Issue 18, Winter and Spring 2020

Abstract Games

... for the competitive thinker.

Keil: A brilliant revisioning of Hexagonal Go

Neue Dame: A forgotten stacking game

WYSIWYG: Serious trick-taking for two

Playing Marrakesh solitaire

Analysis of Super Halma

Realm strategy

Front Cover

Avalam Bitaka, or just Avalam, is a game designed by Philippe Deweys of Brussels. Avalam was first produced in 1996, and the copy photographed here was published by SC.JP Fils.Fils of Belgium. Avalam is a stacking game on an irregularly shaped board consisting of an orthogonal array of 49 depressions. The pieces fit snugly into the depressions; the pieces in turn have depressions on their top surfaces, into which other pieces can fit and stack.

The rules are very simple. The 48 pieces—24 dark and 24 light—are arranged in a checkerboard fashion on the board at the outset, with the central depression empty. One player is assigned dark, the other light. A piece or stack of pieces can move one square in any direction, orthogonally or diagonally. For simplicity, a single piece is a stack—a stack of one. A stack is moved as a whole, and must be moved onto another stack, not an empty space. Either player can move any stack, regardless of the colours of the pieces; and on top of any stack, regardless of the colours of the pieces. The key rule is that no stack can be more than five pieces high. Players continue until no more moves can be made. At this point, the winner is the person with the most pieces of their colour showing on the the tops of individual stacks.

As a variant, the board starts empty and the players take turns placing pieces of either colour onto vacant spaces. I wonder how the game would work with a random start, as it common with Tzaar, for example?

Avalam is a fine game. The rules are probably at least as simple as those of any other stacking game. An outstanding feature of the game is that the colours of pieces do not matter, except for scoring at the end. The maximum stack size of five echoes the stack-height limitation in Sid Sackson's Focus. A counterpoint to the simplicity of the rules is the complexity of the board shape. I suspect that the shape was deliberately chosen, because strategies may differ between "concave" and "convex" parts of the board. The best and most succinct review of Avalam Bitaka that I have found is Stephen Tavener's in BoardGameGeek (https://boardgamegeek.com/thread/23323/user-review).

We have covered other stacking games in *Abstract Games*, including Bashne (*AG1 and several other issues*), Lasca (*AG11*), Emergo (*AG13*), and Neue Dame (*this issue*). These games are all versions of column checkers, although other types of stacking game, including Tumbling Down (*AG6*) and Takat (*AG10* and *AG11*), were submitted for our game design competitions. Avalam Bitaka itself is a non-checkers stacking game. The stacking mechanism is interesting, as it extends basically two-dimensional games into a third dimension. ~KH

To all our friends around the world during the Covid-19 pandemic: Stay safe! And a special heartfelt thanks to healthcare workers for all they are doing on our behalf.

Abstract Games

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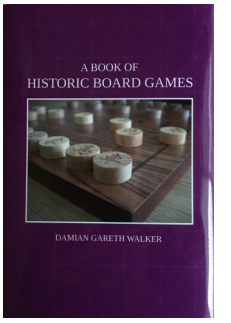

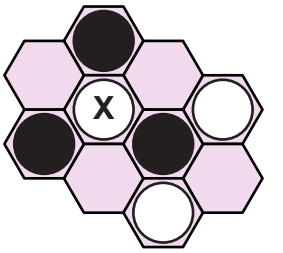

Neue Dame advertisement (1904).

Abstract Games magazine has presented many fascinating new abstract games in the past, including Onyx in *AG4*, Gonnect in *AG6*, Unlur in *AG11*, and many others. Now *AG18* contains a first analysis of Luis Bolaños Mures' brilliant revisioning of hexagonal Go, the new game Keil. In my opinion, Keil has outstanding original tactics, while its strategy is potentially as deep as Go's.

The articles on Realm and Traversi also provide much that is of interest strategically and tactically for players of these games, and hopefully these presentations will attract new players. Neue Dame is a forgotten version of column checkers, and we present the rules along with several challenging puzzles. We include a Chu Shogi problem, and I hope interested readers may be inspired to check the rules of this amazing game online.

AG18 contains some reflective pieces on the meaning of theme, metaphor, and narrative in games, and on chance in abstract games. The interview with Christian Freeling offers much to think about in the world of abstract gaming. Some people would hesitate to include card games, or even games with luck more generally, among the abstract games. Nevertheless, I think we can count card games as abstract games, too. WYSIWYG, presented here by its designer with the most recent and perfected rule-set, is a great game if you like cards, perhaps one of the best card games for two. In addition, we have included an article about Marrakesh, Joli Quentin Kansil's exquisite blending of Backgammon and the trick-taking games—with the surprising observation that it makes a very good solitaire abstract game!

Much has changed since the original series of *Abstract Games*. The community has grown and developed. Game players are now faced with a vast and rolling avalanche of games, many of them complex and interesting, almost all of them provided with a theme. Even among the small abstract gaming community, there is a well-established group of authors who turn out ground-breaking designs regularly.

The community is fractured among thousands of games, playable on hundreds of sites, with dozens of discussion groups. *Abstract Games* does not compete for attention in many of these arenas, but *Abstract Games* does occupy its own unique niche.

We will continue to present material within our niche—abstract games, considered as beautiful objects, both as physical artifacts and as intellectual constructions. Why should we play one game over another? There may be a clever mechanism, some interesting strategic ideas, or even a compelling history and community. I hope our magazine provides food for thought in this regard.

Because of tragic personal and world events, production of this print version of *AG18* has been slower than planned, and we have called it "*Winter and Spring*." *AG19* will be "*Summer 2020*."

Thank you to everyone who contacted us with kind words of support. *Abstract Games* lives because of you, and we are very grateful to all of you.

Kerry

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Neue Dame Solutions from page 31

Puzzle 1
1.a1-b2! c3xa1*D, 2.e3-d4 a1xe5, 3.d4xf6xd8*D

Puzzle 2
1.e5-c3! b8xe5(forced)xg3(also forced), 2.c3xe1xh4xd8 f8-g7 (**a**, **b**), 3.g3-f4 g7-h6, 4.f4-e5 h6-g5, 5.d8xh4 h2-g1*D, 6.h4-d8 g1-a7 **c**, **d**), 7.b4-c5 a7xd4xf6, 8.d8xg5 *At least 3 points for Green*.
If **a**: 2.... h2-g1*D,, 3. b4-c5 g1-b6
4. d8xa5 *At least 3 points for Green*.
If **b**: 2.... f8-e7, 3.d8xf6 h2-g1*D, 4.f6-d8 g1-a7 (**e**, **f**), 5.d8-a5 a7-f2 (**g**, **h**), 6.b4-c5 f2xh4, 7.a5-d8 h4xf2xb6, 8.d8xa5 *At least 3 points for Green.*
If **c**: 6.... g1-d4, 7.b4-a5 (or b4-c5, d8-h4) 8.The Lady captures. *At least 3 points for Green*.
If **d**: 6.... g1-h2, 7.e5-d6 h2xc7, 8.d8xb6 *At least 3 points for Green.*
If **e**: 4.... g1-f2, 5.b4-c5 f2xh4, 6.d8-a5, h4xf2xb6, 7.a5xc7. *At least 3 points for Green*.
If **f**: 4.... g1-h2, 5.b4-a5 h2xf4, 6.g3xe5 *At least 3 points for Green*.
If **g**: 5.... a7-b8, 6.b4-c5 b8xh2, 7.a5-e1 (**I**) h2xd6xc4, 8.e1xa5 *At least 3 points for Green*.
If **h**: 5.... a7-d4 (or e3, g1), 6.b4-c5 d4/e3/g1xb6, 7.a5xc7. *At least 3 points for Green*.
If **i**: 7.c5-d6 (works too) h2xd4xc7, 8.a5xd8. *At least 3 points for Green*.

Puzzle 3
1.e1-d2! c3xe1*D, 2.g1-f2! e1xg3, 3.h2xf4xh6xf8*D b8xh2, 4.f8xh6 h2xf4, 5.h6xc1xa3 b2-a1*D (**a**), 6.f4-e5 a1xf6, 7.e5xg7 f6-e5, 8.g7-h8*D e5-f4, 9.h8-d4 f4-g3, 10.d4-e3 g3-h2, 11.e3-g1 blockade. *At least 6 points for Green.*
If **a**: 5 ... b2-c1*D, 6.a3-d6 c1xg5, 7.f4xh6 g5-h4, 8.d6-b8 (or c7, e5, f4, h2) or h6-g7 h4-g3 9.The Lady captures. *At least 5 points for Green.*

Puzzle 4
1.b6-a7!! g1xb6, 2 a7-b8*D b6xd4, 3.h6-g7! d4xb6, 4.dg7-f8*D b6xd4, 5.b8-a7 d4xb6, 6.a7xd4xb2 a1xd4xa7, 7.f8-a3 a7xc5, 8.a3xc1 (forced) c5xa7, 9.c1xa3 a7xc5, 10.a3xc1 c5xa7, 11.c1xa3 a7xc5, 12.a3xc1 c5xa7, 13.c1xa3 a7xc5, 14.a3xc1 c5xa7, 15.c1xa3 a7xc5, 16.a3xd6 h4-e1 (strongest; see variant **a** below), 17.c5-b4 e1xa5, 18.d6-c7 **(b)** a5xc3 (forced), 19.c7-e5! c3xa5 (forced), 20.e5-a1 (or h8) a5xc3, 21.a1 (or h8) captures. *6 points for Green.*
If **a**:
16.... h4-d8, 17.c5-b6 d8xa5, 18.d6-b8 (or h2) a5xc7, 19.b8 (or h2) captures. *5 points for Green.*
If **b**:
18.d6-b8, d6-e7, d6-f8 and d6-h2 also works.

Two Push Games: Shōbu and Push Fight

by Kerry Handscomb

The push games depend on eliminating opposing pieces from the board using various kinds of "push" mechanism, reminiscent of sports such as Sumo. The most famous push game is Abalone, published in 1987. Another popular push game is Siam, published in 2005, although the objective here is to push a neutral "rock" off the board rather than an opponent's piece. The only other games I can think of in the push sub-genre are Push Fight and Shōbu, both reviewed here. There must be more, and I expect to be corrected by readers!

Shōbu

Shōbu is a new game, designed by Manolis Vranas and Jamie Sajda and published by Smirk and Laughter Games in 2019. The equipment for Shōbu consists of four 4x4 wooden boards, 16 polished stones (eight dark and eight light), and a length of rope. The setup is shown below.

Shōbu setup (image from publisher's website)

The components are attractive, where the atmosphere of the game recalls driftwood and pebbles on a beach. The rope takes no part in the game at all, except perhaps to reinforce the beach atmosphere with a piece of flotsam. I have no problem with this eccentric add-on, although I suspect most players will leave the rope in the box after a couple of games.

The play of the game is straightforward. The objective is to eliminate all opposing stones from just one of the four boards by pushing them off with your own pieces. Each turn consists of two moves. The "passive move" is made on one of the two "home boards" closest to you. You move one of your pieces one or two spaces through empty squares, diagonally or orthogonally. The "aggressive move" is made by one of your pieces on a board the opposite colour from the board on which the passive move was made, either on your home board or your opponent's home board; the aggressive move must be the same number of spaces and the same direction as the passive move; the aggressive move may push no pieces or may push exactly one opposing piece (and none of your own); the aggressive move may well push a piece off the board and out of play. You must choose a passive move that permits an aggressive move.

That is it! The game plays as a fierce melee, with players pushing opposing pieces off a board with most moves after the opening. Shōbu reminds me a little of Fanorona in this respect, where after the mass destruction of the opening and middle-game, the play settles into an endgame of quiet calculation. In my experience of Shōbu, however, we have tended to blunder into the endgame, where one player or the other has a quick win. Maybe we should be calculating more before the endgame, so that specific structures that are advantageous may be selected ahead of time.

Curt Covert from Smirk and Laughter Games generously offered the following advice on good play:

After playing the game extensively, neither the designers nor I can identify stronger openings, first or second player advantages, or the other typical things you'd expect. But, here are some more obvious strategies and insights:
**It is almost impossible to play defensively, and play well, in the beginning of the game. You will lose stones, lots of them, and that seems to be okay. The effort to play defence immediately leads you to ignore opportunities to remove your opponent's stones and to do so is most definitely a better strategy. Always remove stones when you can, unless a particular move would lose you the game.*
**Placing your stone between opponent stones is a great way to claim a stone without losing your attacking stone immediately after.*
**Corner spaces are more vulnerable and harder to escape.*
**It is often hard to win on the first isolated stone. Often placing a player in double jeopardy on two boards is necessary.*
**Balancing your movements across all four boards is key to success. If too aggressive on a set of boards, your stones will eventually become locked down and unable to move effectively to capture. Losing all ability to move in a certain direction becomes a problem in the late game if you have not kept your pieces fluid from board to board.*
**By the same token, identifying where your opponent is unable to move and placing your stones where they cannot shove them is an excellent strategy.*

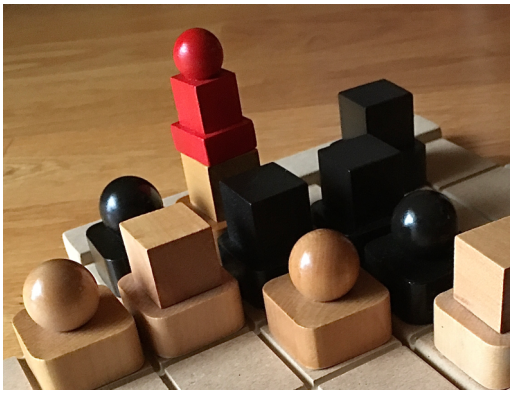
Curt has condensed much strategic advice about Shōbu into these few terse sentences. Is this enough for us to start making sense of Shōbu, or is it always going to be a wild melee? Either way, Shōbu is fun to play.
Smirk and Laughter Games: https://www.smirkandlaughter.com

Push Fight

Push Fight, designed by Brett Picotte, was published by Brettco Inc and Penny Arcade in 2008. According to the website, the game is over 25 years old, meaning that it dates back to the early 1990's. However, Push Fight is not well known, and perhaps it ought to be, which is why we are reviewing it here. The board for Push Fight consists of 26 squares, with raised runners along the left and right sides. The shape of the board is rotationally symmetric with additional edges and corners at each end that provide tactical and strategic interest.

Each player has five pieces, three with flat tops and two with round tops, and the players share a single red anchor piece. The wooden pieces are large and pleasant to handle; they are so finely finished on the bottom that they are smooth to touch and glide easily over the board. The anchor piece fits perfectly on top of the flat-topped pieces, but obviously does not stand on the round-topped pieces—which is exactly in accord with the rules. The

design of the components matches the rules very well. Indeed, the components are a good example of *poka-yoke*, or mistake-proof design. Cameron Browne wrote a great article about this quality of games, "Embed the Rules," in *Game & Puzzle Design*. As a physical object, this game is brilliantly put together and a joy to handle and play.



Push Fight Game in progress.

The rules for Push Fight are very simple. To start with, a player can make up to two positioning moves, where her pieces may be slid any number of spaces over orthogonally connected squares, without jumping and without pushing. Then, she must make a push move with one of her flat-topped pieces. The push move pushes a line of connected pieces of any length. The pushed pieces may be of either colour and of either piece type. If a player's piece is pushed off the board, that player immediately loses. When the move is complete, the red anchor piece is placed on top of the piece doing the pushing. This "anchored" piece cannot be pushed in the opponent's next turn.

Push Fight plays extremely well. There is plenty to think about, because the two positioning moves can provide varied options. The shape of the board with the side runners seems ideal. The sides are relatively safe, but the irregularly shaped ends of the board are dangerous and provide opportunities for tactical threats. Despite the fact that Push Fight is a small game, with only five pieces per side, it is by no means trivial. I suspect that it has considerable depth and interest. And it is fun to play and push around those big wooden pieces! My single issue with Push Fight is that I would prefer a less descriptive name, although naming is a personal preference that in no way detracts from this excellent game. Push Fight is an amazing game. How did we miss it? ■

Publisher: http://pushfightgame.com

All the push games are interesting. The push mechanism is intuitively very nice, and as straightforward and obvious a goal as connection or capture. Perhaps games like Push Fight are too small to accommodate narratives, but surely the goal is a primal metaphor, as with the sport Sumo and the children's playground game King of the Mountain—see "Stories and Themes" in this issue. The surprising fact is that there are not very many other push games around. I highly recommend both Shōbu and Push Fight

A Book of Historic Board Games

by Damian Gareth Walker

Reviewed by
Kerry Handscomb

Damian Gareth Walker's *A Book of Historic Board Games* (2014) is a book about 12 traditional games from around the world: Parchisi, Halma, Agon, Tâb, Fanorona, Nine Men's Morris, Wari, Konane, Xiang Qi, Tablut, Asalto, and Renju. For each game, the author covers the game's history, its rules, and some strategy.

Damian's book most closely resembles R.C. Bell's *Board and Table Games from Many Civilizations* (1979) or perhaps his *Discovering Old Board Games* (1980). Bell was a ground-breaker, and I suspect he was the book's inspiration. Nevertheless, I have not always found Bell's rules for games to be perfectly clear, and *A Book of Historic Board Games* is much better in this respect. The strategy advice, moreover, is what sets the book apart and makes it most useful to game players. The author admits he is not expert in any of the games and that he often had to rely on other sources. Nevertheless, a few ideas about the strategy and tactics can make exploring a game that much more enjoyable—and can make it much easier to decide which games to focus on.

I came to *A Book of Historic Board Games* from David Ploog's comments on Agon in *AG17,* and perhaps the book is worth getting for Damian's description of Agon alone. Several other games jump out at me. I already know Wari quite well, and Mike Sandeman's article on Tablut in *AG16* is already a really good presentation of this interesting game. We discussed Halma, or rather the serious and competitive Super Halma, in *AG15* and again in this issue; Nine Men's Morris was covered in *AG13*; we published a long letter with much information about Konane in *AG12*. On the other hand, although I have known about Parchisi and Tâb for many years, I had never considered them to be on the same level as Backgammon and its family of related games. Damian's description, however, indicates that they may be interesting games in their own right and worth playing. I plan to try Tâb some time soon, just because of Damian's book.

Damian has chosen worthwhile traditional games that are little known beyond their native cultures. In addition, the games he has selected are generally difficult to approach for new players outside these cultures, mainly because of the lack of easily available written material. The exceptions, of course, are Xiang Qi and Renju. Xiang Qi is reputedly the most played game in the world, and much material is already available in English for study. Renju has a professional player class, and although less material is available in English about Renju, Goro Sakata and Wataru Ikawa's *Five-In-A-Row (Renju) for Beginners to Advanced Players* is a classic republished by Ishi Press in 2010. Instead of Xiang Qi, I may have selected one of the more obscure regional chess variants; perhaps instead of Renju, I would have chosen an unusual regional checkers variant—for otherwise the huge family of checkers games is unrepresented.

Nevertheless, the choice of games is a small quibble, and Xiang Qi and Renju are both world games that are little known by many potential players. These games deserve an introduction.

A Book of Historic Board Games has been around for five years already, and it is a obviously a classic of its kind in the making. If you are the type of person that reads *Abstract Games*, and you have not yet dipped into this book, you should get hold of it as soon as you can! ■

A Book of Historic Board Games by Damian Gareth Walker can be ordered via print on demand from Lulu (*http://www.lulu.com*).

An interview with Christian Freeling

by David Ploog

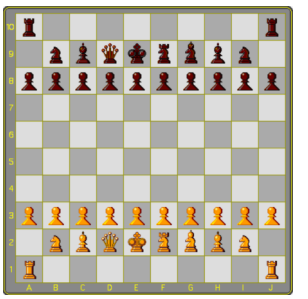
Christian Freeling is one of the world's premier designers of abstract games. I first became aware of Christian through his articles on Chad and Havannah in the old Games & Puzzles *magazine of the 1970's. Christian stands with Robert Abbott, David Parlett, Alex Randolph, Eric Solomon, Sid Sackson, et al, who ushered in the huge wave of new and original abstract games that appeared from the latter part of the Twentieth Century. Christian Freeling has been as prolific and inventive as anyone else over the intervening decades. The interview below was conducted by David Ploog in November 2019. David's questions are in italics, whereas Christian's replies are in plain text. ~ Ed.*

You have been inventing many games, starting with "... some forty games between 1979 and 1986." On your homepage, you list six games as major achievements: Grand Chess, Dameo, Emergo, Sygo, Symple, Storisende. The first three games improve on classic games (Chess, Checkers, Stapeldammen) and the latter three are entirely new concepts. In your own words: "If abstract games matter at all, then these do matter." Why?

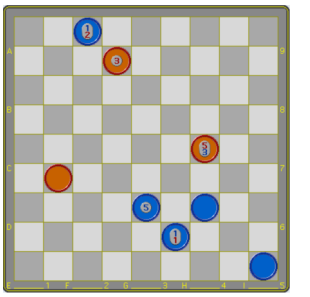
Why do they matter in the first place? I can see through their behaviour despite the fact that I don't play them all too well, and they all qualify as "sport weapons" that may (or actually will) stand the test of time. But "seeing through their behaviour" hardly makes a convincing argument.

Organicity plays an important role. All of the six but Grand Chess [*AG3, and others*] are more or less organic in their behaviour, Emergo [*AG13*] is the most organic, and it signalled the start of my "career," more so than Havannah [*AG12, and others*;. *Havannah was published by Ravensburger and candidate for "Spiel des Jahres" in 1981 and 1982*]. I had encountered Stapeldammen and it left me confused because I couldn't see any strategy and tactics went off in all directions. So I disregarded it. But then, Ed [van Zon] said that there were "... some beautiful things" happening in the game, and he explained. What followed was a revelation as much as a vision. I saw the whole dance at once, the life cycle of each column, wrestling to stay alive and if failing, releasing the opponent, always at its strongest but subject to the same fate, and the whole organism spiralling upwards to an inherent termination—the simplicity and unity of it and the fascinating interaction with its dramatic turns of events. It made Chess and Draughts look so far less "alive." By the way, the name is inspired by "Luctor et Emergo" ("I wrestle and emerge"), the motto of the Dutch province of Zeeland. "Wrestling" is a good metaphor for its behaviour.

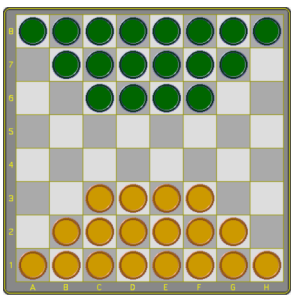
I remember being adamant about omni-directionality, with an entering procedure as consequence. That was a bit of a hurdle but I found the rule governing it quite quickly. Everything was there although not all that consciously: inside out inventing, Occam's Razor, organicity versus assembly. I was totally fascinated, and for someone with Asperger's that means obsessively so. [*The images below were taken from Christian's MindSports website, http://www.mindsports.nl.*]



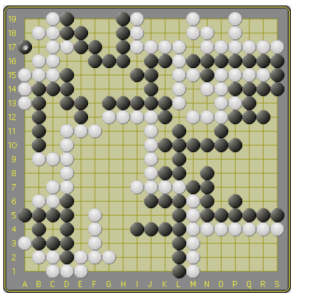
Grand Chess



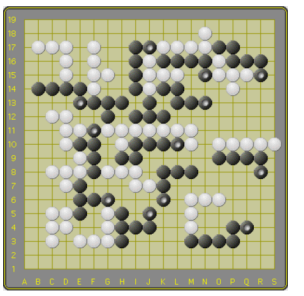
Emergo



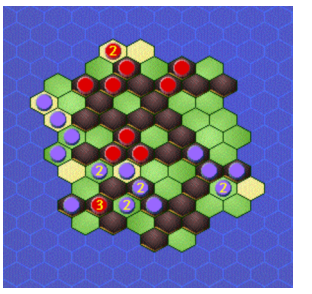
Dameo



Sygo



Symple



Storisende

Which of your hallmark games has had the best reception by the community? Which ones would you like to see played and discussed much more?

I have a deep bond with Emergo, and I never get bored playing it. No bond at all with Grand Chess for that matter, but of course I would like to see it being played and discussed much more. The best players deserve a complete version of Chess and vice versa. But as an invention it's not more than thoughtful assembly.

You know how Dameo [*AG10*, *AG11*] came to be. [*Readers who don't know, should look up Christian's essays on the history of Draughts, the breakdown of its mechanics, and the genesis of Dameo on his MindSports site.*] I had the idea of linear

movement in Draughts on the shelf because it didn't seem to work. Not that I even tried, because I could see it running into gridlock. And when Leo Springer, who came by yesterday after some three years in which I didn't know if he even was still alive, introduced me to Croda, it still took a couple of weeks before I realized Croda [*AG9*, *AG10*] wouldn't get stuck with linear movement. But then Dameo came together in two minutes top. That it turned out so good was a surprise, even to me. Do I want to see it played and discussed more? Yes. [*Aleh Tapalnitsky wrote a book Meet Dameo (http://mindsports.nl/images/stories/arena/damvar/Dameo.pdf) in 2019 which is an excellent way to get into the game!]*

But more than Grand Chess? I don't know. Dameo was invented in 2000, in between the two "waves" I had. From the stuff of the first wave only Emergo and Grand Chess "matter," although I made some nice chess variants and Hexdame [*AG8*], Bushka, Medusa, and Mu. Mu tested the limits of inside out inventing and organicity, the others mainly provide context.

Symple and Sygo are the same invention. Sygo was simple. Symple was flawed, and I sensed it but couldn't lay my finger on it. Luis [Bolaños Mures] did that a couple of months after its invention (and after Mark Steere had ridiculed and bashed it to smithereens). Now Symple matters because it is simple and deep, extremely cleverly balanced, and 100% decisive. Sygo is 99.9%. I think both are very interesting.

Storisende should be discussed much more, of course, but the community hasn't even begun to understand its unique scenario, and I doubt they ever will. Of these six, it's the game most likely to be forgotten. But promoting it is quite ineffective so that's fine with me.

Where can your games be played, either online or against a program?

Actually in many places, I am sure to miss some. LittleGolem has Havannah and Dameo. This is the only online place where I play myself except of course for MindSports. [*Note by Little Golem's Richard Malaschitz: Havannah has been played from November 1, 2008, with a total of 38080 games played; Dameo has been played from January 1, 2016, with a total of 1864 games played; numbers as of November 20, 2019*.] Ai Ai by Stephen Tavener is a program against which you can currently play my games Starweb, Storisende, Dameo, Emergo, Havannah, Sygo, and Symple, among many others. Try it out, it's a great work! Zillions and Greg Schmidt's Axiom have lots from me. Crossfire, my take at Sid Sackson's Focus, can be played at Boardspace.net.

Is Draughts still big in the Netherlands? Have good players ever contemplated variants, such as Dameo, to deal with the draw problem?

It is a different time now but so far as I can tell Draughts [*i.e., International Checkers, AG7, AG9*] crawls on at a grassroots level. I'm not qualified to comment on Draughts in social media, but the mainstream media largely ignore it. The time when a Draughts player could become "sportsman of the year" has long gone by.

Draughts in the Netherlands, as an intellectual pursuit, has always lived in the shadow of Chess. Draughts players will vigorously defend their game. Chess players of course don't have to. That mind set means that they feel criticism of their game as an attack. Variants are disregarded, especially by dinosaurs like Sijbrands, Wiersma, and Clerc. A few top players liked Hexdame, but I think that's mainly because it has the same rules and it is no obvious threat to their game. For Dameo I've chosen to disregard the Draughts community altogether, although I posted a link to Aleh's book at the World Draughts Forum. The interest is low. As for "dealing with the draw problem," a Dutch site listed 25 way to address it and let readers elect their favourite. Democratic modification, I wonder what will come of it? Maybe a "Drexit."

To go one step back: "abstraction," as in "abstract games," is one typical argument in the old debate about what, if anything, makes the human species special. The other argument one often hears is "empathy." What's your take on the matter?

I think the development of language is a key factor. It allows you to name existing things, but more importantly, it allows you to name non-existing things. Language thus triggers imagination and the use of it develops a sense of "I." Everybody is one, but what exactly is it and where can I find it? "Mysteries, tomorrow I'll find out all about those mysteries," the Sparks sing, "I don't even know what I don't even know," and they're right.

Abstraction is clearly the naming and use of non-existing things. I indeed wonder where empathy comes from. We spend billions on ways to efficiently kill people and billions on improving the lives of the sick and the handicapped. We're weird.

But other than the cringing stupidity and inefficiency of human behaviour in terms of keeping the planet balanced, I can't really care. It's like looking at a science fiction movie and knowing that you'll leave before the end, not knowing how it will go on.

You seem to always have been somewhat of an outsider. As you write on MindSports: "I've kept my distance from the world of abstract games for over three decades, watching tactical hypes come and go, while strategy games were still dominated by the classics." I think the assessment about hypes is spot on. You've been around for longer than me or many of our readers. Can you recall some hypes you've experienced over time?

There was Sid Sackson in the old days and Robert Abbott, Alex Randolph, David Parlett. Focus (Sid Sackson, 1963), Epaminondas (Robert Abbott, 1975) [*AG3*] and Twixt (Alex Randolph, 1962) [*AG2, and others*], each had a period of increased interest with the usual slogans, "never get bored," "minute to learn, lifetime to master," and the like. There's something funny about those claims, as if no-one actually believes them, but yet we play the "new Chess" that may have arrived. Gimmicks like Trippples (William T. Power, 1972) [*AG7*] did well, too, for so long as it lasted. Amoeba (W. Barrington Pink, 1975) was hailed as an exciting new game. Even Ploy (Frank Thibault, 1970) [*AG6*] had 15 minutes of fame.

Nothing much changed, I think. I haven't played the hailed new classics like Tak (James Ernest & Patrick Rothfuss, 2017) [*AG17*] or Santorini (Gordon Hamilton, 2004) but the scenario seems the same: it's hard to elevate games if they're presented as toys. David Parlett's site is a case in point. And "Nestor's Toy Shop" (by Néstor Romeral Andrés) of course, although calling it a "toy shop" at BoardGameGeek resulted in a load of indignant replies. Content, in this particular view, should be easily digestible. Abstract strategy games inherently are not, and if they are made to be, then they may not amount to much. Chess, Go, Shogi, and Draughts are difficult games and we've come to terms with that, even applaud it as the essence of them. But that's quite enough, thank you.

In physical sports people can see the differences between disciplines. But with abstract strategy games we only see the similarities: two players facing one another silently over a board

and the audience for a large part clueless about what exactly is going on on the board. So maybe it's not so weird that new games don't immediately get a chance to add to the excitement.

Here's another question about your background and experience. I was born and raised on the Eastern side of the Iron Curtain, and I remember how we would sometimes hear or say things that obviously didn't quite fit with actual experience. This effect is called "cognitive dissonance," and our brains are pretty good at dealing with it. In the last years, I've noticed that these long dormant abilities are needed again. What are your ways to cope with cognitive dissonance?

The way I understand it is that it means being bothered by contradictory beliefs, ideas, or values. I'm full of them but I'm not at all bothered by them. You have to believe something sometimes. Ideas I may have are often inherently contradictory; and values..., I'm not sure about some of them, nor what they're based upon. "Common sense" springs to mind, but I'm not sure what that is based upon either. Anyway, I live in the absence of a "self" because I can't find one. In my hippie years it was good form to head East and "find oneself." So did I, but to no avail. Now I often find people that try to "find themselves" pathetically unable to escape themselves. More to the point, to understand the working of human behaviour (rather than the outcome) I can do without the concept. Occam's Razor. Of course I have a physical and a legal "self" but that's obviously not what pilgrims set out to find. That would make it too easy.

I come from the East, but of course you mean a different East. To me, going to Asia and "finding oneself" was always a sign of Western decadence.

It was a kind of unavoidable background influence, but I went on the trip because it was the least I could do. Talking about it and not going wasn't an option for me. And you were part of something. Hippies were nice, as a rule. Of course then came Manson and things changed.

A pretty basic question is "Why is there anything in the first place?" Before I was born there wasn't, and after I'm dead..., well "being dead" is a contradiction in itself. Dead is "not being." Not problematic, but beyond imagination. So why did nothingness decide to turn into "being"? And when came consciousness to perceive it? Because without it, it seems a lot of trouble for nothing.

Alright, back to games: design can be an art or a craft, depending on circumstances. I think you're in the art camp. Can you say a bit about how you invent games?

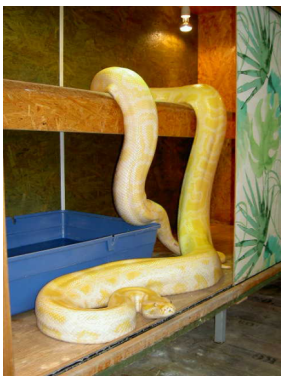
I see imagined game behaviour always as balanced. There's absolutely no point in considering unbalanced behaviour. So I try to imagine where it leads if balanced until and including the endgame. The endgame is where I lost track of Storisende's specific behaviour, and that's what made it so intriguing. I initially also missed a bug in Symple because I thought in Go terms, but usually I can pretty much foresee behavioural characteristics before ever playing a new game. And it's a mode: I can more or less keep up with the daily requirements but in the background it is thinking about whatever concept is at hand. It's automatic, there's no effort involved, and it spins in all directions but keeps gravitating around the idea. But the thing has to grab me, that's probably why I can do a better job at my own games.

Are there games by other designers which have impressed and/or influenced you?

Yes, Ayu by Luis [Bolaños Mures] who in my opinion is the best of them all, Oust by Mark [Steere], Blooms by Nick [Bentley], Polar by Dieter [Stein] and Croda by Ljuban Dedić, to name a few.

"Influenced" may be too strong a word, but I take input from anywhere. And if and when I get into the the mood and the mode, it all starts interacting on the inside. On the outside I run on automatic, with the occasional stops to try to remember what I was doing again, here or there or anywhere (mostly the kitchen). Of course my animals are always a priority, so they'd keep me in the here and now when required. But human interaction is always annoying when I'm in that mode. It would last for two or three months and I would have a bunch of games and a backlog in household affairs. So if there's influence, it's in the input stage. My main influence is Occam.

Snowy, Christian's racoon dog.



One of Christian's four Burmese pythons.

I should mention Corey [Clark]'s Slither although I can't get a grip on it. The late Richard Moxham left NEC and NON and of course Morelli, but I'm not wholly convinced about Morelli. Of the old bunch Epaminondas, Focus, and Twixt are good games. I don't know the drive behind Crossings and Epaminondas or whether Robert designed more games, but Alex Randolph and Sid Sackson were more Nick [Bentley]-like in their approach. And Alex's "Mad Mate" shows he wasn't really an inventor, more a dabbler. I'm sure I forgot a few people. Brian Wittmann for instance.

New ideas are often extensions or variants of old concepts. This holds for arts and sciences but also for games. Which of your games are directly built on previous designs?

Yes, sometimes it's easier to see an improvement or a promising idea in an old game than to find a new concept. I'll start with my designs inspired by traditional games (the games in brackets are the inspirations): we already talked about Emergo (Stapeldammen), Dameo (Croda, Draughts), and obviously Grand Chess (Chess). Apart from that Hexdame is the literal conversion of International Draughts to a hex grid. Yari Shogi is clearly my take on Shogi. At least three of my games are inspired directly by Go, namely Sygo, Dominions, and Medusa; perhaps also Lotus as an afterthought. My Mini-Mancala and The Glass Bead Game are inspired by Oware. And then there are Bushka (Fanorona) and Grabber (Konane [*AG12*]), Bashne [*AG1, and others*]). Hexade, my capricious little sibling to Havannah, is inspired by Pente [*AG12*], the five-in-a-row game with pairs capture. And in addition to Grand Chess, I made more Chess-inspired games: Chess+ sets out to provide Chess with a better placement protocol

than Bobby Fischer's Chess960 does, and Dragonfly is a Chess-Shogi hybrid.

Now to some of my games inspired by designer titles:

- Crossfire (Sid Sackson's Focus, 1963)
- Rotary (Frank Thibault's Ploy, 1970)
- Io, MacBeth, Triccs (Othello/Reversi [*AG9*])
- Havannah, Scware, Query, Rondo (Piet Hein's Hex, 1942 [*AG2, and others*])
- Inertia (Luis Bolaños Mures' Ayu, 2011)
- Breakthrough, Pit of Pillars (Martin Medema's Explocus)

In retrospect I was a very traditional inventor: why try to find something new if so many games can be improved.

Then again, which of your games do you consider to be truly original?

Symple, Storisende (and its precursor Mu, for that matter), Multiplicity, Pit of Pillars.

So far as "assembly" goes: Hanniball. And if chess variants may be considered "original" at all, Chad, Caïssa, Loonybird.

Can you say why these are original? Both for players and other designers, this may be getting to the heart of the issue.

For context, it's easier to find a better game than to find an original one. Let me try to explain.

The Symple move protocol is original, fairly generic and it has an embedded high-resolution balancing mechanism. Symple was the cradle of it, Scware and Sygo came later. Symple was *intentional*: both [co-author] Benedikt [Rosenau] and I knew it had to exist. I just happened to "see" it for a split second. Maybe even a whole second. We knew it had to exist because *Star is such a troublesome effort in terms of giving life to such a tempting concept. [*AG19 will have an article dealing with the Symple protocol*.]

The one-bound, one-free protocol, as in my unification game Inertia, is also fairly generic, but it is an opening protocol and that's a league lower than the Symple protocol.

Mu is original because its design was "inside out" and it basically came together in an hour. But the rules had to find their way through a labyrinth of inherent issues that required regulation. It's a perfect example of inside out inventing being something other than striving for simplicity. And yes, you can even play it, so I wouldn't say it is only that. Storisende was "Mu reconsidered." It is already fairly original in its concept, I think, but the true originality is in its behaviour. But I've said enough about that already.

Multiplicity (2013) is original in its goal and remarkable for its simplicity. [*Omega (Néstor Romeral Andrés, 2010) uses exactly the same chain-scoring formula but has a different placement protocol.*] Requiring an app to take care of the score isn't original anymore.

Pit of Pillars may not be very accessible and it may look like a lot of other games, but it doesn't *behave* like any other game.

Hanniball has an organic core in the interaction of the pieces and the ball. I felt that interaction as "soccer-like" when I perceived it, so it became a football game. Whether it is "original" is probably arguable. I'm not so good at the assembly line, and so Arty [Sandler] had to come to the rescue.

Chad and Loonybird came from "simplest checkmate game" and "what if all pieces would move differently from the way they capture," respectively. Those are original ideas. And about everything except the goal and the use of Rook, Bishop, and Knight is original in Caïssa.

In his splendid 1975 article "Under the Strategy Tree," Robert Abbott (who passed away in 2018) explains his view on clarity, and how it equates with depth. He later added an appendix containing these glorious lines: "This article turned out to be quite influential; though, unfortunately, most people misunderstood it. [...] But even those who misunderstood it thought it was good. However, one game inventor, Christian Freeling, wrote that the article was tautological. Yeah, well of course it is if you don't understand it." Do you remember what was going on back then?

He argues that "clarity is essentially the ease with which a player can see what is going on in a game." So in his opinion, Epaminondas had great clarity because a board position could be read as a "graph of actual strength." You could reverse that and say that it could be read as a "graph of actual strength" because the game has great clarity. So I didn't buy it. Clarity evolves with strategy in games that allow it to do so. For someone unfamiliar with Chess, a Chess position would appear chaotic.

More broadly, his point is that clarity is a function of player ability. He also seems to imply that simple games have greater clarity. After the article appeared David Parlett came with a reaction that made sense to me. We both felt that the article was more about Epaminondas than about clarity. Now I'd say that Epaminondas may have too much clarity and exactly in the sense in which Robert seems to see it: nothing is hidden. Of course that is fundamental for perfect information, but—here, I guess—not much can be hidden, strategically and tactically. Not the way you can "hide" a plan in Chess or Draughts or even Go. But I wouldn't call these games less clear for it. I think players in Chess, Draughts, and Go can reach a level of clarity of view that can hardly be reached in Epaminondas, precisely because the latter game has so little room to hide something.

The last question has to be about Storisende, of course. I know that you're fond of your last design, the game you invented in 2018. Where can it be played? Does its gameplay meet your original vision?

MindSports and against Ai Ai. I've written quite a bit about Storisende and my original vision was incomplete in that I could see it would terminate and that territories would be claimed, but not exactly how the endgame would pan out. The fact that I actually had to wait until I could play a few games was in itself very unusual. And then it surpassed my expectations by its actual behaviour and the evolving scenario. It's very surprising to see subsequent stages of movement and growth, of capture and annihilation, and of slow and delicate manoeuvring of the survivors of the onslaught in the endgame, to get enough of the disputed terrain. At the same time I could see that it would not agree with the current taste in abstracts. At BoardGameGeek unrelenting attempts were made to misunderstand the rules. But I hope that the widened accessibility of MindSports will eventually attract a few players, now that the site is free from java applets. Here is a commented example game which you can replay and watch: *http://mindsports.nl/index.php/arena/storisende/754-example-game.* ■

Stories and Themes for Board Games

by David Ploog

Games are rules. To play a game means to accept a system of rules, but most board games are more than rules. For example, they can be entertainment, simulation, education, or commercial products. Here I am going to explore the connections between games and storytelling. While there is one obvious connection—many proprietary games come with a story—this text is mostly about deeper links. I will break story-related aspects of board games into three parts:

- The game comes dressed up with a *theme.*
- Goal and mechanics are a *metaphor.*
- Players use out-of-game words to describe matches as a *narrative.*

Before going into the details, let us look at a good example for these concepts, the traditional game Tablut, opposite.

Theme: extrinsic backstory

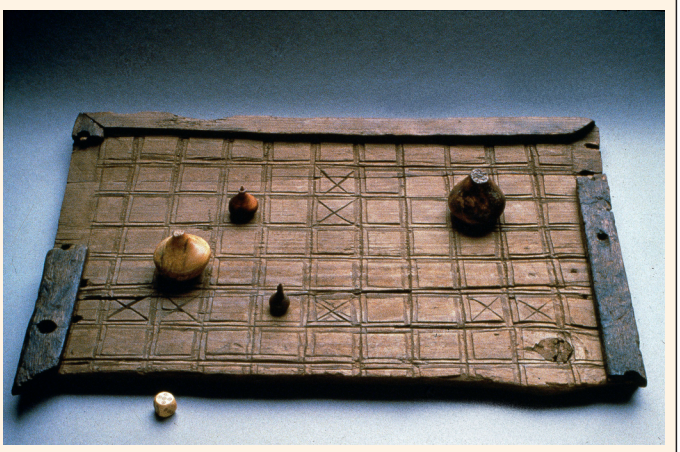
This magazine is called *Abstract Game*s and one meaning of the adjective "abstract" is as the antipode of "themed." This is a little unfortunate because the absence of theme is one of the weaker ingredients for the class of games we care about. It is also vague: every game, as a set of rules, can be played without recourse to its theme, by discarding all thematic visuals or terminology. This applies even to games such as Monopoly, Risk, and Twilight Struggle. And the other direction is possible too: you can take an abstract game and slap a theme onto it. This happens frequently enough that the phrase "pasted-on theme" has been established.

David Parlett's "representational" is another opposite of "abstract," and perhaps the better one. But he agrees that there is no clear-cut distinction: "No hard and fast distinction can be drawn between abstract and representational as a classification of games. How representational a game is depends on the level at which it is played and the extent of the player's imagination" (Parlett, 1999).

Many games provide a theme right out of the box, including the vast majority of proprietary titles. The background story is often just a setting, shakily linked to the game's mechanics. Surefire evidence of this point are reissues with same rules but modified setting, probably to cater to a changing market.

It is sometimes disputed whether and how the classics are themed. For example, the Chess family ostensibly deals with medieval warfare and Go is often introduced as a game about territorial conflict. Parlett regards such disputes as anachronistic, and as it happens, Tablut affirms this statement of his and the one above: "Nearly all the traditional games we now regard as abstract were in their day considered representational, or at least symbolic" (Parlett, 1999).

The games of the Tafl family were spread by Vikings; until the arrival of Chess, these were the dominating intellectual games in northern Europe. Their distinguishing characteristics are square boards of odd size between 7 and 19; the initial position has a 90° rotational symmetry; pincer capture; forces are unequal, with Black having twice as many pieces as White; goals are also unequal, with White trying to get the King from the central square into safety (either a corner or the border), and Black trying to capture the White King.



Nefatafl (ancient Tafl game) from Trondheim, dating from the 1100's (2).

In the 18th century, these games were almost extinct when the young biologist Carl Linné made a chance encounter on a trek through Lapland. In 1732, he recorded a game of Tablut from the Sàmi; see AG16. *They gave a backstory: the historic conflict between Swedes and Muscovites. This conflict is at least a millenium younger than the Tafl family!*

We can only speculate how players and spectators of Tafl games felt about their matches. I suspect it was as captivating as sports entertainment nowadays. Be that as it may, all these games carry a strong metaphor, saving or hunting the King. If you play with White, you really feel the noose tightening around your King. And at least Tablut had an external theme, which we have seen must have been updated through the centuries. One would think that other games in the family would acquire appropriate settings just as easily, befitting each playing generation.

There are various reasons for designers or publishers to employ themes:

- First, as an attempt to increase a game's commercial appeal. More people are willing to check out a product if there is a catchy description attached, regardless of how well it matches actual gameplay. This is why many published games are sold with arbitrary themes that feel pasted on when played. Dressing up products like this is nothing specific to board games; the same happens with video games, puzzles, and other kinds of entertainment.
- Second, a theme can make for an easier entry into a game. Learning rules is arduous, and an appropriate setting provides clues towards reasonable initial heuristics. This holds particularly well for the Chess family: the names of the pieces denote political or military might, indicating a power rating among them. Therefore, capturing becomes an immediately accessible subgoal, including hunting the enemy King.
- Third, themes are common and useful for games with complicated rules. Then they function as mnemonic devices for rules or components. Phrased the other way around: to go without a background story, the rules have to be simple enough.

A properly abstract game does not come with a theme and will not need one. Nonetheless, it can provide thematic links through its title and terminology. Examples of such titles are Hive [*AG10*, *Ag17*], Amazons [*AG16*], and Slither; thematic terminology is the "grasshopper" of Hive [*AG17*] or the "phalanx" of Epaminondas [*AG3*]. You can completely ignore these or you may build a particular mental image from them—your choice. I will come back to this in a moment.

Metaphor: intrinsic plot through goal and mechanics

"Some games, such as Chess and Go have no real theme. Interestingly enough, I have observed that the serious players of such games tend to create the theme, build it from the very fabric of ideas and concepts, instead of having the theme provided for them." ~ Andrew Hardin (2001)

Actually, when I play a game of Chess, I do not feel like taking part in a medieval battle. Yet I do feel like hunting the opposing King, and it would feel like this even if the pieces had different, or no, names. In this sense, "hunting the King" is the inherent metaphor of Chess.

Many games have goals or mechanics that similarly relate to real-life activities. I want to distinguish between primal and mild metaphors. Here things start to get personal, for you may have a different metaphor for a game than I do, or perhaps none at all. In the following, I will argue that the great classics have primal goals and mechanics (and this is a reason why they thrived for so long), whereas many modern games have mild metaphors, if at all.

It is probably least contentious to start with primal goals, objectives which are particularly gripping when interpreted as real-world actions. Especially, elimination, hunting, and territorial contest are primal goals; deeply entrenched in human nature and belligerent history. Primal goals and, more generally, primal mechanics, are those that matter at a very basic level—survival and slaughter, sacrifice and sacking—concepts worthy of Homeric epics, the *Old Testament*, the Eddas and Sagas, and Shakespearean tragedies. Curiously, the other great driving force, proliferation, is not covered at all by board games. The old sources (Gilgamesh, Homer, the *Bible*, etc.) all have both sex and violence.

Ravana fighting with Jatayu (3).

Rice paddy in Yuanyang, China (4).

It stands to reason that most old games are of this kind. Classics confirming this idea include the Chess family (the goal invariably is checkmate), the Draughts family (elimination), Go (territorial conquest), and the Tafl family (hunting versus saving the King). All these games feature capture, which, again, is of primal nature: Chess's replacement capture directly mirrors combat; Draughts' jumping represents the fast cavalry charge, fitting well with successive jumps; Tablut's pincer capture is about two attackers mugging someone in their middle; Go uses the more abstract but very clear encirclement and annihilation of armies. By contrast, the Merels family (Nine Men's Morris [*AG13*], etc.) is an outlier, not in goal (elimination), but in capturing mechanics—line-of-three captures are not metaphors in any way I could see.

Moving away from games of yore, modern abstracts are often less primal, in both goals and mechanics. Consider Halma [*AG15 and this issue*] from 1883 or its spin-off Chinese Checkers (1893), games building on the Draughts one-point jump but with a non-representational goal: the transposition of all pieces without direct interaction through capture is a new idea. This can be interpreted, of course, where one candidate is a "dance," although

not in a particularly primal way. And the absence of capture makes these games more peaceful than the traditional games.

One of the first connection games, Hex (1942) [*AG2, and others*], is pure and abstract and has no capture. Its goal of linking borders is constructive. Hex is certainly a great game but there is a reason why more plays and novels are written about war and murder than about building bridges! The same goes for games of pattern-forming (Connect4, Gomoku, Connect6) or crossing (Breakthrough [*AG7*], Epaminondas [*AG3*]) or unification (Lines of Action [*AG1, and others*], Ayu): one can easily find fitting images, but these goals correspond to more innocuous human activities. However, while Epaminondas's objective is more serene than hunt or kill, its capturing mechanism is enthralling and violent!

Metaphors and visual goals

My point is not to denigrate good games. You can enjoy dramatic matches without caring about theme or metaphor whatsoever. Still, the goals of all games mentioned above are close to important human-related activities; if not fighting, then building or gathering will do. This relates to a strong design quality: even the non-primal goals are visual, so one can watch both sides advance their objectives right on the board.

By contrast, many Nim-style games are not visual and most of them are hard to find metaphors for, even if you wanted to. And games with complex victory-point trackers do not have visual goals (hence the score track) and usually have arbitrary rather than metaphorical mechanics; invariably these games need an extra injection of theme in order to make players understand the mission.

Even a mild metaphor beats a theme

I believe that any theme, drawn by the designer or the publisher, is unlikely to last—simply because it is extrinsic to the abstract game underneath. On the other hand, a metaphor, even a mild one, is intrinsic. It provides flavour with staying power for those who appreciate it.

Here is why I think that a game's long-term reception is hurt by a dominating theme. The emphasis on setting during release prevents players from associating transcendental qualities with the game. This is a lot like using a gaudy design with catchy colours and cute artwork. Such measures may help with the initial reception, but will reduce long-term appeal: before the game has a chance to prove its depth, it will have been replaced by the next thematic and glittering design. The history of abstract board games has seen many hypes.

To give a positive example, the title and the mechanics of Amazons [*AG16*] make it possible to invent a casual backstory, although the backstory is neither needed nor officially part of the game. I will mention Amazon tribes competing for land when introducing the game to a person who, by my assessment, appreciates the prelude. To the fanciless killjoys complaining how arrows could not possibly block off regions, I reply, use your imagination! These could be poison arrows. It is the same lack of realism which makes nobody question Bishops running along diagonals.

Another game of this kind is Epaminondas. While its title will only make sense to a few history buffs, its mechanics are clear and meaningful: division pitted against division, and only the stronger team survives. Above, I listed the win condition, crossing, as one of the non-primal ones. Nevertheless, the movement and capture mechanics feel primal to me. It is easy to cast the game in a setting of Greek-era warfare, which is of course exactly what happened when the game was commercially published in 1975 with a full-fledged theme.

Phalanx: Tyrrhenic amphora, ca. 560 BC (5).

Then again, Hex is a game that is doing very well within its niche, but it has none of these things: its metaphorical goal is bridge-building—important, but hard to get excited about. Hex is a placement game without capture, so there is no metaphorical input from its mechanics either. Hex thrives purely on depth and clarity.

It is not always that clear-cut and I will mention two proprietary titles, of which many readers will be aware: Through the Desert (Rainer Knizia, 1998) is, if played by two, an abstract game, its camel-and-oasis theme notwithstanding. Around the same time Zèrtz (Kris Burms, 1999) [*AG6, and others*] was released, which is an abstract game without any thematic underpinning. Both are good games and I cannot say which one is played more often now, twenty years later. As indicated above, my inclination is that Zèrtz, like the other titles of the GIPF project, fares better in the long run with its timeless and transcendent appeal.

Narrative: games as emergent stories

"In my experience, Chess and Go are seen by regular players as poetry, as a deeper struggle than the rules themselves hint at." ~ Andrew Hardin (2001)

Sometimes, it happens that a match between two players is not just an intellectual contest; it may also unfold as a story enacted by the pieces on the board. Lest this sounds overly romantic, let me mention right away that I rarely have this impression during my games—then I am fully occupied with assessing moves, reading out lines, contemplating positions. It is only after a game that I may want to talk about it, using words as if telling a story.

Now, it is not an accident that narratives are created off the board, either afterwards or by spectators. This is just like in a sports match where the players on the football field are fully absorbed with what they do, and similarly for the actors in a theatre piece. The narrative arises with the spectators—a good sportscaster can help, of course, as will a good stage director.

I have noticed this not only with me; it is a common occurrence during tournaments, when players talk about the games they have just finished. This can always happen in the technical style, for example by replaying the game on a board and discussing it. But more often, encounters are quickly recapped in a

surprisingly copious style, using language not related to the rules. Readers may be familiar with examples of this behaviour from Chess or Go. Players generally will not describe individual turns, e.g. "Rook to e1" for a game of Chess; this kind of detail is left to replaying the game on a board. Instead, they will use words such as "Spanish opening," "Queen's wing," "weak Pawn structure," "pinned Rook," "fork," and so on to talk about the higher structure of their encounter. Go players might employ jargon like "breaking the ladder," "bad shape," "strong wall," "making an eye," "chasing a large group," and so on. A finished game may be characterized as a "fierce fight," "won by a large sacrifice," "won by a major territory exchange," and so on. Two examples are show below.

I believe the existence of narratives like these is a beautiful quality to be cherished. It certainly does not apply to all games. There is no narrative potential for Nim-type games, but these are easy targets. Myself, I cannot see it for Reversi [*AG9*] or Hex either. To be sure, this is not a point about drama: a game of Hex can be nail-bitingly exciting, for the players and the spectators. Here, I am merely musing about if and how finished games may be retold afterwards. I do not know exactly why the narratives are lacking for Reversi or Hex, although there are various possibilities.

It could be that my lack of skill prevents me from formulating, or understanding, a game of Hex as a story. In a similar vein, perhaps we have built up so much conceptual depth in Chess and Go that narratives for these games have become second nature. Quite possibly enough Hex theory will emerge in the next decades to enact stories.

On the other hand, Chess and Go may have higher storytelling potential because they are about primal goals—compare how it is easier to make up a story about murder or robbery than about lining up. It could also be the more strategic nature of those games that allows for narratives, with Hex's more tactical leaning preventing that. I have heard a strong player mention, "Hex is basically a giant local battle." This is unlike Chess or Go, and might hamper an overarching narrative for Hex. It is an interesting topic, but I think no final answers are possible for now.

On a speculative tangent, I suspect that games with narrative potential allow the brain to access moves and heuristics verbally, in addition to established, strictly combinatorial ways. This is very important to some players, but entirely irrelevant to others—again emphasising the subjective qualities of theme and narrative. Still, the mere existence of emergent stories is a great indicator that games can be much more than a set of rules.

There is another interpretation that is equally vague: if players can talk about their games in various ways, then perhaps they can also play with different styles. So I will entertain the thought that games affording varied language probably support varied strategies. Thus, the next item to discuss is how actors appear in such stories.

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Game 5 of Lee Sedol vs. AlphaGo, March 15, 2016 (6).

"An interesting and even more exciting game. AlphaGo made a clear mistake in the bottom right hand corner, but Michael Redmond said that it was probably only worth 5 points or so, so not fatal. Play continued with AlphaGo creating a large framework, which Lee Sedol needed to invade. He did so, but with some elegant play AlphaGo compressed Lee's group into just two eyes and created a decent sized territory out of the rest of the framework. Lee then had to invade the bottom left corner, but didn't get much compensation out of this, so was still struggling albeit a little ahead. The rest of the middle game was a knife-edged struggle, going to and fro, but eventually Lee didn't manage to make use of a cut towards the bottom and it looked like he made a mistake on the left which cost him points again. The score was still very close, with both players in byo-yomi, but with Lee about 2.5 point behind he resigned as only half-point moves remained. A sad finish to a close game, which allowed us to see AlphaGo's ability at yose."

Game 1 of the Mikhail Botvinnik vs. Mikhail Tal world championship, from Sports Illustrated 18 April 1960 (7).

"Botvinnik chose the Winawer variation of the French defense. Occasionally, as though in response to a brain wave, Tal stopped in his tracks, hovered over the board like a hawk and then resumed his pacing. The most audacious and unorthodox chess master since Paul Morphy, the exact opposite of Botvinnik in manner, appearance, temperament and style of play, Tal gave the impression of being guided by momentary inspiration alone. It quickly became evident that Tal was skating on such thin ice that ponderous Botvinnik could not follow him. Tal moved his queen out early, opening a feint on the king side which allowed Botvinnik to advance his queen pawn to the seventh row without opposition, while Tal placed a bishop which, in one of the sudden deceptive moves of which he is a master, was revealed to be bearing on Botvinnik's king and on the rook behind the king. So Botvinnik would lose his rook when he moved out of check. There was a thunderous roar from the crowd. The electric sign, SILENCE, PLEASE, flashed over and over without effect. Botvinnik resigned."

Actors in abstract games

Thinking of a match as a narrative, the story needs actors to which players—and ideally even non-players—can relate. It is interesting to observe how actors emerge for various games: only through their rules and not by explicit nomination; this is part of the meaning of *abstract* game.

Games with moving pieces have a head start, especially if the pieces are differentiated and not of too many types. Narration provides an argument in favour of smaller Chess variants: standard Chess has six different types of pieces, easy to distinguish; some Shogi variants have over thirty, much more arbitrary and worse for storytelling. The Chess pieces already have labels, unlike the uniform stones of a placement game. Differentiated pieces introduce a hierarchy, which helps establishing cognitive links. Above, I said that the actors should not emerge by nomination—and the Chess pieces are not actors by nomination. Regardless of whether we use the medieval-sounding "King" or, abstractly, "The Piece Whose Capture Loses the Game," this piece would be a focal point of any narrative. What does help Chess storytelling is the universal knowledge of the game and its rules, which is a social phenomenon. For example, the coverage of Chess in *Sports Illustrated* was triggered by the reign of Bobby Fischer and expressly addressed players and non-players alike.

Among games other than Chess variants, I mention Amazons. Although with only four identical Amazons on each side, each piece usually has a different, and changing, role throughout a game: she may be tragically crippled (isolated) early on as a sacrifice, or she may be defending the main territory, or she may force an opposing piece into isolation. Together with emerging—and sometimes raided or exchanged—territories, there are many entry points for intriguing stories.

Go is a placement game with a particularly large board, so naturally the story of a game usually does not unfold through individual stones (there are exceptions, such as imposing killing moves). Rather, players will talk about a higher structure, groups. A typical match is about weak and strong groups, and about the building, tearing down, and exchanging of territories. Much excitement comes from killing and survival, in other words, the life and death of large groups.

The overall storyline

Many games have a division into an opening, middle game and endgame. Roughly speaking, an experienced player will be on familiar terrain in the opening, encounter a forest full of unfamiliar lines in the middle game, and the consequences of those will be played out in the endgame.

Sometimes, the division can be made more precise, often by the type of interaction between pieces. For example, a Halma game starts with a phase of no interaction (the opening), proceeding to a phase where players can use pieces of the opponent for their jumps (the middle game), then resolving to another phase without such interaction (the endgame). Games where the number of pieces generally increases (Hex, Reversi, Go) or decreases (Chess, Draughts, Lines of Action) have other ways to structure matches.

Curiously, some games do not have this structure. In my opinion, alignment games like Renju [*AG5*, *AG6*] and Connect6 do not. Having a look at the final position of a drawn 19x19 Connect6 match makes me think that this style of gameplay could be extended indefinitely, given an unbounded board. Similarly, very tactical games with small boards lack a clear division as well.

Comparison with sports

I think it is worthwhile to make a comparison with sports reporting. Watching a racing duel can be exciting, but in reality this is just independent actors running in parallel—whether sprint or marathon, a world record could in principle be achieved by a lone athlete. But what is much more memorable than single-actor sports? Competition including conflict, of course.

Most of us will recall singular events: a tennis match where one player is down to match-ball, to win in a tie-break; an American football game decided by a touchdown in the very last moment; Muhammed Ali on the ropes for several rounds, only to come back and knock out George Foreman while thousands of spectators shout, "Ali Bomaye!"

The exciting dramaturgies arise because these are games, contests between athletes or teams. There are tactical choices for races, of course, but a lot more goes on in a match. Which decisions are made, and how they are carried out, is a great source of emotional investment for spectators.

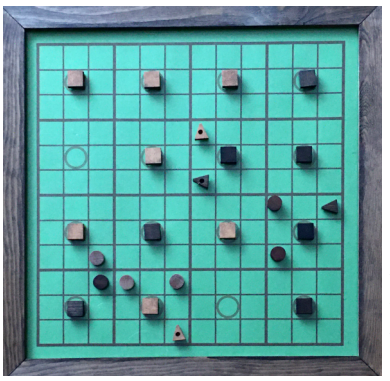
How to make games talk

It is time to tie together the various strands introduced in this article. First, primal win conditions and mechanics lean more towards verbal description than others. Primal goals include elimination, hunting, and territory building, each highlighting a different aspect of human conflict. By contrast, goals such as connection or pattern-forming are milder metaphors and less thrilling. Among mechanics, intuitive and manifold capture possibilities go a long way towards storytelling.

Second, a necessary requisite for relevant storytelling is playing skill of the would-be narrator. Even a mediocre level might suffice, but a new player will be lacking concepts to apply in games and the terminology to express these concepts. In turn, the necessity of skill suggests depth as another aspect. Great depth, in other words a large skill ceiling, and many players attaining great skill can combine into a strong impetus for storytelling, regarding the action on and off the board. In the same vein that narratives describe individual games, a sufficiently rich game allows players of high level to exhibit different styles, permitting different and competing narratives. This is quite like the various narratives of sports reporting! Moreover, abundant strategies are one cornerstone for ensuring variety: the games played should not feel all alike, but genuinely different. This is where surprises and upsets can come from.

Third, actors are needed as the basic ingredient for any storytelling. The Chess King, for example, is a designated actor, although he cannot carry all the narrative of a Chess game on his shoulders. Actors can also arise as patterns of pieces, in other words as specific and labelled configurations of pieces—for games with undifferentiated pieces, this is the only way. Identifying actors requires a sizeable and stable player base of sufficient skill who create and preserve this information. Clearly, this links to the social and the depth aspects of games.

Fourth, there is a social aspect. Games with a club and tournament culture are well equipped for high-quality narratives. The communities provide ample opportunities to play games, and to discuss them afterwards. Moreover, they encourage the creation and dissemination of jargon, proverbs, and memes related to gameplay. In other words, narratives feed back into the social environment of the game. It will be interesting to see if and how the modifications from online play and communication affect narration in Chess and Go. *(Continued on page 16.)*



Mid-game position (Mik-Lev Inc. edition, by Dr. William L. Mikulas & Stanley Levin). Realm rules are in AG9.

A Taste of Realm Strategy

by Ray Armenteros

I was playing 1856 one Saturday. For those that have never tried it before, a game from the 18XX family is an eight-hour perfect information extravaganza dressed in the trappings of a train theme. It was my first time with such an epic experience, and I have to say, I tuned out by the third hour; the many facets of this game were fascinating but way over my head. I found myself going over moves and sifting through the repercussions of my hypothetical moves—but not for this game! The game I was savouring was Realm. At SuperDuperGames, my opponent and I were coming close to the endgame, and I had the board state memorized. I was daydreaming about the tactics I was going to use in that game rather than the one that was right in front of me.

Savouring is the right word for that feeling you get when you have time to make your move, and you are going over all possibilities, confident that what you are about to do is going to devastate your opponent's plans. You do not commit to the move just yet because you are going over the potential of subsequent moves. Your calculations could be precise or not, but this moment of savouring the results of carefully orchestrated actions is one of the great joys of playing abstract games. The game known as Realm, by Philip Orbanes, has offered me many such exquisite moments.

For an abstract game, Realm is rather a complicated affair. The lack of minimal elegance in its rules has turned off more than one abstract gamer. The only thing I can say to this unwelcome feature is if you stick to it, you will find a game that might recall games like Chess and Yinsh but that has a different flavour than many other games—that kind of taste that is hard to pin down in words.

In Realm, you are creating pieces in order to claim areas and fight off your opponent's pieces. You have three types of pieces. *Powers* move like Chess Rooks, and they create the two other types of pieces. *Enforcers* also move like Rooks, but they face a direction which limits their movement to forward, left, and right; they capture Bases and attack other Enforcers. *Bases* do not move; they are the fortifications that claim an area. The square board is comprised of sixteen of these areas, called *realms*. Each realm is subdivided into nine squares, which are the actual spaces the pieces move on. You claim a realm by entering a vacant realm with a Power. This action places a Base in the centre square of the realm. You create an Enforcer when your Power enters one of your realms that has no Enforcer in it.

What makes Realm different from many other abstract battles is the three types of movements, which allow you the possibility to move multiple pieces at once. Each movement type is tied to the realm you wish to activate. A *dispersal* has you move any of your pieces in one realm to other realms. It can be any number of pieces, and they do not need to go to the same realm. A *concentration* is when you choose a realm as a target destination, and any and all pieces that are orthogonally lined up to it can move there. A *rearrangement* is when you take out any of your pieces in one realm and reorganize them in the same realm.

There is a hierarchy of what it takes to attack a Base or Enforcer, and this is the part that rules purists find least attractive about the game. To capture a Base, you move the Enforcer that is going to do the dirty work into an opponent's realm with at least one more Power than your opponent. However, if the difference is only one, then the Enforcer will be sacrificed by becoming immobilized. If the difference of Powers is two or more, then the Enforcer remains intact. That means when entering an opponent's realm with two Powers and an Enforce, you have two choices. You can enter with both Powers before the Enforcer, allowing you to capture the Base without losing the Enforcer. Or you can enter first with a Power then with an Enforcer followed by the second Power, granting you the double move of capturing a Base and then immediately placing your Base, but at the expense of the Enforcer.

An Enforcer can only attack a Base if there are no mobile opponent's Enforcers present. To attack an Enforcer, you only need to enter a realm with an enemy Enforcer in it. If you enter it with a Power majority, your Enforcer will be preserved. If you do so with anything less (including the absence of a friendly Power), the entering Enforcer and an opponent's Enforcer will be immobilized.

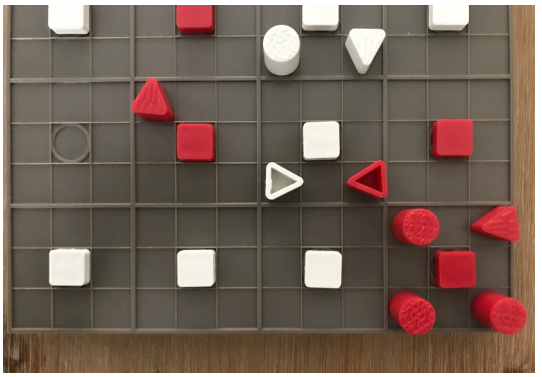
It is important to note that when an Enforcer is sacrificed or attacked, it is not captured; it is immobilized. The piece remains on the board, but it is turned over to indicate it can no longer be moved (although it is still subject to a rearrangement). These unmoving units accumulate on the board.

Many of the tactics that evolve from these rules are based on blocking manoeuvres. Pieces are not allowed to jump others, and so you can hamper an opponent in a corner of the board, while your other pieces do something else. Indeed, blocking becomes the essential element to Realm tactics. This characteristic is compounded as the game continues, when the pieces accumulate on the board. Savvy Realm players will try to build walls against the opponent while paving avenues for their own pieces.

There is not much written on Realm. In addition to what I have written in the past, I only know of one article on the game. "Realm - The Dilemma: Creation or Destruction," written by Dr. William L. Mikulas (*AG9*), describes the essential features of the game. Dr. Mikulas went into an arrangement with Philip Orbanes to rerelease the game a number of years after its initial run in 1973. Though that project was never realized, Dr. Mikulas with a partner, Stanley Levin, tweaked the rules and discovered interesting ways to play the game.

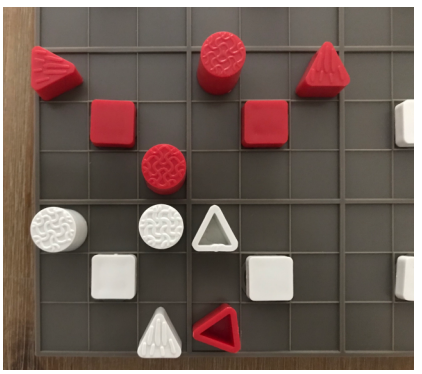
His article makes the first mention of a *juggernaut*, which is when you use all your Powers with at least one Enforcer to steamroll over opponent realm after realm. The idea here is since

you are using three Powers, you use two to enter the realm first, then the Enforcer to capture the Base without being immobilized, and finally the third Power to claim the realm. And on to the next realm.



Red Juggernaut before undefended realms (Gamut of Games edition, Sid Sackson's company).

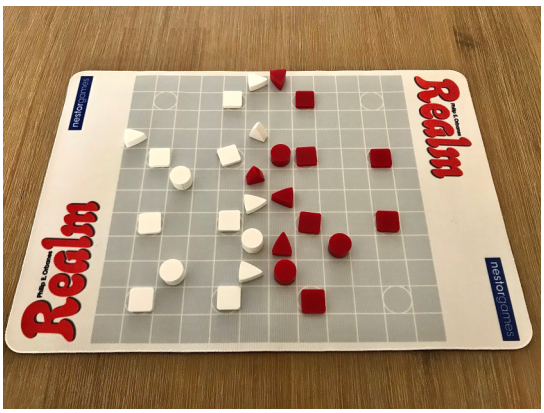
The other tactic he describes is a *blockade*. You set up walls in this tactic to keep enemy Powers in corners of the board. You do this by having your Powers create more and more pieces and by immobilizing Enforcers to place semi-permanent bastions against traversal. Dr. Mikulas mentions that a good defence to a juggernaut is a blockade. Even so, if a juggernaut is stifled, he adds, the player could always use it to commit a powerful dispersal with multiple pieces in different directions.



White within blockade (Gamut of Games edition, Sid Sackson's company).

That article was my rules and tactics primer into Realm, and it coincides with how I still understand the game today. A favourite tactic of mine used to be the use of a dispersal to send one or two pieces in one direction while launching a lone Enforcer into a realm with an enemy Enforcer, and consequently locking that realm down on one side with both immobilized pieces blocking the all-important corners of a realm. An opponent would have to waste a move or two doing a rearrangement to get a piece through that. That tactic harmonized with my strategy of overwhelming the board and sacrificing Enforcers along the way. I was playing for shock, and my philosophy was if I can hit the opponent with lightning, they would be too disoriented to recuperate before I quickly put down my last Base, and a player placing the final Base is the endgame condition.

After dozens of games like this, I was one day playing a match where things turned out differently. Most of the people I played were a little more conservative about their Enforcers, and I was patently reckless. I was playing for speed, and it always yielded results. The faster you went, the sooner you won the game, plus the immobilized Enforcers from both sides in key areas meant I was continuously keeping my opponent at arm's length while I was plundering their realms, petrifying Enforcers and converting Bases. But this opponent I was playing was new to the game, and he was playing it differently. In our online chatting, he was telling me about himself, how he was not really an abstract gamer but a Eurogamer. As we were playing, he was sealing up the lines between the sides with his own carefully-executed Enforcer assaults. After a dozen moves, I had never seen the Realm board look like that. It was neatly divided up the middle with one color on either side, like two football teams before the hike. A solid wall of immobilized pieces stood between us, and now the players had to find inroads on the board's edges or through rearrangements to get anything done. He had done a commendable job of impeding my favourite strategy and making me work for it.



Imprecise recreation of the Football State (NestorGames edition).

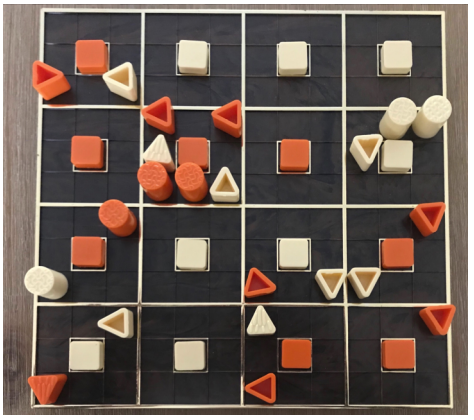
If this were a strategy, it is one I had not seen before. He actually shaped the board. He was a sculptor or city planner who was making something look a certain way to his own ends, which proved effective as he won that game. Such moments make me think about the strategies of Realm and how sophisticated the game possibilities are.

I would never profess to understand the depth of Realm. Is it as deep as Chess or Go? I do not know if anybody could answer that, because it has not been played that much to categorize those levels of depth that could make a game captivating and long-lasting. Nonetheless, I have been able to recognize a few strategic approaches. I have gone up against players that were careful and unwilling to give up Bases and Enforcers so easily. These players played a more analytical game, making the moves count, as they would in Chess. A careful player, however, might be overlooking their overall board position when focussing too much on preserving their pieces. On the other side of that, there was also an exhilarating way to play, where you are trying to develop your position on the board slowly, finally to get out that juggernaut and then sweep across a line of the opponent's realms. A player with a flair for the dramatic might favour this. But as we know, a juggernaut can be easily blocked if you see the signs in time. Or even better, you could step back and almost invite your opponent to converge on one of your realms with a juggernaut in order to lure these pieces into a corner and trap them.

Each approach had its own weak point, and I eventually found that my favourite way to play the game also had one. If you were willing to sacrifice so much for the sake of speed, you could

inadvertently be digging your own hole when you find you are out of resources and the game is still a few moves away from being done, as I found myself in this one game with a seasoned Realm player. He was providing careful defences. The striking characteristic of this game is how he kept using rearrangements. I had never seen so many rearrangements in a single game. Rearrangement was the third type of special move that always felt like a wasted move; it was giving in to two moves when one move would have been better. And thus, it was hardly ever used. But in this game, I found myself rearranging in reaction to his rearrangements. Having started the game with my quick timing, I was in the middle game and a witness to my immobilized Enforcers uselessly spread all over the battlefield. Even so, I was ahead in the game with more realms and just two more Bases to place. But the board was so crowded, our moves were cut into minor actions to get out of locked compartments. When he placed his next two Bases, I knew I was in trouble. I had two Enforcers left, and he had twice as many.

To complicate matters, there were no easy roads with which to have the Powers and Enforcers converge on one of his realms. I finally got the only opening I was ever going to get and attacked a realm with just one Power and an Enforcer, losing one of my last two Enforcers. All I had to do now was to get that Power out of the realm in the next move so that I could move it back into the realm in the following move and install my final Base, which would end the game.



Epic Game Final Board State (Amway edition of Sid Sackson's Sly—three Sly sets needed to make one Realm set).

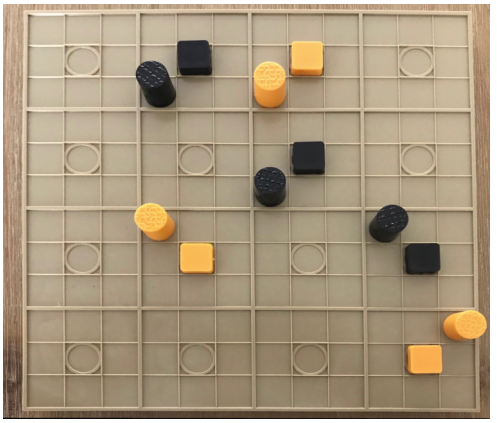
To this day, this one match is still vivid. I remember that game so well—those final positions burned into my brain. It was the longest game of Realm I ever played, clocking in at about forty moves. We were coming toward the end of this savage bout, and there were moments when I was seeing it all before me: the previous moves, the moves I had yet to make, the moves thereafter. I was getting ready to go to work, and I had just made a move before stepping out. As I was shaving, savouring the coming repercussions to my action, something hit me and wiped the smug expression off my face. I did not realize that the board situation was going to be a tie. I ran back to the computer (as this game was on SuperDuperGames) and undid my move to redo it later—days later, as it turned out.

Even though the goal in Realm is to acquire the most realms, with just sixteen realms, and in games with players of equal strength, ties were not uncommon. So, the tie-breaking conditions were how many mobile Enforcers, unplaced Enforcers, and captured enemy Bases you had all together. (On SuperDuperGames, it is different: it is how many available Enforcers before you count the captured Bases—so Enforcers have the tie-breaking priority.)

The game was going to be a tie, and our Enforcer discrepancy was going to swing the victory to him. I eventually lost, and I was dumbfounded how my opponent used the least-likely manoeuvre to stifle my speed and make me waste my resources. By answering my headlong attacks with rearrangements, my opponent broke the game up and made it hard for both of us. It was not as exciting as having Enforcers fly all around creating havoc, but it was effective.

I think knowing your opponent is another level to strategy. If he recognized my impetuous tendencies, he might have answered that with that long line of stumbling blocks. Knowing what the opponent is good at and providing something awkward or unexpected might make the opponent delve into unfamiliar territory. It is not unlike using a specific Chess opening against certain opponents who do not play well against them.

In Dr. Mikulas's article, he offers the idea of opening moves and he states that there are no favourable starting positions that have been noted, with the exception of trying to command the centre. The centre is pivotal, and I have noticed that it is the second player that determines how the centre is populated.



Possible Realm Opening (Gamut of Games edition, Sid Sackson's company).

Realm begins with a placement phase of six moves. Each player alternately places three Bases and then three Powers in the realms those Bases claim. The placement rule does not allow you to place a Base orthogonally lined up with one of your own Bases. So if the first player places one in one of the four central realms, and the second player places one in the central realm diagonal to it, that means there will be no other Bases in the centre realms until movement begins. By contrast, if the second player does place a Base next to the first player, the four central realms could be occupied before the movement phase starts. I do not know which one I prefer, but I am sure if Realm is played enough by a community that notes strategic developments, there may be advantages and disadvantages found to either scenario, and the interesting part is that the second player is the one that determines this. The second player is in a better position than in other similar games. When the Powers are placed, it is the second player that determines if they are blocking each other or not, since that player is reacting to the first player's placement. That means, from my assessments, Realm does not suffer from a second player weakness. And this is commendable, because the Realm rules do not attempt to compensate for a first-player advantage—as far as I can tell, such an advantage does not exist.

It would be interesting to study the ramifications of initial

setups, like one would study Chess openings. What would be the logical responses to a first player and how strong would that be? What is the best timing for forming a juggernaut, and what are the downsides to leaving the rest of the board empty of your powers? Can you switch a strategy mid-game when you notice your opponent is using your best methods against you?

These are appropriate questions, like many other questions I have about the game. I have here offered my thoughts on Realm's dynamics. There is still much more to learn. This game gives me the sense that there is a lot more under the surface, but like any strategy game, it needs a community of players to discover them collectively.

The Realm games I have played with others have made me contemplate a great deal about this game, I have come to observe that by the time you enter an endgame situation, you might not recognize the minute dynamics, because you have never seen them before. I have seen so many different board configurations that forced the players to respond to them somehow. This is one of the aspects of the game I love best. Because of this versatility, the game has personality. It is a different brew. Something with a robust aftertaste that will have you reflect on it for some time to come. ■

Rey Armenteros is a Los Angeles-based painter and writer who has had his essays and poetry appear in numerous literary journals and art magazines, as well as gaming publications like Casual Game Insider *and* Counter *magazine. A devoted player of abstract games and certain Euro games, Rey now has his sights on learning the ancient game of Go. You can find him on BoardGameGeek and elsewhere under his secret identity, MobyNostromo. ~ Ed.*

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("Stories and Themes" continued from page 12)

Finally, for stories to unfold in a board game, there has to be ample space and time in the gameplay. In other words, even though almost all abstract games scale seamlessly, a small board may preserve the tactical depth but lose the overarching narration. Compare Go on 19x19 and on 9x9 boards. The small board allows for exciting games, but there is not enough space for long-term strategies to unfold. Similarly, games need to go a certain length lest we end up with an aphorism rather than a full story. I believe that Chess is excellently designed to create stories on (only!) 8x8 squares. The reasons for this richness of Chess, in my opinion, are the wide range of powers among pieces (which makes a Queen sacrifice, for example, always exciting) and the very subtle and powerful Pawn structure. Pawns not only force an opening period (before other pieces can even partake in the game), but as the weakest and slowest pieces they can easily threaten but also support each other. In Shogi, Pawns do not play such a prominent role, but that game picks up action, depth, and narrative from its masterful drop mechanic, which loads every capture with dramatic potential.

To sum up, the following qualities are suggestive of high narration potential:

- *Rules*: primal win condition and mechanics.
- *Depth*: high level of play, ideally with professional players.
- *Variety*: manifold heuristics to make games feel different.
- *Actors*: established and labelled on-board configurations.
- *Social*: a strong community, including clubs and tournaments.
- *Scope*: sufficient board space and game length.

Obviously, you cannot design a game with these properties on the drawing board: proof of depth requires continual play at a high level, thus a strong community. This is hard to establish and, like a pop music hit, cannot be planned for. But even if you just take the simpler ingredients—primal goal, an established capturing rule, sufficent board size—ultimately narratives depend on people telling them. Only very rarely will a new board game give rise to serious tournament play, to the development of theory, and to narratives. We should be happy that some of the games we care about have reached that stage.

I will note that Renju, the subtly balanced Japanese five-in-a-row game, has professional players, proven depth and a strong community. I would say its non-primal mechanics and the lack of strategic variety prevent it from being as narratorial as Shogi or Go.

Let me finish by stressing again that the absence of narrative does not entail judgement on a game. Ardent players of such a game are looking for other things than emergent stories in their matches. In particular, lack of narrative does not say anything about a game's depth or clarity.■

References

Parlett, David (1998). *The Oxford history of board games*. OUP.
Hardin, Andrew (2001). "Is it really about Theme vs. Mechanics?" *The Games Journal*, February 2001.

Images

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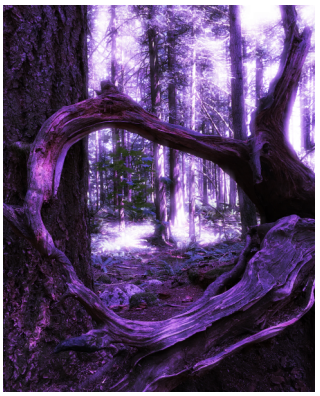
6. Game 5 of Lee Sedol vs. AlphaGo, March 15, 2016 (https://www.britgo.org/alphago-leesedol).
7. Game 1 of the Mikhail Botvinnik vs. Mikhail Tal world championship, from *Sports Illustrated* 18 April 1960 (Edmund Stevens).

David's description of theme, metaphor, and narrative of abstract games is much fuller and more nuanced than our simple contrast between abstract games and thematic games on our website Home Page. By theme we mean an attempt in a game to reproduce certain aspects of the real world; games without themes are abstract. Clearly there are gradations of theme, which may be supported by metaphor and narrative. David's terminology is very clear and useful, and we should adopt it as standard for Abstract Games. *Perhaps our readers want to share their experiences with storytelling in their favourite abstract games with us. We are happy to hear from you! ~ Ed.*

Sudden Death Grasshopper Solution from page 27.
Here the cliché, "The best form of defence is attack," is accurate: 4….a6-b5 is shown up as the first blunder of the game, if Blue plays 5.g3-c3. There is no defence against the threat of 6.e1-a5, and Blue wins on the next move. (If 5….b6-b4-d2, then either 6.f2-d4-b6 wins or 6.g2-e2-c2-c4-a6 wins; if 5…c5-a5, then 6.e3-a3-a7 wins.)



A game by Luís Bolaños Mures

Keil

by Lear Bahack

Keil is a very recent and revolutionary hexagonal Go variant invented in 2019 by the game designer Luis Bolaños Mures. [*See also, for example, HexGo in AG6.*] The game is played on a hex-hex board (a hexagonal grid of hexagons) with sides typically between six and ten cells long. A game on the base-six board (containing 91 cells) is comparable to a 9x9 Go game, while a game on the base-ten board (271 cells) is close in scope to a full 19x19 Go game.

For our presentation of Keil, it would be helpful for readers if they were familiar with Go, although hopefully a knowledge of Go is not strictly necessary. Go concepts needed will include *liberties*, *territory*, *eyes*, and so on, and the core idea that groups with two or more eyes are *living* and groups with fewer than two eyes are *dead*. All of these ideas will have to be adjusted for Keil's board geometry and radically different notion of connectivity.

Rules

As for Go, a player on her turn places a stone of her colour on an empty cell, starting with Black. A *group* is a collection of stones of one colour that are mutually connected; a *liberty* of a group is an empty cell that is connected to the group. (Connection is defined below, somewhat differently than in Go.) After a player has placed a stone on the board, every enemy group with no liberties will then be removed. The resulting position must be such that the newly placed stone is part of a group with liberties, and no previous move by the same player has ended with the same board position (the so-called *situational superko rule*). Players are allowed to pass, and the game ends with two consecutive passes. The player with the higher score in the final position wins. A player's score is the number of stones of her colour on the board, plus the number of empty cells in her territories, plus a *komi* in the case of White (similarly to the Chinese Go rules). We propose a komi of 6.5, although further statistics might point to a different value. The komi is supposed to compensate White for Black's first-move advantage.

The difference from regular Go, apart from the hexagonal board, is the innovative, dynamic topology of the game: whereas, in Go, like-coloured stones on adjacent points are always considered connected and therefore part of the same group, adjacent stones in Keil need to satisfy an additional connectivity condition in order to be considered connected. Likewise, an empty cell in Keil is considered connected to a stone (and hence is a liberty of said stone's group) if, in addition to being adjacent to it, the same connectivity condition is satisfied.

Two equivalent ways of stating the connectivity condition are as follows:

The connectivity condition:

(1) Two adjacent cells are connected if there is a third cell adjacent to both such that those three cells together contain 0 to 3 stones of one colour only.

(2) Two adjacent same-colour stones, or a stone and an adjacent empty cell, are connected if there is another cell adjacent to both that is not occupied by the other colour. Two adjacent empty cells, on the other hand, are always connected.

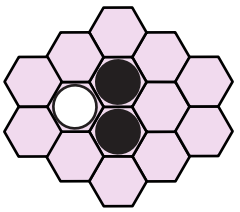


Diagram 1a: The two black stones are connected.

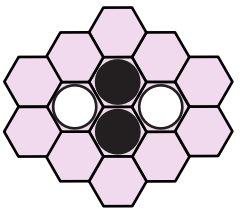


Diagram 1b: The two black stones are disconnected.

Diagram 1c: The two marked empty cells are connected.

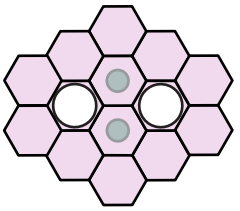


Diagram 1a shows the two black stones connected. The two black stones with the empty cell immediately to their right satisfy the connectivity condition under both formulations. With a second white stone in this third cell, as shown in Diagram 1b, the two black stones are disconnected by a *crosscut.*

The requirement that adjacent empty cells are always connected, which is explicitly stated in the second version of the connectivity condition, seems to be counterintuitive. In Diagram 1c, we might assume that the two marked empty cells also are disconnected by a crosscut. However, the two marked empty cells in Diagram 1c are connected according to the first version of the connectivity condition, because (1) the left triple of cells contains only white stones, and (2) the right triple of cells contains only white stones. (Only one of these two properties is strictly necessary.) The two connectivity conditions are genuinely equivalent.

As in Go, a *territory* is a connected set of empty cells, and is owned by a player if all stones connected to it are of her colour. In Diagram 2a, the five spaces marked with **X** form a black territory. Note that the two white stones are not connected to any cells in that territory, despite being adjacent to it.

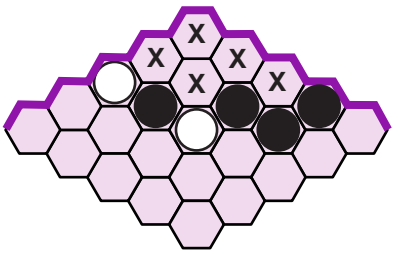


Diagram 2a: Black has five points of territory.

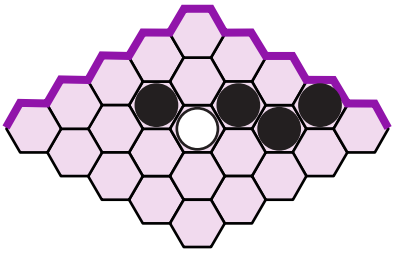


Diagram 2b: Black has no territory.

Because two adjacent empty cells are always connected, the stones enclosing a territory need to enclose it *completely.* The "territory" in Diagram 2b is not completely enclosed, for example, and the five points at the corner are connected through the open channel on the left side to the remaining white stone from a direction outside the wall. The wall surrounding a territory may include *enemy* stones, but not empty cells!

Just as with Go, it is worth noting, a player does not have to complete capture of a dead enemy group in her territory. It is enough that both players agree the group is dead at the end of the game, and then the dead stones are removed before calculating the score. If the players do not agree which groups should be removed, they will simply play on until the situation is clear to both.

Rationale

One possible way to think of Keil's definition of connectivity is by replacing the common notion of mutually connected pairs of cells with the notion of mutually connected triples of cells: a mutually adjacent triple of cells is then mutually connected if it contains only one colour. Alternatively, one can still think of connectivity in terms of adjacent pairs, which are connected as long as there is no third stone (of the appropriate colour) to drive a wedge between them. This is also where the name of the game comes from, as Keil is the German word for wedge. For the author, the second approach to Keil's connectivity, that of having connected pairs that can be split, is more natural and works best in play.

This idea of dynamic connectivity depending not only on the board's shape but also on the stones' surroundings is fascinating and revolutionary. We hope Keil will be followed by more new abstract games implementing a similar mechanism. However, we should note that Keil was not invented for the sake of showcasing a new mechanism, but firstly as a solution to an inherent problem with the natural way of playing Go on a hexagonal board.

In regular-connectivity hexagonal Go, groups tend to have too many liberties and are harder to kill. Perhaps more severely, enemy groups cannot crosscut each other. Thus, if Black wishes to prevent White from connecting two of his groups, she must fully cut those white groups using a single, fully connected black group, and, likewise, in order for Black to stop White from further expanding a group of his into an empty area, she must fully encircle his group using a single, fully connected black group. This becomes so difficult and inefficient that players prefer to stay focused on building their own territory and expanding their groups.

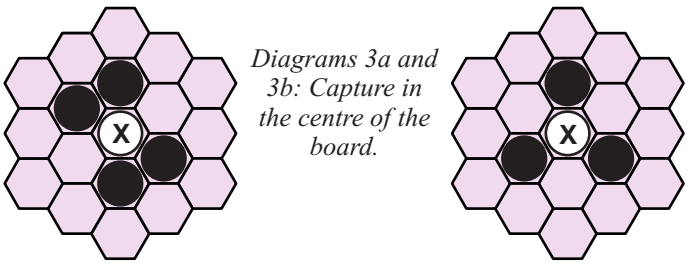
Go dynamics are based on blocking, cutting and killing groups, or at the very least on feasibly threatening to do so while using the threatening moves for other purposes, such as building your own groups. The inherent lack of crosscuts in the hexagonal grid is clearly essential for games like Hex (which otherwise might end without a winner), but it also makes plain hexagonal Go a boring game.

Keil solves this problem by reducing the natural connectivity of the hexagonal grid: adjacent cells are no longer automatically connected unless they satisfy a further condition. Capturing (and threatening to capture) becomes easier; in fact, only two stones are needed to place a single enemy stone into *atari* (i.e., one move away from being captured). Crosscuts are possible, and building a strong wall that cannot be cut requires more effort. The balance between stability and dynamics is restored, and playing Keil feels strategically quite similar to Go, just with different tactics.

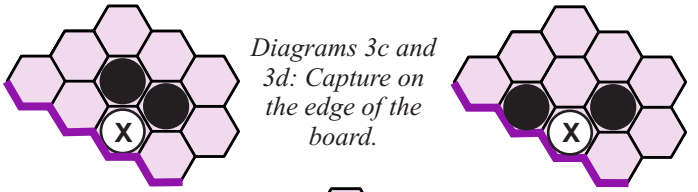
For the many game designers reading the *Abstract Games* magazine, it is worth nothing that other territorial games played on the hexagonal board solve the over-connectivity problem differently. A common solution is to have double stone moves, as in TriGo, Blooms, and Yodd. In a very abstract sense, even regular square Go can be thought of as a solution to the over-connectivity of the hexagonal grid: take the connectivity of the hexagonal grid where each cell is adjacent to six surrounding cells in three directions; choose one direction and cancel the connectivity between adjacent cells in that direction. What do you get? A square grid!

Various Captures

While there is only one way to capture a group in Go, which is to have an opposite-coloured stone on every cell adjacent to a stone of the group, in Keil there is often more than one way to do so. For instance, ignoring rotations and reflections, there are two distinct ways to capture a single stone in the middle of the board, two distinct ways to capture a single stone along the edge, and one distinct way to capture a single stone in a corner—see the five diagrams below. We stress, in these examples, all empty cells adjacent to the captured white stone are not liberties of that stone, because they are disconnected from it by the surrounding black stone(s). The reader might wish to read the connectivity condition again at this point.



Diagrams 3a and 3b: Capture in the centre of the board.



Diagrams 3c and 3d: Capture on the edge of the board.

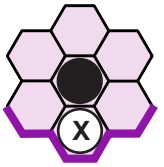


Diagram 3e: Capture in a corner.

Placing a stone on an empty cell where it currently has no liberties is allowed as long as it results in a capture that gives the stone at least one liberty (assuming it is not forbidden by a *ko*—see below). In Go, any stone involved in a capture will inevitably gain at least one liberty by it, precisely where the captured group used to be. In Keil, this is not always the case. Diagram 4a shows a legal move where the newly placed stone has no liberties prior to the capture but gains three liberties by capturing the white stone marked with an **X**. On the other hand, Diagram 4b shows an illegal suicide move where, even after "capturing" the white stone, the newly placed black stone has no liberties. Black **1** in Diagram 4b is, of course, illegal, and the white stone would not be captured.

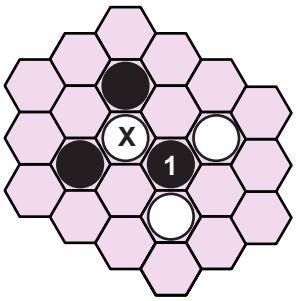


Diagram 4a: Legal capture.

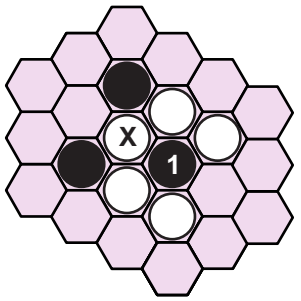
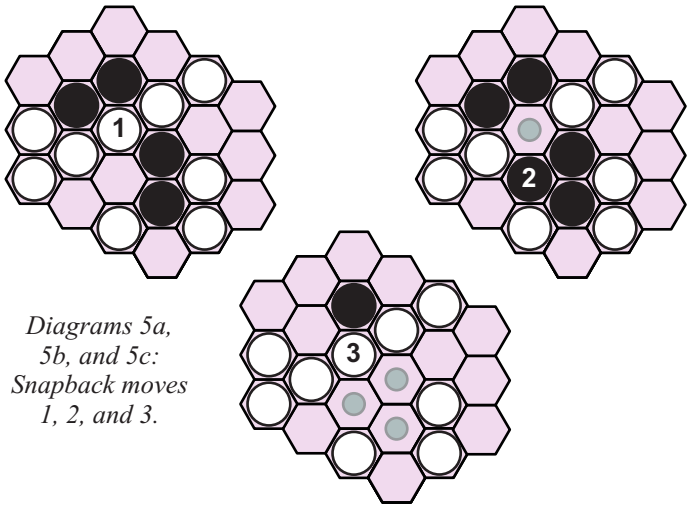


Diagram 4b: Illegal capture.

Like Go, Keil has snapbacks, nets, and special common captures along the edge, but, as we will show, maybe not ladders. A *snapback* is a situation where one side gets multiple stones into self-atari by capturing a single enemy stone that was just placed. Diagrams 5a, 5b, and 5c show a snapback pattern similar to the empty-triangle snapback in Go.

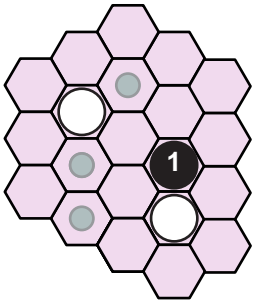


Diagrams 5a, 5b, and 5c: Snapback moves 1, 2, and 3.

A *net* is a way eventually to capture an enemy group that is not yet in atari by building a configuration that will lead it into atari in a few moves. In Diagram 6a, Black has made a mistake by playing adjacent to a white stone that is accompanied by another white stone to its left. The second white stone could have been in any of the three marked empty cells instead, resulting in a similar net. Diagram 6b shows how White can lead Black through a sequence of ataris into a final, inescapable atari.

Diagram 7a shows White carelessly sneaking along the edge into Black's territory. Usually, a move such as Black **4** in Diagram 7b does not endanger the white triangular group, because it can immediately be captured by an adjacent white stone to the right of the black stone along the edge. However, in this example, the empty cell to the right of **4** happens to be a corner cell, and thus a White move there would be an illegal suicide move. White is therefore in an inescapable atari: strengthening with White **5** is useless, since Black **6** can still capture. Playing White **5** at **6**, or on the edge cell to the left of **6**, would be useless as well.

Diagram 6a: Black 1 can be captured in a net.



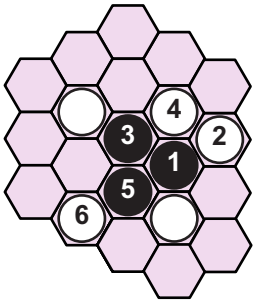
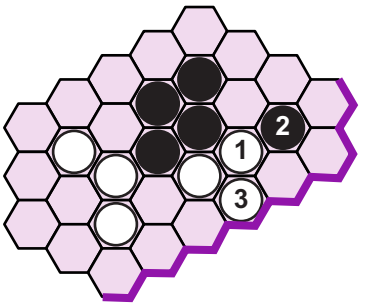


Diagram 6b: White captures the black stone.

Diagram 7a: White push close to the edge.



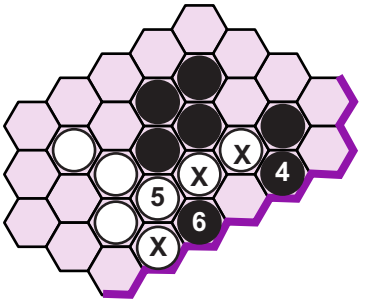
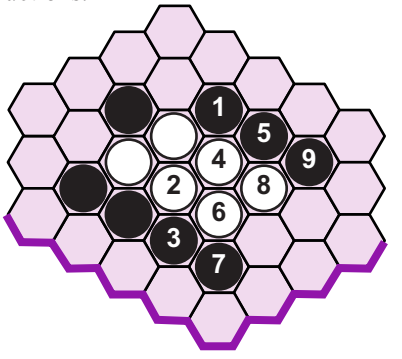


Diagram 7b: Black defeats the White push.

Ladder threats are common in Go, but it seems to be difficult to construct analogous threats in Keil. A promising attempt to construct a ladder is shown in Diagram 8a. However, the example is faulty, because Black can make an earlier threat to capture, as shown in Diagram 8b, overleaf. If White plays **A**, Black captures the white group with **B**.

Instead of a ladder, Diagram 8b shows another kind of net. However, the ladder in Go is, after all, a special kind of net, which follows a regular pattern until the threatened stones run out of space at the edge. Perhaps the ladder form of net in Go has no direct equivalent in Keil, although Keil may well permit more complex ladder-like constructions.

Diagram 8a: Attempt to construct a ladder.



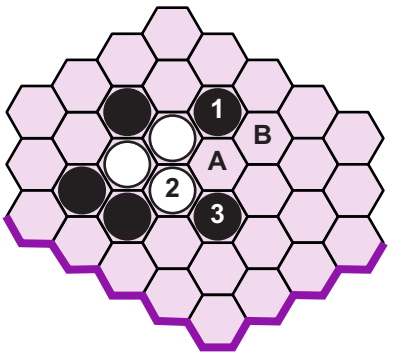


Diagram 8b: The "ladder" is not needed.

Life, Death, and Seki

Similarly to Go, creating eyes for your groups (or retaining the ability to do so later on) is a major concern during play. An eye is a group's liberty such that (a) the liberty has no connections to enemy groups and (b) the opponent can only ever occupy that liberty if it is the group's last, thus capturing the group. As soon as a group gets two eyes, however, neither of them can be the group's last liberty, and placing a stone in either one will always be an illegal suicide move for the opponent. As a result, the group will be immune from capture for the rest of the game—in Go jargon, it is *unconditionally alive*. See, for example, the groups in Diagrams 9a and 9b, where each eye is marked with an **X**.

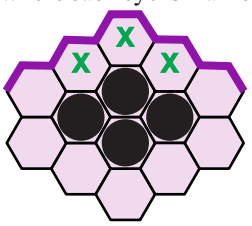


Diagram 9a: Group with three eyes in a corner.

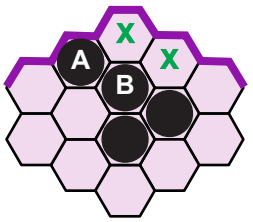


Diagram 9b: Group with two eyes in a corner.

The reader will notice that these groups' eyes are connected to one another, which is not possible in Go. As a matter of fact, the rules of Keil are such that a group's eyes could even be directly connected to neutral empty cells or adjacent (but not connected) to enemy stones. One might find the example in the second diagram a bit questionable, since the connection between the black stones at **A** and **B** might seem to be breakable. Therefore, we stress the key point: if a white stone were placed in the corner, it would need to capture the black stone **B** in order to get liberties. However, capturing **B** using a single white stone is impossible due to its connection to both eyes, which means a White move in the corner is an illegal suicide move.

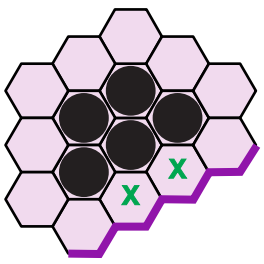


Diagram 10a: Group with two eyes on the edge.

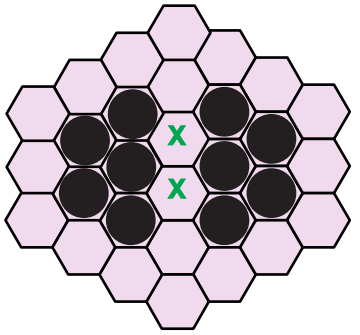


Diagram 10b: Groups with two eyes in the centre.

Diagram 10a shows a group with two eyes along the edge, and Diagram 10b shows a system of two middle-board groups with two shared eyes in between. In terms of number of stones, the examples in 9a, 9b, 10a, and 10b constitute all possible minimal configurations with two eyes in the corner, edge, and middle of the board, respectively.

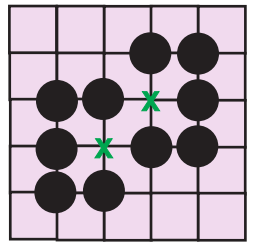


Diagram 11a: Go groups with two eyes.

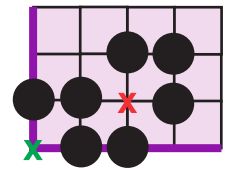
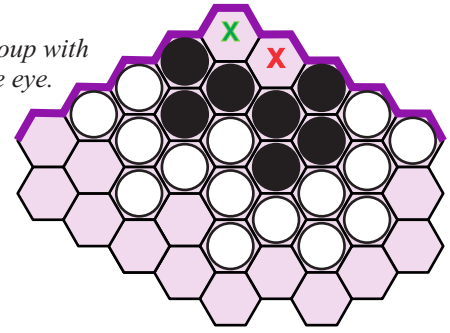


Diagram 11b: Go groups with an eye and a false eye.

Systems of two or more groups creating shared eyes between them are common in Go as well. Diagrams 11a and 11b show two possible such systems. While the eyes of Diagram 11a are genuine, the potential eye of Diagram 11b marked with an **X** is known as a *false eye*. Although placing a white stone there is currently illegal, if the White player later surrounds the upper-right component of the system, he will be able to play there and capture the component.

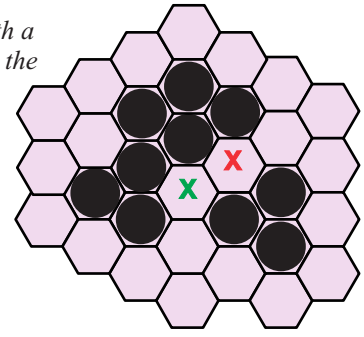
False eyes are common in Keil as well, and (unlike in Go) even a single connected group might have a false eye, such as the group in Diagram 12. The black group is externally surrounded by White. A White move in the cell marked with an **X** cuts the black group, capturing the right-hand component, and thus is not an illegal suicide move.

Diagram 12: Keil group with an eye and a false eye.



Diagrams 13a and 13b show two further examples of false eyes, without the surrounding white stones. In Diagram 13a, if the lower-right black group is surrounded by White, a White play at the **X** will capture the black group. In Diagram 13b, if White surrounds the right black group, a play at **X** will kill the right black group; if White surrounds the left black group, a play at **Y** will kill the left black group.

Diagram 13a: Groups with a false eye and a real eye in the centre.



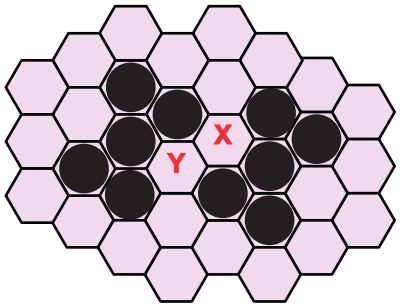


Diagram 13b: Groups with two false eyes in the centre.

Lastly we present an example of *seki*, which is a fascinating phenomenon shared by the games Go and Keil. As discussed above, a group with two eyes is unconditionally alive. However, one might occasionally come across a system of opposite-coloured adjacent groups that are safe from capture despite not having two eyes.

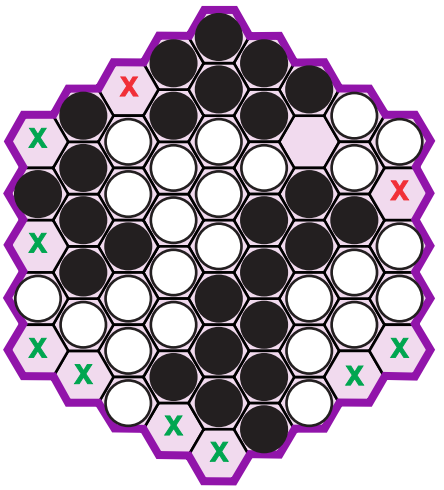


Diagram 14: Mini-game with a seki.

The mini-Keil game in Diagram 14 contains two black and two white living groups, each having two eyes, in addition to one black group and one white group along the right upper edge, each having one false eye only (marked by an **X**). An attempt by Black to capture the upper-right white group by playing on the unmarked empty cell is bound to fail horribly, because White could then follow by filling the left false eye, which would capture the top black group. A similar attempt by White to capture the top black group would painfully result in his own upper-right group being captured, when Black fills the right false eye. Therefore, this pair of eyeless groups is said to *coexist in seki*.

Ko in Keil

Ko is a situation where two alternating single-stone captures would illegally recreate the original board position. In such cases, after the first capture by one player, the opponent cannot immediately recapture, but must first insert a move elsewhere—a *ko threat*—to avoid the repetition. If this threat prompts the first player to neglect her original stone in the ko, her opponent will be able to capture it next, thus reversing the ko. These series of exchanges, known as *ko fights*, exhibit similar dynamics in Go and Keil, but are more common in the latter. Furthermore, because a single stone can be captured in two different ways, the interlocking of two single-stone captures produces various ko shapes. We present two of them: the simplest ko in Diagrams 15a and 15b, and a more peculiar one in Diagrams 15c and 15d. Cells that are forbidden to play on due to the ko rule are marked in red.

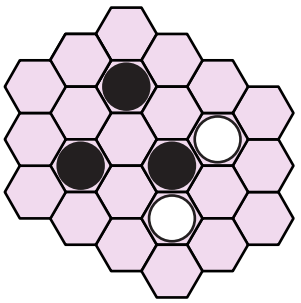


Diagram 15a: Ko position before capture.

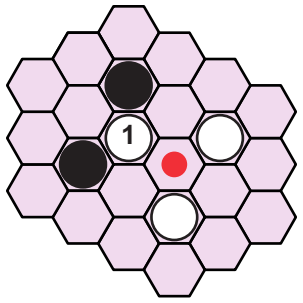


Diagram 15b: Ko position after capture.

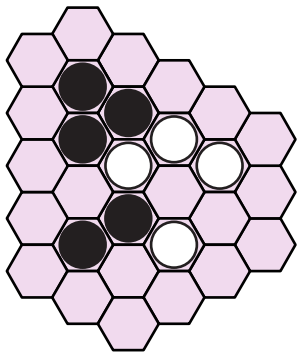


Diagram 15c: Ko position before capture.

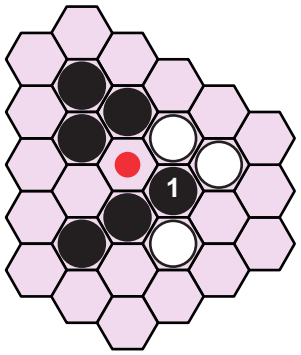


Diagram 15d: Ko position after capture.

In Go, a newly placed stone that creates a ko cannot be immediately captured, since the cell which is forbidden to play on is always a liberty of the newly placed stone. In Keil, on the other hand, the forbidden cell might not be a liberty after a subsequent enemy play on an adjacent cell, and the newly placed stone might be captured immediately. Diagrams 16a, 16b, and 16c show such a situation.

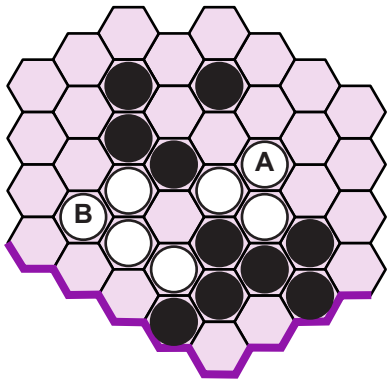


Diagram 16a: White needs to connect the two groups.

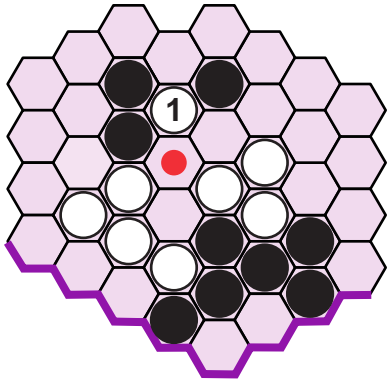


Diagram 16b: Black cannot recapture on the marked space.

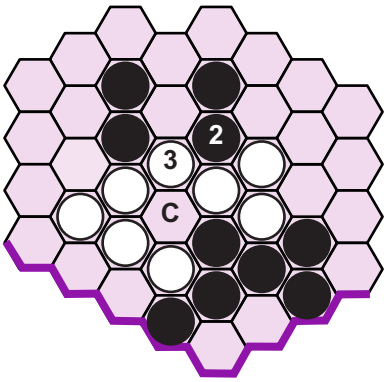


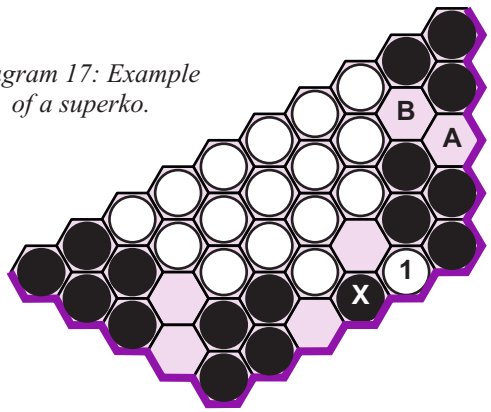
Diagram 16c: White connects the two groups.

In general, it is not wise to place a stone where it is captured immediately, but sometimes it can be an excellent tactical resource. If White wishes to connect his **A** and **B** groups in Diagram 16a (thus giving eyes to **A**), he can do so by sacrificing a stone at **1** and then playing at **3**, where there used to be a black stone. After **3**, the two original white groups are securely connected. Note that Black cannot capture **3** by playing at **C**, as that would be an illegal suicide move.

Keil's rules include the so-called *situational superko rule*, which declares it illegal for a player to make a move that results in the same whole-board configuration as any of her own earlier moves, rather than just the immediately preceding one. The American and other Western Go rule sets include the superko rule, while the more popular Japanese and Chinese rule sets do not. The superko rule builds on the simple ko rule by forbidding not only cycles with a two-move period, but any longer, non-immediate ones as well. As a result, Keil games are always guaranteed to end after finitely many moves, and draws by endless repetition are avoided.

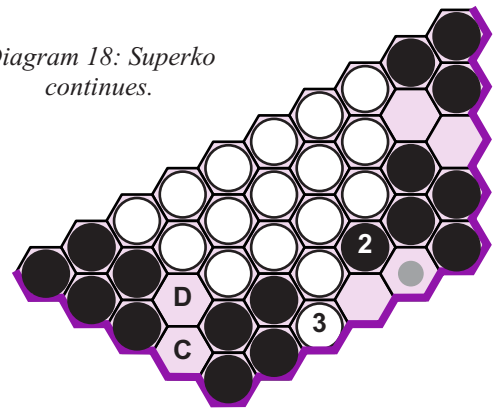
Since ko patterns require fewer stones in Keil than in Go, cycles with a period longer than two moves should be more common, but probably not by much. The author would be very interested to know of any such cycle occurring naturally during a game. We present two examples of long cycles in Keil that are prevented by the superko rule: the first is a four-move cycle that might somehow naturally occur, and the second is a beautiful (if a bit artificial) six-move cycle, analogous to the so-called triple ko in Go.

Diagram 17: Example of a superko.



In Diagram 17, there is a central white group with no liberties outside the scope of the diagram, flanked by unconditionally alive black groups to its left and right with eyes outside the scope of the diagram, and also by two more black groups in the lower and lower-right corners. After White **1** captures the black stone at **X**, the lower-right black group is in atari, and an answer by Black at **A** or B would not help. Since the ko rule forbids Black to reply at **X**, her only way to escape capture is to play **2** in Diagram 18.

Diagram 18: Superko continues.



White then plays **3** to put the lower black group into atari. Much as on the right before, a reply at **C** or **D** does not help Black, so Black **4** in Diagram 19 is the only protection. White would love to capture **2** and **4** by playing at **E,** but the superko rule forbids it.

Diagram 19: Superko continues.

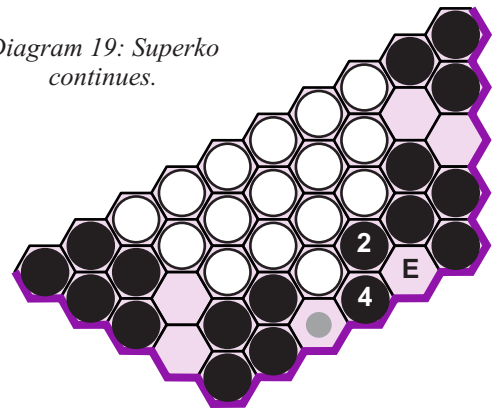


Diagram 20 shows a board section with only one black and one white group, both having no real eyes. White **1** has captured a black stone and rescued the white group from atari, while in turn putting the attacking black group itself into atari. It has also created a regular ko, marked with red. Next, Black will capture **A**, the only white stone in atari which is not protected by ko, and the white group will be in atari again. In response, White will capture at **B**.

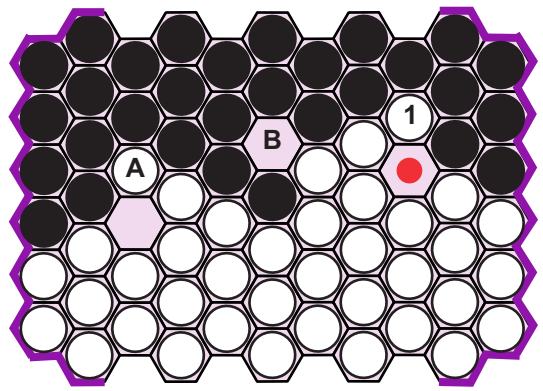


Diagram 20: Another superko example.

This ping-pong-like process continues until White **5**. At that moment, the superko rule will forbid Black to capture the white stone at B, as that move would recreate the position prior to White **1**. Instead, Black will need to pass or play elsewhere, thus allowing White **7** at **1** to capture all the black stones on the board!

Commented Partial Game

We present a partial mini-Keil game played on a base-six board, from the very beginning until the result is clear. We believe Keil's strategy and depth of play are very similar to Go's, even though the supporting tactics are naturally different. The example game shown here is thus very tactical, even compared to a typical small-board game, and does not aim to delve into the game's strategic assets. We are all beginners in Keil at this stage, so the game is not intended to be illustrative of the best play.

In Diagram 21, Black **1** starts at the exact centre of the board. On bigger boards, this would probably not be a very good idea, but, on the base-six board, the centre makes a decent opening because it has a non-negligible influence over the edges in all directions. White **2** follows with a lower stone, on the third line from the upper-left edge, which creates a much stronger position at its edge, compared to Black **1**, but has negligible influence over further parts of the board. Black **3** follows, too, with a stone on the third line, now from the upper-right edge, relatively close to **1**, in order to prevent White from easily expanding to the right later. White **4** then aggressively attaches to the centre stone, and Black **5** puts White **4** into atari (a third black stone at **A** would capture **4**).

In Diagram 22, White **6** protects **B**, Black **7** keeps **B** in atari, and White **8** protects again. Black **9** does two things—protects against a potential white stone at **C** (which would put both **7** and **D** in atari), and increases Black's influence on the lower side. White **10** follows by attacking **E**.

In Diagram 23, Black **11** protects the threatened stone, and White **12** strengthens the white stone at **F**. Black **13** blocks White from expanding toward the lower-right corner, while also laying the groundwork for a potential double-atari with another black stone at **G**. White **14** prevents Black's double-atari plan. Black **15** follows by attacking **14**.

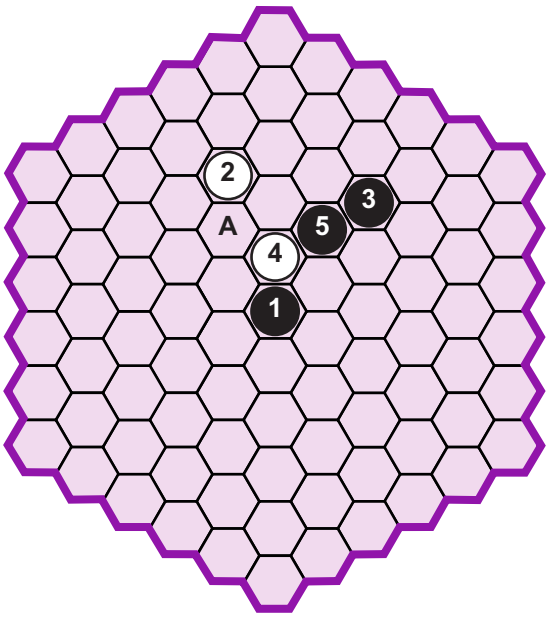


Diagram 21: Opening moves.

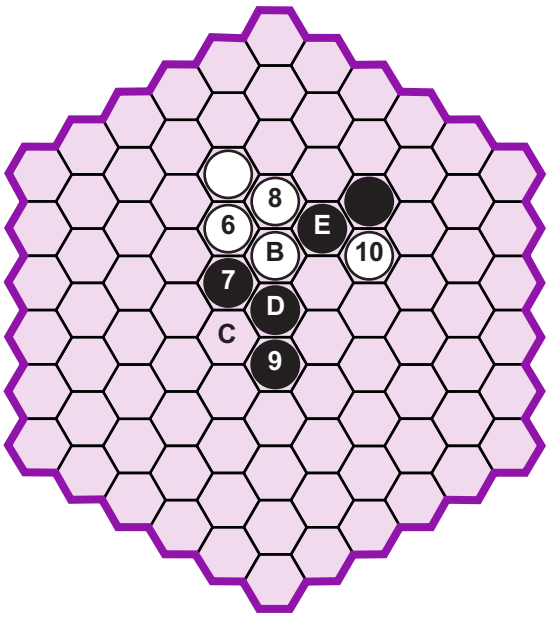


Diagram 22: Battle in the centre.

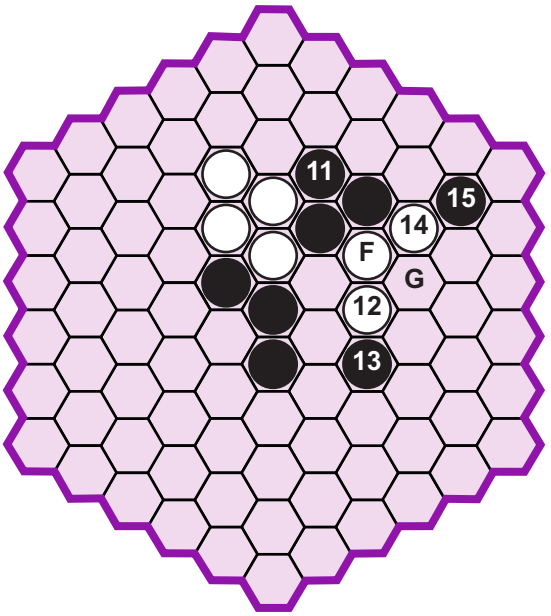


Diagram 23: Extension to the right side.

In Diagram 24, White **16** protects the threatened stone, and Black **17** protects the adjacent black triangle (without it, a white stone at **H** would put the triangle into inescapable atari). White **18** is a sente move meant to protect the right-side white rhombus from being threatened by a potential black net, while creating a significant stronghold near the lower-right corner. Black **19** protects against atari and builds an influential black wall. White's attempt to expand toward the left with White **20** is blocked by Black **21**, which puts **20** into atari. White has two possible ways to protect against the threat to **20**—by capturing **J** or by White **22**. The chosen move strengthens White's presence around the lower-right corner, and might later enable White to expand towards the left, despite **21**. White has made a good strategic choice here. At this moment, Black should protect **21** in order to keep White away from the lower side and start using her strong central wall to gain territory on the left.

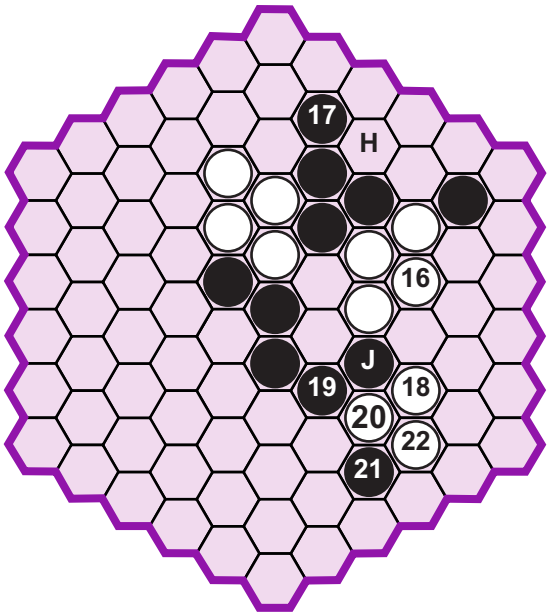


Diagram 24: White takes the right side.

In the game, however (Diagram 25), Black's invasion of White's lower-right side with Black **23** comes at the wrong time. Feeling strong enough in the area, White ignores **23** for a while and takes the chance to expand to the left with White **24**, which puts the black stone at **K** into atari. Black **25** separates the two right-side white groups by protecting **J**. White **26** threatens to capture **23**, while ensuring the adjacent white rhombus has enough liberties to stay out of danger. Black **27** protects the threatened **23**, thus keeping the black threat on the right side viable. White **28** captures the black stone at **K**.

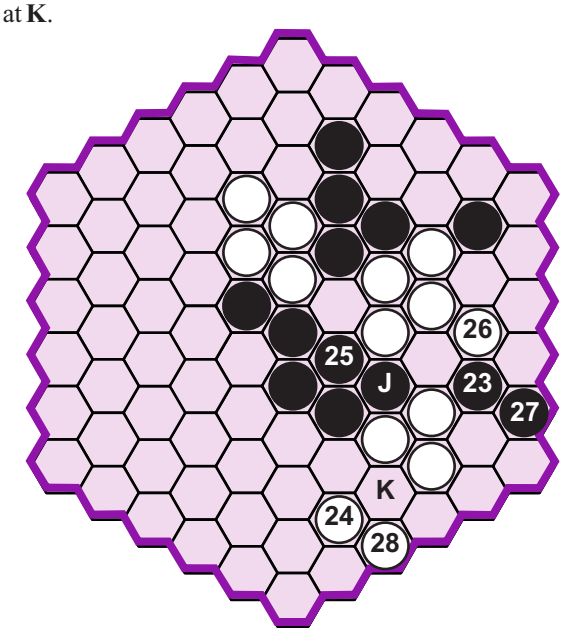


Diagram 25: Black invades the right side—a strategic mistake.

In Diagram 26, Black **29** strengthens the two black stones in the lower right by forming the triangle shape, which is the smallest connected group. White **30** looks like it is in atari, but it is actually safe because a Black capture at **L** is illegal. A White play at **M** now would be dangerous for Black, as the black triangle would be in atari. Black could capture at **N**, but then a White play in the location of Black **31** would in turn capture at **N** and continue the pressure—another White play at **M** would now be safe from capture. Black **31** defends against this line, while reducing by one the liberties of the upper-right white group. Nevertheless, White may capture **31** at **P**, which will result in a ko.

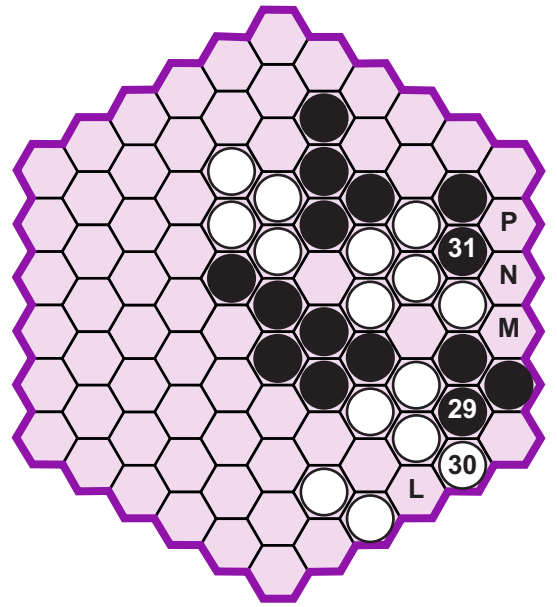


Diagram 26: Black tries to live on the right side.

In Diagram 27, White **32** captures the black stone at **Q**, initiating the ko. Black cannot recapture at **Q**. If Black recaptures at **R** instead, White will in turn capture by playing at **Q**, and Black's chances will be over. Black **33** is a ko threat. The white rhombus still has technically four liberties, but a Black play now at **S** would take three of them at once and catch White in a net. White does not immediately capture the black stone **T**. Instead, he defends the group with White **34**, which threatens the black stone at **U**. White **34** is a big play, as White also starts to develop territory on the large and empty left side.

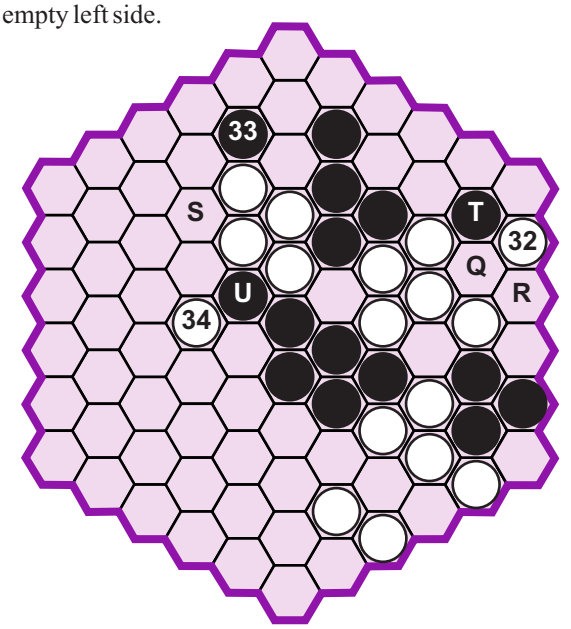


Diagram 27: A developing ko fight.

In Diagram 28, Black ignores the threat to the stone at ***U***, and instead Black **35** recaptures in the ko. White **36** captures the black

stone at **U**, which offers substantial compensation. Black **37** tries to escape with the central black group, but is blocked by White **38**. Black **39** does not connect the upper and lower black groups, but it puts the upper-right white rhombus in atari.

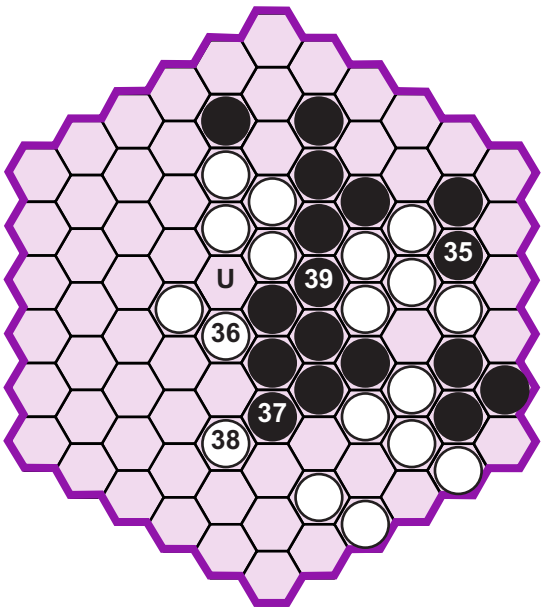


Diagram 28: The ko fight continues, with White compensation.

In Diagram 29, White **40** recaptures in the ko. Black **41** puts **V** in atari, but is not a large enough threat to win the ko.

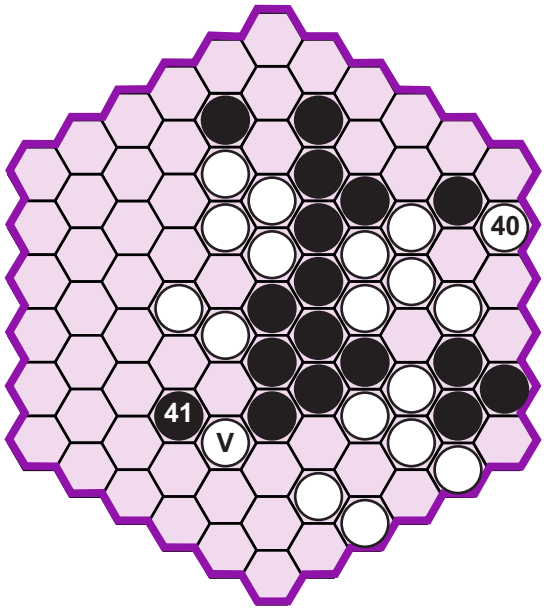


Diagram 29: The ko fight continues with a Black threat.

In Diagram 30, White **42** captures, and locks up the right side. The right-side black triangle is dead. In compensation, Black **43** captures, strengthening the lower-central black group. White **44** pushes back against this black group, increasing White's hold on the left side, too. White has potential territory on both left and right sides that easily exceeds any territory that Black can achieve on the upper and lower sides. Black resigns.

♖♘♗♔♕♗♘♖

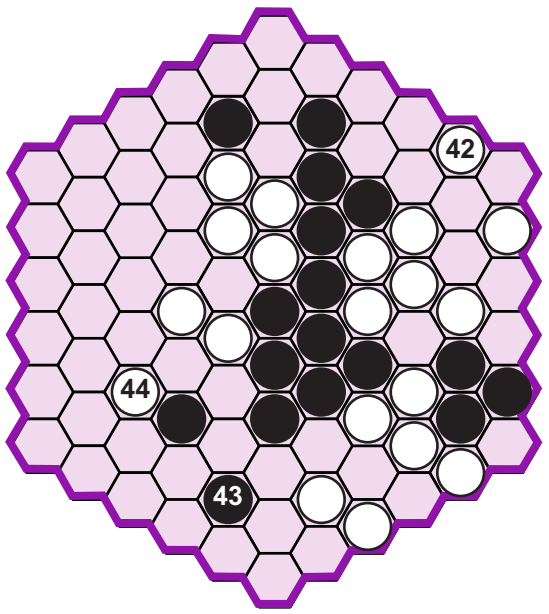


Diagram 30: White wins the ko and takes the left side, too.

The play of this small game of Keil is not supposed to represent best play, as mentioned above, but it does at least illustrate some of the possibilities. There is much, much more to discover. For example, on a full-size, base-ten board, we may consider good locations for handicap stones, perhaps a maximum of seven, one for each corner and one in the centre. Before this, however, we would like to investigate how close to the corner an isolated black stone could be, while still permitting a successful, minimal corner invasion by White. We look forward to hearing of Keil discoveries from the readers! ■

Keil's designer, Luis Bolaños Mures, was born in 1987 in Spain but has been living in Germany for a few years now. As a game designer, some of his recurring interests include solving the deadlock problem in square-board connection games and looking for novel uses for Go's surround-capture mechanism. His game Veletas is available from nestorgames. Among other games designed by Luis are Ayu, Xodd, and Yodd.

Keil seems to me to be the ideal revisioning of Go on a board consisting of hexagons (when playing on the spaces) or equilateral triangles (when playing on points, as in Go). Although we have put this article under the heading "Hexagonal Go," Keil is its own game. Obviously, as Lear points out, there are many parallels with Go. However, I am particularly looking forward also to the discovery of tactical or strategical motifs that have no obvious parallels in Go! Our thanks to Lear Bahack for this fascinating first investigation of Keil.

The advantage of representing Keil as played on the hexagonal spaces is that it seems intuitively obvious that two adjacent stones can be "squeezed" and thereby disconnected, as in Diagram 1b, where the two white stones disconnect the two black stones. On its own, the apparent "squeezing" of stones apart is a good reason for playing Keil on the spaces rather than the points. However, when the points are played on, as in Go, the lines on the board emphasize the connections between pieces. In Go, whenever one stone is placed next to another, as in the diagram below left on page 45, the two stones are connected and cannot therefore be captured separately; the two stones must be captured together. The two stones are connected directly along a line of the board, as shown in the diagram below right on page 45.

(Continued on page 45.)

Halma postcard (c. 1870-1890).

All in the Family: Traversi and Sudden Death Grasshopper

by Andrew B. Perkis

Super Halma is Halma with "super jumps"—a piece can jump another piece any number of vacant spaces away, provided it can land the same number of vacant spaces beyond the jumped piece. Ralf Gering has shown that the provenance of "Super Halma" predates the name. It was first described in 1963 as "Halma mit Weitsprung" ["Halma with long jumps"]. Nevertheless, Super Halma is an apt generic term, and I propose retaining it as such.

I have adopted "Traversi" as the new name specifically for 10 x 10 Super Halma (*AG15*), focusing not on the game's special feature of jumping but on its objective. In this article, I shall be looking more closely at certain features of play in Traversi after introducing another member of the Super Halma family, Sudden Death Grasshopper.

Primitive rules for Halma and Super Halma permit players to set up unbreakable blockades, spoiling the game. The article in *AG15* contained a detailed proposal for a competition version of Super Halma that thwarts spoiling tactics. When I worked on Traversi, my intention was that accompanying anti-spoiling rules would have minimal impact on the game. At the same time, I was aware of an alternative approach which had fascinated me for some time–ever since I began to think about the full-camp rule as applied to standard Halma. [*See AG15 and below for an explanation of the full-camp rule.*] I discuss this alternative approach below for a small Halma variant that I call Sudden Death Grasshopper.

Just as one can take pains to prevent spoiling, but without altering the character of the game, one can also use the spoiling issue as a means to add novelty. With regard to the latter, the full-camp rule makes a good starting point for Sudden Death Grasshopper, mainly because the full-camp rule does not quite work and therefore demands either to be set aside or elaborated.

8 x 8 Grasshopper

Primitive 8x8 Halma is called Grasshopper. The smaller "grasshopper" version of Halma is interesting since, although games are short, puzzling blocked positions may occur along the way. Diagram 1 shows a typical position.

Blue to play might continue with e3-c5-a7 or d4-f6-d8, starting to open up the position. More interesting is d2-f4 which parries both of Green's reciprocal threats (d6-f4-h2 and e5-c3-e1). After Blue's d2-f4, Green might do best to break symmetry with e4-g4.

Nevertheless, an anti-spoiling rule must be adopted for Grasshopper. The fine-print rules suggested in *AG15* could be satisfactorily employed to prevent spoiling. I have chosen instead to modify the full-camp rule.

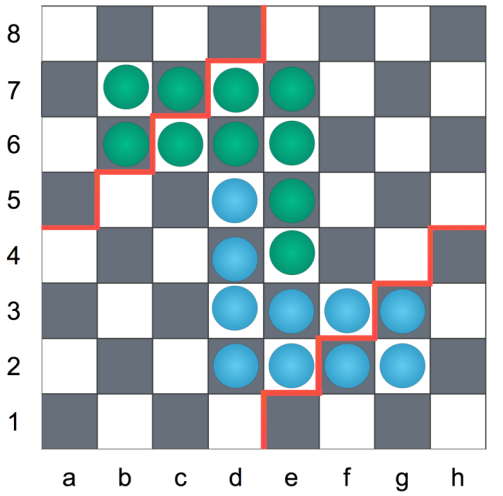


Diagram 1: Blocked position in Grasshopper.

The full-camp rule states, "A player wins when all the opposing base points are occupied, at least one of them by a piece of his own colour" (Parlett, 1999). The basic full-camp rule does not work against the "holey fortress" strategy. See Diagram 2, where fortress pieces are marked.

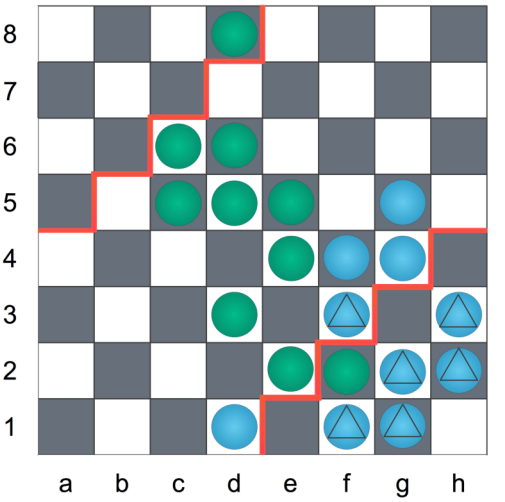


Diagram 2: The "holey fortress" strategy.

Sudden Death Grasshopper is Grasshopper with super jumps and a modification of the full-camp rule that nullifies the holey fortress strategy. While neither super jumps nor a fancy anti-spoiling rule would alone improve Grasshopper, a combination of these can be used to produce a distinctly different game, fast and dangerous;

and also a great training game if you wish to develop the ability to see a greater portion of the myriad possibilities that super jumps offer.

Sudden Death Grasshopper (SDG)

In this "sudden death" version of Grasshopper, the following simple elaboration of the full-camp rule prevents successful spoiling with the holey-fortress strategy. Any enemy pieces still in their own camp count two points each for the attacker if she has entered that camp. A player wins by entering the enemy camp and attaining ten or more points. Attacking pieces in the enemy camp count one point each. A glance at Diagram 2 will confirm how this works. Under these rules, Green's last move, d2-f2 has already won him the game as he acquired 11points on entering the goal camp.

With super jumps allowed, Grasshopper loses some of the strategic interest due to blocked pathways. At the same time, it becomes an even faster game. Add to this the above elaboration of the full-camp rule, with sudden death as a "side effect," and even though there is clearly no forced win, threats can come into play very early, making games of SDG hair-raising from the very start.

Starting position

Sudden Death Grasshopper is a form of Super Halma played on an 8x8 board. As shown in Diagram 3, each player starts with 10 pieces in his home camp, the boundary of which is marked by a red line.

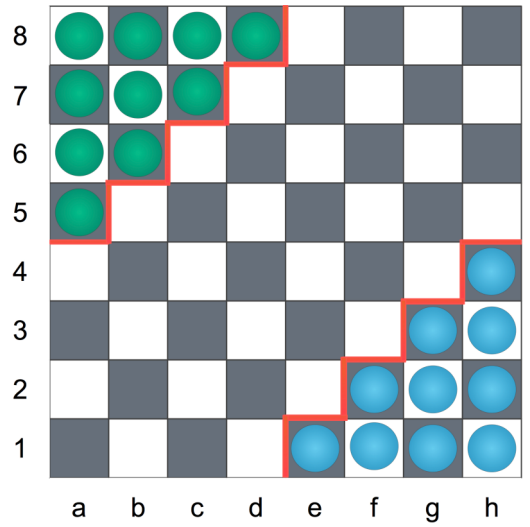


Diagram 3: Board with pieces in starting positions (for Grasshopper and SDG).

Play

Blue moves first, and thereafter players take turns to move. There is no passing, and only one friendly piece may be moved per turn of play. Moves are of two types: step moves and jump moves. A player may not make a move that combines a step and a jump.

Step Move: A piece may be moved one space in any direction, orthogonally or diagonally, into an empty space.

Jump Move: A piece may jump over any other piece any number of empty spaces away, either orthogonally or diagonally, provided it can (and does) land the same number of empty spaces beyond it in a straight line. The shortest such jump (in which the number of intervening spaces is zero) is the standard jump of normal Halma. Multiple jumps can be made, but to start or continue jumping is optional.

As in Halma, no captures are made, and pieces cannot move onto occupied squares. However, pieces may enter and exit both camps without restriction.

Object

Any enemy pieces still in their own camp count two points each for the attacker if he has entered that camp. Any attacking pieces, once entered, count one point. A player wins by entering the enemy camp and attaining 10 or more points.

A player making a move that gives his opponent 10 or more points is required to take the move back and play again.

Repetition and Draws

A player may claim a draw if the current position has occurred for at least the third time with the same player to move.

The Yellow Frog System (YFS)

SDG is very entertaining but games are short with a very low blunder threshold. Even play-testing by email resulted in very, very short games.

Diagram 4 shows how my first game ended.

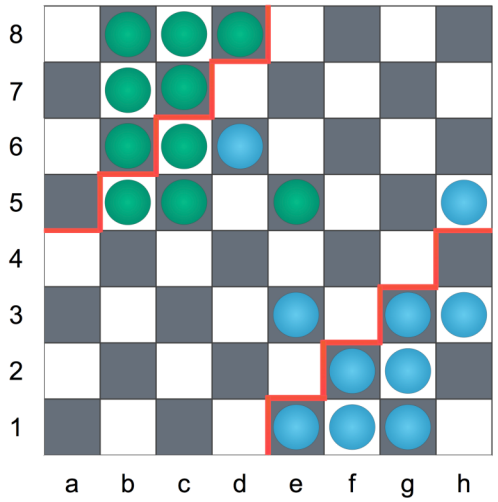


Diagram 4: Blue to play.

In this position, Green has just played 4…a6-b5 threatening e5-f4 winning (if 4….e5-f4 had been played immediately, then 5.g3-e5-a5 wins). Blue now blundered by playing 5.f1-f3. Green went ahead with 5….e5-f4, and Blue resigned, since the threats of f4-h2 and b6-d4-h4 ensure victory next move. In fact, Blue had a much better fifth move. Can you spot it? The solution is on page 16.

In order to investigate what non-miniature SDG games might be like, we decided to employ the Yellow Frog System. I invented this system in the mid-1990's to increase the degree of competitiveness possible in "skittles" games. Such friendly games can often deteriorate in a predictable way: since the psychological stakes are lower, blunders are more likely to occur, and also the blunderer is more likely to be allowed to play again. Whenever this happens, there is a progressive lessening of concentration.

When I first used this system with a Chess-playing friend, we picked up yellow toy frogs to use as "currency." When a player wished to play a move again—usually after his opponent's

reply—he would simply pay one yellow frog (to the box, not his opponent) to take the position back a move. If we decided to each have **x** chances to take moves back during the game, then we would start with **x** yellow frogs each.

The YFS has several applications, including playtesting games, especially those with a low blunder threshold. At a certain point in the investigation of a new game, "testing by fire" (i.e., via properly competitive play) becomes the swiftest means to find out if the game really stands up. With a new and fascinating game, however, just "seeing what happens" can be such a dominant interest that it counteracts an ultra-competitive frame of mind. Nevertheless, harnessing whatever competitive energy can be mustered is always going to make the investigation of a game more thorough, and this is where the YFS really comes in to its own.

The virtue of the YFS is simply that blunders are taken back within the agreed playing conditions, thus not leading to an inevitable and progressive slackening of concentration.

Using this system with SDG meant we could swiftly get some idea of what games other than miniatures might look like. (Our play did improve with practice: after a few games, we were happy to play with only one yellow frog each!)

We found that in most games, sudden death ceases to be a factor after seven or eight moves, which also tends to be the moment in the game when a rapid transfer of pieces into the opposing camps begins.

Diagram 5 shows a position from the last game my opponent and I played.

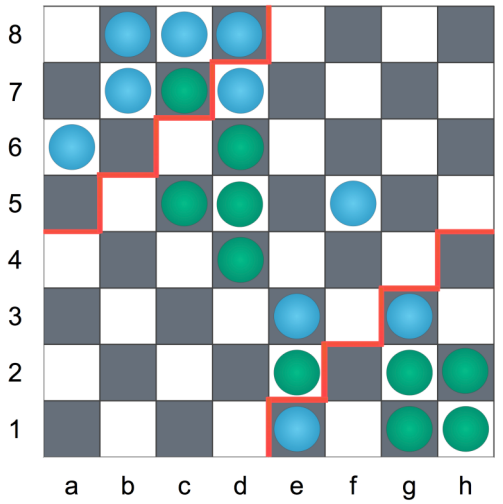


Diagram 5: SDG position after Green's twelfth move.

In what could already be regarded as a late middle-game position, Blue, to play, looks to be slightly better placed. His problem is the piece at e1, which is in danger of being left behind. 13.e1-d2 probably wins. Instead, Blue played 13.g3-c3 and after 13….d6-b4-d2 (rather than 13….d6-b4-d2-f2) was in trouble. See Diagram 6. Effectively, Green was able to turn the game around simply by holding back one piece. The game ended:

14.e3-a3-e7 c5-e3
15.e1-d1 d2-f2
16.d1-d2 d5-d3-f1-h3
17.d2-b4 e3-e1
18.f5-e6 d4-e5
19.e6-d6 e5-f4
20.d6-c6 c7-d6
21.Resigns.

Green wins with two moves to spare.

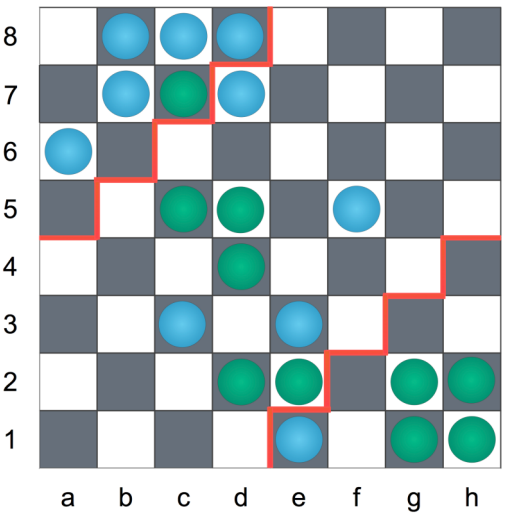


Diagram 6: Position after 13…d6-b4-d2.

Traversi: Late Middlegame Decisions

In Traversi, decisions in the late middlegame can also be critical. This is the stage of the game where interaction between forces is dwindling but still significant. As in the above example in SDG, a single straggling piece is often of key importance. A weakness such as this can be brought about if players have needed to exit their home camp quickly to avoid being trapped there.

In Diagram 7, from a rapid-play game, both of us had made prodigious efforts earlier in the game to harass each other's stragglers. Blue seems to have a slight edge. Although more Green pieces have got through to their goal camp, ten pieces compared to seven, Green's badly placed pieces, particularly the one on h10, are likely to cause him more problems than any comparable blue laggards will for Blue. However, Green's last move, 35…f9-h7, threatens h10-h4, after which the final race would be very close. What should Blue do about this?

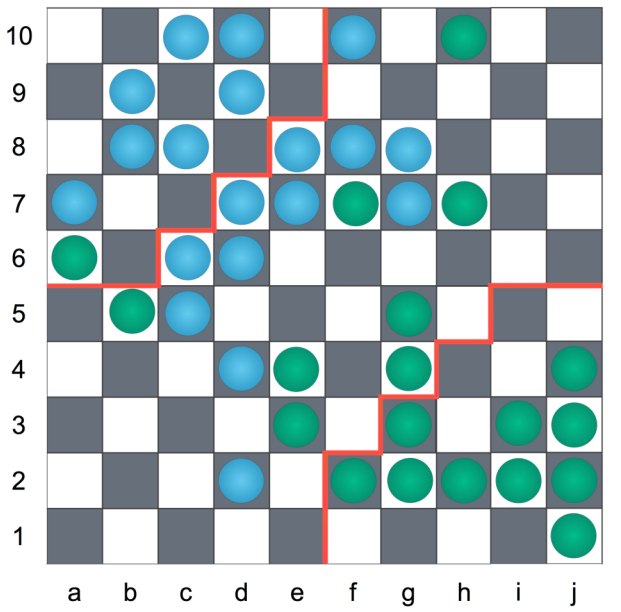


Diagram 7: Blue to play.

In the game, Blue played 36.g7-h8? and went on to win fairly comfortably after the reply 36…b5-d5-f3-f1?! Nevertheless, 36.g7-h8 is not a good move as the more testing retort 36….h10-g9! would have shown.

If Blue returns 37.h8-g7, then 37….g9-h8 threatens again to reach h4. Blue has no good way to oppose this and has achieved nothing in the meantime. [If Blue leaves the piece on h8 and simply commences to race, say with 37.b8-b10, then Green plays 37….e4-e2-i6, threatening to speed through fairly quickly on the "j" side; if Blue now retreats 38.h8-g7 Green plays 38....e3-d3, holding up Blue's piece on d2. (37….e3-d3 immediately would benefit Blue, after the reply 38.d2-e3, with sufficient routes thorough to a9 or c9.)]

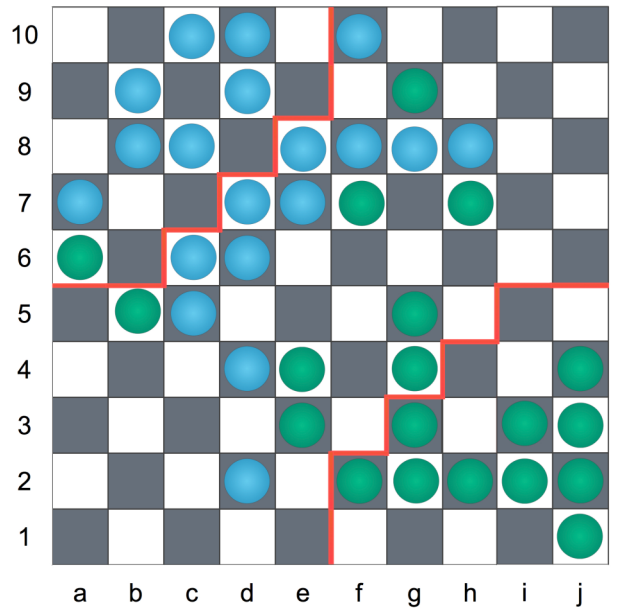


Diagram 8: Position after 36.g7-h8 h10-g9.

The move 36.g7-h8 had looked better to me than, say, 36.d2-f4-h6-h8 since, with the latter move, Blue adds to the cluster of seemingly misplaced pieces in the h8 vicinity. But, this proves to be a superficial objection.

Before returning to the question of Blue's best move, a little diversion might be useful.

Parity Considerations

Kerry Handscomb pointed out to me that using a four-coloured board with patterning as shown in Diagram 9 makes it much easier to see moves instantly. One can size up the possibilities much more quickly, since at each stage of any jump move, a piece will be in contact with the same coloured squares.

Thus far, I have recommended converting International Checkers boards for Halma, without using the additional colours. A few games on such a board is sufficient practice to allow swift recognition of available moves, so it is debatable how much the four-coloured board has to offer in that quarter. However, there is another, subtler consideration regarding which the four-coloured board might really be a more lasting and necessary help.

Looking at the diagram, we can see that, at the start of play, both players have five pieces placed on black squares and five pieces placed on lavender squares. In addition, Blue has six pieces placed on white squares and three pieces placed on yellow squares; while for Green, this is reversed, with six pieces on yellow squares and three on white squares. Thus, each player has three pieces "off colour" at the start of play. Three of Blue's pieces on white squares must switch to yellow squares. Conversely, three of Black's pieces on yellow squares must shift to white squares.

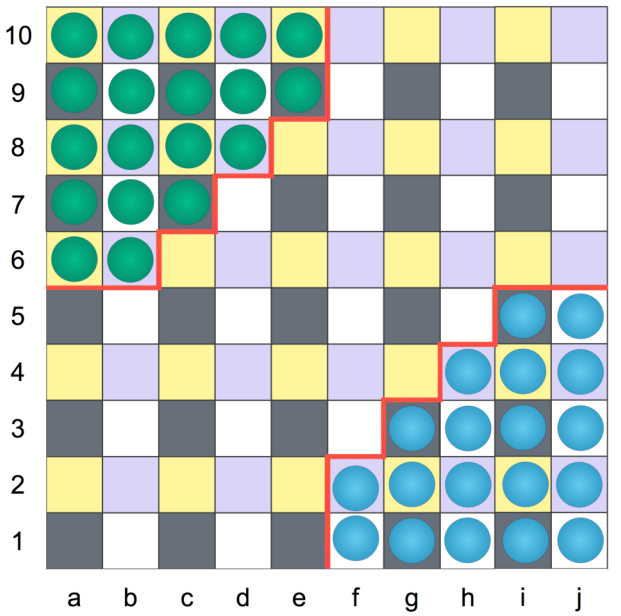


Diagram 9: Starting position on four-coloured board.

During most games, the state of parity alters only slightly, since both players tend to avoid making too many step moves. Nevertheless, in some games, a lot of step moves can occur. Some of these may be made in the attempt to set up jumps for one's self or to block jumps for the opponent, but most tend to be made while trying to box in enemy stragglers or because life has been made uncomfortable for one's own stragglers.

During the late middle game, the moment comes when it is advisable to check up on one's state of parity. Looking at the position in question on a four-coloured board, in Diagram 10, we can see that Blue and Green each have only two pieces off colour. (Blue has two extra pieces on lavender squares and is one short each on yellow and black; Green has two extra pieces on yellow and is one short each on black and white).

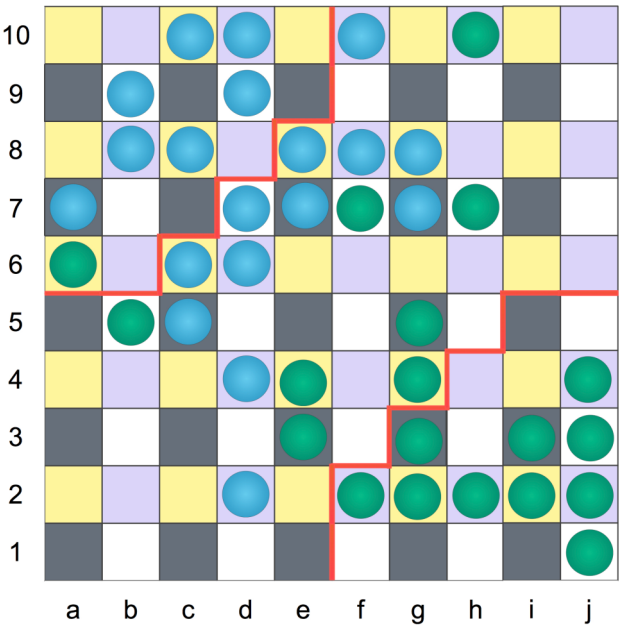


Diagram 10: Diagram 7 on a four-colour board.

(Continued on page 44.

Neue Dame

"Most Interesting Game of Present Times"

by Ralf Gering

Neue Dame (New Draughts) was created by Heinrich Adolf Schmidt (often misnamed Heinrich Adam Schmidt) and published by him in a company called Gesellschaft für den Vertrieb moderner Spiele (Society for the Distribution of Modern Games) in 1904. The inventor hoped that his game would get an international following and so the rules were also given in English, French, Spanish and Dutch. However, his hopes were never realized. Today Neue Dame is one of the most obscure board games and has thus become a much sought-after collector's item. It was briefly mentioned in *Spiele der Menschheit: 5000 Jahre Kulturgeschichte der Gesellschaftsspiele* (Urich Schädler, editor) in 2007. On the Internet the game was described complete with rules only in a few discussion groups such as the Facebook group World of Mind Sports and some now defunct Yahoo groups. It does not even have a BoardGameGeek entry of its own yet.

Neue Dame is one of the first stacking games. Only Bashne (1875 as of first description; see *AG1*), Towers of Hanoi (1883) and the Diplomaten-Spiel (1895) are older, while Lasca (*AG11*), a much better known stacking draughts designed by the German World Chess champion Emanuel Lasker, is seven years younger. Nothing is known about its inventor except that he lived in the small town of Hildesheim in northern Germany. The game was presented at the Leipzig Trade Fair in Mädlers Kaufhaus in 1904. At that time an advertisement claimed that Neue Dame is "... the most interesting game of present times." It has been assumed that the inventor and his game publishing business belonged to a larger reform movement, which among many things also propagated vegetarianism, communal living, and nudism. Some rules of the game are also found in Central-South German Draughts and Italian Draughts, while some terms might have derived from Salta (*AG8*). Other rules appear to be unique. In 1906, there were still some Neue Dame advertisements in German magazines, but Heinrich Adolf Schmidt now also sold Ideal (invented in 1905), a mix of skittles and roulette. On April 4, 1908, the pieces for playing Neue Dame were protected as a utility model, which is a sort of a patent for ideas, at the Imperial Patent Office in Berlin. After that nothing is known about the game's history or its inventor.

Note: The designer should not be confused with Heinrich Schmidt (born in 1902), the first National Socialist mayor of Hildesheim. Schmidt is the second most common German surname, the German equivalent of "Smith" in the English-speaking world.

"Draughts is not merely an idle amusement. Several very valuable qualities of the mind, useful in the course of human life, are to be acquired or strengthened by it, so as to become habits ready on all occasions." ~ Benjamin Franklin

Rules

The English rules of the early 1900's appear to be lost. The following rules are based on the German original.

Neue Dame is played on the dark squares of a Chess board with each player owning 12 checkers. Originally, the pieces had two differently coloured sides (not unlike Reversi/Othello pieces): green and red or black and white. At the start of the game the dark side, that is green or black, was showing upwards. We have kept this colour scheme in the puzzles below, for historical accuracy, where the players are called "Green" and "Black." However, it is recommended actually to play the game now with ordinary checkers, with the bottom sides somehow marked so that they can be distinguished from their upper sides.

Initially the pieces are placed on the dark squares of the first three rows of each player. In all of our diagrams, Green has started with pieces on the bottom three rows and plays up the board, whereas Black has started with pieces on the top three rows and plays down the board. The board is placed so that the bottom right square on both sides of the board is white. The German rules did not say who moves first, so it must be assumed that it did not matter.

The unpromoted pieces called "Steine" (stones) in German, with green or black side face up, move one square diagonally forward. They capture by the short leap forwards, as in Anglo-American Checkers.

If an unpromoted piece reaches the farthest row forward, it becomes a "Dame" (Lady). Ladies move any number of unobstructed squares diagonally forwards or backwards and they capture by the long leap diagonally in any direction, as in International Checkers [*see AG7 for details*].

Captured pieces are placed under the pieces that jumped over them, thus forming columns ("Türme," literally "towers"). If a piece jumps over a column only its uppermost piece is captured.

Columns belong to the player who owns the piece on its top. They move and capture like their upper-most piece, which may also promote to a Lady if it is yet unpromoted and reaches the last row. Columns always move like a unit and may never be broken up to move. Some more rules concerning captures:

- Capturing is mandatory.
- Captures must be continued as long as possible.
- A capture by a Lady takes precedence over a capture by an unpromoted piece.
- If a Lady can capture in more than one way, the nearest piece must be captured first.
- Finally, a Lady must stop on the square immediately behind the last piece taken'

The game ends when all columns are owned by one player. The winner gets as many points as there are Ladies on the board. If no piece was promoted to a Lady, the winner gets 1/2 point (a house rule not given in the original rules). In case of a draw, each player gets 0 points. The original rules did not mention that it is allowed to resign a game. Obviously players were supposed to play to the bitter end. ■

Notation

The chess notation is used. "D" denotes a "Dame," that is a Lady.

References

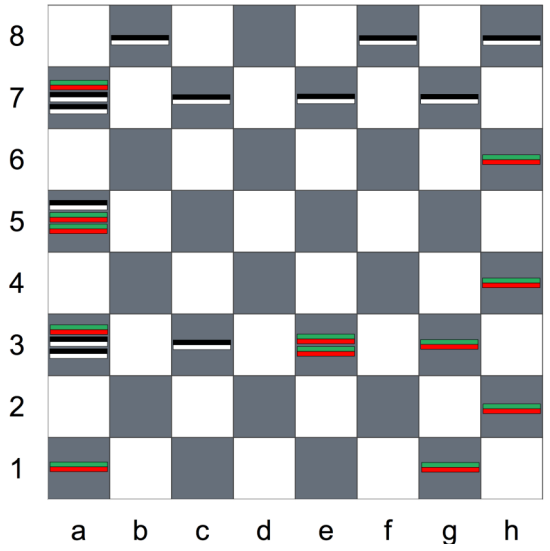
- Ralf Gering (June 2019). *12 Neue Dame Puzzles*. Germany [self-published e-book]
- Ulrich Schädler (2007). *Spiele der Menschheit: 5000 Jahre Kulturgeschichte der Gesellschaftsspiele*. WBG (Wissenschaftliche Buchgesellschaft), Darmstadt (Germany)

Acknowledgements

- Dr. Marion Faber, Spielzeugmuseum in Nürnberg (Germany), for initiating my interest in Neue Dame in November 2008.
- Rudolf Rühle, game collector in Bonn (Germany), for sending me a scan of the game's rules shortly thereafter.
- Dr. Ulrich Schädler, game historian and director of the Swiss Game Museum in La-Tour-de-Peilz (Switzerland), for pointing me to a Neue Dame advertisement.

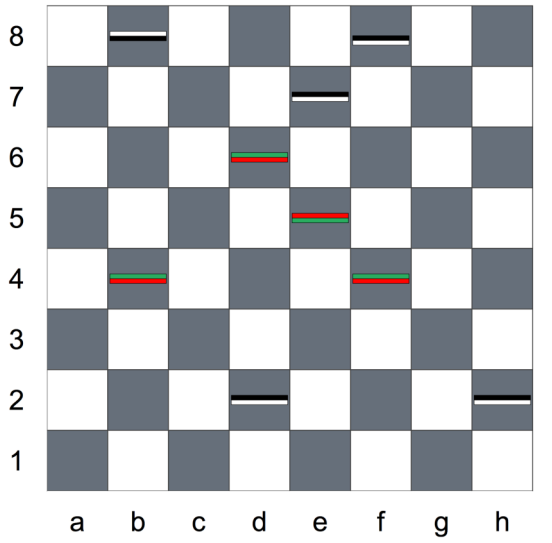
Puzzles

Here are four Neue Dame puzzles. Note that the diagrams for Puzzles 2 and 3 show less than 24 pieces. The remaining pieces are stacked beneath other pieces in such a way that they do not alter the solution. The solutions are on page 1.

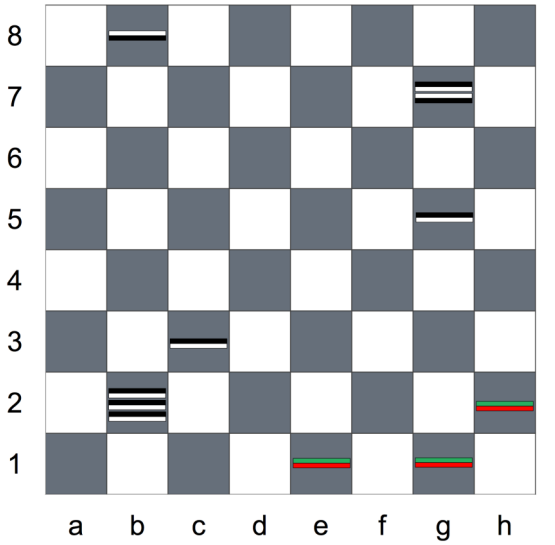


Puzzle 1: Green to promote one of his pieces (Ralf Gering, 2014).

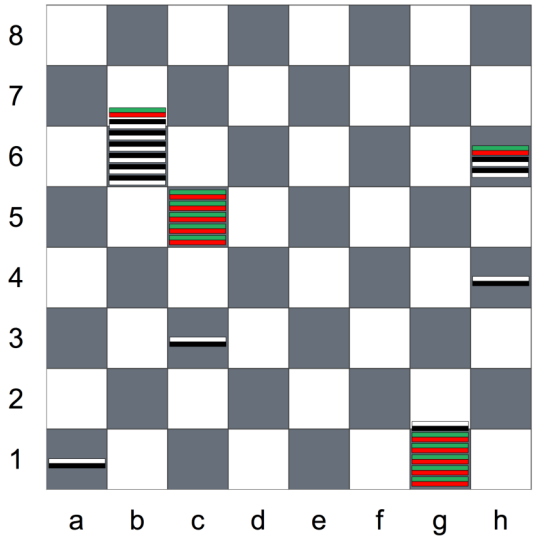
Note: The Battle of Dinklar (Puzzle 4) was fought in 1367, between the Prince-Bishopric of Hildesheim and an alliance of the Guelphs. It became famous because the militarily inferior forces of the Prince-Bishop Gerhard von Berg won due to a courageous night attack.



Puzzle 2: Black has just moved d8-e7, now Green to win (Ralf Gering, 2019).



Puzzle 3: Green to win (Ralf Gering, 2019).



Puzzle 4: 'Battle of Dinklar,' Green to win (Ralf Gering, 2019).

Chu Shogi is thought by some chess and shogi variant aficionados to be the greatest of the historic large chess variants. Chu Shogi is still played by a small number of hobbyists in its native Japan, and by a few other enthusiasts around the world. The Chu Shogi Lion is a special, powerful piece that is usually the focus of attack and defence. Chu Shogi deserves to be better known, although the traditional piece designations with kanji characters will impede its further spread beyond Japan.

Unlike Shogi itself, in which pieces can change sides through capture, the Chu Shogi pieces do not change sides, and Chu Shogi is in this sense closer to Chess than it is to Shogi. For this reason, Shogi-style uniformly coloured pieces are not strictly necessary for Chu Shogi, and pieces of the two sides could be distinguished by colour. Most Chu Shogi pieces promote, and so they do need to be flat and reversible. However, some representation of the moves, as in the diagrams below, would, in my opinion, make the game much more accessible. Purists would always still be able to use traditional pieces inscribed with kanji characters.

We ran columns on Chu Shogi in AG4, AG6, AG7, *and* AG8. *We never included the rules, and the Chu Shogi rules are too extensive for us to reproduce here. However, Chu Shogi rules and identities of the pieces in the puzzle opposite can easily be checked on the Chess Variants website:* https://www.chessvariants.com/rules/chu-shogi.

Chu Shogi was introduced to the non-Japanese world by George Hodges through the sets that he manufactured and sold and through his book, Middle Shogi Manual *(1992, 2nd. edition 2002). George's book contains the rules, some annotated historical games, discussions of strategy, and a large collection of mating problems. Some of these problems remained unsolved until they could be tackled by computer engines. This is where H. G. Muller enters the arena, because his Chu engine, HaChu, has solved many of the difficult problems.*

Please feel free to try the puzzle opposite, which is one of the historical puzzles recorded in the Middle Shogi Manual. *We will present the solution in the next issue. The first correct solution emailed to me before* AG19 *goes live, in Spring/Summer 2020, will receive a free copy of the print-on-demand edition of* AG18.

I hope even non-players of Chu Shogi can get a sense of the game from this puzzle. Of course, one Chu Shogi problem alone cannot properly illustrate the attractions of Chu Shogi, but perhaps it will inspire people to take a closer look at this ancient Japanese "Game of Lions."

Dr. Harm Geert Muller was born in 1956 in Amsterdam. Following a career in atomic physics research, H. G. retired to focus on Chess programming in 2008. His recent area of interest is chess and shogi variants. His Shogi engine Shokidoki was particularly successful in Mini Shogi, where it won the UEC Cup and ICGA Computer Olympiad several times. The engine HaChu was especially designed for handling chess variants on large boards with many pieces (but without piece drops), such as the large historic shogi variants. The original plan was to make it support all shogi variants, from 9x9 Sho Shogi up to 25x25 Tai Shogi, and perhaps even the 36x36 Taikyoku Shogi. So far only Sho, Chu and Dai Shogi work, the larger variants requiring special move types (such as Hook Movers) that are not yet implemented. An attempt to add 16x16 Tenjiku Shogi to HaChu's repertoire failed due to the great complexity of this game, and an (as yet unreleased) separate engine was written for Tenjiku in 2017. The latter works so well that H. G. may scale it down also to play Chu Shogi and release it as HaChu 2.0. ~ Ed.

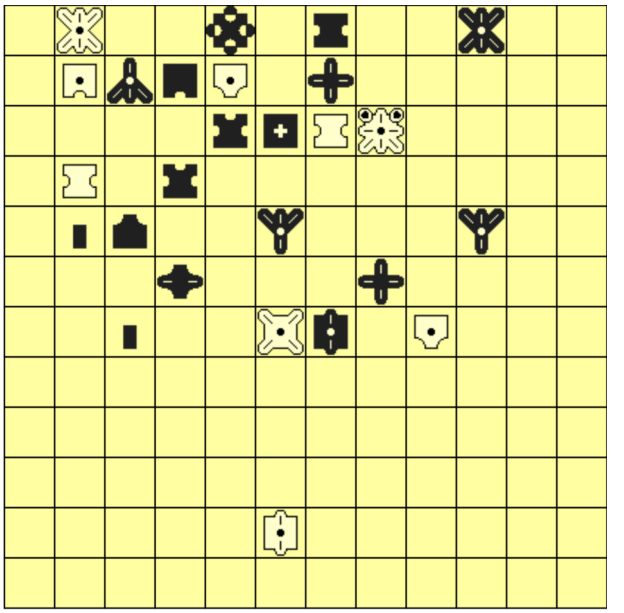
Chu Shogi Problem

by H.G. Muller

This page contains a checkmating puzzle for the ancient game of Chu Shogi, a Chess variant that was popular in Japan frrom 1350 AD to 1750 AD. The solution will be published in the next issue.

This puzzle, shown below, is a historic mating problem for Chu Shogi. It is the 49th problem out of a collection of 100 known as the *Chushogi Tsukurimone*, of unknown authorship and date (estimated around 1700 CE). George Hodge's *Middle Shogi Manual*, which published all the problems, refers to this collection as the D-series.

No solutions were included in the historic document, and because the problems are rather hard there was initially some doubt as to whether they were indeed mating problems. After much effort, it was found that they are in fact *tsume* problems, a class of puzzles common in Shogi, where the purpose is to force a checkmate through checking moves only. *The Middle Shogi Manual* published solutions to some 70 of them. The puzzle presented here was still unsolved at the time; it is a mate in 7. Good luck! ■



Reference

Hodges, George (2002). *Middle Shogi Manual*. 2nd. edition, originally published 1992.

"There are more adventures on a chessboard [Chu Shogi board] than on all the seas of the world." – Pierre Mac Orlan

Card table in Hampton Court Palace, England.

Random in the Abstract

by Mitchell Thomashow

Abstract games featuring random elements fascinate me. By "abstract" I refer to games that use colours, shapes, and symbols. Purists insist that abstract games also must have perfect (or near) perfect information. Now such games are often referred to as combinatorial games. I do not have any preference. Call them what you wish. However in this essay I am referring to that genre of games that uses colours, shapes, and symbols as the basis of territorial, spatial, and pattern relationships.

Let us briefly explore the meaning of random. Typically in gaming, random refers to the element of chance—throwing dice, picking tiles out of a bag, drawing a card, and other tried and true mechanisms that generate a new game situation. When a game effectively utilizes random processes, it creates new situations that demand analysis, creativity, and intuition. I consider that blend as crucial to improvisational learning. How do you blend spontaneity with experience?

Random processes are a foundation of improvisational learning. Here is why. First, they may reveal new patterns as you encounter circumstances that you have not quite seen before. Second, a random process can help you orient your thinking when you are faced with too many variables. Third, randomness demands that you adapt to changing circumstances. Fourth, random processes are just plain fun. Games of chance have a long, long history in human culture. A well-designed game allows you to explore the relationship between chance, strategy, and outcome.

I believe, too, that improvisational learning is the foundation for perceiving global environmental change, and I write about this at some length in my forthcoming book, *To Know the World: Why Environmental Learning Matters* (The MIT Press, 2020).

Now let us get to the games. Ingenious by Reiner Knizia is a now "classic" example of this genre. The random element involves picking tiles from a bag. You never know which tile you will pick, but the number and types of tiles is always known, so you can deduce the likelihood of picking a specific colour, and more information is revealed as the game proceeds. Prior to the Eurogame, there were dozens of these types of games released annually. Check out the work of the important designers from 1960-1990 and you will see games of this sort from Sackson (Intersection), Randolph (Corona), Hoffman (Spiel der Türme), Kramer (Tempo), among many others. And if you peruse the back issues of *Games & Puzzles* (I have done so by scanning my collection) there are great examples of this genre—Mentalis [*AG1*], The Quantum Game, Quinx, Janus, and Entropy [*AG11*] come to mind.

The Euro in large measure represents a thematic and more complex expansion of this genre. Stefan Feld's games are a perfect example. A game like Trajan is organized around a mechanism derived from Mancala, and then features positional alignment, territorial expansion, set collection, and pattern recognition. Knizia's early hits were essentially a transition from the Abstract Game featuring random mechanisms to the Modern Euro. Through the Desert emulates Go. Tigris and Euphrates is the quintessential integration of tile placement with territorial expansion and pattern recognition. Knizia's recent games Blue Lagoon and Babylonia are further explorations of tile placement, connectivity, and territoriality.

Knizia published a book in 1990, *Neue Taktikspiele Mit Würfeln Und Karten*, that is a compendium of dice, card, and abstract games, including some theoretical chapters. This book contains the seeds of many of his future designs. There is now an English translation, *New Tactical Games with Dice and Cards* (Blue Terrier Press, 2019).

Since the popularity of the Euro, fewer of these types of games have been released, as people tend to favour theme over the abstract, and those who love abstracts tend to favour perfect information. Knizia finds a middle ground as a game like Babylonia has a vague theme that may add colour for some, but is essentially window dressing on a fine abstract design.

I am pleased to see that abstract games with random elements are gaining in popularity, spurred by the now international market, the extraordinary number of new designers, and the relative success of Kickstarter initiatives. I find it impossible to keep up with all the new releases. So I will instead comment on two game-series, both of which utilize random processes in innovative, but very different ways—the GIPF games and the Azul series.

Azul

All abstract gamers are familiar with Kris Burm's remarkable GIPF series of games—Gipf [*AG1*], Zertz [*AG6, and others*], Dvonn [*AG8*], Yinsh, Punct, Tzaar [*AG17*], and then Lyngk. Please check out my extended essay "GIPF: Game Design and Aesthetics" in *Game & Puzzle Design*.

These are very deep games, all of which reward repeated play and analysis. Two of these games—Tzaar, and Lyngk—begin

with random arrangements of the pieces on the board. With both games, the board shrinks, as pieces are captured and removed. In effect, the opening position is an emergent property, patterns will reveal themselves as the gaming state changes. It is very challenging to analyze the opening positions. Rather, you need intuitive vision to perceive how the patterns will change and how you can make the most of them to maximize your tactical efficiency. More information is revealed as the game state emerges. With Tzaar you have to settle on which victory condition is attainable. With Lyngk you have to choose which colours give you the best chance of victory. The best players will come to recognize how these patterns emerge, will develop skills in perceiving the emerging patterns, and will let improvisational excellence inform their tactical analysis. You must be flexible, attentive, and alert.

Lyngk

The other games in the series, while also rewarding good improvisational play do not involve any random elements. Many of the flashy Euro games also use random opening positions, but the GIPF games do so using an abstract aesthetic, and there is a wonderful purity about them.

The AZUL series are not nearly as rigorous as the GIPF games, but they are are very interesting as well, and rely on a random element to sustain interest. If you are unfamiliar with them, they are now a series of three—Azul, Azul: Stained Glass of Sintra, and Azul: Summer Pavilion, linked via a common gameplay mechanism and a medieval Islamic pattern aesthetic. Each game revolves around tile drafting. New tiles come out every round. You decide which ones to take, and then you place them on an individual board, scoring points for how they ultimately fit together. Each game in the series features a different scoring approach.

The random element revolves around the neat tile drafting mechanism. Every round brings a new suite of tiles and you have to figure out which ones you most need, which ones your opponent(s) needs, and then the optimal way to place them. There are both short- and long-term scoring options, so there is a good mix of tactical opportunism and strategic planning.

I derive great enjoyment from these games, as the tile mix presents new challenges, the placement puzzle is intriguing, and you have to go with the flow as you may not always get the tiles you need. Sometimes you have to make the best of a bad situation. With random processes, there may well be adversity. Can you weather the storm? And can you take full advantage of the scoring opportunities when the tiles you need come your way?

The AZUL system is sufficiently robust that I can see the series extending for more iterations, especially if the designer, Michael Kiesling, can develop new ways of placing and scoring tiles. AZUL requires that you place tiles on a five by five grid, with rules of patterned symmetry. Stained Glass of Sintra, emphasizes the proper alignment of colours along movable vertical grids, and then Summer Pavilion challenges players to develop patterned symmetry of a different sort, requiring the completion of colour-coordinated florets and number patterns.

Flip through a book of Islamic or Celtic pattern designs, or various colour-wheel illustrations and you can imagine an entire portfolio of possibilities for Azul. Abstract tile placement is a form of mapping, so I think it is a matter of developing neat scoring possibilities on intriguing abstract mapping templates.

The AZUL games are thoughtful, interesting, and visually appealing. Similar to most games that feature random processes, there are times when no matter how well you play, things just will not go your way. However, in the long run, the skilled and experienced player will win the majority of games. The GIPF games are entirely skill based, although they also make use of improvisational processes.

Like most readers of *Abstract Games* magazine, I am enamoured with the beautiful patterns that abstract games reveal. Random processes liberate the possibilities of pattern, and that is why I find them so enjoyable to explore. And when a game series does this well, the games are appealing to a wider audience, and that is certainly, especially in these times of screens and instant gratification, a very, very good thing. ■

The article above is an extensively revised version of an article first published in Counter *magazine. Dr. Mitchell Thomashow is a former university president and environmental studies professor. These days he writes books, teaches from time to time, plays the piano and guitar, roams the hills of southwest New Hampshire, and plays as many games as time will allow.*

The author does not refer specifically to card games such as WYSIWYG or card-and-board games like Marrakesh, both covered in this issue. These two games are abstract games, but with an element of luck, in the same sense perhaps as the AZUL games. The chance factor in Tzaar and Lyngk is of a different type. The random starting positions in these two GIPF games are surprising in the sense that they typically give equal chances to both players, in games that are otherwise completely without luck—at least this is the case for Tzaar (see Ag17*), and perhaps the same is true for Lyngk. Nevertheless, the author opens the door for a discussion of card games, for example, as abstract games in which chance plays a role. Another obvious example of an abstract game with luck is Backgammon, including its variants and games such as Chebache (*AG3*); Parchisi and Tâb are further traditional games with luck, as covered in* Historic Board Games*, reviewed in this issue. I agree with the author that the element of luck can be an enjoyable feature of an abstract game*

David Ploog discusses theme, metaphor, and narrative of games in this issue. Games may have clear themes based on the real world, or may have metaphorical significance, such as racing, fighting, or collecting territory. Metaphors are not themes, but metaphors enable us to understand games in human terms. None of David's characterization of theme, metaphor, and narrative in games concerns whether or not games have random elements. A game with random elements is abstract if it does not deliberately mimic aspects of the real world. Backgammon is the foremost example of an abstract game with some randomness. Card games like WYSIWYG also fall into this category. On the other hand, card games are not so amenable to metaphor as Backgammon or Chess. And Marrakesh is even more distantly metaphorical. Perhaps Marrakesh is more genuinely abstract, in the same way as Hex, in that metaphor and narrative in Marrakesh is much less obvious than in Backgammon or Chess. ~ Ed.

The Card Players by Cézanne, early 1890's.

WYSIWYG

The Two-Player Card Game for Fans of Serious Trick-Takers

by Larry Levy

I designed the card game WYSIWYG (pronounced WIZ-ee-wig) almost 20 years ago. The challenge I set myself was to come up with a two-player trick-taking game that I would enjoy playing. At that time, there were practically no commercial two-player trick-takers around and the traditional ones had fallen out of favour. Today, however, there are quite a few games which meet this description and many of them have achieved popularity, thanks to some clever and innovative mechanics. So why should you, the reader of this fine periodical, bother checking out this older design? I believe there are a couple of things that distinguish WYSIWYG from these other titles. First, my game can be played with an ordinary deck of playing cards, so no special equipment is needed. Perhaps more significantly, it was designed to appeal to folks who enjoy serious trick-taking games: things like Bridge, Spades, Hearts, and Pinochle. The cute gimmicks that the newer games introduce are nice and change things up in a way that give them broader appeal. But if you like the basics of hard-core trick-takers, I think you will find a lot to like in WYSIWYG.

The name, by the way, comes from the early days of personal computing and is an acronym that stands for "What You See Is What You Get." During the late 1980's and 1990's, when graphical interfaces were still new, having the image on your monitor match the one that you printed out was a major feature for a PC app. Such apps were given the descriptor of WYSWIG. Since, in my game, prior to each trick, the players see the cards they will choose between to replenish their hands (as opposed to one or both of them being hidden, as is the case in most similar games), this seemed like an appropriate title.

I have not done a very good job of promoting my game over the past couple of decades, so a reasonably thorough description is needed. If you want even more detail, the complete rules can be found at the game's entry on BoardgameGeek (the most recent rules are labelled WYSIWYG 3.0). But the following should be enough to get you playing.

Rules for WYSIWYG

Summary

WYSIWYG is a trick-taking card game for two players. It is played with a normal deck of 52 cards. The cards in each suit rank from Ace (high) down to Two (low). After each player is dealt their cards, a hand proceeds in four separate phases. First, each player evaluates their hand and announces the total. Then, bidding takes place to establish the hand's trump suit and objective. Next, the players play to tricks, with the winner of each trick replacing their card with their choice of one of two exposed cards and the loser receiving the other card. Each trick taken in this phase is worth one mark. This continues until the deck is depleted. Finally, the players play out the remainder of their cards to tricks, each of which is worth two marks. If the player who set the trump suit has earned marks at least equal to a goal based upon the two hand evaluations and his bid, he wins the hand. Play continues until one of the players scores 80 points.

The Deal and Hand Evaluation

Here is how each hand plays out. A dealer is chosen (which alternates between the two players for each hand) and she deals 13 cards to each player. The rest of the deck is then set aside. Each player must then evaluate their hand. This is a number of points based on an estimate of the quality of your starting hand, which is called your *Eval*. Each Ace in the hand counts 3 points; each King, 2 points; and each Queen, 1 point. To this high card total, add the length of the longest suit in the hand. The sum is your Eval. Each player announces their hand's Eval and then determines their *Mod* for the hand, which is just their Eval minus their opponent's Eval. So if Amy has an 11 point Eval and Ben has a 16 point Eval, Amy has a Mod of -5 and Ben has a Mod of +5. This information is noted on the scoresheet.

Bidding

Now the players will bid for the right to name the trump suit. The player with the lower Eval starts the auction, or, if they are tied, the dealer does. Each bid is a number, which must be higher than the bid your opponent just made. The first bid must be at least 15. The players alternate saying something, which is either a bid or a pass. When a player passes, their opponent wins the bidding for the amount of their last bid.

The player who wins the bid (called the *Declarer*) then names a trump suit, or decides to play the hand in No Trump (with no trump suits). Her opponent then has the option of doubling the bid, if he thinks she has bid too high. If this happens, the declarer can either accept this (and the hand is played at doubled stakes) or bid game, which means the winner of this hand will win the game, regardless of score.

Finally, the Declarer figures out how many marks she will need to win the hand. She calculates her *Goal*, which is found by adding her Mod to the amount of her winning bid. So, for example, if the last numerical bid was 23, bid by a player with a Mod of -5, the Goal would be 18 marks (23 + (-5)).

Play of the Hand

The hand consists of 26 tricks, with each player playing one card to each trick. The rules for the first half of the hand are slightly different than for the second half of the hand.

Prior to each trick of the first half, the top two cards of the deck are exposed. The winner of the previous trick then leads a card to the current trick. For the first trick of the game, the Declarer leads.

Any card can be led to the trick. Then, the other player must play a card. If possible, he must play a card of the same suit as the led card. If he does not have such a card, he can play any card in his hand.

If the second player plays a card of the same suit as the led card, the higher of the two cards wins the trick. If, instead, the second player plays a card of the trump suit in response to a non-trump lead (which is only possible if he has no cards in the led suit), then the second player wins the trick. Otherwise, the first player wins the trick.

For the first 13 tricks, the winner of the trick takes one of the played cards and places it face down in her scoring pile. These cards are the player's running total of marks. One card is placed, because each trick in the first half is worth one mark. The other played card is put out of play. Finally, the player who won the trick takes one of the two exposed cards (her choice) and adds it to her hand. The player who lost the trick takes the other exposed card and adds it to his hand. The winner of the trick then exposes the next two cards from the deck and leads a card to the next trick. This process continues for 13 tricks, until the deck is exhausted.

The second half of the hand is played much like the first half, except that the players do not replenish their hands after each trick. Additionally, the tricks are worth 2 marks apiece, so both played cards are added to the scoring pile of the player who won the trick. The player who wins the last trick of the hand takes the two played cards as usual and then adds one of the cards from the discard pile to their scoring pile (so that the last trick is actually worth three marks). There are a total of 40 marks to play for in each hand. Now that 26 tricks have been played, the hand is over and the scoring takes place.

Scoring the Hand

The way the hand is scored depends upon whether the Declarer wins the hand or not. She wins the hand if the number of marks in her scoring pile is equal to or higher than her Goal. If the number of marks acquired are less than her goal, she loses the hand.

If the Declarer wins the hand, she scores a base of 25 points. In addition, she scores an additional point for every mark she achieved in excess of her goal. So if the Declarer had a goal of 17 and she accumulated 19 marks, her score would be 27.

If the Declarer loses the hand, her opponent scores points. He scores 5 points if the Declarer was one mark short of her goal and 10 additional points for each additional mark the Declarer was short by. For example, if a Declarer with a Goal of 17 only acquired 13 marks, she is four marks short of her Goal and her opponent would score 35 points (5+10+10+10).

All these points are doubled if the hand was doubled, for whichever player is scoring. If the Declarer made a "game" bid in response to her opponent's double, then the winner of the hand wins the game, regardless of the score up to this point!

Winning the Game

After the hand is scored, another hand is played. The player who did not deal the previous hand deals this hand. The game continues until someone wins a game in which a "game" bid was made, or until one player's total score reaches 80 points or more. That player wins the game. So that is how you play the game. I thought you might be interested in how I came to design it.

Development

Back in the year 2000, I was perusing my copy of *Hoyle's Book of Card Games* (it is amazing what we did to amuse ourselves back before there was easy access to the Internet!). I came across a game called German Whist, a 2-player trick-taker, played in two halves, like many of its ilk. In the first half of the game, prior to each trick, one card was exposed from the deck. The winner of the trick got the exposed card, while the loser replenished his hand by taking the top card of the deck. This is similar to the procedure in Two-Handed Pinochle and other traditional 2-player trick-takers. This struck me as a missed opportunity. How much better would it be, I thought, if there were two exposed cards and the winner of the trick got to choose which card to take. No more instances of the losing player lucking into a great face down card and there would be the added bonus of deciding which tricks to try hard for. I did a brief search to see if such a concept was used in an existing game. When I came up empty, I decided to design a game that did use it.

I did not see any reason to buck tradition, so I started the players off with 13 card hands. Obviously, there could be a huge variance in the power of those starting hands, so to be fair, I wanted a way to compensate for that, but how to do it? Well, trick-takers usually feature a trump suit and for mine, I wanted a player to name it, rather than it be a set suit or determined randomly. As a Bridge player, the obvious way of doing this was by having the players bid for the right to do so. The final bid would be used to determine the goal of the Declarer. What if you modified that goal so that players who started with strong hands had to achieve more than those that started with weak hands? That concept, together with a way to evaluate starting hands, became another design feature.

Finally, I decided that I wanted the first half of the game to be more about gradually building your hand than about just scoring points. So I made the tricks in the second half worth twice as much as those in the first half. This also increased the tension of the game, since it was much harder to build up an impregnable lead.

All of this sounds easy and logical, but it took a while to achieve. In fact, there have been three major versions of the rules. Originally, I evaluated the hands using the Points Count used by most Bridge players: 4 points for an Ace, 3 for a King, 2 for a Queen, and 1 for a Jack. But when I took this point count and added the length of the longest suit, I found it overstated the value of the hands. I dealt with this by using a table to determine the modification for each hand. This was obviously less than ideal, but it took me a while to figure out how to avoid the need for a table. I realized that if I changed the hand evaluation to 3-2-1 points for an Ace, King, or Queen, it did accurately reflect the value of the hands. This also made sense, since Jacks are not that important during the early stages of the hand. Implementing the changes of this alteration led to the second version of the rules (and finally getting rid of that annoying table). Finally, a couple of years ago, I realized that the method I used to calculate the hand modifications was unnecessarily obtuse and pretty hard to teach. In addition, the game was taking longer than I wanted it to—maybe I have learned the value of faster paced games over the last 20 years. I came up with a way of streamlining the hand Mod calculations and making it more likely that the game would not drag on for too many hands. I now have a game that I am fully satisfied with and that is much easier to learn and play. Hopefully, you will agree.

Proficiency in whist implies capacity for success in all these more important undertakings where mind struggles with mind.~ Edgar Allan Poe

Example of play

Let me finish things up by going through parts of a sample hand, which will illustrate how the game is played, as well as let me point out some tips for success. Suppose that Amy and Ben have just started a game. Here are their hands on the first deal:

Amy: Q♠, 7♠, Q♥, J♥, 9♥, 8♥, 5♥, 4♥, K♦, 10♦, 9♦, 3♦, 7♣
Ben: K♠, 9♠, 4♠, K♥, 6♥, J♦, 8♦, 5♦, A♣, K♣, 10♣, 8♣, 2♣

Amy's Eval = 0 (no Aces) + 2 (1 King) + 2 (2 Queens) + 6 (6 card suit) = 10
Ben's Eval = 3 (1 Ace) + 6 (3 Kings) + 0 (no Queens) + 5 (5 card suit) = 14
Amy's Mod = 10 – 14 = -4
Ben's Mod = 14 – 10 = +4

Amy, who has the lower Eval, opens the bidding at 15. The players alternate bids until Ben bids 20 and Amy has to decide whether to raise or pass. She has a fairly weak hand, but at least she has a six-card trump suit which is pretty solid. More to the point, her hand has very little defensive value (no Aces and only one King) and her Hearts may be worthless if Ben wins the bidding and selects Clubs as the trump suit (the most likely choice, since Amy has only one of them). If she bids 21, she will have to take 17 marks (her bid, adjusted by her Mod, would be 21 – 4 = 17). This might be a challenge, but her good trump suit should help. She decides to take a chance and bids 21.

Now, Ben has a choice. If he raises Amy and bids 22, he will have to take 26 marks (22 + 4), which is just about two thirds of the total marks in the hand. He has a good hand, but he is not sure if it is that good. Moreover, with high ranking cards in all four suits, he figures he should do well defensively in whatever suit Amy chooses as trump. So he decides to pass. Amy wins the bidding and names Hearts as the trump suit. She has a Goal of 17 marks. Ben's Hearts are his weakest suit, so he is not certain he can stop Amy from meeting her goal and decides not to double.

The top two cards of the deck are now revealed. They are the 10♠ and the 3♠. Amy now has to lead to the first trick. Even though one of the revealed cards is clearly better than the other, she is not that enthused about either of them. And the player leading to a trick tends to be at a disadvantage. If a low or medium ranked card is led, the second player can usually win the trick easily, often by playing a card just higher than the led one; if a high card is led, the second player can just play their lowest card of the suit, saving their good cards for later. Taking all this into account, Amy decides to lead the 7♣. Playing this card leaves her with no Clubs and as long as things stay that way, she will be able to use her Hearts as trumps to capture any Club lead her opponent makes, if she wants to. Ben sees no reason not to take the trick with his 8♣. He adds 10♠ to his hand and Amy takes 3♠. Ben then takes one of the two cards played to the trick and places it face down in front of himself, to show that he now has one mark. The other card is discarded.

The next two cards from the deck are revealed and they are the Q♦ and the7♠.The former is a nice, but not essential card, so Ben decides to lead 10♣. He would like to set up his Clubs as a side suit, so by leading 10♣ he will either strip a low Club from Amy's hand, or lose to a high card (either J♣ or Q♣). With one of those high Clubs removed from consideration, Ben's Club suit would look considerably more formidable. Amy, of course, has no Clubs, so she must decide whether to win the trick by playing a trump card or not. Q♦ would be a good card to add, as it would help her build her side suit (Diamonds, in this case). This can be an excellent source of marks during the second half of the hand. A common ploy is to draw your opponent's trumps and then establish your side suit by playing cards of that suit until your opponent has played all his high cards. Then, you regain the lead (probably by trumping one of your opponent's leads) and then keep playing your side suit until it runs out. So this would be a nice trick for Amy to win.

Unfortunately, she will have to play a trump to do so. The problem with using trumps like this is that she runs the danger of eventually losing control of the suit—that would happen if Ben, at some future time, winds up with more trumps than she has. This would allow him to draw trumps and then win tricks using his established side suit (which looks like it will be Clubs)—this could well lose her the hand. Since she began with 6 trumps, the chances of this happening are lower than usual, but she still has no idea how many trumps Ben began with. So she decides, better safe than sorry, at least for now. She plays her newly acquired 3♠ (remember, if she cannot follow suit, she can play any card) and Ben wins the trick. Naturally, he adds Q♦ to his hand, buttressing that suit. Amy settles for 7♠. Ben again adds a face down card to his pile; he now has 2 marks and Amy has none. But it is very early yet and the first half of the hand is often more about setting up your hand for the second half than about scoring marks.

The two revealed cards for the third trick are the 10♥ and 5♣. Ben wants to win this trick, to add another trump to his hand. Another Club is nice, but with Amy void in the suit, hardly necessary. The problem is, he cannot guarantee winning the trick. Either of his Kings might well do the job, but Amy might have started with the Ace in the suit of the card he leads, making this a risky play. Besides, he's not sure he wants to play such a high card at this early stage, even to acquire a trump. He decides to lead 2♣. If Amy wants to win, she will have to use a trump, largely negating any advantage of her adding the trump to her hand. And at this stage, of course, 2♣ has the same chance of winning the trick as A♣ does. Amy decides that this is a good time to trump the lead. Yes, she loses a trump, but she gets one right back (a considerably better one) and keeps Ben from adding it to his hand. As a side benefit, she maintains her void in Clubs. So she plays 5♥ (let Ben think this is her lowest trump; anytime you can possibly mislead your opponent, do it!), winning the trick. She adds 10♥ to her hand and Ben takes 5♣. She then takes one of the played cards and places it face down, for her first mark.

The two combatants continue playing in this fashion until the deck runs out of cards. At this stage, 13 tricks have been played and the first half of the hand is over. From now on, the players do not replenish their hands. Additionally, the winner of a trick takes both played cards and puts them face down in front of them, to show that the trick is worth 2 marks. Do not forget to add a third card as a bonus for winning the last trick of the hand.

At the end of the hand, the two players add up the cards in their face down piles. Amy has 19 cards (that is, 19 marks). Since her goal was 17 marks, she has won the hand. This is worth a base of 25 points to her, along with one extra point for each mark she exceeded her goal by. Since she had two extra marks, her score is 25 + 2, or 27 points. She places 27 points next to her name on the scoresheet. She is well on her way toward the 80 points she needs to win the game, but Ben will undoubtedly have something to say about that!

If you have the chance to try WYSIWYG out, I hope you enjoy it. A scoresheet is given on the following page, that you can use to make it easier to track things. Feel free to make as many copies as you want. ■

WYSIWYG is a card game in the tradition of other great two-player trick-taking and bidding games, such as Slam (Sid Sackson, 1951) and Bridgette (Joli Quentin Kansil, 1970), both of which are explicitly versions of Bridge for two. While the designer does not identify WYSIWYG as "Bridge for two," it is well adapted to fill that role.

WYSIWYG is the first actual card game that we have covered in Abstract Games. Card games are abstract games, too, and the fact that most of them involve luck does not preclude them from consideration—see the discussion after Mitchell Thomashow's "Random in the Abstract." A second game with cards, Marrakesh, is also included in this issue.

WYSIWYG's designer, Larry Levy, has spent a large part of his life playing, designing, and writing about games. Fifteen or so of his designs are included in the BoardGameGeek database. Almost all of these only use items easily found around the house, such as normal playing cards or standard dice. Probably the best known of his designs is Deduce or Die, a challenging pure deduction game. A redesigned version of this will be published in 2020 by BoardGameTables.com as Loot of Lima, with the new version having recently finished a successful Kickstarter campaign, with all of its stretch goals met.

Larry is one of the jury members for the International Gamers Awards, one of the hobby's most prestigious awards for game of the year. He has also administered the Meeples' Choice Award for the Spielfriek users group for the past 15 years. He has written for a wide variety of periodicals and websites, including Counter *magazine and the* Opinionated Gamers *website. He says he is thrilled now to add a quality magazine like* Abstract Games *to that list. ~Ed.*

WYSIWYG Scoresheet

Hand	Player	Eval	Mod	Bid	Goal	Marks	Hand Score	Cum. Score
1								
2								
3								
4								
5								
6								
7								
8								
9								

Eval = 3 pts. for each Ace + 2 pts. for each King + 1 pt. for each Queen + Length of longest suit.

Mod = Your Eval – Opponent's Eval For winning bidder, Goal = Bid + Mod

During play, score 1 mark per first-half trick won, 2 marks per second-half trick won, 1 extra mark for winning last trick.

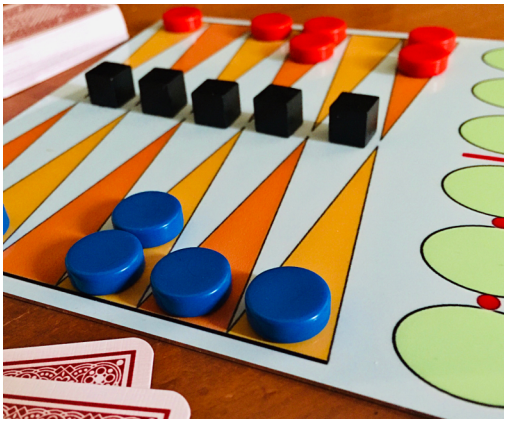
If declarer wins hand, declarer scores 25 points, plus 1 point for every mark in excess of the hand's goal.

If declarer loses hand, opponent scores 5 points for first mark shy, plus additional 10 points for each additional mark shy.

Marrakesh

A Joli Quentin Kansil game

by Kerry Handscomb



Marrakesh (1978), a game by Joli Quentin Kansil, combines Backgammon bearing-off with the trick-taking of card games. The author was a competitive player of Backgammon and Bridge and designed also Bridgette (1970), which is a kind of Bridge for two. JQK has published many other games, among which at least Marrakesh and Bridgette are enduring classics, in my opinion.

Commercial sets of Marrakesh are very difficult to find. Fortunately, Marrakesh is easy to play with a Backgammon set, two regular decks of cards, some additional markers, and some additional dice—components available in almost every gamer's collection. On the other hand, it is even better to have a dedicated Marrakesh set, and I designed my own board and used commercial photofinishing on an aluminum sheet, as I did with MeM, described in *AG17*. I use six red discs and six blue disks for the pieces and five black cubes for the markers. It is nice to have six blue dice and six red dice, although you can get by perfectly well with fewer dice, which are re-rolled several times. Two decks of cards shuffled together, with some of the cards stripped out, complete the set. The design is shown in the diagrams below.

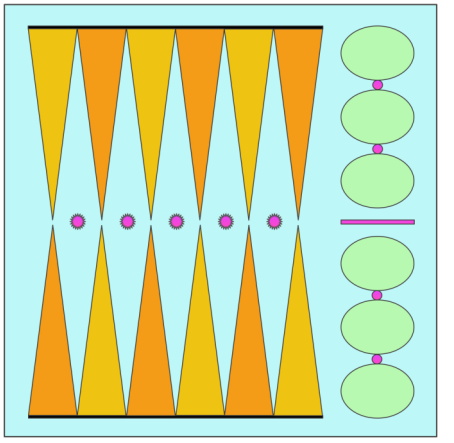
Marrakesh is essentially a game for two. In this form, it is fast and thrilling. Luck does play a large role, and there can be rapid changes of fortune amid plenty of opportunity for bluffing or outguessing your opponent. I have played Marrakesh in this form, and I find it enjoyable. However, I read a post in BoardGameGeek about Solitaire Marrakesh (*https://boardgamegeek.com/thread/352650/solitaire-marrakesh-playable-standard-gaming-equip*), and I decided to give it a try. The solitaire version plays exactly the same as the two-player version, except that the AI opponent makes completely random moves.

Unexpectedly, the AI was remarkably strong! I lost the first three games soundly, as well as the fifth, although I pulled back in the fourth and sixth games. The total score over all six games was 285 points for me and 301 points for my AI opponent. Six games is a small sample, but after many more attempts the AI still plays a good game. Remember, I am trying hard to win, using my best understanding of the strategy, whereas the AI is moving completely randomly. Is it possible that random play is a reasonable strategy, if not always a winning strategy? Perhaps I am just not very good at Marrakesh. Either way, Marrakesh is an engaging solitaire abstract game.

The rules of Marrakesh, below, may seem complicated. However, the use of the ovals corresponding to tricks is very logical, as are the rules for matching cards and bonus cards. The genius of Marrakesh is how the various elements of the game fit together to construct an intricate mechanism that ticks along like clockwork. Once you understand the game, it is simple and straightforward.

Marrakesh Rules

The reworking below of the rules of Marrakesh is based on the scan of the 1984 rules in BoardGameGeek. My version below is more fleshed-out than the original, and hopefully brings out the logical structure of Marrakesh better. To simplify the presentation, I have assumed that the reader is familiar with the process of moving and bearing off pieces in Backgammon. Whereas Backgammon moves depend on dice throws, Marrakesh uses numbers on playing cards for the process of moving and bearing off pieces, not pips on dice. Dice are used in Marrakesh, but only to determine the initial setup of the board. Here is my Marrakesh board design:

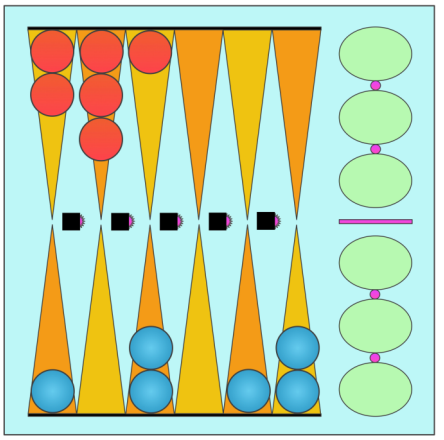


You can see that the main part of the board is half a Backgammon board, in which each player controls six "points." The players each have three ovals beside the board that are used to keep track of pieces they "bear off" from their side of the board. I use the five stars across the middle to hold five *null chips*, for which I use black cubes. The original rules specify three null chips, but sometimes more are needed, and five fits the design of the board. The players each have six pieces in their colour, which should be flat and stackable, like Backgammon pieces or checkers—the diagrams use red and blue pieces. The players each also have six regular dice in their colour, although you can get by with fewer dice that are shared or rolled several times. Lastly, a special deck of cards is needed, consisting of the Ace through Six from two regular decks together with four Queens, one of each suit—again a total of 52 cards, although of different composition from a regular deck.

Each triangular point is a space that can hold one or more pieces. The pieces on a point are stacked end to end, so that you can easily see how many there are. The red pieces can only occupy the six points on one side of the board, the top in our diagrams; whereas the blue pieces can only occupy the six opposite points, the bottom in our diagrams. The points on each side are numbered mentally from 1 to 6, counting from points closest to the ovals. The

numbers on the cards correspond to the numbers of the points and/or the number of spaces a piece can move down, from a higher-valued point to a lower-valued point, as in Backgammon. The Queens have no point value and do not permit any movement of pieces. The Queens are effectively zero-numbered cards.

The players decide who will be Blue and who will be Red. Blue throws the six blue dice, Red throws the six Red dice, and the players distribute their six playing pieces on their side of the board according to the pips on the dice. In my set, the five null chips are placed on the stars in the centre of the board. If Red throws 4-5-5-5-6-6 and Blue throws 1-1-2-4-4-6, the starting position is as follows:



Once the initial setup is determined, the deck is shuffled and six cards are dealt one-by-one and face-down to each player. It does not matter who deals. The undealt portion of the deck is placed face-down close by; the top card may be drawn as a bonus card during play. The players look at their cards, but keep their values hidden from the opponent. The six cards in each player's hand will be played to six "tricks"—each trick will correspond to one of the six green ovals. The play of each trick will result in pieces or null chips placed in one of the ovals, one trick per oval. Each player has three ovals, corresponding to three tricks. A player's pieces are "borne off" from the points, which means they are moved from the points to an oval when a trick is won. A player is trying to bear off all her pieces. With three ovals, a player has three chances to bear off all six pieces for *game*. In the case of *gammon* or *backgammon*, explained below, a player needs fewer than three ovals to bear off all six pieces.

The *leader* to the first trick is the player with most pieces on her 1-point. If this is equal, the leader is the player with most pieces on her 2-point, and so on. If the players' distribution of pieces is exactly equal, they both have to re-roll their dice, and place their pieces again.

The leader selects a card from her hand and places it face down in front of her. The other player, the *receiver*, selects a card to play *face up*. Then, the leader's card is then turned face up and the two cards are compared to see who has won the trick. The winner of the trick may take some of her pieces or a null chip to place in one of her ovals. (Null chips can sometimes also be placed in an opponent's oval—see below.) The first trick that a player wins utilizes the first oval nearest the winning player; the second trick uses the next oval; the third trick utilizes the third and final oval. The winner of a trick leads to the next, and the process is repeated for all six tricks. The leader always plays a card face down; the receiver always plays a card face up. The cards played to tricks are not collected by the winner, but are left face up in front of the players for the duration of the round.

When the hand is complete, with the play of up to six tricks, the setup is repeated by again throwing the six dice each and placing the red and blue pieces and null chips back on the board. The players are dealt another six cards each from the top of the deck, without shuffling in the used cards. A full game lasts for 12 rounds in this manner, where the deck is shuffled again with all used cards only every three rounds.

The winner of a trick is determined by comparing the suits of the two cards. Spades is the highest suit, followed by Hearts, Diamonds, and lastly Clubs, the same order as Bridge. However, if a club and a spade are played to the same trick, the club wins. *If the two cards have the same suit, the receiver always wins*.

At the end of the round, all cards played to tricks and any cards remaining in the players' hands are gathered up into a discard pile, where only the top card is visible, before the next hand is dealt. Every three hands, as mentioned above, the remaining cards in the deck, together with used cards in the discard pile, are all shuffled together again before dealing.

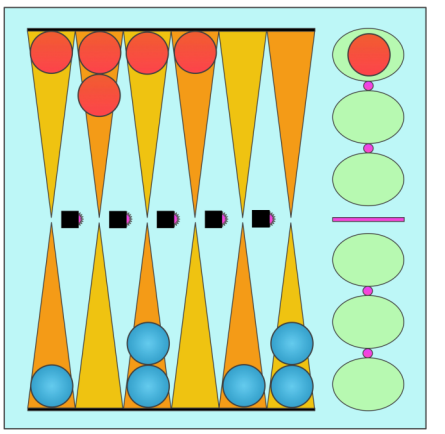
The winner of the trick moves or bears off her pieces according to the numbers on the cards played to the trick. The winner of a trick may also draw a bonus card and bear off or move further piece(s). A player must utilize the numbers on the trick cards and any bonus card to move or bear off pieces whenever possible. To bear off a piece means to move it from a point to the specified oval for this trick, where the point number matches the number on a card. The two cards played to a trick and the bonus card, when drawn, all contribute to bearing pieces off to a single oval. A piece is moved from a higher numbered point to a lower numbered point, as in Backgammon, except that pieces are restricted to their side of the board. As in Backgammon, if there are no pieces on points equal to or higher than the value on a card, then a piece may be moved or borne off instead from the next highest point that does contain a piece or pieces. The number on a card may be utilized multiple times to move various pieces—see below.

Depending on whether the two cards played to the trick do not match in suit or number, match in suit only, match in number only, or match in both suit and number, there are four possibilities:

No match in suit or number

The winner of a trick moves and/or bears off her pieces, according to the two numbers on the cards, once per card, and without drawing a bonus card.

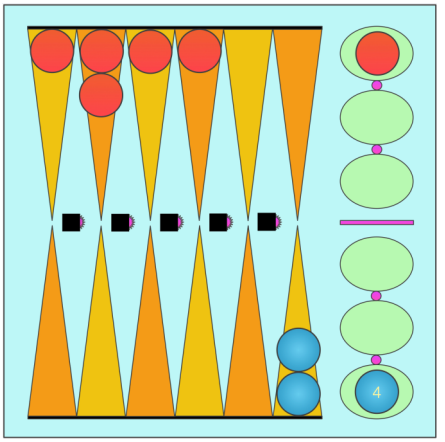
For example, from the example starting position, Blue leads because Blue has two pieces on the 1-point, whereas Red has none. Suppose Blue leads 6♠ *and Red plays* 2♣*.Red wins the trick and bears off a piece from the 6-point. Then, Red has no piece to bear off from the 2-point, so Red moves a piece two spaces, from the 5-point to the 3-point. (Otherwise, Red could move a piece from the 6-point to the 4-point or from the 4-point to the 2-point.) The diagram below results.*



Match in suit, not number

The winner of the trick (i.e., the receiver, because the suits match) moves and/or bears off her pieces, according to the two numbers on the cards, and then draws and discards a bonus card. If this card differs in suit and number from the card the winner (i.e., the receiver) played to the trick, the number on the bonus card is used once to move and/or bear off a piece. If the bonus card matches the card the winner (i.e., the receiver) played to the trick in either suit or number (not both), the winner (i.e., the receiver) uses the number on the bonus card *four* times to move and/or bear off pieces, as if a double were thrown in Backgammon. If the bonus card matches the card the winner (i.e., the receiver) played to the trick in both suit and number, the winner (i.e., the receiver) uses the number on the bonus card *six* times to move and/or bear off pieces.

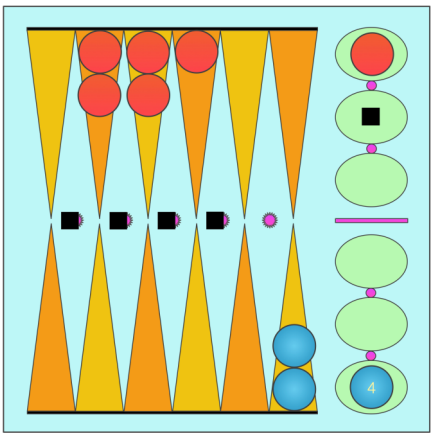
For example, from the new position, suppose Red now leads 3♦ *and Blue plays* 5♦. *Blue wins, because receiver always wins a suit-match. Blue cannot bear off any pieces. Blue moves a piece from the 6-point to the 1-point and a piece from the 4-point to the 1-point. Blue now collects a bonus card and draws* 5♣, *which matches* 5♦ *in number, not suit. Therefore, Blue now has 5 to move four times. As in Backgammon, if you have no pieces on points on or above the number to move, you can bear off from the next point below the number to move. Therefore, Blue bears off a piece from the 4-point, then from the 2-point, and lastly two pieces from the 1-point, resulting in the position below. Note that all four blue pieces borne off are stacked on Blue's first oval.*



Match in number, not suit

The winner of the trick moves and/or bears off her pieces *four* times, according to the number on the two cards, as if a double were thrown in Backgammon, and then draws and discards a bonus card. If this card differs in suit and number from the card the winner played to the trick, the number on the bonus card is used once to move and/or bear off a piece. If the bonus card matches the card the winner played to the trick in either suit or number (not both), the winner uses the number on the bonus card *four* times to move and/or bear off pieces, as if a double were thrown in Backgammon. If the bonus card matches the card the winner played to the trick in both suit and number, the winner uses the number on the bonus card *six* times to move and/or bear of pieces.

Suppose Blue now leads Q♥ *and Red responds with* Q♠. *Red wins, and the cards match in number (i.e., both zero) but not suit. Red does not move or bear off pieces due to the Queen pair, because four zeros is still zero. However, Red receives a bonus card and draws* 2♦. *The bonus card does not match* Q♠ *in number or suit, so Red gets to play 2 only once. Red moves a piece from the 6-point to the 4-point. Red has not borne off a piece, despite winning a trick, so Red places a null chip on the next oval, the second. The resulting position is shown below.*



This is the first example of the use of the null chips. A null chip is used whenever a player wins a trick but does not bear off any pieces. Null chips are used in three different situations. In the first case, a player is unable to use the card values that result from winning a trick to bear off any pieces. Perhaps the card values simply do not permit bearing off, even when the player moves pieces on the board, as in the example here. The player must place a null chip on the corresponding oval instead.

Match in suit and number

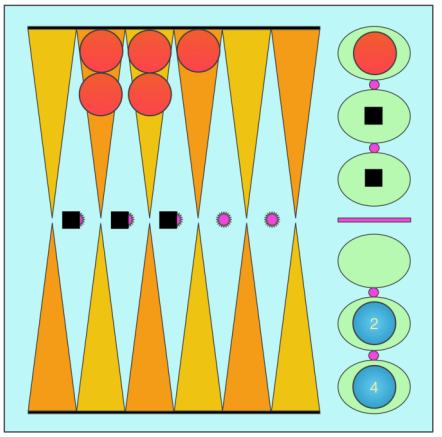
The winner of the trick (i.e., the receiver, because the suits match) moves and/or bears off her pieces *six* times, according to the number on the two cards, and then draws and discards a bonus card. Regardless of any suit and/or number match between the bonus card and the card the winner (i.e., the receiver) played to the trick, the winner (i.e., the receiver) uses the number on the bonus card *four* times to move and/or bear off pieces, as if a double were thrown in Backgammon.

Here is one point where the inexorable logic of the Marrakesh mechanism falters, in my opinion. If the bonus card does not match in suit or number, I would restrict moving or bearing off according to its value *once.* If the bonus card matches in suit or number I would allow use of the number on the bonus card *four* times. The bonus card cannot match in both suit and number again, because there are only two copies of each card (and only one copy of each Queen). I usually play the variant where a non-matching bonus card gives only one move, even though this reduces slightly the prevalence of backgammons—see below.

Suppose Red leads 3♣ *and Blue replies with* 3♣. *Blue wins, because the receiver always wins when the two cards of a trick match in suit. However, the cards also match in number. Blue could play the value 3, six times, although Blue only needs two 3's to bear off the remaining two pieces. Blue would now draw a bonus card and compare it with his* 3♣. *However, all his pieces have been borne off and in these circumstances the bonus card is not drawn. A bonus card is not drawn if it cannot be used because all six pieces are already borne off.*

Lastly, suppose Blue leads with A♠ *and Red responds with* 6♦. *Blue wins, but cannot bear off any more pieces because all are already borne off. Blue instead puts a null chip in Red's third oval, and the round finishes. The final position is below.*

This was the second example of the use of null chips. Again, a null chip is used whenever a player wins a trick but does not bear off any pieces. In the second case, a player is unable to use the card values that result from winning a trick to bear off any pieces, because all the player's pieces are already borne off. The player places a null chip on the opponent's next oval instead.



The process of deciding how many times to count a card value and how to use bonus cards may seem complex, but it is completely logical, aside from the one point I mentioned above, where the trick cards match in number and suit. A summary of the information is given in the table below, with the variant I suggest in purple. The leftmost column shows matching possibilities of the two trick cards, whereas the columns to the right show matching possibilities of the bonus card.

"-" means no match, "S" means match in suit not number, "N" means match in number not suit, and "SN" means match in suit and number.

Trick	Values	Bonus	-	S	N	SN
-	x1	No	NA	NA	NA	NA
S	x1	Yes	x1	x4	x4	x6
N	x4	Yes	x1	x4	x4	x6
SN	x6	Yes	x4 [x1]	x4	x4	NA

If a player bears off all pieces in the first two ovals, with the first two tricks the player has won, then that player has achieved a *gammon*. A gammon must involve the first two ovals. A player has not achieved a gammon, for example, if he has a null chip in the first oval, even if all pieces are borne off in the second and third ovals. Blue in the game above has won a gammon. If a player bears off all six pieces in a single oval, with a single trick won, then that player has achieved a *backgammon*. For a backgammon, a player is permitted to have null chips in the first or even the first and second ovals, as long as all six pieces come off in one play in a single oval. If a player achieves a backgammon, any null chips in her ovals are ignored for scoring—see below.

Now, the six cards in each player's hand at the start of a round correspond to six tricks, and each trick corresponds to exactly one oval. Whenever a trick is played, pieces or a null chip will come to occupy one of the ovals. Pieces cannot be borne off to an oval occupied by a null chip, and once a player has all three ovals occupied by pieces or null chips, no further pieces can be borne off. If a player does win another trick, then the player places a null chip in the opponent's next oval, which is a third example of the use of null chips—null chips are always needed to mark an oval when a trick is played and no pieces are borne off.

The 1984 rules do not deal explicitly with this third example of the use of null chips. Nevertheless, the logic of Marrakesh is inexorable. If your three ovals are already full of pieces and/or null chips, and you win a trick, then an oval must be occupied for this trick, even though all your pieces are not borne off. The only oval that can be occupied is an opponent's, and because you are the winner of the trick, it must be a null chip that goes to the opponent's oval—even if this seems a little unfair, as you still have pieces on the board, not borne off.

When a player has achieved a gammon, then the player's third oval is not used, and only five tricks are played. If both players achieve a gammon only four tricks are played. Likewise, if a player achieves a backgammon in the first oval, the number of tricks is reduced by two. If both players achieve backgammon in their first ovals, only two tricks are played! At the end of the round, if there are any gammons or backgammons, cards not played to tricks are simply discarded face up on top of the discard pile.

At the end of the round, both players score. Points are earned *offensively* for bearing off your own pieces and *defensively* for restricting the opponent from bearing off pieces. A player's score for the round is the sum of offensive points and defensive points.

Offensive scoring			
Type of achievement	Name	Pattern	Points
Game	-	-	3
Game	Casablanca	2-2-2	6
Game	Rabat	3-1-2	6
Game	Bogart	1-1-4	9
Game	El Ayun	1-4-1	12
Gammon	-	-	6
Gammon	Gibralta	3-3-X	9
Gammon	Tangier	4-2-X	9
Backgammon	-	6-X-X, 0-6-X, 0-0-6	12

If a player bears off all six pieces, that player score 3 points for game. If a player bears the six pieces off for game in specific patterns in the three ovals, as shown in the table above, then that player scores higher for game, as indicated. For example, with the first two ovals occupied with one piece, and the third oval occupied with four pieces, the player scores 9 points instead of 3 points for game, for achieving the Bogart pattern. The base score for a gammon is 6 points. However, if a player achieves a gammon in one of the two patterns shown, the player scores 9 points instead of 6 points for gammon. Backgammon always scores 12 points, and the opponent does not score defensively for any null chips accompanying the backgammon. The X's in the table simply indicate unused ovals because all pieces have been borne off; the 0's represent null chips.

If neither player achieves at least game, the players total the point values of all pieces they have left on the board. The player

with the lowest total scores 1 point for Pips. Neither player scores for Pips if the total is tied.

Defensive scoring depends on the null chips and singletons occupying the opponent's ovals. If the opponent has 1 null chip, the player scores 1 for Chips; if the opponent has 2 null chips, the player scores 4 for Chips. As mentioned above, null chips accompanying a backgammon, in the first or second ovals, are ignored for scoring. If the opponent is restricted to one piece or a null chip in each oval, instead of scoring for Chips, the player scores for Fez. The scoring patterns for Fez are shown below.

Defensive scoring		
Name	Pattern	Points
Little Fez	1-1-1	4
Common Fez	1-1-0, 1-0-1, 0-1-1	6
Royal Fez	1-0-0, 0-1-0, 0-0-1	9
Grand Fez	0-0-0	18

In the round finished above, Blue scores 9 for a Tangier and 9 for a Royal Fez, a total of 18. Red does not score.

The highest possible score is 30, with 12 points for Backgammon or El Ayun and 18 for a Grand Fez. Joli Quentin Kansil calls this a *Marrakesh*.

A full game consists of 12 rounds, in which the pieces are distributed and the cards are dealt in exactly the same way each time. A short game may be played with only six rounds. During the play of a round, the extra bonus cards drawn are discarded face up on a discard pile once they have been used. At the end of a round, all 12 cards dealt for the round are discarded face up on top of the same discard pile. The discard pile should be squared so that only the top card is visible. The deck is shuffled together with all the discards only after every three rounds. Otherwise, the cards are dealt from the top of the deck without shuffling and without including the discards.

The winner is the player with the highest score after 12 (or six) rounds. If the score is tied, the winner is the player who scored in most rounds. If this also is tied, the winner is the person who scored highest in any one round. If, lastly, this is tied, the game is genuinely drawn. When scoring, it is best to record the scores for the round as well as the running totals, in order to facilitate checking in case of a tie.

Good play

The comments below are applicable both to the two-player game and the solitaire. I would guess that Marrakesh requires a similar level of skill to Backgammon, or maybe a little less because it lacks major strategic motifs of Backgammon, such as the back game or the running game. Marrakesh entails a great deal of luck, but it is interesting how it is apparently possible to make rational decisions about the best moves, even though this rational behaviour does not affect the winning percentage greatly—at least, in my experience. A happy side effect of this property of Marrakesh is that you can always credit your own cunning, rather than luck, for a win.

For solitaire play, I have the AI play cards to tricks randomly, and always move to bear off the maximum number of pieces. If there is any choice in moving pieces on the board, I always have the AI move from the highest points. Thus, the play of the AI is completely random. However, it would be a mistake to say that the AI has no strategy. The AI is playing a consistent random strategy. The random strategy might even be effective now and then in the two-player game. In games such as Marrakesh, where two human players are trying to bluff or outguess each other, random play has the benefit of unpredictability.

The 1984 rules of Marrakesh that I have used as a guide contain a series of suggestions on good play by great mid-Twentieth Century Bridge player, Oswald Jacoby. The reader can refer to the original file, but my notes here are a summary, and sometimes an elaboration, of the key points.

Numbers to play

Play card values where your opponent has empty points. Even if your opponent wins the trick, he will find it more difficult to bear off. On the other hand, play to your own points that have pieces on them, because if you win it will be easier to bear off. Jacoby gives the Marrakesh axiom, "When in doubt, lead low!" If your opponent wins the trick, the lower numbers will make it more difficult to achieve a gammon or backgammon.

Play of the Queens

The Queens have zero-value, and, in accord with Jacoby's Marrakesh axiom above about leading low, are the most useful defensive cards. Utilize Queens carefully, they are powerful!

Suits to play

The table below shows who wins when various combinations of suits are led by the two players (or by the human player and the AI). When the leader plays Spades or Hearts, the leader has two chances to win, but only one with a lead of Diamonds or Clubs. When the receiver responds with Spades or Hearts, the receiver on the other hand has three chances to win, and only two chances with a play of Diamonds or Clubs.

		Receiver			
		♠	♥	♦	♣
Leader	♠	R	L	L	R
	♥	R	R	L	L
	♦	R	R	R	L
	♣	L	R	R	R

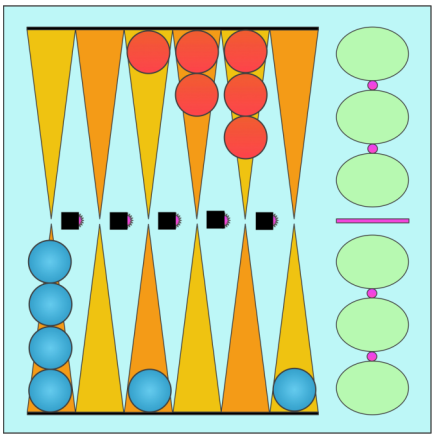
Spades and Hearts, therefore, are termed *major suits*, whereas Diamonds and Clubs are *minor suits*. Of course, in the two player game, the receiver might play a Club if she suspects the leader is about to play a Spade. All things being equal, a major suit is a better play. Of course, it depends on the six cards actually in your hand.

Play to avoid null chips

Jacoby gives the example below, where Blue has 6-1 to play. He recommends bearing a piece off the 6-point, but then moving a piece from the 6-point to the 5-point, rather than bearing a second piece off the 1-point. With this play, Blue spreads her pieces over more points. With pieces left only on the 6-point and 4-point, Blue

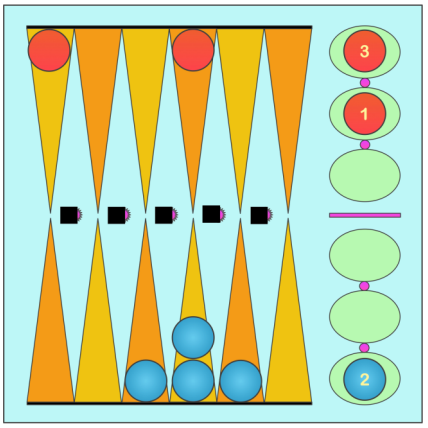
risks a null chip with the next trick she wins. The move would have extra benefit for Blue if Blue had a 5-card in hand.

On the other hand, a point which Jacoby does not mention, the bearing off of only one piece rather than two leaves the player more open to her opponent scoring a Fez. I would play to take the two pieces off. Either way, this example indicates the type of thinking necessary for careful play in Marrakesh.



Play to make scoring patterns

The diagram below gives one more example by Jacoby. Again, it is best to bear off as many pieces as you can each turn, but there are exceptions. Suppose Red has led 2♣ and Blue responds with 4♣. Blue wins the trick and aims for the 2-2-2 Casablanca scoring combination. If Blue bears off from both 4-point and 2-point, the bonus card will probably give Blue another piece off, spoiling the chance of a Casablanca. According to Jacoby, Blue should bear off the 4-point and move a piece from the 3-point to the 1-point—then hope to bear off exactly one piece with the bonus card.



An alternative, again which Jacoby does not mention, is that bearing off fewer than the maximum number of pieces reduces your chances of a gammon, even though you are increasing the probability of achieving a scoring pattern. In this particular example, I think Jacoby is correct. Nevertheless, sometimes a fine balance exists between the two options to maximize your score.

Luck, I suspect, will often defeat even the most sophisticated Marrakesh strategy. The joy of Marrakesh is that the high luck factor does not seem to matter much. I highly recommend Marrakesh as a two-player game, and also as a solitaire. Marrakesh is a masterpiece from one of the late Twentieth Century's great game designers and promoters. ■

(Continued from page 29.)

Now we can see an extra disadvantage of 36.g7-h8? It worsens Blue's parity situation, not fatal in itself, but enough to make 36.d2-f4-h6-h8 or 36.d4-f4-h6-h8 clearly better.

However, after either of these moves, Blue still has to negotiate 36....h10-g9. The search for an adequate retort provides the clues to Blue's probable best move, the surprising 36.b8-b2-f6-h8!

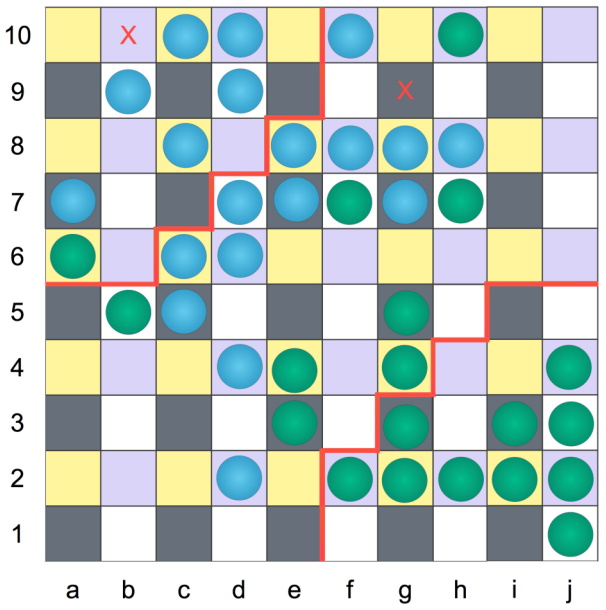


Diagram 11: Position after 36.b8-b2-f6-h8.

If Green replies 36…h10-g9, then Blue retracts, not to b8 but b10.

After 37.h8-f6-b2-b8-b10, Green plays 37….g9-h8, forcing the way forward. However, Blue is a tempo up compared to what the straight race 36.b8-b10 h10-h4 would have offered, since after two moves, Green is merely threatening a jump move to the same destination, whereas Blue's moves b8—h8, h8—b10 have resulted in the occupation of b10 and cleared b8. Blue can now play 38.d2-f4-b8 with a clear lead in the race.

[Perhaps best for Green (after 36.b8-b2-f6-h8) is 36....f7-f6, even though it loses further parity. Play might continue 37.f8-d8-b8-b10. If now 37….h10-g9, then 38.h8-h6-f4-b8, and Blue is on the right track. So Green's very best continuation may involve delaying movement of the piece on h10 for a bit longer. This makes it closer, but Blue should still win by a hair's breadth.]

Our scrutiny of this position has shown how jumping and blocking considerations, as well as tempo and parity considerations, can all be linked in an appraisal of a position. This is often the case in late middle-game positions; earlier on, the threat to trap home stragglers is a more salient feature which, as shown in the last article, can lead to an earlier termination of the game. A more usual result, however, would be to force escaping pieces to exit into positions outside the main pathways between camps in the hope this can be exploited later. To do so successfully, as the example above indicates, can be an exacting task. ■

Reference

Parlett, David (1999). *The Oxford History of Board Games*. OUP.

Header image

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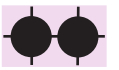
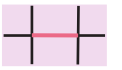
(See notes on facing page.)

Andrew B. Perkis was a valued contributor to the old Abstract Games*. His game Miller's Thumb, in* AG9*, is a very unusual approach to alignment games. Then, his Super Halma article appeared in* AG15*. The analysis above of Sudden Death Grasshopper and Traversi was due to be included in* AG17 *of the old series, and we are happy finally to present it here. We also have some quite extensive archival analysis by Andrew of his game Miller's Thumb, and I think we should publish this in a future issue. Andrew's games Alfred's Wyke, Caravaneers, Mirador, and Owlman are playable on SuperDuperGames, and his game Tablaaza is described in Issue 4 of* The Life of Games *by Kadon Enterprises. Alfred's Wyke is probably Andrew's most highly regarded game, although Miller's Thumb is very subtle.*

Interestingly, the old postcard advertising Halma, on page 26, contains a reference to a second game by George Howard Monks, called Basilinda. I had never heard of this game prior to finding this old advertisement for Halma. Is Basilinda worth playing, possibly another forgotten classic? ~ Ed.





In Keil, two stones placed together can be disconnected, as shown in Diagram 1b. In Keil, the smallest group whose stones cannot be captured one by one is an equilateral triangle of three stones, as shown below left. The connections between these pieces form an equilateral triangle of lines on the board, as shown below right.

When Keil is played on the points, not the spaces, the triangular shape of this fundamental group is immediately apparent in the triangles that constitute the board.

*Luis suggests that the connectivity condition of Keil may be applied to other Go-like games or Go variants. In particular, Gonnect (*AG6*) played with Keil rules on a hex-hex board would be an interesting experiment. ~ Ed.*

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Marrakesh

A Joli Quentin Kansil game