British Go Journal 碁

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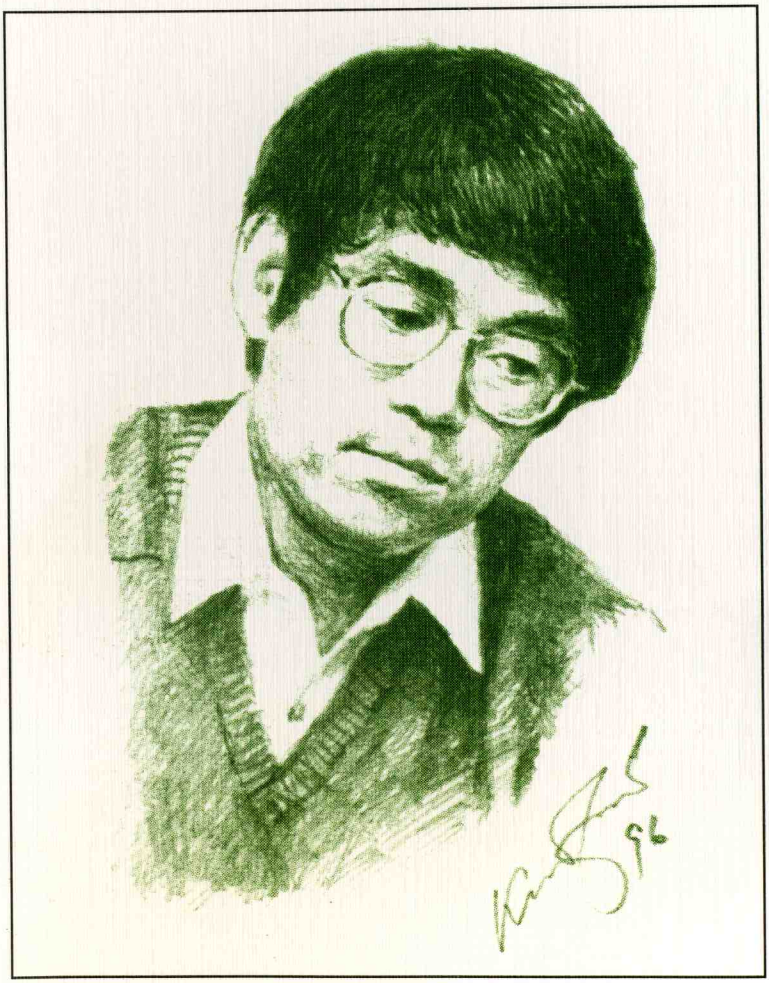

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See page 36 for E-Mail Addresses

Contents

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Tournament Calendar

Coventry: Will not be held this year.
Women's Coaching: 28-29 March. See page 54.
Bournemouth: April 4. Marcus Bennett, 01202-512655.
British Go Congress: 17-19 April, at BAe, near Chester. Helen Harvey 01925-602388. Sponsored by **British Aerospace** and **Korea National Tourism Organization.**
Anglo-Japanese 'B': April.
Barlow: 3rd May, Cambridge. Kyu players only. Tim Hunt, 01223-500769. tjh1000@damtp.cam.ac.uk
Bracknell: May 9th. Clive Hendrie, 01344-472741
Pair Go: May 16. Kirsty Healy 01926 337919, Alison Jones 0181 5046944.
Scottish Open: May.
Challenger's: 2-4 May, Nippon Club, Piccadilly. By qualification. Charles Matthews, 01223-350096.
Leicester: 13 June.
Anglo-Japanese: June. By invitation.
Barmouth: 27-28 June.
Youth Pairs: July.
Devon: July.
Norwich: August 8. Tony Lyall 01603-613698.
Northern Go Congress: Manchester, September.
Milton Keynes: September.
Shrewsbury: 4 October. Brian Timmins, 01630-685292.
International Teams Trophy: October.
Wessex: Marlborough, October.
Three Peaks: Thornton in Lonsdale, November.
Swindon: November.
West Surrey Handicap: December.
Isle of Man: August **1999** (biennial).
Anglo-Japanese: December. By invitation only.

London Open: December/January.
Youth Go Championships: January.
Furze Platt: January.
School Teams: January.
Oxford: February
Trigantius: Cambridge, March.
Candidates': March.
International Teams: March.
Irish Open: March.

Tournament Organisers: Please supply information to the editors of the Journal and the Newsletter as early as possible

Editorial

A list of e-mail addresses is being compiled to cover the rapid expansion of this form of communication, and can be found on page 36..

These addresses, from the typographic point of view, behave like very long words yet should not be hyphened, so that it is advisable to have them printed separately in an appropriate format. (They will still be printed elsewhere, where convenient or essential.)

Please contact the Editor if you spot any errors or if you can supply addresses that could or should be included, as the list is far from complete.

Notices on page 54

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Attach-Extend Mysteries

by Charles Matthews

Part 3

Now it's time for a discussion on the third line approach move (Diagram 1), in this position and comparable ones. We've had a good look at the approach on the fourth line in Part 2. Playing high that way is good shape, without a doubt, if you want to attack. So what's the other side of the story?

Firstly there are countermeasures for White if Black attacks on the fourth line, that were not mentioned in the last article. For example there is the slide of Diagram 2. This might be attractive for White if all that mattered was life on the edge. Black can chop off one stone, for sure, with 3 and 5, and build in the centre. However White finds the points *A* and *B* interesting for the future. If Black wants to go on attacking round here something less direct is called for.

Then again there is Diagram 3. White once more plays as if it is an emergency. But some eye shape appears. Black is more likely to play a move like 9 to bind the outside together, than continue an attack which appears over-ambitious and a bit thin. The number of cutting points is not small.

So you can say that on occasion Black will attack on the third line with the pattern of Diagram 1. How do we expect the game to go? Judging by the shape in the last BGJ, it would be Diagram 4. Aha! This shape looks an improvement on the empty triangle way out into the centre of Part 2.

Until, that is, one realises it doesn't work. Black can cut. For preference not as in Diagram 5. The triangled stone is going to end up badly placed, but Black seems once more to have too many cutting points to press for advantage here. There is also the superior sequence of Diagram 6. This is clearly better

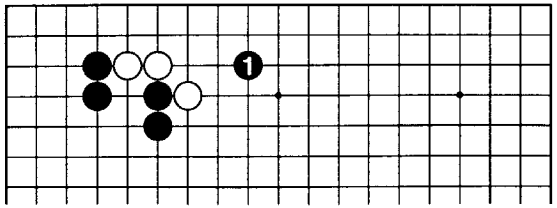


Diagram 1

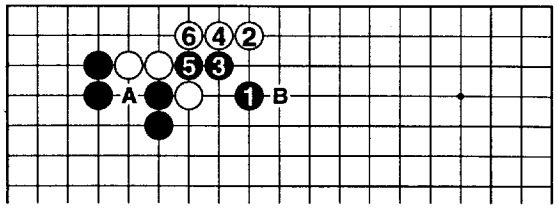


Diagram 2

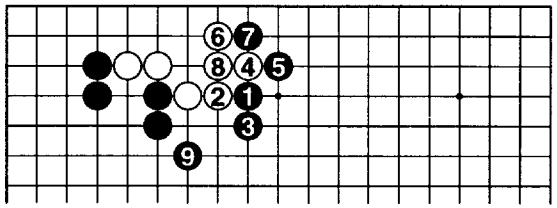


Diagram 3

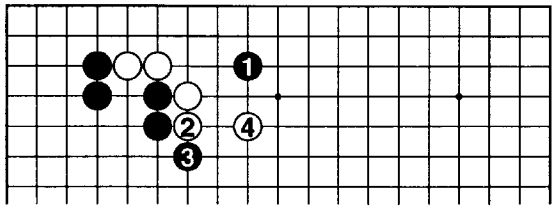


Diagram 4

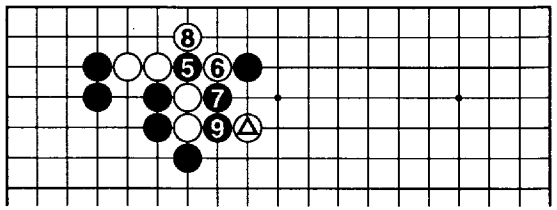


Diagram 5

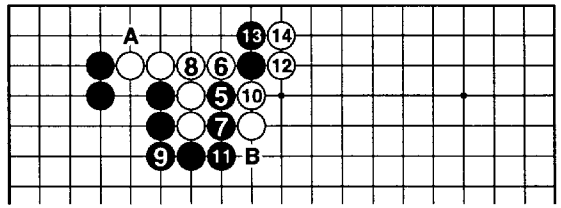


Diagram 6

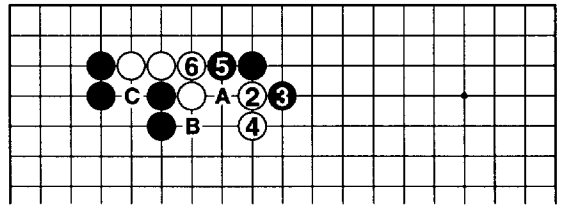


Diagram 7

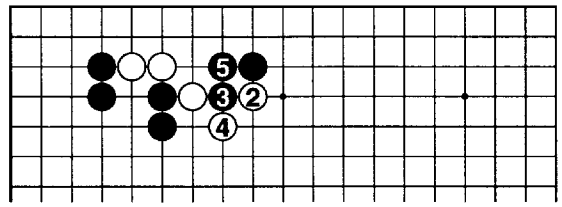


Diagram 8

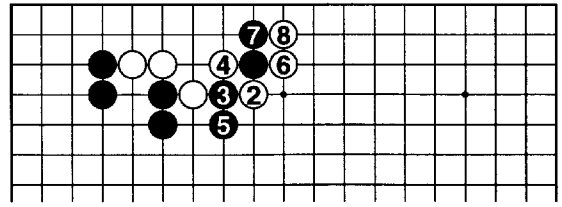


Diagram 9

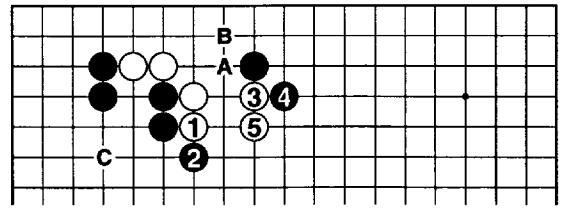


Diagram 10

for Black, who could hardly hope for more in this part of the board. Next Black *A* would cover the remaining cutting point for territory and influence, while Black *B* is an excellent point for shape.

Well then, White has to find something else. The next idea is to attach on top of the Black approach stone. As in Diagram 7. This looks like a possible way for White to make shape. Black pushing at *A* lets White play *B*, which in turn makes White pushing through at *C* more dangerous. But Black B then White A hurts the Black stones on the top side. This result seems adequate for White. The Black peep at 5 doesn't turn out to be so threatening.

But there is (surprise! surprise!) another wrinkle (Diagram 8). Depending on a ladder, Black may be able to cut up rough with Black 3 there.

What ladder? Well, it doesn't appear in Diagram 8, which is just a disaster for White, who gets cut. White 4 there is simply not on, so we turn to Diagram 9.

Seen the ladder yet? If not you need to revise a basic tesuji. (See solution on p.46.)

White is still in search of a playable line here. Finally we can reveal Diagram 10. This way is secure enough for White. Black wedging to the left of 3 with 4 now leads nowhere. Black now is left with peeps: at *A*, and at *B* which appears to be better for shape. On the other hand a Black reinforcement at *C* seems urgent, because White has come right out into the centre. Black may well play the peep at A because it is sente, White connects, Black plays *C*. Then White can attack on the top side, with options related to those Black had at the start here.

Conclusion: Comparing this result with what came out of Part 2, you'd have to say that Black in choosing the third line attack (a) allows White better shape, and (b) risks an overplay and subsequent counterattack, for the sake of preventing White settling quickly.

How to play Go on the Internet

by T. Mark Hall

Some time ago I commented that an article in the BGJ purporting to assist and advise readers on how to play go on the Internet needed to be translated into English. My attention was drawn to this lack when a fellow player suggested that I give a patzer's guide written in plain simple English to how you can get onto an "Internet go Server" (there are several) and the easiest way of doing this. I hope that the following helps.

First, I am going to assume that you do have an Internet account with somebody and that you are using Windows95. Apologies to those who are not. Most Internet Service Providers (ISPs) provide access to the World Wide Web, so to start you should connect to the Web and connect to:

www.cwi.nl/~jansteen/go/go.html

This links you to Jan Steen's web page; you should then click on the "go FTP Site" option which will connect you to the IGS page in Korea. When connected, choose the option for the directory "Clients". This will then connect you to a page listing various "clients", programs which will act as buffers between your machine and the go Server. I at present use winigc; if you click on the name of that program, it will begin to download onto your computer and you will be asked where you want to save it. Once it has been saved, you may disconnect completely from the Internet for the moment. The program is shareware and will remind you about every 15 minutes of use that you have not registered it. If you like it and want to continue using it I would recommend that you do pay for it ($30 and there is a way to play by credit card). Registration also allows you to take the free upgrades.

The program has been "zipped" and will need to be "unzipped" before any further action can be taken; this can be done simply by using Windows Explorer and double-clicking on the file name. Once unzipped, the program will need to be installed; again you double-click on the "Install" file and it will proceed with the installation. Here there is something which catches a lot of people out (including me the first time). The program asks you if you are using a Modem connection or "Winsock, SLIP/PPP". Do not, repeat not, choose Modem! This may sound ridiculous, but choosing the modem option means that you will be dialling up direct rather than through the Internet. Choose either the "both" option or the WINSOCK option. Take my word for it; it is easier this way. (I am assuming that most Windows95 compatible programs will operate in the same way). The program will then be ready to use and may already has the addresses set up in it for connection to three Internet go Servers. If they do not appear in yours, here are the addresses of both of the most-used go Servers:-

igs.nuri.net 6969

nngs.cosmic.org 9696

These should be entered in the setup section of the connection option. NB: the spaces after net and org are part of the address; don't omit them. Then, when you connect to the Internet, you call up the client and ask it to connect to one of the servers. The busiest one is IGS.

Now we come to the interesting bit— registering and playing. The first time you connect, it is best to just sign on as "Guest". If you were to connect up without the client (as I did at first) you would see the games you played "observed" (more about this later) on an ASCII board; White moves would be displayed as 0 and Black as # and the board would scroll up every time a new move was played. You would have to type in the coordinates of the moves, which makes typos common and produces headaches after fast games. There are various help options, which you can access by typing "help". You can also have the help document(s) e-mailed to you, if you wish to read them at your leisure. Initially you should type "help register" and this will tell you how to register your normal sign-on. Once you have done this, the server will e-mail you confirmation that you have been registered and a password, which you can change the next time you sign on (see help password).

You are now a newbie; welcome to the club. You can see who is signed on by typing "who". This will list all the players signed on, in order of latest entry in IGS and by strength in NNGS. If you want to see how many 10 kyus are on, type "who 10k". At the moment you will be NR; this means that you have No Rating (or Rank). Be warned, IGS ranks are stronger than outside ones; I am having fun at the moment playing around 1d* (the * indicates that you have played enough games to be rated by the program). Players without an * have not yet played enough. If you set your rank (help rank) you will only get the * after playing 20 rated games. So, set your rank and ask for a game; how? You can "shout" that you would like to play people of a particular rank e.g. "shout any1 3k-5k 1/10?". This means that you would like to play someone within those grades with time limits of 1 minute to start then 10 minutes byoyomi of 25 stones. There are berserkers who ask for anything down to 1/1; they are usually in Korea with fast connections. Since I have lost games on time at 1/3 (because of netlag), I usually now only accept anything 1/5 and over. You can also ask a particular player whether he/she would like to play. So let's look at how the listing would appear if you typed "who 1k". (See table.)

Info	Name	Idle	Rank	Status
21	wenjie	38s	1k*	!
79	byd	15s	1k*	_
59	ip	21s	1k	S
41	tang	0s	1k*	X
55	nada	1m	1k*	Q
79	saturn	12s	1k*	Q

The numbers directly next to the player's name means that they are playing in that game. For example, saturn is playing byd. If a player has the symbol ! against their name they are actively looking to play a game. If they have an X, they do not want to play; nada is actually watching game 55, played between two others. Q stands for quiet; they do not see announcements of games started and finished and players signing on and off. S is a variation of this, that the player does not see "shouts" from any other players (or non-players). Usually, people watching a game will want to see the strongest players in action; sometimes these may well be replays of professional games or real-time games. It is rumoured that Jimmy Cha plays under the pseudonym "tobe", but tobe has denied being Jimmy Cha. "tobe" has the rank of 9d* amateur; the strongest anyone else gets to is between 4d and 6d. To watch a game, like nada above you would type "observe 55" and the client will display a board with the moves being played as they are relayed. Observe and unobserve can often be abbreviated as "ob" and "unob". To implement any of the other commands you would need to "toggle", e.g. "toggle looking" to signal that you want a game, "toggle quiet", "toggle open" etc.

You will find that there are certain conventions and habits used on IGS. I hinted as much in the "shout" above; to save typing, a number of abbreviations are used by players. I list below the most common ones with translations:

thx	Thank you
c u	See you again (or more prop erly meet gain)
any1 4 a gm	anyone for a game

Anyone who has spent any time on IGS will have seen messages about escapers. A genuine escaper is someone who hates to have a lost game on his record and he will then break connection rather than continue the game. The game is normally stored for a period so that the players can resume if the telephone connection was accidentally broken. Recently I played a game taking White against a player signed on as "beat99". When it became obvious that he was losing, he lost connection. When I saw his name there sometime later I asked if he would like to continue and he signed off. After a couple of examples of this, the next time I saw him signed on I restarted the game and typed "Your move, I believe?" and he broke off connection again. When he reconnected, I did it again and he finally agreed to finish (and resigned shortly after). To restart the game I had typed "load tmark-beat99", entering the white player's name first. If you have doubts about playing someone, you can check their "stored" games by typing, e.g. "stored beat99". The higher number of stored games, the more likely the player is an escaper (the record for a human player that I have seen is over 70 games). At the moment I have 8 or 9, most of which are escaper's. So far I have only cried escaper once, when someone signed off immediately after I asked him to resume (and not beat99). Personally, I would hope that no Brit gets a reputation as an escaper; all Brits then get tarred with the same brush. A lot of Chinese now have that reputation and the systems administrators are trying to devise a method of dealing with escaping.

If anyone has any questions on the above you can e-mail me at:

tmark@gogod.demon.co.uk

or, if you get connected, on IGS as "tmark". C U there!

Charting a Course in the Middle Game

by Cho Chikun, Honinbo

Translated by Bob Terry from Kido, February 1984

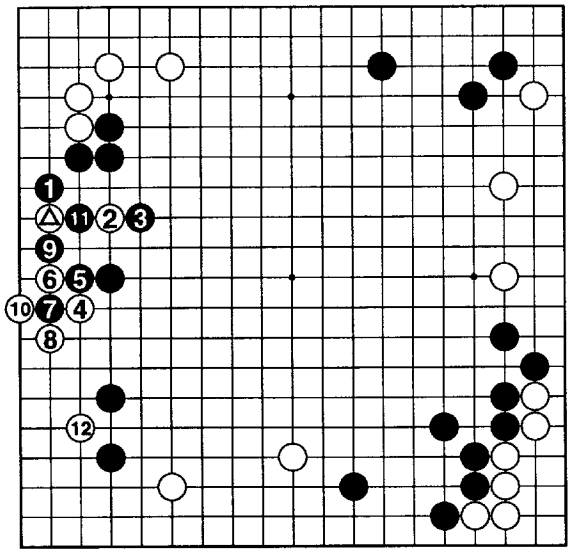
Part 8

When involved in a fight, do not neglect essential things.

The Model Diagram shows a three stone game between an amateur 4 dan and a shodan, and at this point the stronger player made the submarine attack with the marked white stone. In response to the marked stone, one cannot play elsewhere, so for the time being the theme of the game will revolve around the fighting here. Then again, a number of variations may be considered and each has good and bad points, but the thing I would like to say this time is unconnected with the merits or lack thereof of those variations.

What I want to stress is that even during intense fighting, one must consider the whole board and have a firm grasp of the vital points of a position. And then, one wants to turn to those vital points at the earliest opportunity. In this game, where might those vital points be? Before getting to that, let's examine the progress of the game.

Black played the diagonal attachment of 1, and when White jumped to 2, attached at 3. Jumping in at White 4 is a common technique. The move that made things difficult was the cut at Black 5 and 7, sacrificing a stone to end the fight. This is not a very good way of playing. Black incurred a small loss here. However, even though a loss was sustained, in a 3 stone game



Model Diagram

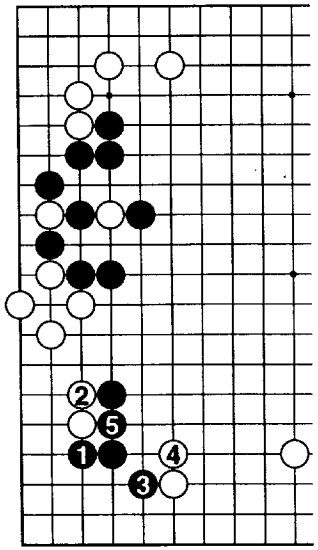


Diagram 1

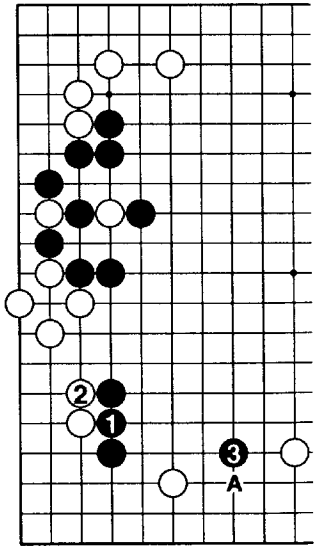


Diagram 2

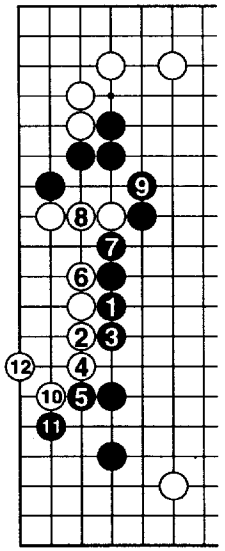


Diagram 3

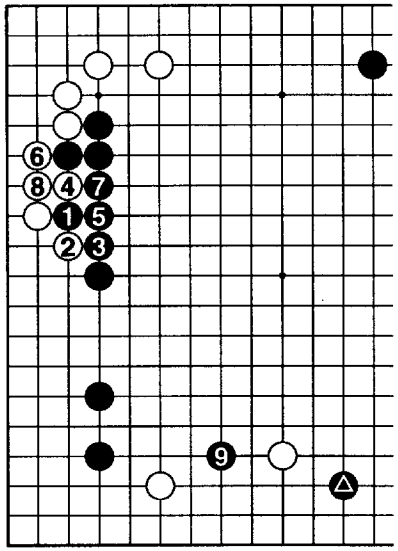


Diagram 4

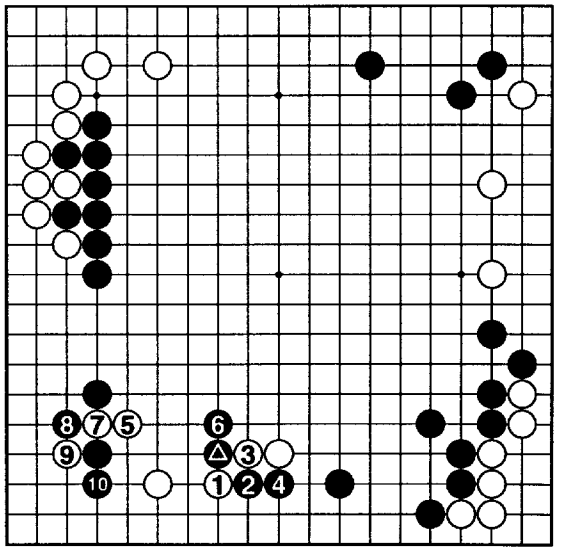


Diagram 5

there is leeway for error and the victory is still up for grabs. If Black plays well the rest of the game, victory is still possible. What is the best way to answer the peep of White 12?

Blocking from the corner with Black 1 in Diagram 1 is solid. After White 2 and Black 3, Black connects securely with 5; the corner territory is preserved and this is good.

Someone who wants to play more actively would connect at Black 1 in Diagram 2 and aim to invade at 3. Why the high invasion at 3 and not at *A* is an important theme. There is one variation to the course of the game that should be considered when it is realized that with the capture of one stone with White 8 and 10, the move at 12 will be played; that is, letting White live but sealing the group in.

Cutting with Black 5 and 7 is a little too negative. It is better to seal White in as in Diagram 3 and take sente to play a big point elsewhere. Black's thickness would undoubtedly work to good effect in any fight that might take place in the centre of the board.

But without getting into all of this, the move that must be recommended, from the very start, is the attachment of Black 1 in Diagram 4. Up to White 8 is one example of what might happen, and this is a joseki. It is unavoidable that one must allow this kind of territorial encroachment. At that point, Black turns to the invasion of 9. From the beginning, this point was characterised as a vital point considering the whole board, and when the marked black stone abuts against White's position as it does here, this invasion comes with explosive force.

The severe invasion with the marked black stone in Diagram 5 was a vital point in this game. If one wonders why this is called a 'severe invasion' it is because with this one stroke, White's

stones are separated. In this position, one group of white stones or the other will be captured. The stronger player will attach with White 1, but Black's ace in the hole is the connection to the right with 2 and 4. Well then, the opponent is no slouch either, and will come up with the clever peep at White 5. Now is not the time for faint heart. Extending powerfully with Black 6 is recommended. Perhaps the push through of White 7 and the cut with 9 is feared. However, please look at the next diagram.

With White 1 to 7 in Diagram 6, the four stones in the corner are captured. However, it is fine for them to be captured. That is because from the start it was determined to sacrifice them. With 8 through 12, Black profitably seals White in. The three marked white stones are dead, and isn't Black's outside influence magnificent? And then, if Black expands his position with a move like 14, he will win by 300 points (to borrow a famous line from Kajiwara Sensei). This diagram is just one example, but the important point is that if Black played the vital point of the invasion things would go well. Let's examine two or three variations.

A go proverb states that even a fool connects in answer to a peep, but if Black does this with the connection of 1 in Diagram 7, he has been tricked by the cunning of White's peep. With White 2 and the following, Black is tightly wrapped up. It is because White wanted to play this sequence with 2 and 4 and the following that he originally played the peep, and it is hoped that one is able to see through this intention from the start. In this variation, Black should simply capture at 9 with 7. It was only to point out a worse result that pushing out with 7 was shown.

Diagram 8 shows an important theme. The low invasion of

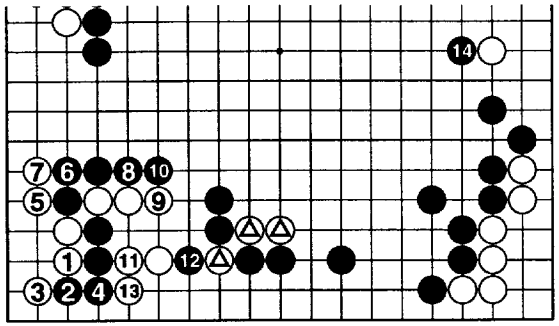


Diagram 6

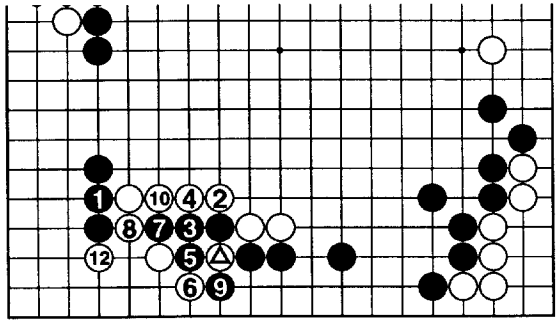


Diagram 7
11 at triangled stone

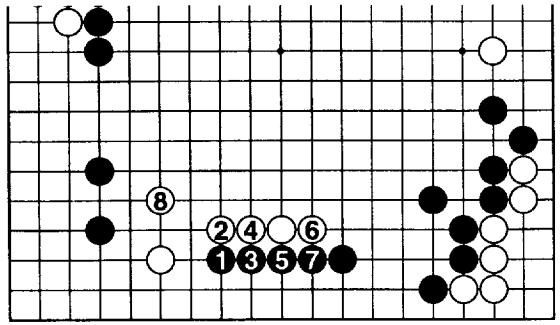


Diagram 8

Black 1, which is more usual, is not sufficient in this case. White lets Black scoop out the lower side by playing at 2 and the following, but in the overall scheme of things, White has been relieved of some worries. White cannot be separated and attacked here.

The stronger player will continually test the weaker player's strength. When Black attaches with 1 in Diagram 9, White will realise that "Black is pretty strong, huh?" and without playing anything, most likely defend at 2. Whether leaving the marked white stone as it is and playing elsewhere is an effective use of a forcing move or not must be determined over the course of a real game.

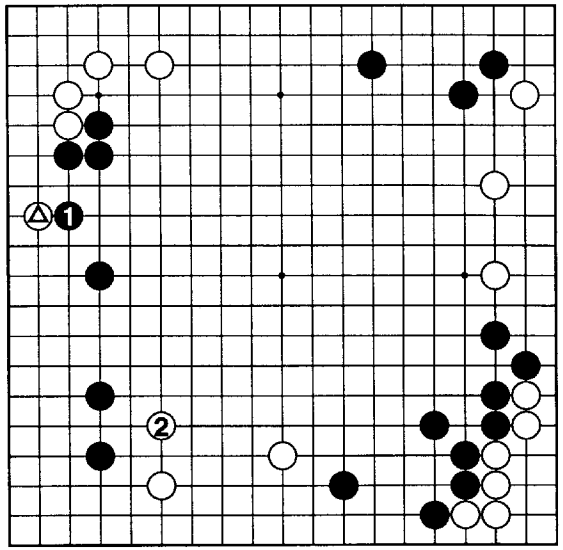


Diagram 9

Analyzing Ko Struggles Theoretically

by Karel Tavernier

In *Tesuji*, James Davies wrote:

'Many go players dislike ko struggles; understandably so, for they are forced not only to think about the local situation, which is likely to be complicated enough, but to weigh it against all the ko threats available to both players, to weigh those ko threats against each other, and preferably to do so before the ko begins.'

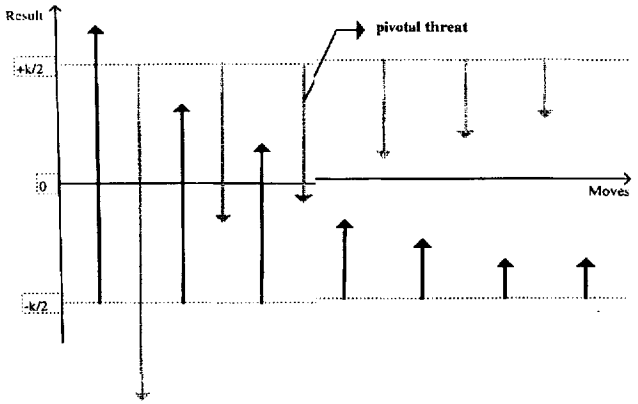
In this article, we exclusively discuss *how* to weigh the ko threats. We do not discuss ko in general, how to initiate ko struggles, how to use ko to make life, etc. We assume the ko is created, and all the ko threats are identified and valued exactly.

Go theory is usually discussed by stating a general principle, and then illustrating it with examples. We take another approach here. (One reason is that I am not a good enough go player to risk giving examples!) We analyze the weighing problem exactly, but under simplifying conditions. In real world go games these conditions are not perfectly fulfilled.

I hope that I will not add confusion to the already opaque field of ko struggles, but that understanding the simplified ko struggle will help to understand real ko struggles.

The ko game

We define a simple game, called the ko game. The rules of the ko game are as follows:



1. There are two players, Black and White, playing in turns.

2. A ko game is characterized by its *configuration*. The configuration consists of a positive integer k, called the *stake of the ko game*, and two finite sets of threats, one set for each player. Each of these threats has a positive integer associated with it, called the *strength of the threat.*

The Black ko threats have strength B1, B2,...Bb.

The White ko threats have strength W1, W2,...Ww.

3. There are two possible types of moves:

stop the game;

play one of the available threats.

4. The threats can be played in any order. Each threat can only be played once. When a player has no more threats available when it is his turn, he must stop the game.

5. Black begins the game by playing a threat.

6. The player stopping the game makes k/2 points. The other player makes the strength of his last threat. The result of the game is the difference between Black points and White points. Black's objective is to maximize the result, White's objective is to minimize it.

So, in contract with the go game proper, the object is not simply to make more points than your opponent does, the object is to achieve the maximum difference for the given configuration.

Clearly, this game is closely related to what happens on the goban during a ko struggle. With some degree of accuracy, there is a ko game embedded in a ko struggle on the goban:

- Stopping represents resolving the ko, either by playing in the ko, or another move achieving the desired result.
- Making a new threat represents the following sequence of go moves: defend against the opponent threat, the opponent takes the ko, make a new threat.

These moves can be interlaced with tenuki moves, this does not matter.

All this maps exactly. The problem is that not all the rules in the ko game map exactly, certainly not the ones allocating points. We discuss the accuracy of the mapping in the section How realistic is the model?

We clarify the workings of the ko game with an illustration. On the y-axis we put the result. Along the x-axis we put the succession of moves. Upward arrows stand for Black threats, and downward arrows for White threats. The length of the arrow is equal to the strength of the threat played. The point of the arrow then indicates the result of the ko game if the opponent stops the game after this move.

Black can stop the game after each White threat, indicated by the downward arrow; the top of the arrow then indicates the result. Or he can continue with a threat on his own. White can stop after each upward arrow.

In this illustration, we assume that both players play their threats in descending order of strength. The first move is Black, a threat with strength B1. If White ignores this threat the result is -k/2+B1, indicated by the top of the arrow. If White continues, he plays his threat W1, a bid of k/2-W1. And so on.

Another way of looking at the ko game is as follows. When Black plays a threat with strength Bi he offers White two options: stop the game with result k/2-Bi, or continue to play with the remaining threats. We can say that Black has made White an offer to stop the game at k/2Bi. If White refuses this offer, he must make an offer of his own. And so on.

The optimal strategy

The question is now what is the optimal strategy, or, more specifically:

In what order should a player play his available ko threats?

When should a player stop the game?

How many points are made under optimal play.

For optimal strategy we take the *minimax strategy*. This works as follows. Assume Black is to play. Black has the choice between a number of possible moves. On any Black move, White will respond in such a way that the Black result is minimal. This minimum is the result that this move brings to Black. Of all his possible moves, Black plays the one that brings him maximum value: of all the minima, Black picks the maximum.

If one of the players plays like a moron, other strategies may produce better results.

Intuitively, it makes sense to play your threats in descending order of strength, first the strongest threat, then the second strongest one, etc. We call this the *descending order strategy*. We will show that this strategy indeed achieves the optimal result. There are other orders that achieve the same result, however.

Suppose now both players follow the descending order strategy. Each successive threat of a player gives him a worse result, but each successive opponent threat provides a better result. The question is when to stop the game. The answer is: *Stop when your strongest threat is weaker than the result of the current opponent threat.* This is the *stopping rule*. Alternatively: *Stop when the sum of your best threat and the current opponent threat is less than the stake of the game.*

It is easy to see that you cannot achieve a better result by continuing the game after the stopping rule becomes valid. If you continue the game, you must make a threat with a worse result. Your opponent can always stop the game there, and you are worse off.

Look at the illustration, from Black's point of view. Black can stop on the downward arrows, representing White threats. White has answered Black's first threat with a counter-threat of his own. After White's first move, Black has a threat giving a better result, so he plays it. White now answers with his second best threat, already much weaker. Black still can do better, so he answers with his third threat. White again makes a counter-threat. Black now has no better threat available. According to the stopping rule above, he must stop the game there.

We call the first threat that must be ignored under the descending order strategy the *pivotal threat*. The result gained by stopping on the pivotal threat is the pivotal result.

Another way to define the pivotal threat is the following. Sort the threats in descending order, and pair them with the opponent threat. The pivotal threat is the first threat where the sum of its strength and the strength of the opponent's next threat is *less* than the stake of the ko game.

Two important lessons for beginners

- Beginners think one must resolve the ko as soon as their best threat is less strong than the stake ko. This is not true. One must continue and only stop when your best threat plus the threat made by your opponent is less than the stake of the ko.
- When the threats are numerous and roughly equal in strength, the result of the ko will be roughly halfway between the two extremes of the stake. This means that if you attack and threaten to kill an opponent group of value k, and he lives in ko, you still can expect to make about k/2 points, whoever 'wins' the ko. So if you initiate this attack, and your opponent wins the ko, you still made a very profitable operation.

Proof that the descending order strategy is optimal

The pivotal threat separates the threats in two classes:

● *Super-pivotal threats*, the threats giving better results than the pivotal result. Under descending order of play, the super-pivotal threats are played before the pivotal one.

● *Sub-pivotal threats*, all the other ones including the pivotal threat itself.

Note that each player has the same number of super-pivotal threats when the pivotal threat has the colour of the player beginning the game, in the other case the player beginning has one more super-pivotal threat.

Suppose the pivotal threat is White.

We first show that White achieves at least the result of descending order, with the following strategy: When Black plays a sub-pivotal threat, White stops. When Black plays a super-pivotal threat, White responds with a super-pivotal threat of his own. White has exactly the right number of post-pivotal threats for this. White achieves at least the result of the pivotal threat with this strategy.

Likewise, we can show that Black can at least achieve the pivotal result.

Therefore, each player can at least achieve the pivotal result, and his opponent can stop him from doing any better. The pivotal result— the result of the descending order strategy with proper stopping rule— is indeed the optimal result in the minimax sense.

The general optimal strategy

From the above, we deduce the general optimal strategy: first play all your super-pivotal threats, in any order.

The big advantage of descending order is that you do not need to determine the pivotal threat in advance. Your opponent sorts his threats for you.

Knowing the pivotal threat helps you to know what to do when your opponent makes mistakes in playing his threats. If he plays any sub-pivotal threat, you must grab the opportunity and stop the game.

How realistic is the model?

In this section, we will discuss how well the ko game maps on a real ko struggle.

Local ko threats

The biggest hole in the theory seems to be that it does not seem to cater for the all-important local threats. This is not so. A local ko threat is equivalent to a normal threat of strength k. If you ignore the threat, the opponent will resolve the ko, without compensation, making k/2 = k-k/2 points. The only reasonable answer to a local threat is to defend anyhow.

The reason for playing local threats first is that they are super-pivotal anyway, and that they only are available in this ko struggle. By playing local threats, you do not consume threats useful for future ko games.

Simple ko struggles

We define a simple ko struggle as follows:

1. The ko is direct for black and white.
2. No other ko affects the result of this ko struggle.

The model above only holds for simple ko struggles.

More complex situations exist, i.e. indirect ko, double ko or combinations of ko. I will think about these when it is too late, when I have lost a game over such a situation.

Independent ko threats

The model assumes that both players can freely select the order in which to play their ko threats. In other words, both players have a set of ko threats at their disposal, and they can play them in any sequence that suits them. Playing a ko threat does not affect the availability or strength of the other threats, neither yours nor your opponents.

This is far from being always true. When you play a ko threat, this often creates new ko threats. These new ko threats are effectively at the disposal of the player, but he cannot play them *before* the initial threat.

We will extend the theory later to cover dependent ko threats.

Unbiased ko threats

When a ko threat is made and answered, this affects the result of the game in no other way than that the attacker can now play in the ko again, and that a ko threat is no longer available.

At first sight, this seems a very strong restriction: surely a ko threat, even when answered, can conquer territory, can create aji! Yes, but such a ko threat is then clearly a sente move, and you should be able to play it anyway. Therefore, ko threats are a lot more unbiased than you might think at first sight.

Making a ko threat can also cost the attacker. The attacker loses a point if he plays a ko threat inside enemy territory but is answered in neutral territory. When you make a ko threat, it is no longer at your disposal for future ko struggles. The answer to a ko threat can eliminate aji.

A ko threat can create a new ko.

Minimax players

To assume both players to be minimax is not a very restrictive condition. It is not absolutely valid, however. In a real world game, nobody plays perfectly. Striving for minimax may not be optimal. When in the lead, it may be sensible to trade a few points for reduced risk. Conversely, when behind, you try to complicate the game, to create ambushes, even at the cost of playing a move that, under perfect play, will bring in a few points less, in the hope that your opponent will make a mistake.

Ko games with dependent threats

The concept of the pivotal threat helps to analyze some ko games with dependent threats.

Restrictions in the order in which a player can play his threats

Suppose you can only play some threats after you play a specific threat, called the liberating threat. The threats are then ordered in a three structure. We call the threats available at a given moment the *free threats*. The free threats of both sides— together with the stake— define the current pivotal threat.

You must play the super-pivotal threats that free up strong threats *first*. Only liberating threats stronger than the pivotal one are of any use.

You must do this first. If your opponent liberates some of his threats, the pivotal threat can change to your disadvantage. This can shift some super-pivotal threats to sub-pivotal ones. These threats are then no longer at your disposal. If some of these threats liberate other strong threats, you have lost access to these threats. Likewise, when you liberate threats the pivotal threat changes to your opponent's disadvantage, and this may block access to some of his liberating threats.

Threats that eliminate opponent threats

Suppose that playing one of your threats eliminates some of your opponent's threats. A similar strategy is valid.

Again, only eliminating super-pivotal threats is of any value. Again, you must act quickly, before the pivotal threat changes to your disadvantage, and to change it to the disadvantage of your opponent.

Summer Schools

by Charles Matthews

Matthew Macfadyen will run a week-long introductory go course at the Marlborough College Summer School from July 19 (if he has a quorum; please point out this opportunity to likely friends).

I have been trying to collate information on go schools of all sorts. Some of you looking for holiday ideas might welcome what I have gathered so far.

France: A major two week event is the "Stage de Go" held annually at Sanilhac in the Ardèche in August. Not there in 1997 because of the Marseilles Congress, but the 1996 one received a super review in the AGJ.

Family-compatible, French language not vital. If I receive more details I'll get them to the Newsletter.

There are also some much smaller informal "stages ski" during the winter months.

Le stage Go et Ski has its own web page:

//WWW: http://bat710.univ-lyon1.fr/~ffg/1998/STAGE_SO/Welcome.html

Centre UCPA des Contamines Montjoie (Alpes), 14 au 19 April 2250,00 F. With Guo Juan, 7 dan.

You are advised to apply soon, as the number of places available is limited.

Hungary: Lake Balaton. I have no current information. Matthew Macfadyen knows the location, makes it sound like the next best thing to Blackpool in a land-locked country.

USA & Canada: The AGA has a July summer camp for children this year with Janice Kim. Jim Kerwin (Nihon Ki-in professional) has regularly run seminars over the years. His seminars are usually in Vancouver.

The package trip to Korea mentioned elsewhere in this issue is supposed to include contact with an English speaking professional from the Hanguk Kiwon, but no firm details at this point.

Latest news (from Francis Roads): The 1998 U.S. Go Congress will be held from Sunday, August 2 through Saturday August 8, 1998 at St. John's College, Santa Fe, New Mexico.

For more detailed information send an e-mail to organiser Grant Franks:

ghfranks@clark.net