabbit. Things are not looking very good for White now.) **14.Hg3n/Hg4n/Rg2n/Ch2w** (White does not give up hope and advances a Horse to help the jammed Elephant while trying to keep the SE trap safe.) **14....he3w-Re2n/Re3e-hd3e** (Black starts clearing the way for the Rabbit.) **15.Df2w/dg6e-Hg5n/Rd1n** (White has to play both defense and offense now. The White Horse takes control of the NE trap while the Dog and Rabbit try to block the Black Rabbit.) **15....De2e-he3s/Rd2n-he2w** (Black continues trying to clear the path for the Rabbit, but is neglecting defense.) **16.Hg6n/rf7s-Hg7w,rf6x/Rf3w** (White traps a Rabbit and now poses a strong threat.) **16....rd4e/ec4e/Rd3w-ed4s** (Black still continues to play only offense and neglects White’s threat.) **17.Hf7e-cf8s/cf7s-Hg7w,cf6x** (White captures the Black Cat and now the threat of the White Rabbit reaching goal is obvious.) **17....rg8w/rh8w/dh6n/dh7w** (Black makes a last ditch effort to block the White Rabbit from reaching goal, but it is too late now.) **18.Hf7s-rf8s,Hf6x/Ee8e/Re7n wins.** (White sacrifices the Horse while pulling the Black Rabbit to make just enough room for the Elephant to get out of the way and let the Rabbit reach goal!)

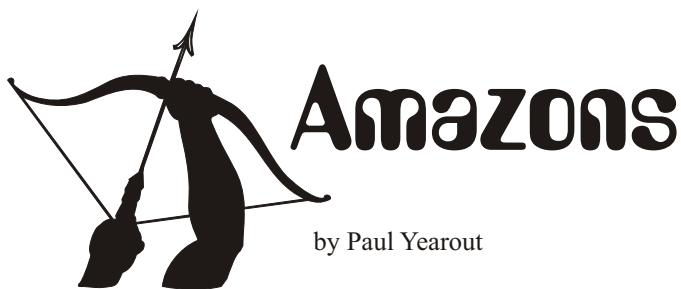
### Conclusion

This game is easy to learn, challenging to play and extremely fun. Because of its depth of moves for each turn, it strains the limits of current game programming. Omar Syed claims that it will be difficult for anyone to create a computer program that will play this game well.

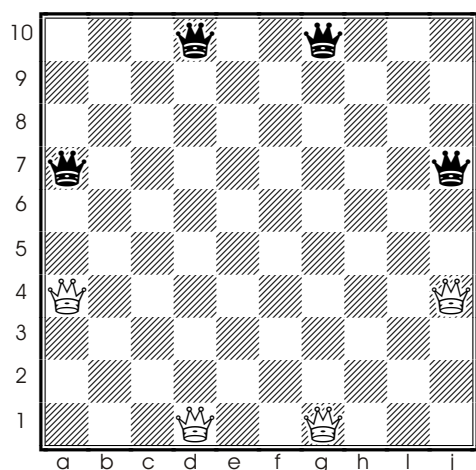
He has posted an offer of US\$10,000 to the first person, company, or organization that develops a program that can defeat his chosen human representative in an official Arimaa match. This match will be six games and the program must run on a general-purpose, off-the-shelf computer and not require any specialized hardware. This challenge will stand until the first of 2020. Visit <http://www.arimaa.com>, the website hosted by Omar Syed, for more information about this challenge and the current programs which can play this game.

### Answers to the Puzzle

Black could win in two turns by first stepping the Horse at e3 north. Then stepping the now unfrozen Rabbit at f4 to e2. The Rabbit can pass through the f3 trap because of the Camel at f2. White would then have no possible response that would prevent the subsequent win. The White Dog at d2 is frozen, and all other strong pieces are too far to help. White cannot block with the Rabbit at f1 because it, too, is frozen. If White had the first move, he could prevent this scenario by either stepping the Camel from e6 to e4 or pushing/pulling the Black Rabbit at f4 with the Elephant at g4. ■



Amazons appeared out of Argentina a dozen years ago (Zamkauskus, 1992) and was soon adopted by both kNights Of the Square Table (NOST) and the Associazione Italiana Scacchi Eterodossi (AISE). The initial position is shown below. An Amazon moves like a Chess Queen. From its destination it shoots an arrow to a square a Queen's move away from it. There are no captures. Both an Amazon and an arrow form barriers to movement of Amazons or shooting of arrows. The player making the last move wins.



Amazons starting position

A game must end in 46 moves, every square then being occupied. However, actual games seldom reach half that number. The arrows gradually form walls separating the board into regions, each occupied by Amazons of only one color. After that the winner is determined by counting empty squares. Sudden endings are possible. In an initial attempt by complete innocents, Diagram 1 shows Black hugely ahead after only seven moves.

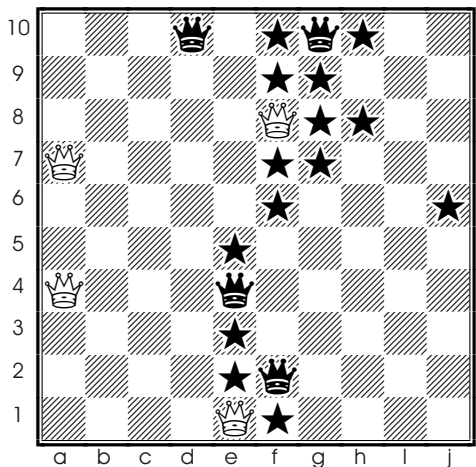


Diagram 1

In the tradition of Chess's Fool's Mate, three and one half moves suffice for a win in Amazons: 1.a4a1/a2 d10d2/b2, 2. d1b1/c2 d2h2/d2, 3.j4j1/j2 h2h1/h2, 4.g1c1/d1. (The notation shows the Amazon's move followed by the arrow's landing square.)

Counting regions is not quite as simple as suggested above. In the NW corner of Diagram 2 a10, although walled off from White, cannot be counted by Black unless c10 moves away. And in the NE corner only one of the two squares is available to White.

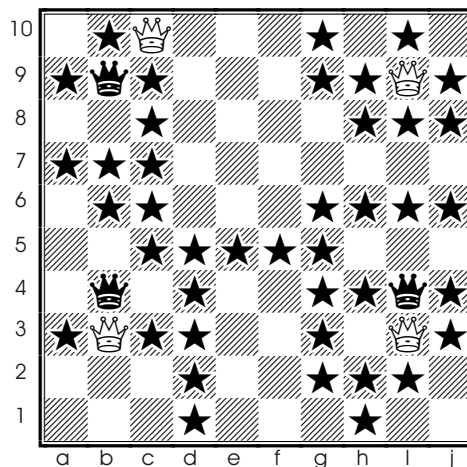


Diagram 2

One can construct positions with larger numbers of unreachable squares, but none has so far shown up in actual games. The SE corner shows a different anomaly. Each side has a three-square region with an apparently neutral square at h3. But the first to move (as determined by the remainder of the board) must cede h3 to the other player. Taking account of such oddities, including others still unnoticed, the larger count wins, while equality of areas gives the win to the second player.

### Door Guards and Incomplete Walls

In the SW corner of Diagram 2 White cannot move to a4 or c4 nor place arrows there without loss, so Black can count those squares, despite their not being walled away from White. My name for b3 is a *door-guard*. As long as Black remains adjacent to b3, White is stuck, giving Black freedom to move elsewhere. Of course, White might abandon his post if the area beyond the Black Amazon is larger than that being guarded.

### The 46 Principle

The aforementioned 46 has a role beyond its limiting one. If a player could (impossibly) control more than half the available 92 squares before the first move, then the game would be won. Each move removes 2 squares, reducing the number necessary for a win. Precisely stated, if the number of squares controlled by a player added to the move number exceeds 46, then that player has won the game.

At game's end counting one side and adding is little different from counting both sides. But earlier on, the 46 Principle can be a strategic guide. Imagine at move 15 player A has 26 squares walled off. The sum being 41, if A's Amazons outside the controlled regions can make 6 more moves, the game will be won. Or A will win if 4 moves can bring 2 more squares into the fold. Other combinations readily suggest themselves. If none can reach 47, resignation might be appropriate.

On occasion vacant regions arise, such as the 9 squares on the



S side of Diagram 2. Forty-six can then be reduced by half the number of isolated squares. (There being no half-squares, an odd number is replaced by the next lower number, this time 46 becoming 42.)

### A Tiny Analysis

The position shown in Diagram 3 may be construed as an eccentrically chosen beginning of a small game or the decisive ending of a larger game. (Actually, it is neither.) Despite the small board, White has 15 opening moves, most of which can be discarded at once. For example, *1.a2a1/a2* allows Black to box in White and claim the rest of the board. Any arrow from *1.a2c4* blocks b3 or concedes it to Black, decisive either way. *1.a2b3/a2 b2c2/b2* provides equal areas, but alas White moves first. That leaves *1.a2b3/b4(or c4)*, with hopes, quickly dashed, of returning south.

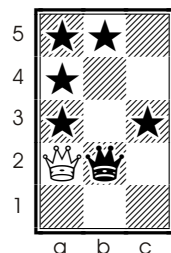


Diagram 3

### Openings

The double Queen move vastly expands the preceding 15 moves to almost 1200 (including symmetries) on the full board. That abundance has elicited the comment that the first move could almost be random. The brevity of the game suggests the opposite: the initial move is important, but not readily identifiable. The artificial position of Diagram 4 shows that corners are most valuable, an idea which hardly needs the pictured evidence, providing partial guidance in the placement of arrows.

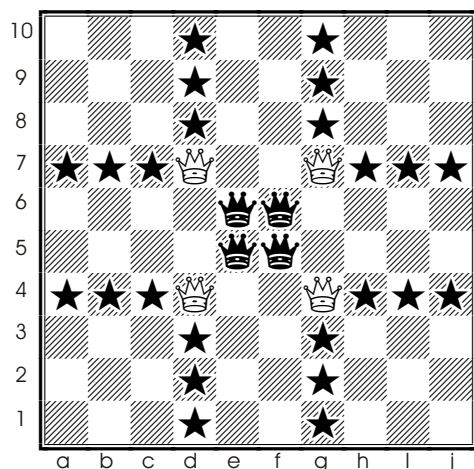


Diagram 4

In contrast, arrows, as well as Amazons, should inhibit the opponent's Amazons.

A frequent first move has been *1.d1d7/g7*. It doubly blocks d10 and g10, but it also hinders movement of White's other two Amazons, with the arrow contributing to Black dominance in the NE corner. I do not have an alternate to suggest.

### Sample Game

Here is a 1997 score showing interesting play even at that early stage:

*1.d1d7/g7 a7e3/e8, 2.a4a7/c9 d10d8/c8, 3.g1g5/e7 g10h9/h6, 4.g5d5/g8 j7h5/j5, 5.j4i4/i8 h9h7/i6, 6.d5f7/g6 h7h10/f8, 7.f7f4/c7 h10b10/b3, 8.i4i5/f2 d8f10/j6, 9.a7a9/b9 h5d5/a8, 10.d7c6/c5 d5c4/e4, 11.f4f3/f4 c4b5/e2, 12.i5d5/d2 e3c3/e3, 13.d5d8/d4*

*f10e9/d9, 14.f3h1/c1 c3c4/f7, 15.d8d5/d8 b5b6/b5, 16.c6b7/c6 b6a6/b6, 17.h1d1/c2 a6a7/a6, 18.Resign* (Diagram 5). Black wins by zero points. White said that until Black's 17th move he thought he had won the game.

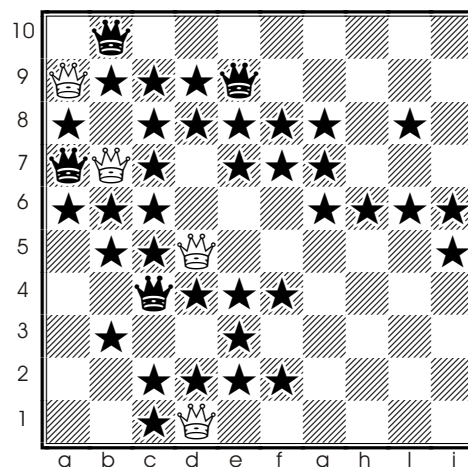


Diagram 5

### Variants

Fergal O'Hanlon suggested that an Amazon be allowed to shoot an arrow from any square along its path rather than just the final square. John McCallion named the game Centaurs (McCallion, 1999). Looking back to Diagram 3, that position is a fragment of a Centaurs game that White won with *a2b3/a2b1* (*a2b1/a2b3* serves equally well). Centaurs board configurations resemble those of Amazons and scores show a preponderance of ordinary Amazons arrow-shots. Nonetheless, Amazons feels constricted after playing Centaurs.

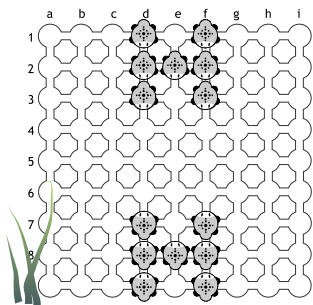
Patrick Mouchet thought an enlarged board would better accommodate the greater variety of Centaurs and proposed a 14x14 board with eight Centaurs on each side (P. Mouchet, personal communication, November, 2000). Four of White's pieces are at a6, a3, c1, f1, the remainder, and Black's pieces, being located by symmetries. Neither Amazons nor Centaurs experimentation is extensive enough for evaluation or comparison with the smaller games.

Amazons falls into the category of games discussed in *Winning Ways* (Berlekamp, Conway, and Guy, 1982), reviewed in *AG6*. One of the authors of that work, while hinting at boards of various shapes and sizes, gives a detailed analysis of an unusual family of Amazons variants with the board consisting of several strips which are only two squares wide (Berlekamp, 2000). ■

### References

- Berlekamp, E. R. (2000). *Sums of Nx2 Amazons*. Lecture Notes Monograph Series. Bethesda, MD: Institute of Mathematical Statistics.
- Berlekamp, E. R., Conway, J. H., and Guy, R. K. (1982). *Winning ways for your mathematical plays*. New York: Academic Press.
- McCallion, J. J. (1999). *Is Anyone Out There*, 13 (June, 1999).
- Zamkaskas, W. (1992). *El Acertigo*, December, 1992.

*Paul's presentation makes it quite clear that Amazons is a disguised territorial game. It follows on from "A Family for Go" in AG13, Hi-Jack in AG14, and Snort in AG15 in a loosely connected series on territorial games. More Go-like territorial games will follow!—Ed.*



# Mamba

...a competition in abstract farming

by Christophe Berg

**M**amba is a tactical game for two players. One important element of Mamba is that you can combine many actions in one turn.

## Rules

The Mamba equipment consists of a 9x9 board with the cells linked orthogonally, and a sufficient number of pieces, all of the same color, with a pointed end and a fat end. A player's pieces have their wide end pointing toward the opponent. Each player starts with seven pieces, arranged on the board as shown at the top left. The goal is to reduce the number of opponent's pieces to four.

Mamba pieces are called *mambiz* and can be imagined to be tropical ladybirds. They all have the same behavior and the same way to move. Movement is one or two empty cells orthogonally into an empty cell. If two cells are moved, it is permissible to change direction into the second cell. An orthogonal straight line of two to four pieces of the same side is called an *inline*. If a piece is isolated (i.e., all eight neighbor cells are empty), it can give birth to a new piece orthogonally adjacent to the mother. Pieces can die from asphyxia if all four orthogonally adjacent cells are occupied, or by overpopulation if an inline of more than four pieces is formed (the player may choose from which end the pieces die).

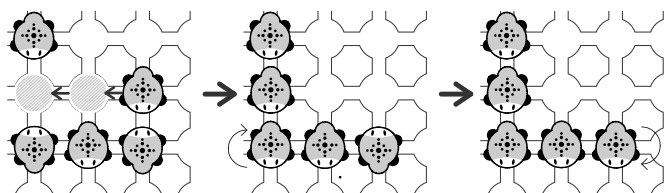


Figure 1 : Example of transformations

You can capture pieces using *transformations*. If you have an inline touching an opponent's inline in the same straight line, and the opponent's inline contains fewer pieces, you transform the opponent's inline piece by piece. To capture a piece, you just have to turn it to your side. One transformation can create a chain reaction leading to other transformations.

Mamba is a turn-based game. At your turn, you can take two types of action:

- (1) Birth(s), if possible. (It is not mandatory to make births.)
- (2) Move one of your pieces.

Mamba subtly comes from one core rule for determining the *balance* on the board. After every action, you must re-establish the balance in the following order (when applicable): asphyxia, overpopulation, transformations for the player who took the action (then overpopulation), transformations for the second player (then overpopulation).

When a piece changes sides twice after a particular action (with no overpopulation adjustment between those two changes),

there is a block on this piece and it stays in its original state

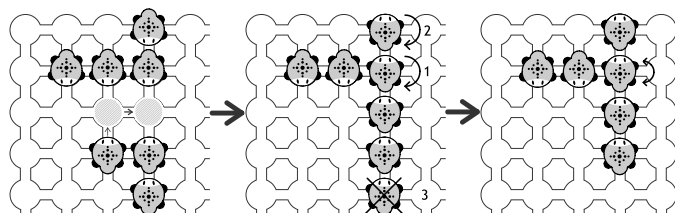


Figure 2: After the second transformation, there is an overpopulation. The player removes one piece (3), then there is a block (the piece changes sides twice).

Re-establishing the balance may dramatically change the ratio of forces on the board. Mastering this rule leads to combinations which will surprise your opponents. Creating new combinations is part of the pleasure of playing Mamba.

Birth is one of the most powerful actions in the game. Isolated pieces bring uncertainty to your opponent, generate "chaos," and are the origin of the most beautiful combinations.

## Game Mechanics

As mentioned already, to reestablish the balance you start with transformations for the player who initiates the confrontation by moving a piece. This order of resolution is very important. In Figure 3 the player makes a two-cell move, which will transform all opponent's pieces.

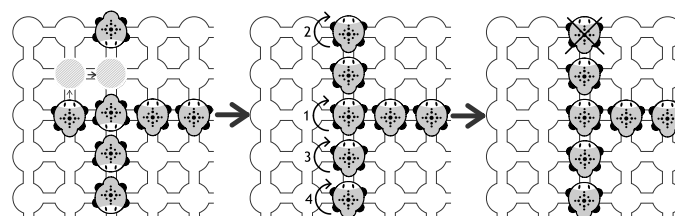


Figure 3: "Give me a place to stand and I will move the world." Archimedes

An inline of four is not easy to break. Whatever single piece you transform, there will be a block. However, there is no wall that cannot be broken! The solution in theory is simple: you have to transform it at two points. This may be hard to implement. In Figure 4 we will see how isolated pieces can help us break an inline of four pieces. This will also illustrate how strong isolated pieces can be.

The player has two isolated pieces. He adds the first newborn in contact with the inline of four. There is a confrontation that ends up with a block. Now he adds the second newborn above its mother, and moves the mother to initiate a second



confrontation. When re-establishing the balance, we will transform all opponent's pieces.

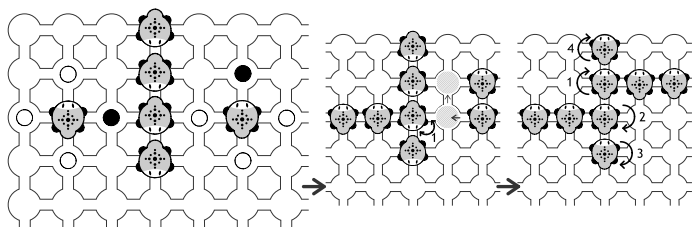


Figure 4: Breaking the inline.

If the player adds both newborns in contact with the same piece of the inline of four, asphyxia comes first; he has to remove one opponent's piece, but he cannot transform the three other pieces.

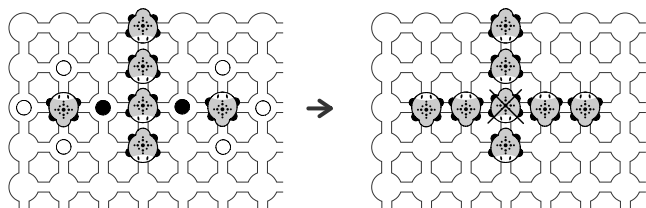


Figure 5: Breaking the inline fails.

### Strategy and tactics

When your turn comes, start by exploring the position: are there any threats, births, opportunities to isolate a piece, transformations, opportunities to limit the opponent's expansion, or kill opponent's pieces (using asphyxia)?

After this exploration, you see subgoals, and you can choose what you want to do. Always prefer an action that achieves more than one of your subgoals. Also, make sure you stay in the center of the board, trying to control the most important part of the board. With some practice, you achieve a global understanding of a position very quickly. There are common patterns, which are useful to know, to determine the ratio of forces.

### Opening

The beginning of the game is territorial. Always try to control a large part of the board. An isolated piece controls eight cells, so by using isolated pieces from the beginning you can manage to control a large territory with few pieces. Try to develop a strong position in the center of the board.

Even in the beginning of the game, choosing where to play next is really important. The player who starts has the initiative. As the second player, you must be careful to not be overloaded by an offensive player. Threats forcing a direct response create initiative, so be offensive too!

### Middle game

The middle is the most tactical part of the game. Some combinations may be tricky to solve. Do not hesitate to take the time to explore each subgoal.

If your opponent has a strong position, it may be necessary to make a few sacrifices in order to break apart his position. Asphyxia is useful when you want to break inlines, but risky.

### Endgame

*Case 1: You are winning*

Focus on speed, make births to reinforce your position and close

down initiatives from your opponent. While your opponent has isolated pieces, he can come back in the game, so try to prevent him from isolating pieces. If you have numerous advantages, you can try to choke him by systematically decreasing his territory.

*Case 2: You are losing*

Fight for the initiative, make as many births as you can, try to break the opponent's position, and attack where he is weak.

### History

Mamba was created in November 2001, and the website <http://www.mambagame.com> was launched in June 2002 (in French and English). The online version was made using Macromedia Flash™ and allows players to play asynchronously. Since then, Mamba has evolved through the feedback from online play (about 800 players, 6000 games played, and five tournaments organized). We are seeing the emergence of new tactics, openings, and fast improvements in play.

In June 2003 Toodoo éditions launched the second edition of Mamba with many improvements. In particular, the board has two sizes, 9x9 and 11x11, and a summary sheet is included.

You can find the rules and play Mamba for free on <http://www.mambagame.com>. ■

*Anyone interested in investigating Mamba will probably want to play over the board as well as online. The new Mamba set is attractive and compact, but a regular Shogi set and board will also serve perfectly well in order to get a feeling for the game. – Ed.*



*Arimaa*



**Congratulations !!**

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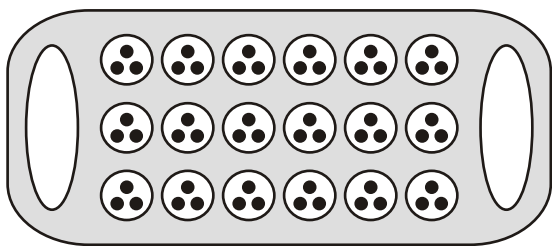
**September**

**Naveed Siddiqui**

*"The more I explore Arimaa the more I'm astonished by the richness of the game. Everything fits together nicely, the balance of forces in freezings, trapping, pushings/pullings, the complex chains of influences in blocking, freezing, freeing..."*

– Lionel Bonnetier, France

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# Selus and Sadēga

## African Warrior Games

by Ralf Gering

**S**elus is not a single game, but the generic name given to Mancala variants that are played on three-row boards. Apparently, the word derived from Geez “Selus,” which means “three.” Once widespread, Geez is today a dead language that only survives as the sacred language of the Ethiopian Orthodox Church, a striking parallel to the fate of Latin in the western world.

Sadēga is the generic name for Mancala games known in the southwest of Ethiopia and nearby Sudan. Although played on two-row boards, many have rules quite similar to three-row variants.

The oldest archaeological evidence of three-row Mancala is an undated artifact that was found by Professor William Matthew Flinders Petrie in the ruins of Memphis, the first Egyptian capital built under the reign of King Menes in 3100 BC. It is a rough block of limestone with 3x14 small holes and a big one, obviously a store for captured pieces (Petrie 1927, Bell 1960).

Two French travelers, Marcel Cohen and Georges Montandon, described Selus as played at the court of the Ethiopian emperor in the early 20<sup>th</sup> century (Cohen 1912, Montandon 1913).

In 1972 Richard Pankhurst wrote an excellent 53-page article on Ethiopian Mancala variants, including games from Eritrea, Djibouti, and Somalia (Pankhurst 1971). He gave the rules of 103 games, of which 12 were three-row variants or “Selus.” Although a few of them were covered by R. C. Bell and Larry Russ in their popular game books (Bell 1973, Russ 2000), they missed some of the most exciting two-row Mancala variants, such as Alemungula, Andada, Bulko, and Lamlameta.

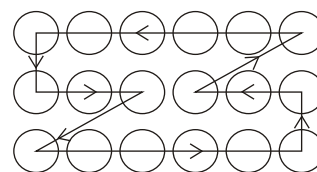
Today Selus is still played in the highlands of Eritrea and in certain regions of modern Ethiopia, notably northern Tigre, Dorzé and Kulu Konta.

The most sophisticated three-row game was the aristocratic Selus played by Emperor Menilik II (1889-1910) and his nobles throughout the Empire. It continues for hours, even when played with such speed that one can scarcely follow the moves. I could never finish a game due to physical and mental exhaustion. Fortunately, there are games that take a reasonable time, and yet years of practice are still needed to gain true mastery.

### Basic Rules

This article is focused on a particularly interesting sub-class of Selus, which share the following features:

- The board has 3x6 holes.
- Initially there are three seeds in each hole.
- Each player owns the row closest to him and the three holes of the central row at his right hand.
- Each move starts with a player emptying the contents of one of his holes that is not a *wegue* (“wound”). Then, the seeds are dropped one by one into the following holes. The direction of play is shown below:



Direction of movement

- If the last seed falls into an occupied hole other than a *wegue*, the player takes up its contents and distributes these seeds in a new lap.
- It is not permitted to pass a move unless a player has no legal move left.
- The move ends if the last seed is dropped into an empty hole. This is called *kwah*, an onomatopoeic word that imitates the sound of the stone alighting on the board.
- The goal is to capture more seeds than the opponent.
- *Wegues* are an important strategic feature of these games. They are created when the last seed distributed falls into a hole of three, thus making four seeds. The creator is the owner of the *wegue*, and marks the *wegue* with his own distinctive marker. Creating a *wegue* ends the move.
- If the last seed of a move is dropped into a *wegue*, the player captures this seed and, unless the *wegue* was empty, one of the seeds it contained.
- The creation of a *wegue* is only permitted after the original set-up has been destroyed, i.e. after the first move of a game. If, in the first move, the last seed of a lap makes four seeds, they are distributed in another lap.
- The game ends when both players have no move left. Each player scores a point for each captured seed and a point for each seed in a *wegue* owned by him. The player with most points wins.

### Selus Variants

#### *Selus (Massawa)*

This Selus is played around the city of Massawa in the northwest of Eritrea and was described as Game 13 by Pankhurst.

A *wegue* can be created anywhere. Capturing is permitted from any *wegue*, irrespective of the owner. The player must move again (beginning with any hole of his side which is not a *wegue*) if he captured from a *wegue* he owns, but must stop moving if he captured from a *wegue* owned by his opponent.

*Exception:* The two left-hand holes in a player’s back row are called *ayemi* (“eyes”). A player is not permitted to capture from an *ayemi* on his side, only from the opponent’s side. In that case, he must move again, even if he has captured from an opponent’s *wegue*. If the last seed fell into a *wegue* in your own *ayemi*, the move ends.



### Sulus Nishtaw

This Sulus is from Adwa, a city located in the Ethiopian province of Tigre. It was described as Game 2 by Pankhurst.

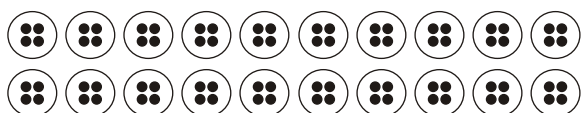
Only holes of the opponent can be turned into *wegues*, a process that is called *wagika* (“piercing with a spear”). If the seed increases the contents of a hole on the player’s own side to four, all four seeds including the seed dropped into it are redistributed in a new lap.

Capturing seeds is *only* permitted from *wegues* that are owned by the opponent. The player is then entitled to make a bonus move. Capturing a seed from a *wegue* is called *mebelae* (“to eat”). The bonus move is known as *belu’eka sini* (“escorting”).

If the last seed falls into a *wegue* owned by the player nothing is captured, and the move ends.

### Sadéqa (Jimma)

Sadéqa is played by the Jimma, who live in western Ethiopia. It was described as Sadeqa V (Game 84) by Pankhurst, who stated that it used to be a popular pastime at the court of Abba Jifar. While the king had wooden boards called *bolo sadéqa*, boys simply dug holes in the ground, and women were not allowed to play the game at all. Sadéqa is almost identical to Sulus Nishtaw, except that it is played on a two-row board with 20 holes and four seeds in each hole initially. The larger board and number of seeds per hole add complexity to the game.



Starting position for Sadéqa

Seeds (“*lon*”) are distributed counter-clockwise, one by one, in a multi-lap fashion into the following holes until the last seed is dropped into an empty hole; a *warana* (“spearred”); or an opponent’s hole containing exactly three seeds, thus making a new *warana*. A move may begin from any hole of your own side, except a *warana*.

A *warana* can only be made on the opponent’s side and is said to be owned by his creator.

When the last seed falls into a *warana* that is owned by the opponent, the player captures it and another seed from that *warana*. If the *warana* was empty, the player captures only one seed. Then the player makes a bonus move by starting from any hole of his side that is not a *warana*.

The move ends if the last seed is dropped into an empty hole, creates a *warana* or falls into a *warana* which is owned by the player.

Passing is not permitted as long as there is a legal move.

The game ends when all remaining seeds are in *warana*; i.e., neither player has a legal move left.

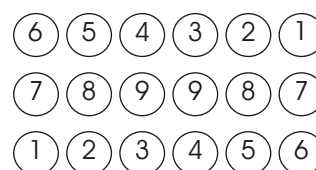
Each player has as many points as he has captured seeds and has seeds in his *warana* at the end of the game. The player with most points wins.

### **Strategy**

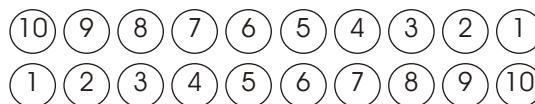
*Wegues* are important means of winning a game—or losing it! Often it is hard to judge whether they help you or your opponent more. In Sadéqa and Sulus Nishtaw it is usually good for you to create a *wegue* only if it is located in your opponent’s first three holes (i.e. holes 1-3). In Sulus Nishtaw hole 1 is known as *ayni eda* (“eye of the house”). If a *wegue*, or “wound” is created in your eye, you will probably bleed to death, become blind and die.

### **Notation**

*Selus*



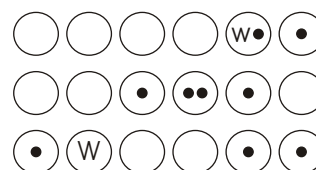
*Sadéqa*



- W** *Wegue/warana*: owned by North  
**w** *Wegue/warana*: owned by South  
– Same player moves again (bonus move or no legal move for other player)  
**(+n)** Player captures n seeds.

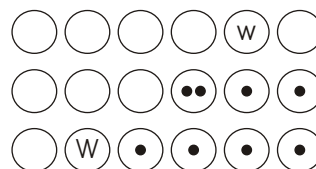
### **Problems**

1: *Selus (Massawa)*



South to move. Capture as many seeds as possible!

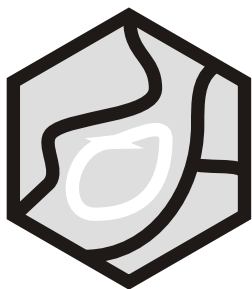
2: *Sulus Nishtaw*



South to move. Capture as many seeds as possible! ■

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# Havannah

## Basic Tactics Part 2

by Christian Freeling

In the previous issue you have seen a basic mill as a means to cut an opponent's intended connection. The next example elaborates on that while introducing a very strong move with widespread applications: the anchor. Of course, and this holds for all basic tactics, we are limited to a couple of isolated examples. In actual play everything is interconnected.

### The Anchor

An anchor is a *solid* extension whose influence is *perpendicular* to the direction of the extension. This sounds rather abstract (and considering the magazine, why shouldn't it be?), so in the next example we will tie it to a simple question: Can Black kill the top four white stones in Diagram 1? The most obvious attempt is marked 'X'. Less obvious but no better is 'O.'

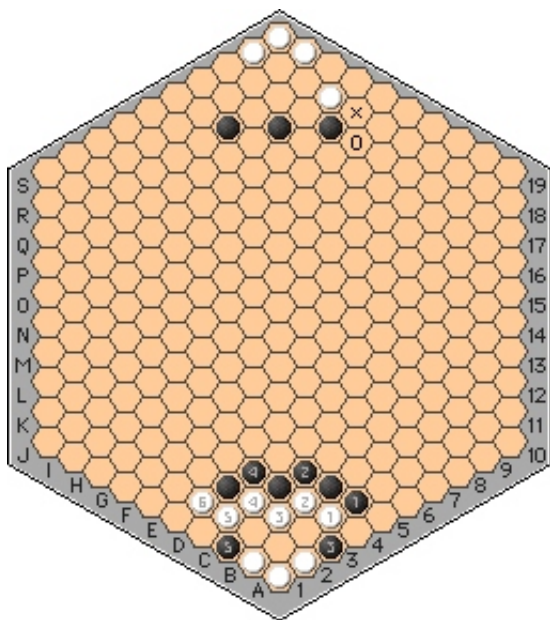


Diagram 1

At the bottom of Diagram 1 we can see why Black 1 fails. White starts pushing along the inside, creating one ring threat too many. White 6 marks the escape. In fact White only needs six moves for a fork (he can link up the three bottom stones for free using a ring threat) and he must be stopped by a Black move somewhere from f2 to i4, forcing White into the center.

In Diagram 2 a Black move at 'X' is an anchor. It is a solid extension from the black stone *downward*, but its influence extends *horizontally* along the diagonal line s11-k19.

At the bottom we can see how White is killed by three successive anchors, 1, 3, and 5. White 2 offers no escape and five moves down the line, white 7 encounters the same predicament.

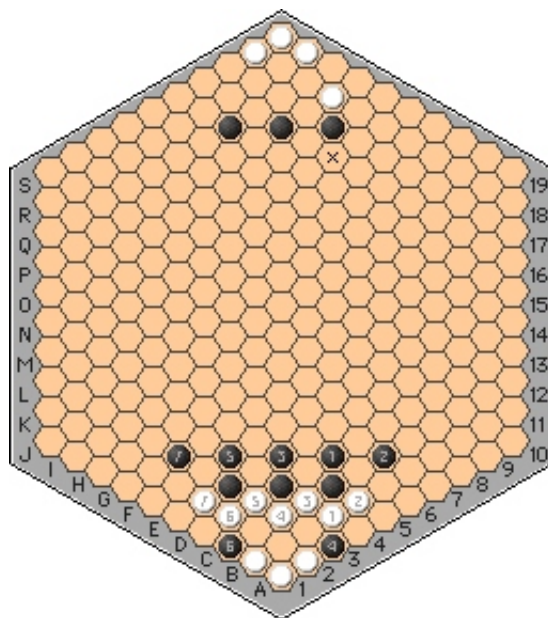


Diagram 2

### Cup and Trap

Diagram 3 shows a weakness in the Black connection at 'X.' If White moves there, the Black answer at 'O' is called a *cup*. It employs the whole Black connection as an umbrella to get connected at 'Q' and 'P,' and if not at 'P,' then via the top two stones farther up the side.

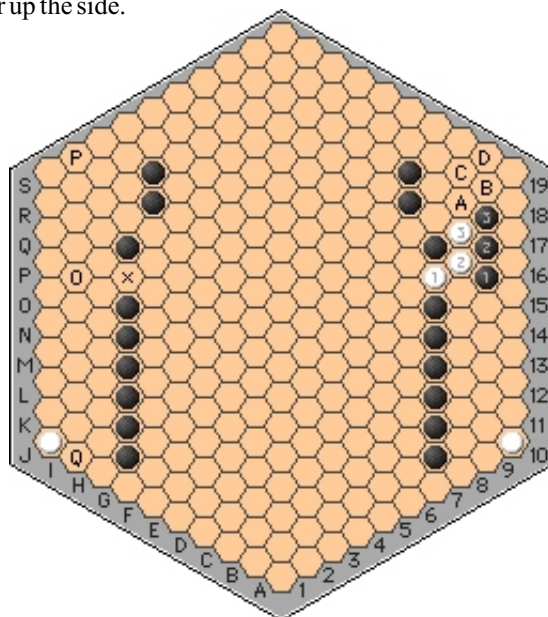


Diagram 3



On the right White has actually invaded and Black 1 is the cup. Clearly, if White pushes downwards, Black can simply follow on the second line, threatening to connect to the six black stones all the way up to a9, where he has the side and doesn't need to connect to the stones anymore.

Upwards things are slightly more complicated. Black 3 threatens to frame at 'C.' If White blocks at 'B' or 'C,' Black connects at 'A' to the two black stones. These cannot be kept from connecting to the top right side, so White's blocking stone is dead in the process. If White pushes at 'A,' Black moves 'B,' and White must block at 'D,' allowing Black to connect at 'C,' with similar consequences.

Obviously in the previous example, Black has a frame, despite the 'weakness' at 'X.' In the next example we add a little outside help to the equation in the form of an extra White stone.

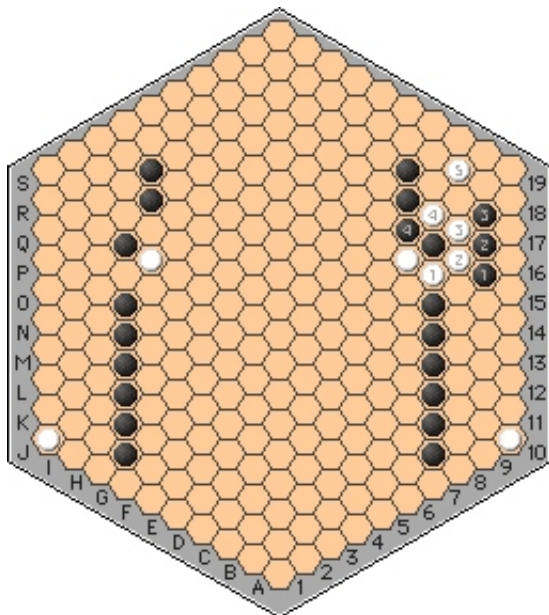


Diagram 4

On the right we see why the Black structure is not a frame now: White 4 threatens a ring and White 5 cuts Black in two (three for the formalists). Black would in most cases take the corner, because White is still forced to take the side then, to prevent Black from doing so. This way of using a ring threat to stop a progressing opponent's chain along a side is called a *trap*.

### Block

Suppose White opens with a move on a main diagonal, as at the top of Diagram 5. Black's answer next to it is called a *block*. It denies White access to the top-right side and threatens to slip under it at 'X.'

This used to be a regular opening that, without its actually falling into disrepute, is rarely seen in modern play.

At the bottom White is pushing downward to the corner. Black must follow to keep White from reaching the side. After four moves, White has a choice—he can take the corner at 'A,' threatening to kill Black at 'B,' forcing a Black move somewhere along the D-line or E-line; or he can move at 'B,' threatening to kill at 'C' if Black takes the corner. We will follow the latter line.

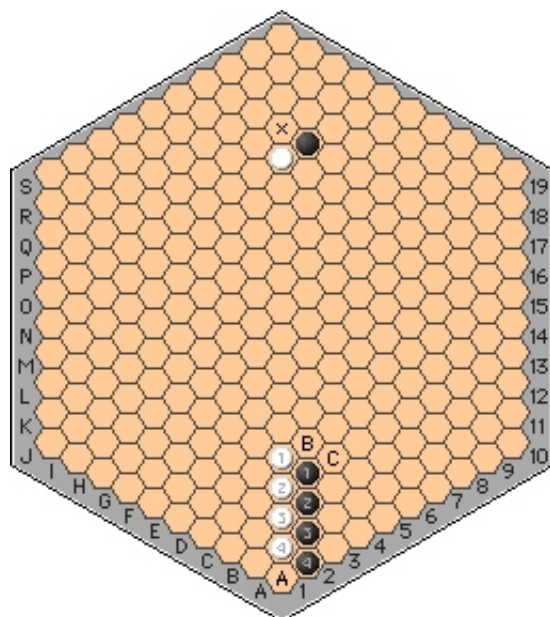


Diagram 5

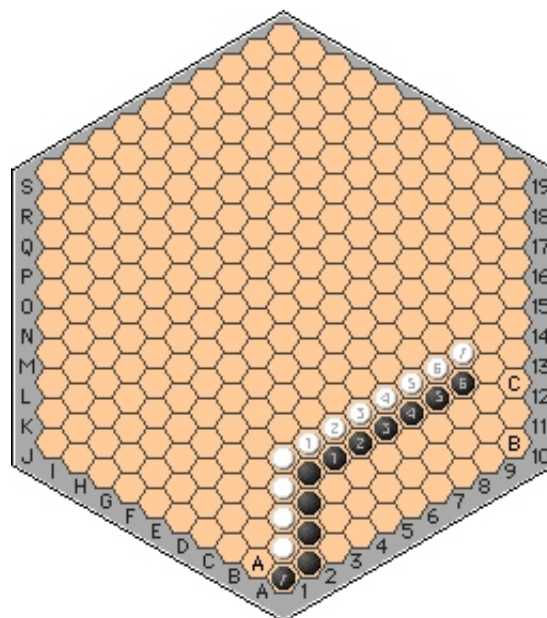


Diagram 6

Black, for sheer life, must follow White along the D-line, but his defense turns into a nasty attack (as so often in Havannah) if White pushes too far. I will leave it to you where precisely White should have stopped Black, but in this example he is too late. After White 7 Black takes the corner, threatening a bridge as well as progress to the bottom-left side. White has no choice now: a move at 'A' is followed by a Black move at 'B,' framing a bridge. So White must take the corner himself, allowing Black the side at 'A.' Of course, this forces him to defend the right side at 'C.' He will succeed in that at the cost of losing the game; in Diagram 7 we can see why.

Again White's defense takes on the contours of an attack, but this time he is too late. After 8 Black threatens a bridge at 'A' and a fork at 'B.' You have seen a simple block evolve in a complete game, poorly handled by White, but hopefully instructive.

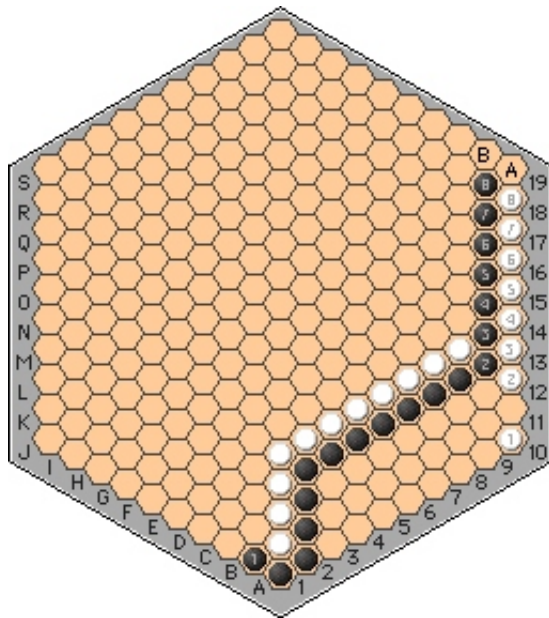


Diagram 7

### Running game

In a running game, one and sometimes both players' moves are forced. In Diagram 8 it develops from the same situation as the previous example, with one difference: Black has taken the corner one move earlier. White 1 defends by taking the other corner, and Black uses the portal to get to the bottom-left side. White 2 defends the right side, and Black 2 threatens to connect at 'X' all the same. White can only defend by taking the point himself, after which Black can keep pushing: a running game.

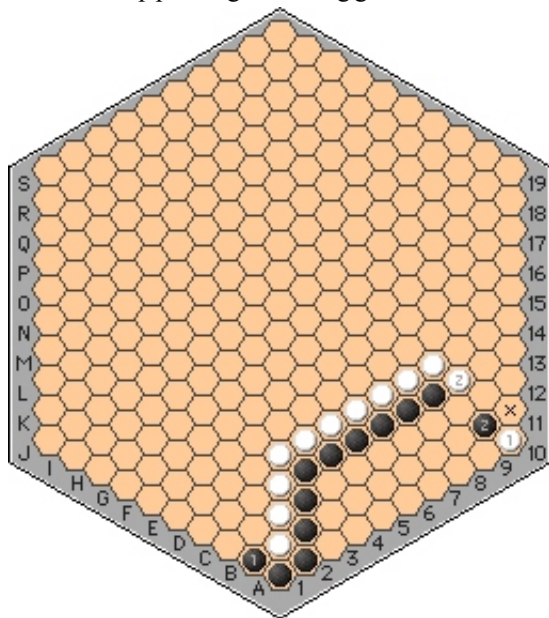


Diagram 8

In actual play the outcome, of course, largely depends on where it is running. A black stone near the top-right corner would make all the difference. As it is, Diagram 9 shows Black can keep pushing quite far, but not all the way! Characteristically, White's defense at some point turns into an attack—in this case the threat of a straightforward bridge means that Black can push no further than 7, because White 8 forces him to take the corner in defense. White escapes with 9, and Black has a choice to make. He can prolong

the running game with reversed roles at 'A' or sacrifice Black 8 by snatching the side away from white at 'B.'

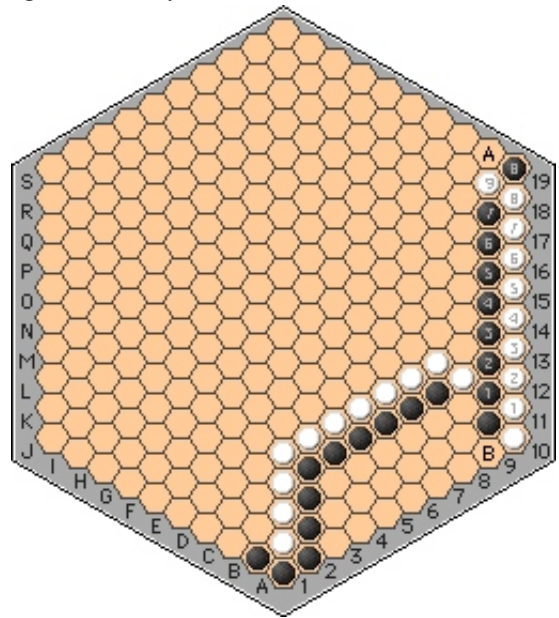


Diagram 9

Running games do not always develop on the two lowest lines. However, the term is usually kept for battles along the first and second, or the second and third lines.

### Split

A *split* is a successive attack on two related cutting points. In Diagram 10 White can prevent a Black bridge both at the top and at the bottom by playing the points marked 'X.'

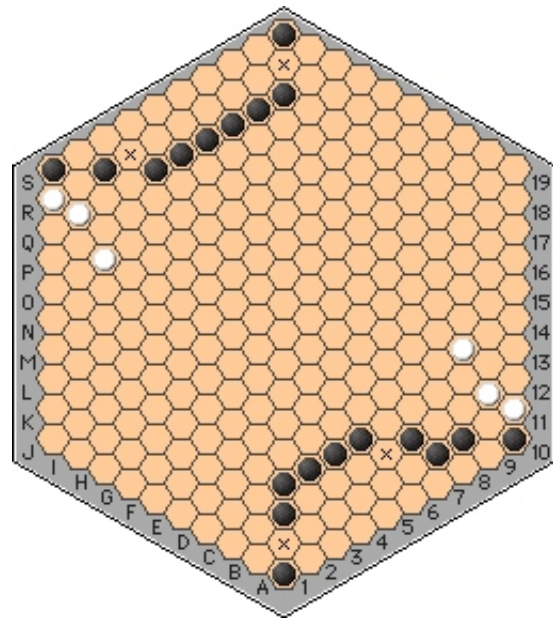


Diagram 10

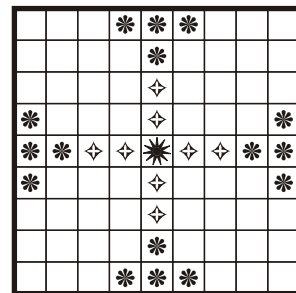
Diagram 11 at the top shows White threatening to cut with 1, forcing Black to connect. Next White cuts with 2, and simply follows Black if he tries to connect with 2. If Black keeps pushing along the side, White eventually will connect to 1, where he has the two cutting points marked 'X.'

(Continued on page 24.)



# **Tablut** **A Sami Game**

by Michael Sandeman



**T**ablut is the best-documented representative of a group generally referred to as Tafl games. Very little is definitely known about any Tafl game apart from Tablut, and even in the case of Tablut what is known is under dispute. Tablut is a game of the Sami, nomadic reindeer herders of northern Scandinavia and the Kola peninsula. It was first described by a non-Sami observer in 1732 when Carl von Linne (Linnaeus) recorded the rules of play in his diary while on a botanical excursion in the mountains of Sweden.

Previous to this the most recent known record of a Tafl game is that of the Welsh game Tawlbwrdd, mentioned by Robert ap Ifan in 1587. In ap Ifan and all earlier references knowledge of the game is assumed in the reader so insufficient detail of the rules is given. How these games were played was purely a matter of conjecture until 1913 when Murray in his *History of Chess* tied Linnaeus' description of Tablut in with the earlier references. However, while I acknowledge a connection between these games, the assumption that all Tafl games, including Tablut, employed the same rules with only the size of board varying has no evidence to support it. My view is that Tafl games other than Tablut can be considered to be lost.

Tafl games have four distinctive features: the playing boards are square in terms of number of cells (or in one case points); the boards have symmetrical patterns of specially marked cells; the outer forces utilize twice the number of pieces as do the inner; and the player conducting the inner forces has one extra piece, which begins the game on the central cell/point.

The initial layout of pieces in Tablut is shown in Diagram 1. In line with written records of the Vikings the central piece is normally called the King. There has been a tendency to call the outer forces "attackers" and the inner "defenders," but as this is often at variance to the psychological and strategic approaches required by actual play, I will use the terms Black and White. However, be aware that in all Tafl games other than Tablut the inner forces were Black and the outer were White.

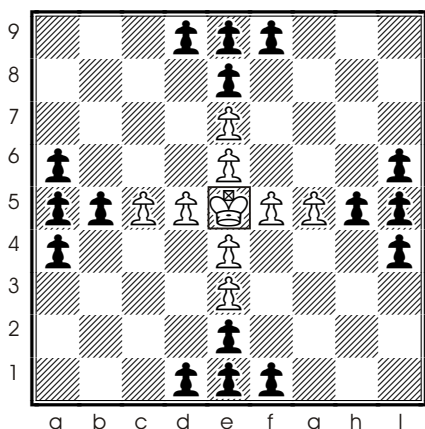


Diagram 1: Initial setup of Tablut.

For the purposes of this article I will be using the rules of Tablut as it is played on the BrainKing at <http://www.brainking.com>. The main reason is that these rules encompass and maintain the spirit of those in Linnaeus' original description, but also BrainKing has plenty of keen players who are familiar with these rules, thus providing a supply of experienced opponents for those wishing to explore the game in practice.

BrainKing is run by Filip Rachunek from Prague in the Czech Republic. Aside from providing a wide range of games Filip aims for membership involvement. For example, paying members can define and manage tournaments, and various members form a customer service corps. This gives the site a family feel.

The rules are very simple, all three types of piece can move along any adjoining orthogonal as far as desired, but can neither capture nor pass obstructing pieces of any variety. An opponent's piece is captured when a player's piece finishes its move such that it orthogonally sandwiches the opponent's piece between itself and another friendly piece. For example, from Diagram 1 if White moves 1.d5d2 there is a threat to capture e2 next move by 2.f5f2. Instead of defending this threat Black could opt to capture c5 by 1....d9d5 or d2 by 1....d9d3. The King cannot take part in captures, while Black, in order to capture the King, must surround it on all four sides. Black wins the game by capturing the King; White wins the game by moving the King to the perimeter of the board. Naturally, also, if a player has no further move that player loses the game.

Once the King has left the central square no piece, including the King, may occupy that square, although any piece may freely pass over it. As a consequence of this restriction, it is possible for Black to capture the King by surrounding it on three sides if on the fourth side the adjacent square is the center.

Captures must be made actively, so, a piece may safely move to a square between two opposing pieces, and the King may move from or across the central square to the adjacent square even if that square is surrounded by Blacks on all three available sides.

As Tablut is a game of unequal forces it is natural that there should be a degree of bias in favor of one side or the other. I do not see this as a problem. After all, Chess is considered to be a satisfactory game, yet is heavily biased in White's favor. However, some investigators have taken the view that Tablut in the form recorded by Linnaeus is excessively biased and have introduced various rules in an attempt to remedy this. In fact, the bias is more apparent than real. If we compare the difference in performance with Black and White displayed by those players at BrainKing with established ratings, we find a reduction in disparity with an increase in rating. This suggests that the bias is caused by the relative ease with which play of the conflicting sides can be conducted. This is to be expected as Black has twice as many pieces and normally about twice as many available moves, so twice the likelihood of making a mistake. Further to this, Black



wins are usually longer than White wins, which means that Black must play precisely for longer than White must.

In the early part of the game, at least, Black is reacting to White's ideas and often needs to find obscure and difficult moves to survive. My personal view is that in an ideally played game Black has the advantage, but at my level White's practical advantage is enough to produce games that are difficult for both sides. In fact at BrainKing a preference for playing Black is slightly more common than for White.

Tafl boards generally have certain specially marked squares. This has lead some observers to propose that these squares are off limits and that they function for capturing pieces in the same manner as the central square, but extended to all pieces not just the King. The main objection I have to the game in this form is that the play becomes very localized, wasting the potential mobility of the pieces and limiting the strategic and tactical possibilities. The idea to some extent depends on the assumption that Tafl games evolved from the Roman game Ludus Latrunculorum, which has unmarked squares. However, there is no evidence for such an evolution, and I am inclined to regard this as a conclusion based on laziness and preconception.

I am not saying that Tafl games other than Tablut did not include this concept, just that as it was not mentioned by Linnaeus there is no reason to think it applied to Tablut. In fact, Linnaeus' Sami hosts presented him with a board made of reindeer skin. The squares were unmarked except for those occupied at the game's outset, and these were marked in three styles indicating which pieces begin the game on which squares. If we consider the alternative possibility that Tafl games evolved from Tablut or a proto-Tablut of the Arctic-rim nomads, we need no special explanation for the markings as they have not appeared as a later development. Suggestively, the design represents a typical Sami cosmological motif of the Sun (King) reaching the Earth's four corners.

Tafl, pronounced "tabl," is taken to be a loan word from Latin, which is also mentioned in support of the Roman connection. However, "tablut" is independently a Sami word, a verb meaning "to play board games," so we could equally conjecture that the Vikings adopted the term "tafl" as a familiar compromise of Tablut.

There are many interesting questions left to be answered about Tablut. For example, Linnaeus records the Sami calling the Black pieces Muscovites and the White Swedes yet, at the time of Ivan the Great's unification of Russia under Moscow, Tafl games appear to have been extinct everywhere else but the Celtic stronghold of Wales. Even more intriguing is the fact that the Black pieces had two heads. The two-headed eagle of Moscow springs to mind, but again the timing seems wrong. Tablut is assumed to be extinct among the Sami, but as the most recent mention of it as a living game dates from 1884, I still hope to be able to locate Sami members who can clear up these questions. Although I am pursuing enquiries into these matters, all I can offer at the moment is speculation, so I will draw a close to the general discussion and examine some aspects of play in four sample games played at BrainKing.

#### Game 1

**1.e4f4** (Although there are only seven available first moves for White they all break the symmetry and to some extent define the strategic tone. White's choice here aims for a slow game.) **1....b5b3** (Black by contrast has 79 possible replies. The move chosen also aims for a slow game; with 1....a4e4 Black could attempt to set a faster tempo. As mentioned earlier, Black's wins

tend to be longer than White's so as a general principle it might seem natural for Black to aim for a longer game. On the other hand, a longer game means more possibility to go wrong. Also, if White prefers a slow game there is something to be said for denying that preference.) **2.d5d6 b3c3** (A very dubious move; it opens the b-line for no reason and generally pays no attention to White's plan.) **3.f5f8 e8b8, 4.e6h6** (White has achieved the shape aimed at, and it already looks as if Black will have problems trying to defend the i9 sector.) **4....a4e4:e3** (diagram)

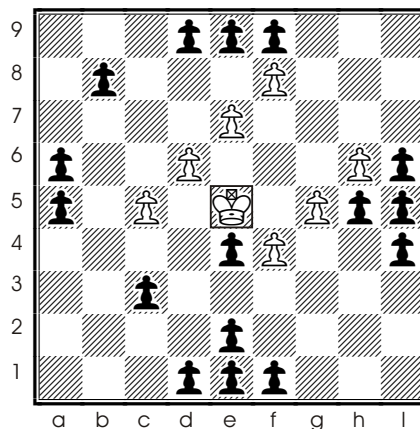


Diagram 2: Position after 4....a4e4:e3

(Defending h5 would be to continue playing White's game. The move chosen attempts to involve the lower e-pieces and c3 in the fight. It also presents White with the question of whether to continue with the original plan or to change objective with f4h4:h5.) **5.e7e8 i6i7, 6.e5e7** (White elects for the original plan. As f4h4:h5 allows the participation of f1, it does not fit with this idea.) **6....a6a7, 7.e7g7** (Here and on the next two moves White could force a draw by e7b7 followed by a perpetual attack on the a-edge. This is the only point of dissatisfaction that I have with these rules. A draw implies equality, but in Tablut only White can force the draw. As this is clearly an inequality it needs to be dealt with. The two natural suggestions are that repeating loses for White or that, rather than it being a draw, the game is replayed with reversed colors. The question for philosophers is: If the rules of a game of skill allow no possibility of a draw does this imply that one side must have a forced win?) **7....f9g9, 8.f8i8 i7h7:h6, 9.f4f9 a7e7:e8** (Prevents the possibility of a draw and lets b8 into the fight.) **10.i8h8** (diagram)

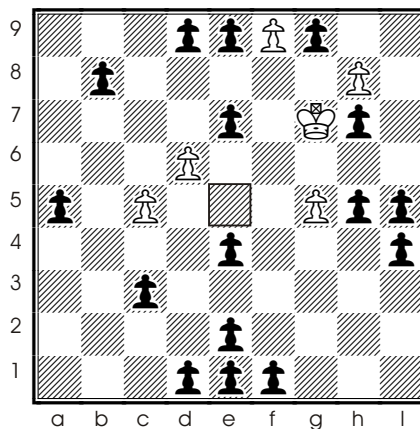


Diagram 3: Position after 10.i8h8

(Attacks both g9 and h7 while threatening g7g8 leaving Black no defense to the threat h8h9:g9 and g8g9.) **10...b8g8, 11.f9f8:g8** (It looks better to capture h7 first: 11.d6h6:h7 i5i7, 12.f9f8:g8 e9f9, 13.h6i6 h5h7, 14.g5h5, and White's attack has succeeded. Notice how the success of this attack depends on Black having no pieces on the 6-line.) **11....i5i8** (Black now has an extra piece for the defense and can meet 12.d6h6:h7 with i4i7.) **12.d6d7 i4i6, 13.f8f7:e7 g9g8:h8, 14.g5f5** (Over the last few moves White has switched attention towards the low letters, giving Black time to consolidate. After this move Black has the King surrounded on three sides. Given the number of remaining pieces and their positions this should be decisive.) **14....i6g6, 15.f7f8 e4e7, 16.f5f7:e7 e2e7, 17.d7d6 e9e8:f8, 18.f7f2 e7f7** wins.

## Game 2

**1.e6h6** (Here White aims for a quick game. Black accepts the challenge and makes a quick-tempo reply. 1....i4h4 is probably the most solid.) **1....a6g6:h6, 2.e7g7:g6 e8e6** (This looks very loose but is in keeping with Black's fast strategy. 2....f9f7 is an appealing alternative if Black does not mind allowing White the opportunity to draw.) **3.d5d6 d1d5:c5, 4.f5f6:e6 e9e6** (Already we have a knife-edged position. If it were Black to play, d9d7:d6 would consolidate the grip on d5 and e6, making things very difficult for White.) **5.e5f5 f9f7** (diagram)

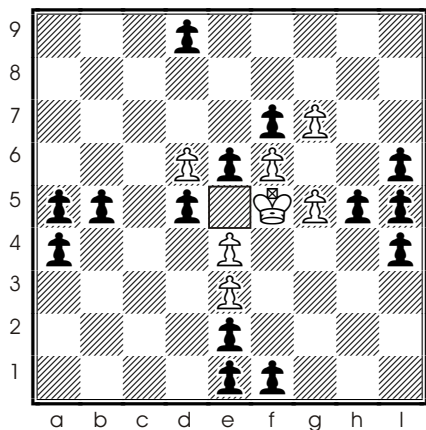


Diagram 4: Position after 5...f9f7

(Black creates another target, letting White conduct attacks in three directions simultaneously. Instead 5....d9d7:d6, 6.f6h6 f9f6, 7.e4h4:h5 would restrict the fighting to the high letters.) **6.e4d4:d5 b5d5, 7.d6d7 i6g6:f6, 8.d7d6:d5 a5d5, 9.d6d7** (The double attacks by this piece give Black no time effectively to bring in any other pieces, so it would have been better to capture it on move 5 when there was a chance.) **9....e1c1, 10.d7e7:f7 e6f6, 11.e3e6** (Diagram. By clearing the 3-line White gains time to add another piece to the attack. Black can no longer defend against the combined attacks on the low letters and numbers.) **11....f1f4, 12.e6d6:d5 c1c5, 13.d4c4 e2d2, 14.f5d5 a4a5, 15.d5d3** wins.

## Solutions to Mancala problems from page 17

Problem 1: 6/1/5/9/3-4-9(+2)-8/1/6(+2)-5/1/6-8-7-8(+2)/1. Problem 2: 5/1(+1)/3-5-7/1(+1)/8/1(+1)/9/1(+2). The three remaining seeds are eventually captured by South, no matter what North does.

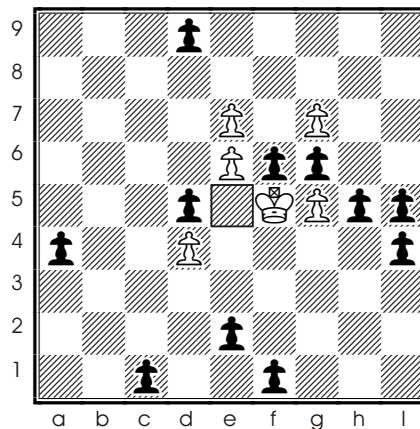


Diagram 5: Position after 11.e3e6

## Game 3

**1.c5c8 b5c5** (An interesting and double-edged move. Black immediately sets about directly restraining the King by a central rather than a peripheral strategy. On the negative side, it makes contact, and the piece is unsupported, making it an easy object of attack.) **2.e6c6 a4c4, 3.d5d2** (White opens a new front of battle. On this occasion it might be better, at least for the moment, to further pursue the existing attack. e7b7 is attractive, although getting the balance right is difficult. From the technical stance e7b7 has two positive points: it continues the attack, and it further opens the King's front. But it also has two negatives: it blocks the b-line, and it frees Black's upper e-pieces. Nevertheless, it looks promising, and for example 3.e7b7 a6b6, 4.e5e7 f9f7, 5.e7c7 maintains various threats.) **3....i6e6:e7, 4.f5f2:e2 a5a3** (The position is already difficult. If instead Black comes in with the capture of g5 by f9f5:g5, White will get a very strong attack: e.g., 4....f9f5:g5, 5.e5d5 d9d7, 6.d5d3 c4c3, 7.e4c4:c5 a5c5:c4, 8.e3e4 f5f3:f2, 9.e4c4:c5.) **5.e5f5** (diagram)

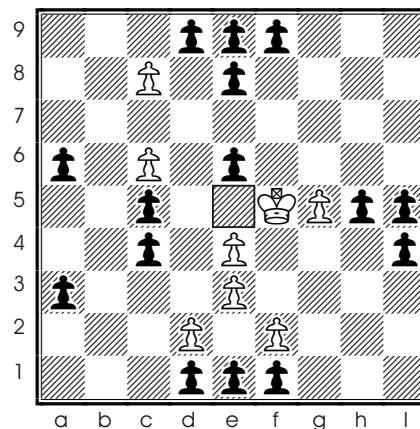


Diagram 6: Position after 5.e5f5

**5....f9f6** (A subtle but significant mistake. f9f7 is much better as it closes the 7-line and does not interfere with the mobility of e6. As White cannot achieve anything with f5f6 Black had no need to come right in.) **6.f5f3 h5h3** (As it gives White more chance to advantageously open the g-line at some point this move might look suspect, but i4i3 would give White the chance to step up the attack on the lines of 7.f3h3 f1h1, 8.e4i4 h1h2, 9.h3f3, with winning threats.) **7.f2h2 i4g4, 8.f3g3 f1g1, 9.e3f3 e1f1, 10.g3g2 g4g3** (diagram)

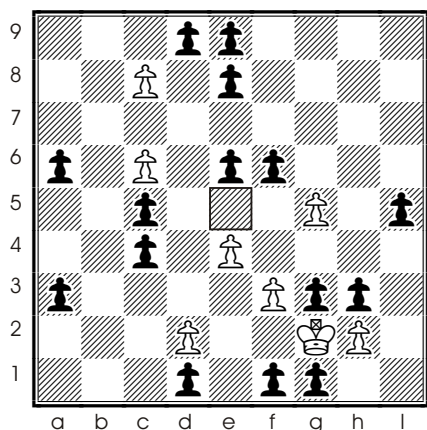


Diagram 7: Position after 10....g4g3

(White has been trying hard to keep up the threats in the face of Black's persistent defense, but now Black loses patience and makes the decisive mistake. Superficially, the following exchange looks good for Black as White's king is further surrounded and one of the closest defenders is removed, but it overlooks the consequences of White's twelfth move. It is difficult to say what would be best, after the natural sequence 10....f6g6:g5, 11.g2e2 f1e1, 12.h2h1 i5i2, 13.f3f1:g1. White still has threats. Notice the f-line is open at the end of this variation. Had Black chosen 5....f9f7, then 10....e6g6:g5 would have been possible, keeping both the f-line and the 7-line closed, considerably reducing White's chances of escape.) 11.e4h4:h3 a3e3:f3, 12.h2i2 g3h3, 13.g2h2 wins.

#### Game 4

1.e6d6 i6e6:e7 (As in Game 1 White adopts a deliberate approach, but on this occasion Black responds by trying to switch to a fast game.) 2.f5f6:e6 f9f7, 3.e3f3 a6c6, 4.d6d7 (White's previous move not only defended the threat of a double capture by f1f5, but by strengthening White's position on the f-line prepared an attack on the low numbered pieces. d5d2 would therefore have been the consistent continuation here. White needs to react to the fast tempo set by Black and fight back.) 4....a4c4:c5, 5.g5g7 h5f5:f6, 6.d7e7:f7 c6e6:e7, 7.g7g6 (diagram)

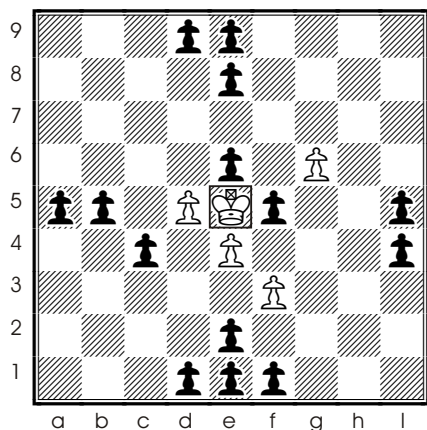


Diagram 8: Position after 7.g6g7

(The game has reached its crisis. As Black has moved in so quickly there are lots of open lines left beyond the two blockading pieces. White can set up several attacks.) 7....d9d7, 8.e4f4 e2e4, 9.g6f6:f5

i5f5, 10.f4g4 d7f7:f6, 11.g4g6 f7g7 (diagram)

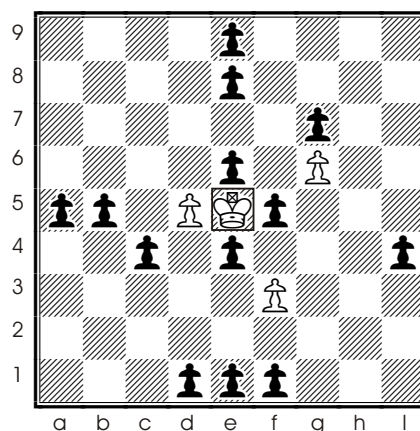


Diagram 9: Position after 11....f7g7

(Black has managed to set up a three-point surround and White has insufficient pieces to challenge it. The finish is fairly straightforward.) 12.g6g2 d1d3, 13.g2c2 e9d9, 14.c2c3 b5b3:c3, 15.f3h3 d9d6 wins.

It can be seen that Tablut games tend to be of fairly short duration, as might be expected of a game with unequal forces, but because of the size of the board and mobility of the pieces games quickly take on their individual character and present their own particular problems. If there are any readers who prefer an alternative interpretation of the rules, I would be interested in their experiences. ■



(Continued from page 20.)

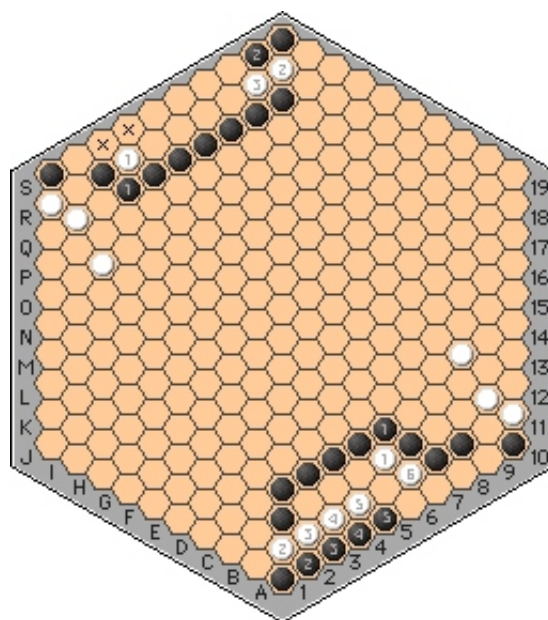


Diagram 11

At the bottom there is a similar procedure, now with a one-point jump at 6, made possible by White 1 and the threat to cut.

Now you know how to play Havannah... almost. Next issue it will all come together in a real thriller! ■





# BASHNE

## Combinations and Counter-Combinations

by Sergey Ivanov

Twice Winner of Bashne Championship of St. Petersburg

Some people have achieved considerable experience in the popular logical board games. They are able to win against other competent players, but cannot formulate (or explain) the principles of successful play.

It is usually recommended to any novice player in simple Draughts to adhere to some basic principles: don't lose pieces; capture opponent's pieces; occupy squares in the center of the board; limit the mobility of the opponent. Players use these criteria to evaluate the advantages or disadvantages of a position.

These principles, however, do not work for Bashne. For example, it is possible to lose pieces with advantage. Experience has demonstrated some criteria that may be used in evaluating Bashne positions:

- *Column height.* The more of one's own pieces in a column, the stronger it is. (Although this will lead to a denuding of the rest of the board and weaker coverage!)
- *Negative potential.* Weak columns have negative potential. "Weak" columns consist of 1-2 of one's own pieces on top of a column of enemy pieces. Columns of this type can be attacked by the opponent and turned into enemy columns.

It is possible to formulate three strategic principles:

- *Capture opponent's pieces.*
- *Protect columns with enemy "prisoners."*
- *Attack weak columns.*

Applying these principles is an art, and it demands skillful application of tactical methods. (See AG7, "Bashne: Basic Tactical Methods.") Positions with large material advantage can be lost because of tactical combinations. The tactical methods known in Draughts needed extensive revision. For example, in Draughts a win by depriving the opponent of moves is infrequent and unexpected; in Bashne it is a basic way of winning. Let us consider two example games.

### Game 1

1.g3h4 h6g5, 2.c3d4 g5f4, 3.e3:g5 b6c5, 4.d4:b6 a7:c5, 5.g5h6 (diagram)

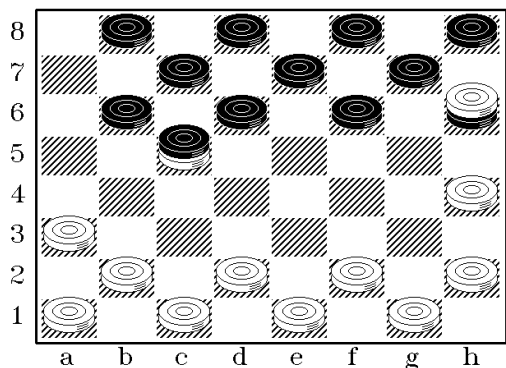


Diagram 1: Position after 5.g5h6

(Black has selected a tactical method that seems to provide material advantage.) 5....c5b4, 6.a3:c5:a7 c7b6, 7.a7:c5 f6g5,

8.h4:f6 e7:g5? (Better is 8....g7:e5, with equal chances.) 9.c5:e7 f8:d6 (diagram)

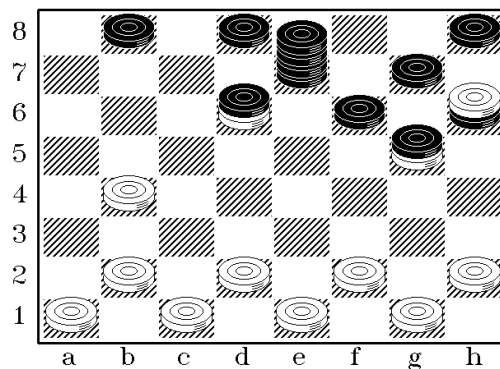


Diagram 2: Position after 9....f8:d6

(Black assumed White would play 10.h6:f8+?, after which Black would achieve considerable advantage: 10....h8g7, 11.f8:h6:f4:c7 e7:c5:a3, 12.g5:e7 b8:d6:f8—diagram.)

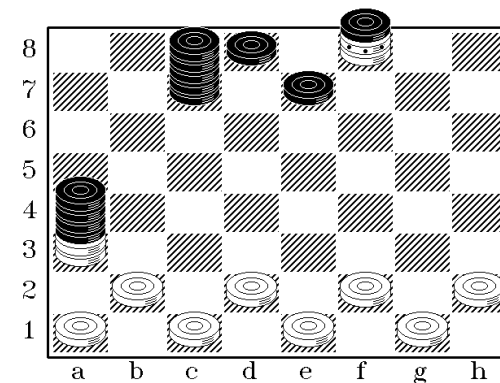


Diagram 3: Position after 12....b8:d6:f8 (variation)

(Black has four White pieces safely trapped on a3 and f8 and has two strong columns. But White analyzed the position carefully and played the following counter-combination—from Diagram 2) 10.h6:f4! f6:h4, 11.f4e5 d6:f4, 12.f2g3 h4:f2, 13.g1:e3:g5 e5:g3, 14.f2:h4 g3:e5, 15.g5h6! (diagram)

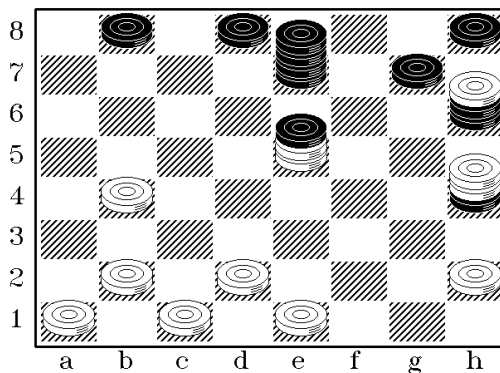


Diagram 4: Position after 15.g5h6!

White threatens to promote in this position, and Black is compelled to defend.) 15....g7f6 (White will promote anyway.) 16.h4g5 f6:h4, 17.d2c3 h4:f6, 18.h6:f4:d6:f8+ f6:d4, 19.f8:c5:g1 (Diagram—White's "weak" column is safely positioned on g1, and cannot be attacked by Black. White has a won game.)

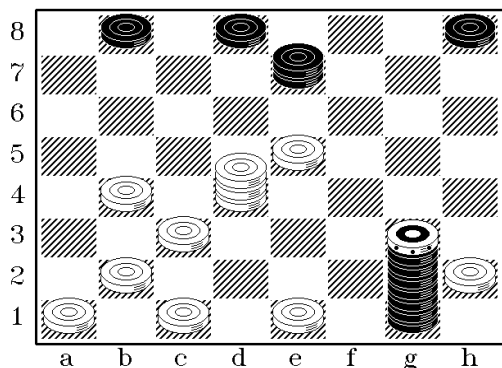


Diagram 5: Position after 19.f8:c5:g1

## Game 2

1.c3d4 f6e5, 2.d4:f6 e7:g5, 3.g3f4 f6e5 (diagram)

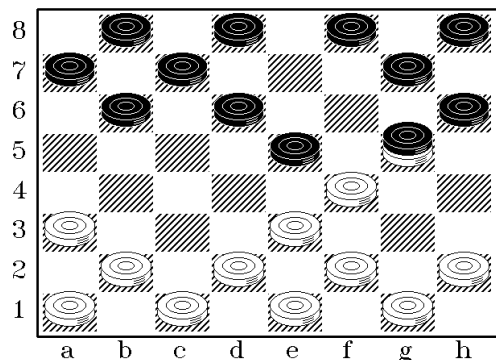


Diagram 6: Position after 3....f6e5

(White now makes a tactical maneuver.) 4.a3b4 e5:g3, 5.f2:h4:f6 g7:e5, 6.g5:e7:c5 b6:d4:f2:h4, 7.b4:d6:f4 f6:d4, 8.h2g3 h4:f2, 9.e1:g3? (diagram)

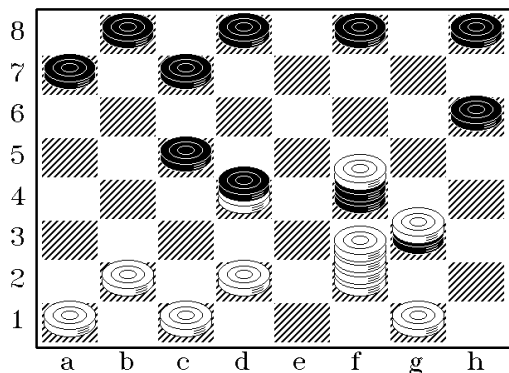


Diagram 7: Position after 9.e1:g3?

(9.g1:e3 may be better. White supposed this position to be very strong. He has a column of four, and threatens to continue destruction of the Black position by 10.f4g5 h6:h4:h2, 11.f2:h4:f6 g5:e7, 12.b2c3 d4:b2, 13.a1:c3 e7:g5, 14.f6:h4, etc. But Black carried out a combination that is known in ordinary Draughts.) 9....d4e3! 10.f2:d4:b6 a7:c5, 11.b6:d4 h6g5, 12.f4:h6 f8g7, 13.h6:f8+ (diagram) 13....d8e7, 14.f8:d6 c7:e5:c3:e1+:h4, 15.c5:e7 h4:d8 (diagram) White cannot free the pieces trapped under the Black king on d8. However, Black can now destroy the weak white column on d4: 16.(b2a3) d6c5, 17.d4:b6 d8:a5 18.b6:d4 g3h2, 19.d4:b6 a5:d8. White's position is hopeless.)

In actual games, there can be combinations, counter-

combinations, counter-counter-combinations, etc. This richness of Bashne makes it a beautiful, magical game.

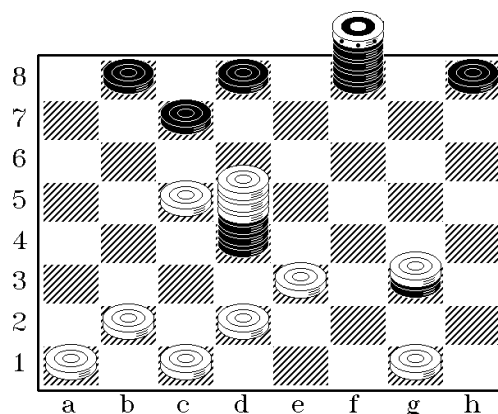


Diagram 8: Position after 13.h6:f8+

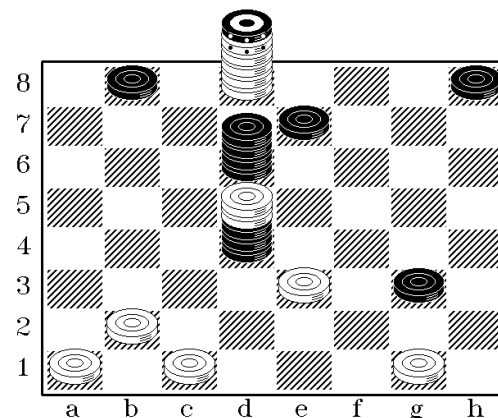


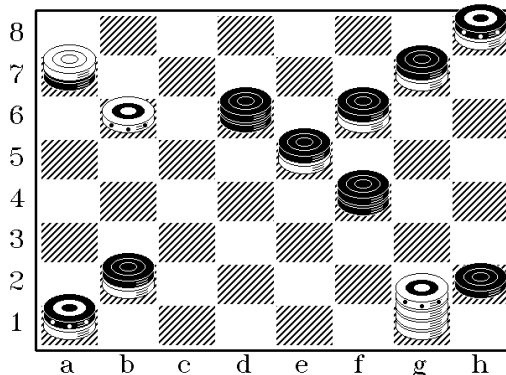
Diagram 9: Position after 15....h4:d8

## New Bashne Problems

by Alexander Sladkov and Victor Bajhudgakov  
(Jachroma, Moscow region)

These positions are unlikely to occur in the practical games, but contain ideas that allow one to investigate in more detail the tactical methods of Bashne.

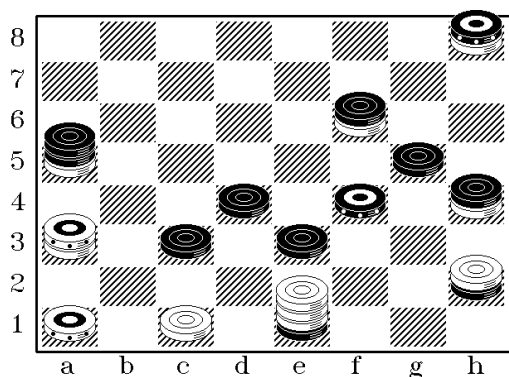
### Problem 1 A.Sladkov



### Problem 1 Solution

1.g1d4 e5:c3, 2.a7b8+ c3:e5, 3.b8a7 e5:c3, 4.b6a5 c3:e5, 5.a7d4 e5:c3, 6.a5:d2:h6:f8:a3:c1:g5:e7:c5:g1.

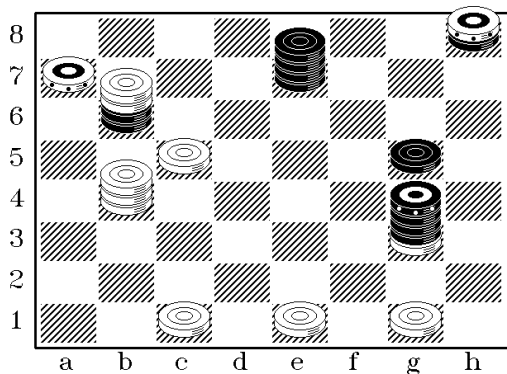
*Problem 2*  
A.Sladkov



*Problem 2 Solution*

1.e1f2 e3:g1, 2.a3f8 g1:e3, 3.f8h6 e3:g1, 4.h2g3 f4:h2,  
5.h6:d2:b4 a5:c3, 6.b4:d2 c3:e1, 7.a1:e5:g7

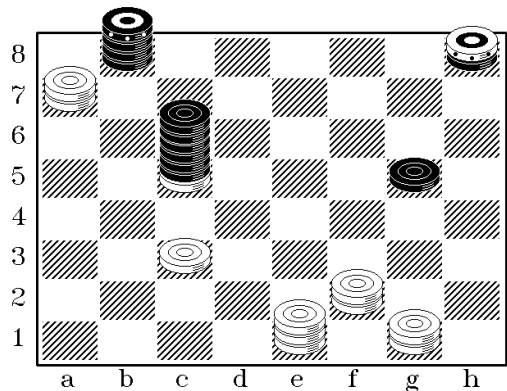
*Problem 3*  
V. Bajhudgakov



*Problem 3 Solution*

1.b6c7 g3:b8, 2.c5d6 e7:c5:a3, 3.c7d8+ a3:c5, 4.d8:h4 c5:a3,  
5.h4g3 b8:h2, 6.a7f2 a3b2, 7.h8:a1

*Problem 4*  
V. Bajhudgakov



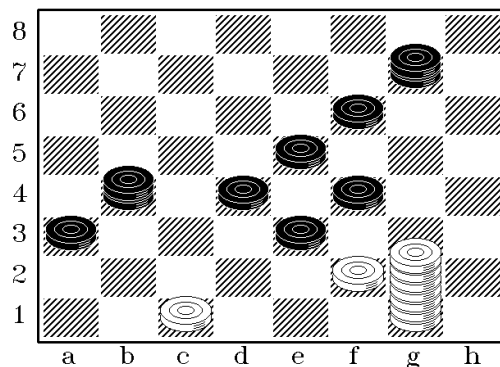
*Problem 4 Solution*

1.c3b4 c5:a3, 2.f2g3 b8:h2, 3.e1d2 h2:f4:c1, 4.g1f2 c1:e3:g1,  
5.a7b8+ g1:e3:c1, 6.b8f4 g5:e3, 7.f4:d2 c1b2, 8.h8:a1 b2c1,  
9.a1b2

**Old Bashne Problems**  
by Victor Petrov

Victor Petrov (1934-1994) was a master of Russian Draughts and one of the first exponents of Bashne.

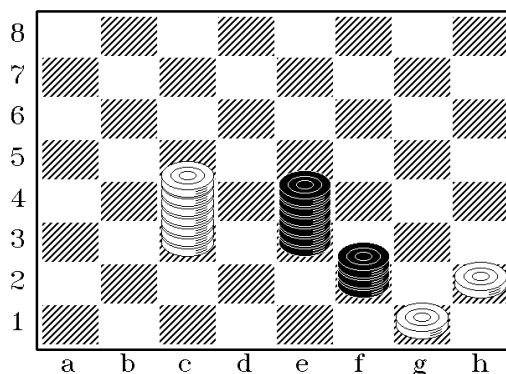
*Problem 5*  
V. Petrov



*Problem 5 Solution*

1.f2g3 f4:h2, 2.g1f2 e3:g1+, 3.f2e3 d4:f2, 4.e3f4 e5:g3, 5.f4g5  
f6:h4, 6.g5f6 g7:e5, 7.f6:d4 e5:c3, 8.d4:b2 b4:d2, 9.c3:e1

*Problem 6*  
V. Petrov



*Problem 6 Solution*

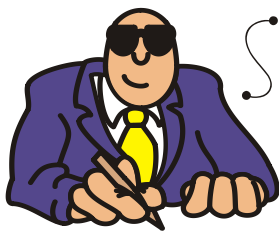
1.h2g3! f2:h4, 2.c3d4 e3:c5, 3.d4:b6 c5:a7, 4.g1h2! a7:c5,  
5.b6:d4 c5:e3, 6.d4:f2 e3:g1+, 7.f2g3 h4:f2, 8.g3:e1 (The  
sequence of moves in this combination was named "Boomerang"  
by the author.) ■

*I urge readers to play out the incredible combination in the solution to Problem 6—the timing is exquisite! We have come to the end now of the material I have on Bashne, aside from a few problems that we haven't printed yet. Put together, the collection of Bashne articles and problems in various issues of Abstract Games represents a fair introduction to the game, so that a newcomer could quickly achieve a basic level of competence. It's the kind of thing I had hoped to achieve with the magazine. —Ed.*

**Shared Pieces Game Design Competition Update**

As of mid-December there were 24 entries. By the closing date we expect there will be at least 30 in total. As usual, several good games from the competition will be described in *AG17*, and the winners will be announced in *AG18*. —KH





# Sprouts for Capitalists

by Gregory K. Van Patten

Invented in 1967 by John H. Conway and Michael S. Paterson, Sprouts is a modern classic game in which conflict arises naturally from intrinsic connective properties of surfaces (Mathematicians who study these properties are called “topologists.”) For instance, if you played Sprouts on the surface of an inner-tube shape (a “torus”), your strategy would be different than if you played on a sphere. One might even ask if Sprouts could somehow be played in 3-dimensional space . . . but I digress.

I always think a game is more enjoyable if each opponent somehow owns “property.” In standard game theory jargon, I prefer “partisan” games to “impartial” games, although perhaps the economic terms “capitalist” and “socialist” better convey the sentiment. The games Nim, Dots-and-Boxes, and traditional Sprouts are all “impartial” or “socialist” games. The object is to remove items in such a way that your opponent is the first one with nothing to take for himself. The fact that both players have access to the same supplies means that the winner is simply the one who can count the most carefully. If you make sure that the supplies run out after an even number of moves, you win.

In “partisan” or “capitalist” games such as Hex, Go, and Chess, whether the number of moves left is even or odd does not matter. In these games you have supplies that are in some way off limits to your opponent. By defending your property from your opponent, you have the opportunity to consume your resources as you see fit. These games are won by the player who is the better engineer, not the better accountant (just to snub the accountants out there!). I should however admit that my prejudice against the impartial socialist games is likely due to the fact that I stink at them.

## Rules for Capitalist Sprouts

- 1) The game begins on a piece of paper with an equal number of O’s and X’s. Player-I owns the O’s, and Player-II owns the X’s. Player-I has the first turn of the game. Incidentally, it could be fun to extend this “partisan” version of Sprouts to a three-player game. Just start with equal numbers of X’s, O’s and Z’s (or some convenient third symbol).
- 2) On his turn a player draws a line that satisfies the following conditions:
  - a) The line does not have to be straight.
  - b) Each end of the line must be at either an O or an X.
  - c) If Player-I draws the line, then at least one end of the line must be at an O.
  - d) If Player-II draws the line, then at least one end of the line must be at an X.
  - e) The line may not pass through any O or X already on the board.
  - f) The line may not cross (or touch) any line already on the board.
  - g) Both ends of the line may be at the same O or X, so that the line forms a loop.
  - h) No O or X may be the end point of more than three lines.
- 3) Suppose that a player, let’s call him “John,” has just drawn such a line. It is not yet his opponent’s turn. Now John can choose to put a new O or X (not both) in the middle of the line he has just drawn. However, John is *only* allowed to do this if the line he has

just drawn has an O at one end and an X at the other. John is not required to put a new O or X on the line. The new O or X that John has just drawn is now the end point of two lines, because John has effectively split his line into two shorter lines. Thus the new O or X can be an endpoint for at most one other line as the game progresses.

4) Eventually, no more lines can be drawn. A player’s score is the number of lines he was able to draw during the game. Higher score wins.

Note: If a player draws a line and then splits it by drawing an O or X on it, he has not given himself two points. A split line still counts as only one point toward the score of the player who drew it (even though the split line is now really two lines). A player’s score equals the number of times he draws a line, regardless of how many O’s or X’s he adds.

The fact that Player-I can only obtain a new O by connecting with an X, and vice versa, may seem at odds with the fact that this is supposed to be a “partisan” game. Well, every good game requires some interaction between its opponents, and this was an attempt to encourage interaction. Without this rule for instance, Player-I might just circle a big group of X’s, and then the rest of the game the players would just be trying to spend their own resources as slowly as possible. It would be reduced to a game of attrition with no fighting.

Another idea I toyed with is that when a player draws a line from an O to an X, he would be allowed to draw the new O or X on *any* line. My current thinking is that this is a bad idea because local fights could get drawn out, monotonously. Allowing the new X or O to be drawn only on the most recent line keeps the game fresh.

## Rules for Classic Sprouts

These are included for completeness, even though they can easily be obtained by a quick internet search.

- 1) The game starts with several dots drawn on a piece of paper.
- 2) On his turn a player draws a line that satisfies the following conditions:
  - a) The line does not have to be straight.
  - b) Each end of the line must be at a dot.
  - c) The line may not pass through any dot already on the board.
  - d) The line may not cross (or touch) any line already on the board.
  - e) Both ends of the line may be at the same dot, so that the line forms a loop.
  - f) No dot may be the end point of more than three lines.
- 3) Suppose that a player, let’s call him “John,” has just drawn such a line. It is not yet his opponent’s turn. Now John must put a new dot in the middle of the line he has just drawn. (In one variation called “Black and White Sprouts,” players are not required to add a new dot in the middle of each new line drawn. Possibly a perfect-play strategy for Black and White Sprouts has been worked out by Holger Matties; see <http://www.geocities.com/chessdp/blackandwhite1.htm>). The new dot that John has just drawn is now the endpoint of two lines, because John has effectively split his line into two shorter lines. Thus the new dot can be an endpoint for at most one other line as the game progresses.
- 4) The first player who cannot draw a new line loses. (In one standard variation called “misere play,” the first player who cannot draw a new line wins).

Here is a final word of advice for playing any version of Sprouts. Players should really try to draw “reasonable” lines, as the available space may become scarce. Don’t make unnecessarily curvy lines. Take the most economical route  
(Continued opposite.)

("Sprouts for Capitalists" continued.)

between two points. Leave as much space as you can on both sides of your line. Your strategy should not be to leave so little space that your opponent finds it difficult to draw, or visualize a winning move (although that might make an interesting game in its own right!).

My one reference for this article is the outstanding "World Game of Sprouts Association" (WGOSA), a web page maintained by Danny Purvis: <http://www.geocities.com/chessdp/rules.htm>. ■

## Grace Under Pressure

by Connie Handscomb

**G**race under pressure, that's how I've always wanted to present myself to the world: a beacon of elegance able to withstand any and all stresses encountered with manifold, stalwart, pure. . . grace. That is my inner vision and continues to be my unrelenting and positive affirmation—truly, I do believe in the magic of dreams.

Human nature is ever changing and continually striving towards perfection. Thus, I am not overly hard on myself when my visionary ideal doesn't exactly fit my reality. I whoop and holler and chortle with glee, and dance and whirl around the room in ecstasy, singing loudly, "Yes!!" claiming any victory I attain at the game table over my beloved. I experience a most magnificent and superb satisfaction whenever I manage to trounce The Master. Granted, my delusional spells don't necessarily last for long. He is, after all, far more gifted in these pursuits than me. I know as soon as he determines what I am up to in my strategies, his own *modus operandi* will eventually nix my good fortunes most effectively, and my divine virtues in this area will forsake me. All the more reason I skip delightedly over to titter wickedly into his ear with a most gloating posture whenever I have the sublime moment to do so!

Maybe I shouldn't say this, and give myself away, but I will if you promise not to tell anyone. Once my game is up, so to speak, I watch his movements carefully to see if I can recover my good name. I try ever harder to regain my lost momentum by copying his own strategies, erratically incorporating them into my own so he can't see what I'm up to.

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He's very good though. Eventually, even these tactics fail me. Eventually, I crash from my pedestal. My mournful lament, "Nooooooooooooo!!!" can surely be heard great distances. I stare dismally at the game board for a long while, stunned by my loss, adjusting to my new—well, former and mostly prevailing—status. Surely there must be more reward forthcoming than this for someone who tries ever so hard, so desperately to clobber her illustrious foe?

It's only a game, I comfort myself as my good fortune begins to fade, and surely nothing to get overly excited about. But next time, oh my yes, next time, for sure, for sure, I am going to WHOP him! ■

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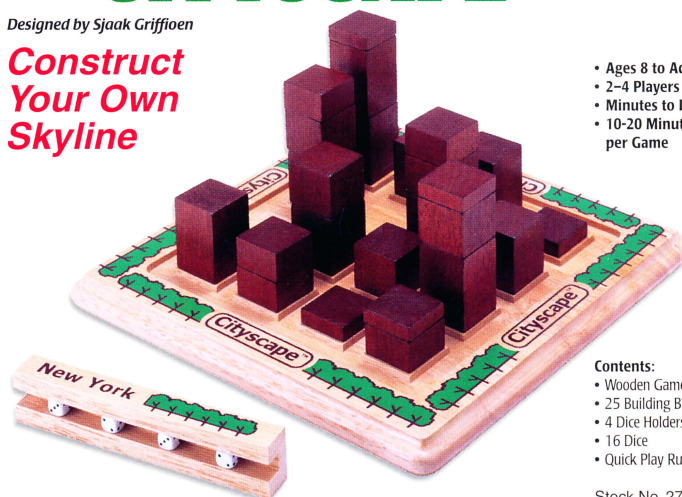
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