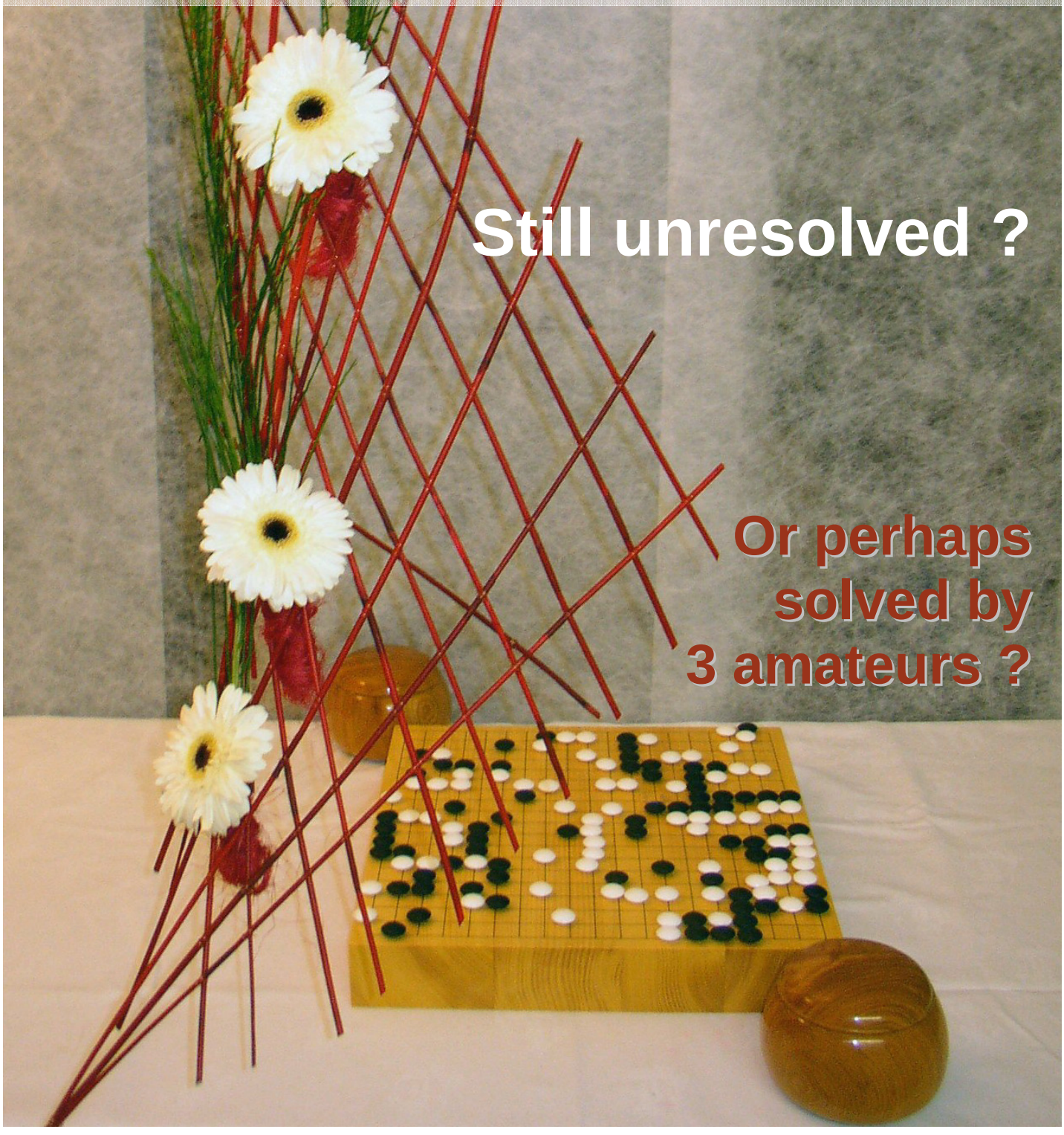
Igo Hatsuyoron Problem 120

The most difficult problem ever



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6. **The 2nd Throw-in** 73

7. **Leaving the Battlefield (I)** 99

8. **Leaving the Battlefield (II)** 113
   (including research on the move that probably wins the game for Black)

9. **Time - What distinguishes between amateurs and professionals.** 135
   (or joins them together)

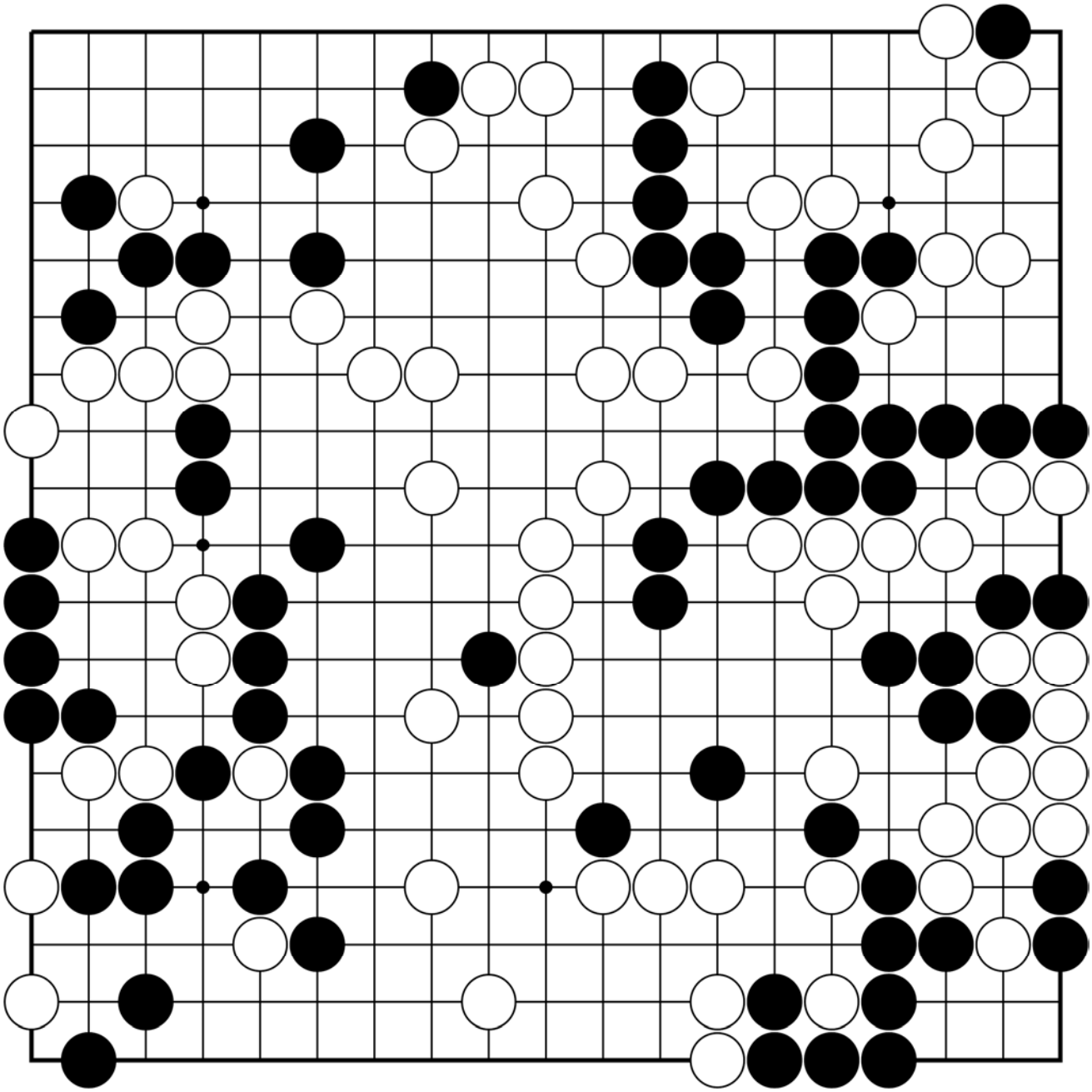
The cover:

"Grids" – Ikebana by Karin Jarchow-Redecker, 美風, Sogetsu School

Igo Hatsuyoron, Problem 120

Created by

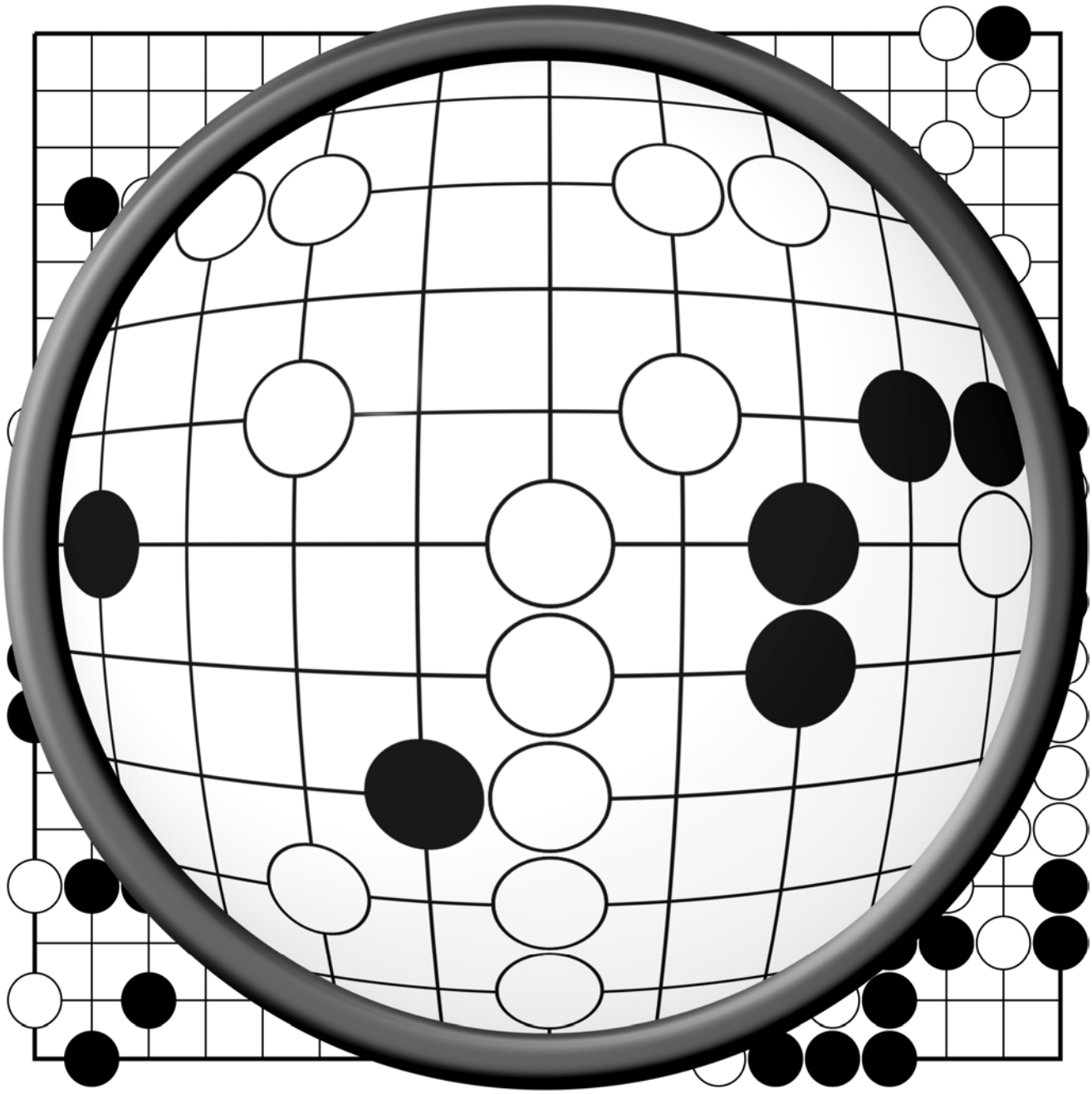
Inoue Dosetsu Inseki (1646 - 1719)



Black to play and win

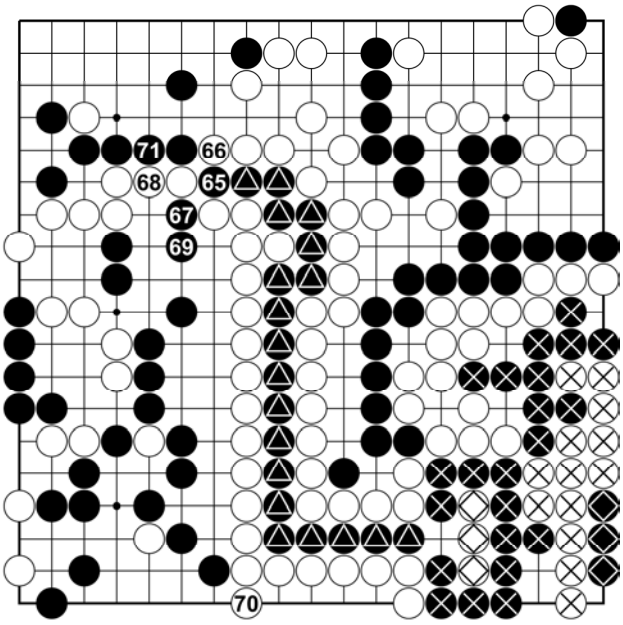
Igo Hatsuyoron, Problem 120

What this problem is really about



Black to play and win

What this problem is really about



"Igo Hatsuyoron's Hanezeki"

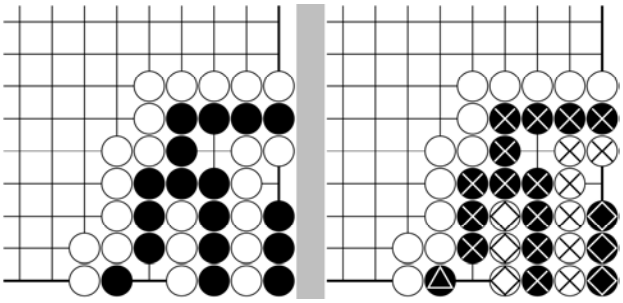
Igo Hatsuyoron's problem is quite complicated. The key issue is the life of the black group at the top – White can stop it getting independent life with 2 Eyes, and Black will have to kill all the white stones in the lower right.

The first 71 moves of the "official" solution serve to construct a special type of Seki, called Hanezeki, which is discussed below. This will be a temporary Seki. The black stones marked with crosses are cut off, and the white stones above are part of another (linked) temporary Seki, as is the large black group in the top right, which is eyeless.

So Black must live on the top. To do so he must either get 2 Eyes there or he must force White to capture the 20 black (= marked with triangles) stones in the centre, leading to the collapse of the (temporary Hane-) Seki, which, in turn, allows Black to capture all White's stones in the lower right, thus saving Black's group at top right.

Black's only chance of forcing White to capture Black's 20 stones in the centre is to attack White's stones on the left, and to reduce them to one Eye (or less). But it's now White's turn. In addition, Black must be aware that it is White's option either to capture the black string in the centre, or to take liberties from the black group in the top right.

If White is willing to let Black get two Eyes at top (maybe **65** is not played in this case), then Black may have to pay a price in the top left corner. But Black will also get a small amount of compensation (about 10 points) in the top right, because most White moves there are no longer Sente for White - indeed many are now Sente for Black, instead.



"A Hanezeki"

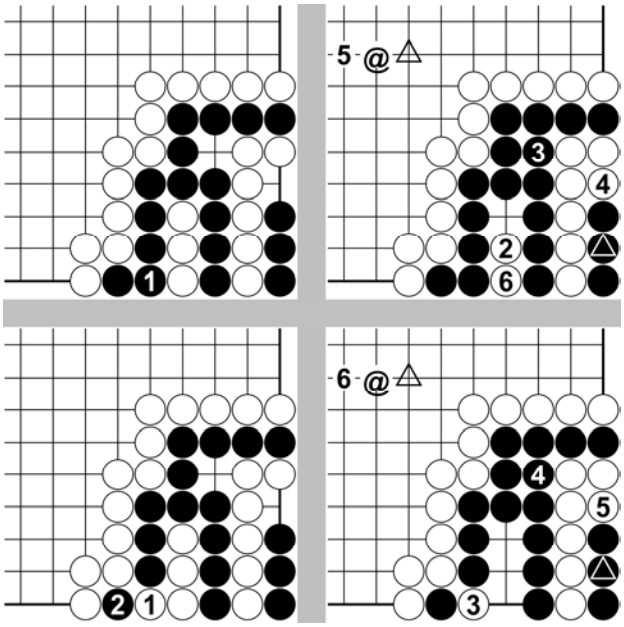
The diagrams above show a special type of Seki, called "Hanezeki". *(The stones on the right are marked for the sake of comparison with Igo Hatsuyoron's problem.)*

A Hanezeki is a Seki in which

1. each side could capture an equal number of stones internally (here 3 stones, light yellow / light blue), but obviously do not want to do so because they would lose the capturing race if they did so, and
2. there is the further refinement that one side (here White) has the alternative of capturing some "external" stones (here 1 stone, dark blue; may be a Hane, therefore the name of the Seki).

However, if the "external" stones are captured, then the Seki collapses – if there are not many external stones,

then it will not be an advantage (for White) to capture them.



"Neither Black nor White will win"

Above we show why neither Black nor White wants to start the capturing race (Semeai).

If Black starts at **1**, then he loses after White plays at **6**.

If White starts by capturing at **4**, then Black steals the eye with the triangled stone, and White loses the fight.

The side that starts here will eventually lose the Semeai by one move.

White cannot safely capture the single “external” black stone with White **1**. After Black has stolen White’s eye with **6**, White will die.

Note that, in this diagram, if the single “external” black stone is replaced by 8, or more, black stones, then White could profit from starting this fight.

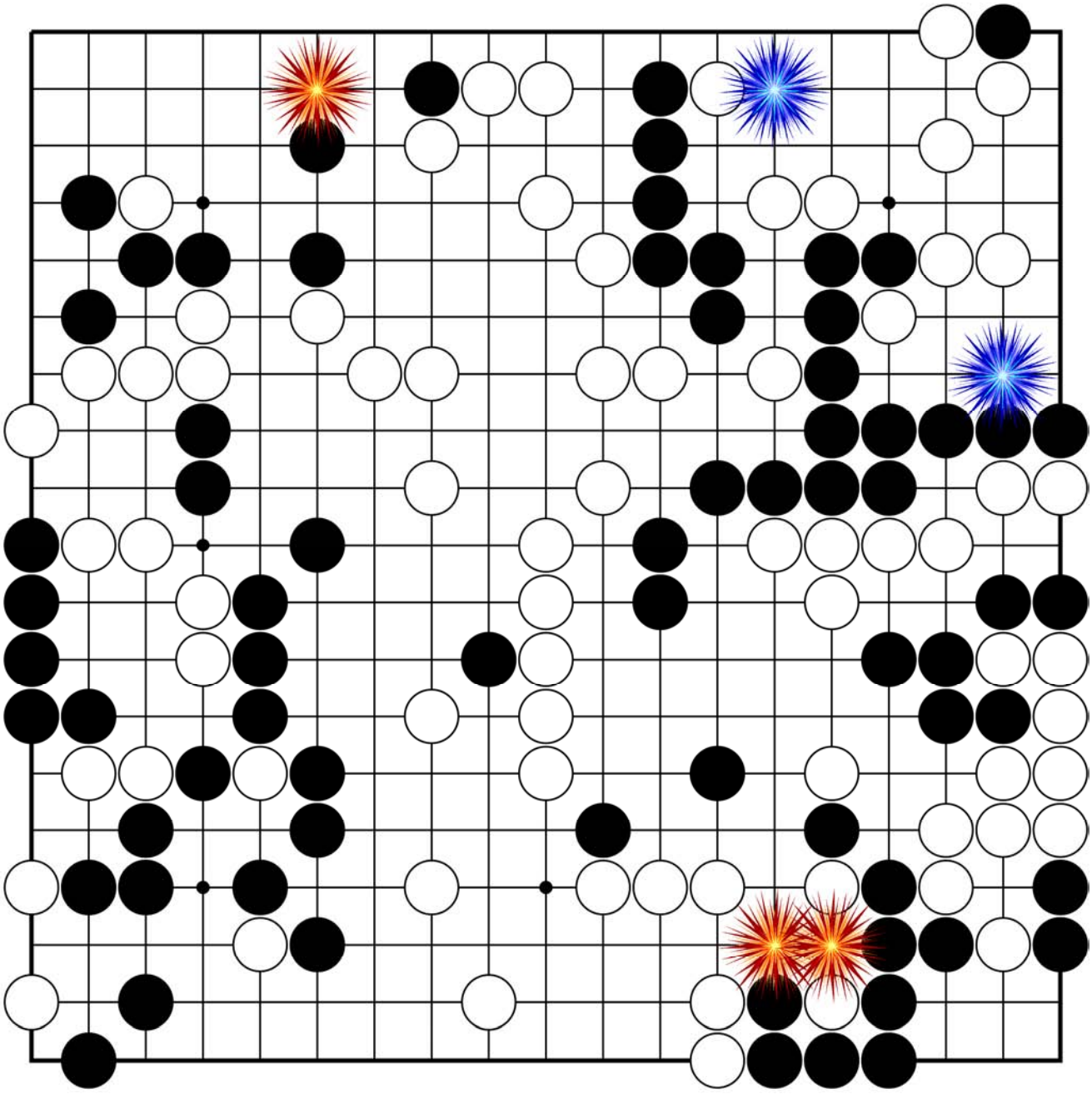
Ignoring questions of Sente, in the Igo Hatsuyoron problem, White’s capture of 20 stones costs her about 25 points locally.

There is further discussion of Hanezeki at Sensei’s Library:

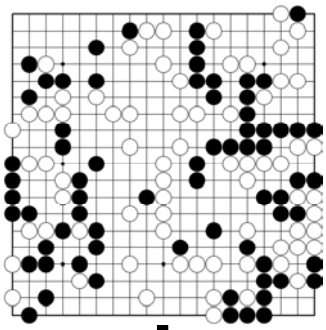
(http://senseis.xmp.net/?hanezeki).

Igo Hatsuyoron, Problem 120

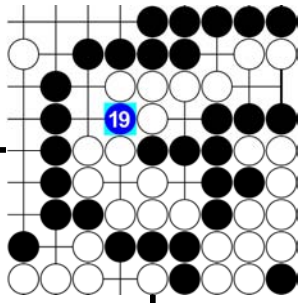
Highlights - Our key-results



Black to play and win



Black to play and win

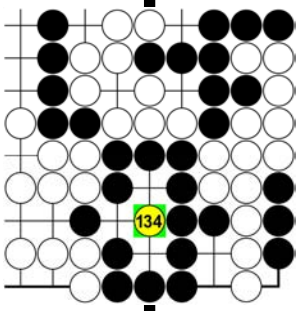


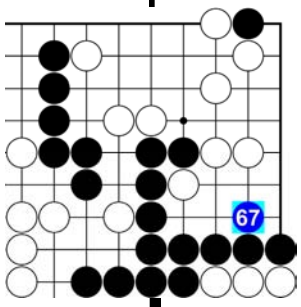
B + 3

"Official" Solution *

2nd Throw-in **

possible ?



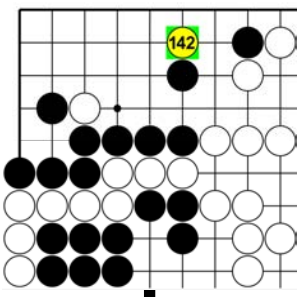


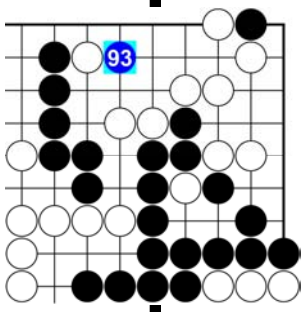
Joachim's Oki *

"Bad shape" move **

W + 1

B + 1 ?





Yamada Shinji's Tsuke *

Hasami-Tsuke **

W + 2

B + 2 ?

*) Result approved by professionals

**) Only some variations professionally checked

This document

This document has grown over time with every step of our investigations, so it may now appear a bit too complex, and its overall structure too difficult to see. But a general re-design would cost too much effort and time. So we decided to add a summary with the highlights and key-results of our research here, at the beginning of the document.

We provide a historical outline of the changes in this chapter.

Overview

3. **Main Path** 19

The sequence with the strongest play of both sides; **professionally approved**. Includes the key-move found by Joachim Meinhardt, after which **White wins the game**.

4. **Questions** 31

Some questions, which arose during the discussions with Joachim while writing and editing this booklet.

5. **Variations** *(from "common" sources)* 37

Contains most of the variations for the Main Path found in the sources. We added some variations we thought to be helpful for the reader, too.

6. **The 2nd Throw-in** 73

The sources mention a Semeai that will end harmful for Black after this move. We went through the "common" Semeai-variations, but found none.

7. **Leaving the Battlefield (I)** 99

We had looked for a move that might open the door again for a win by Black. This chapter includes our attempts after my very first idea for a "bad-shape" move in the top right corner. Finally we concluded that the timing for this move was not correct.

8. **Leaving the Battlefield (II)**
(including research on the move that probably wins the game for Black) 113

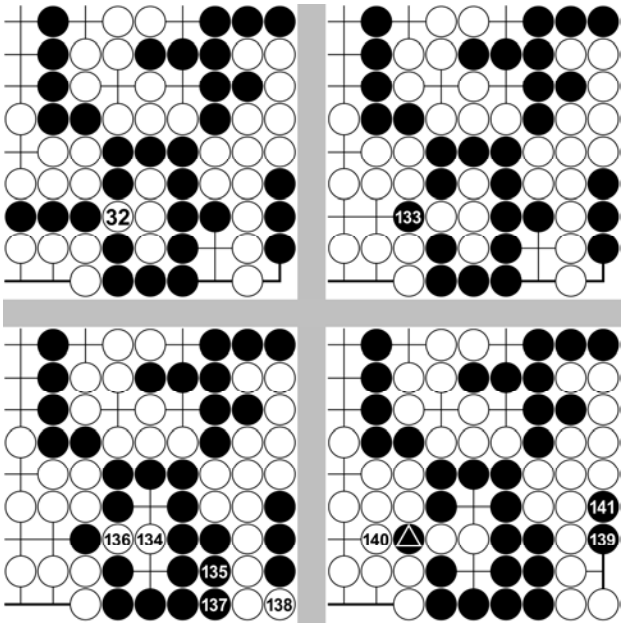
Contains variations after what we think to be the correct timing for the **"bad-shape" move winning Black the game** (in our opinion). Most of these variations are on amateur Kyu level; only a few have been checked by professional knowledge.

9. **Time - What distinguishes between amateurs and professionals.**
(or joins them together) 135

An essay, based on my experiences with professionals.

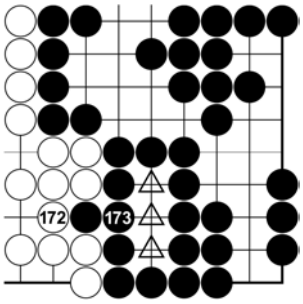
Our key-results

2005



"Joachim's placement with W 134"

The German Go-Journal (DGoZ) reports on what Joachim Meinhardt had found: White can win by throwing-in with **134**. Compared to the "official" solution Black loses one stone ...



"The End of the 'Official' Solution"

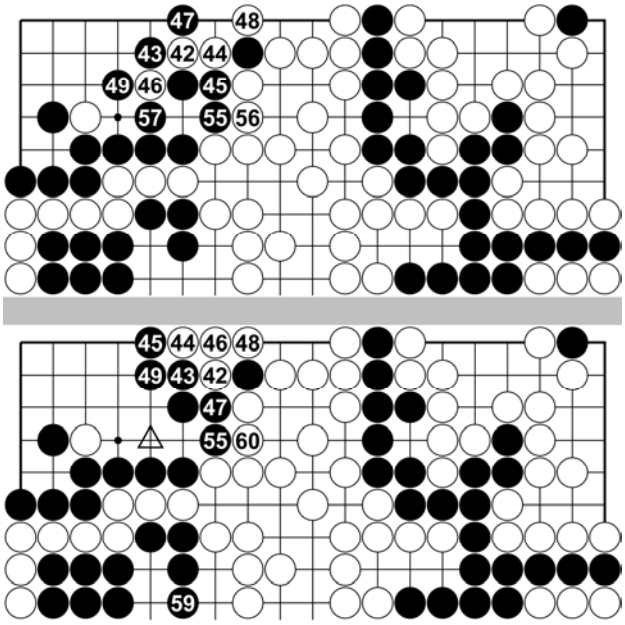
... and three points of territory, which changes a 3-point-win for Black into a **1-point-win for White** !

[to the sequence on page 27]

STATUS:

Joachim's move as strongest white resistance has been proven true by professionals !

2007

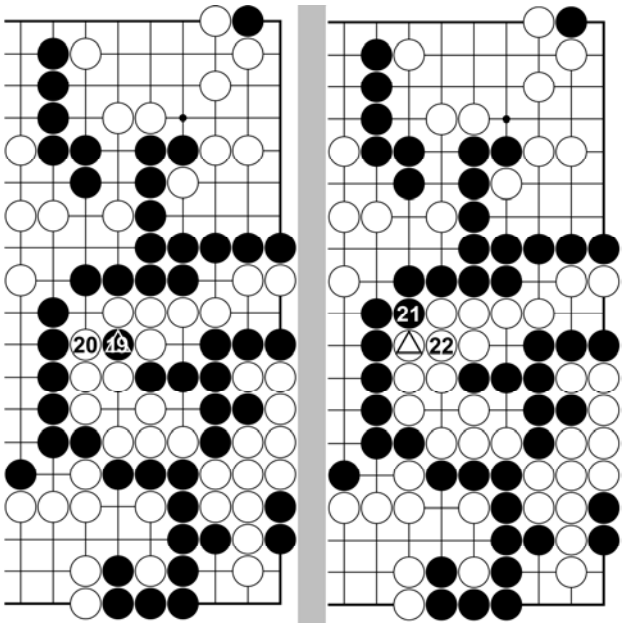


"Yamada Shinji's Tsuke"

Yamada Shinji 4p is busy with the problem during a stay in Korea (many thanks to Benjamin Teuber 6d). Because the white group on the left side now certainly lives, the Tsuke (attachment) of **142** becomes possible. It gives White another 1-point advantage compared to the "official" solution.

Results in **White +2**.

[to the sequence on page 28]



"The Second Throw-In with B 19"

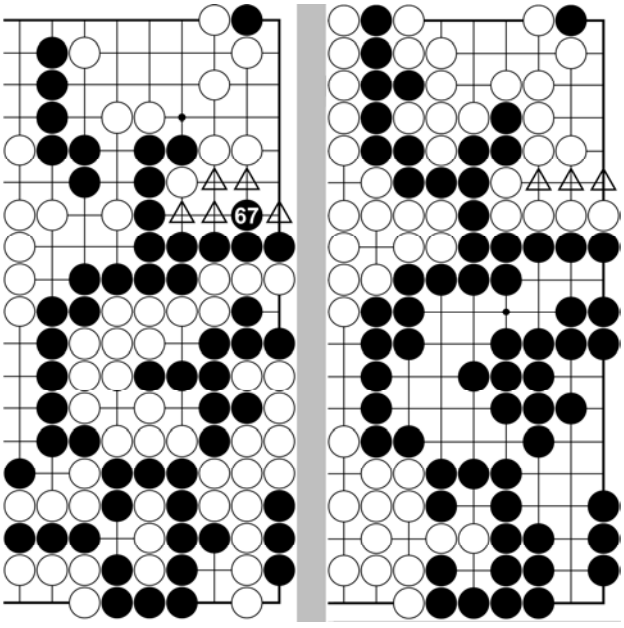
In Germany two amateur Kyu-players (Joachim and me) ask why it is not be possible to Throw-in for the second time with Black **19** during the opening sequence of the problem. We cannot find the Semeai that is mentioned in the sources, and that is supposed to be harmful for Black.

This Throw-in has advantages as well as disadvantages. If the Seki in the lower right is dissolved, then Black's lost stone (at **19**) is compensated for by an extra white stone (at **20**), but Black has removed an extra liberty from the white stones at centre right. If the Seki remains, however, the second Throw-in becomes a lost point.

[to the sequence on page 39]

[see explanations on page 75]

To provide a clear distinction between our work and the "official" solution, all our amateurs' attempts will be shown after this second Throw-in.



"My Idea for 'Bad Shape' with B 67"

At the end of the year (2007) I am very busy with the question where and how Black could reduce the white territory by at least three points to win. This can be accomplished only in the top right corner and only by a move that takes no liberties from the black group.

The "bad shape" with **67** prevents some points of white territory in this region. In this specific area, Black has gained a liberty, and now has five liberties here, and the possibility of two eyes. Getting two eyes is big – White cannot make points with Sente at the top now. Furthermore, Black will not have to sacrifice extensively in the centre, and at the left.

Single disadvantage of this move: It is not absolute Sente locally.

Apart from that Black would turn the tables from White +2 to **Black +1**.

[to the sequence on page 115]

STATUS:

This "bad shape" move (leading to a black win in our opinion) has survived some professional efforts so far.

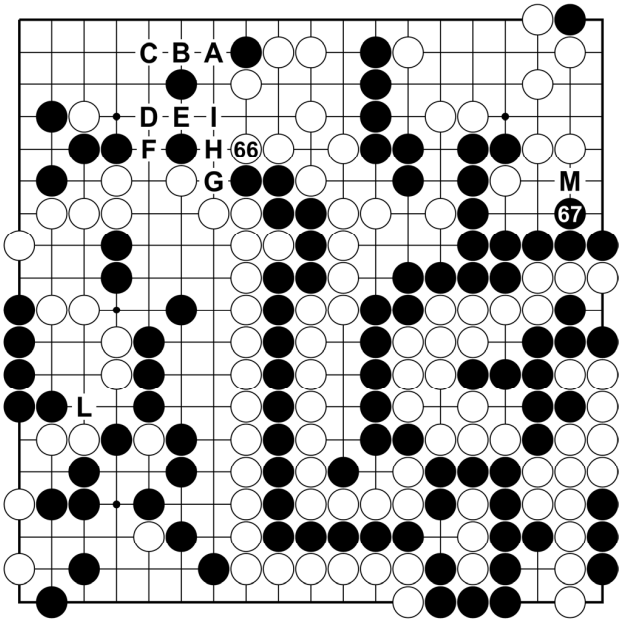
But there are many very complicated variations remaining, which have been investigated only by amateurs.

My very first attempts with this "bad shape" move were with **93**, but at this late moment it will not work any more.

[to the question on page 33]

[to the sequence on page 101]

2008



"Follow-up Moves for White"

White now has several options.

White **M** immediately makes it impossible for Black to make two Eyes in the top right. Black must therefore force White to capture the 20 stones in the centre so as to break the (temporary) Hanezeki.

White **L** first presses the black stones on the left.

In the top left corner White **F** seems to be strongest.

Our first idea in the top left was **H**, but this doesn't seem to work for White.

[to the research on page 126]

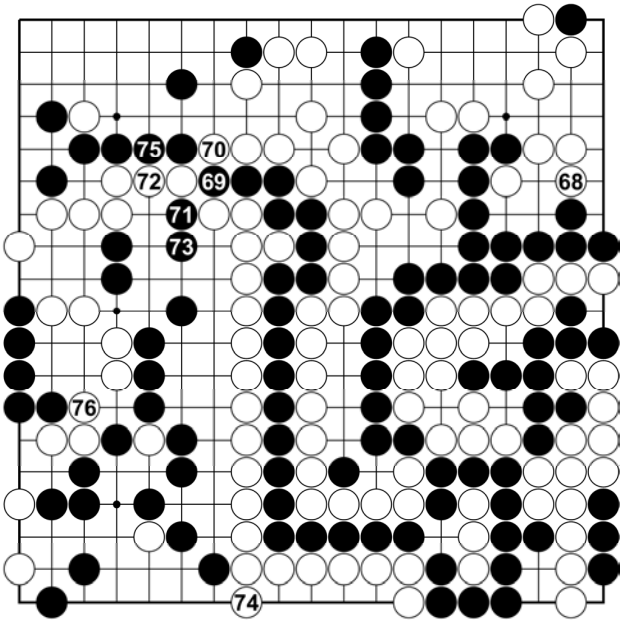
STATUS:

M, F: Yoon Young-Sun 5p kindly helped us with some variations. Many ideas are left on amateur level only.

A - E, G - L: Investigations had been on amateur level only.

Up to now we found no win for White.

At the European Go-Congress in Leksand (Summer 2008), I speak to several professionals about the problem. But even the really friendly and massive support by Kurebayashi Meien 2p cannot change the fact that nowadays professionals seem to have other things to do that are probably far more important than solving classic Go problems.



"White Takes Eyes Immediately"

White **68** = **M**.

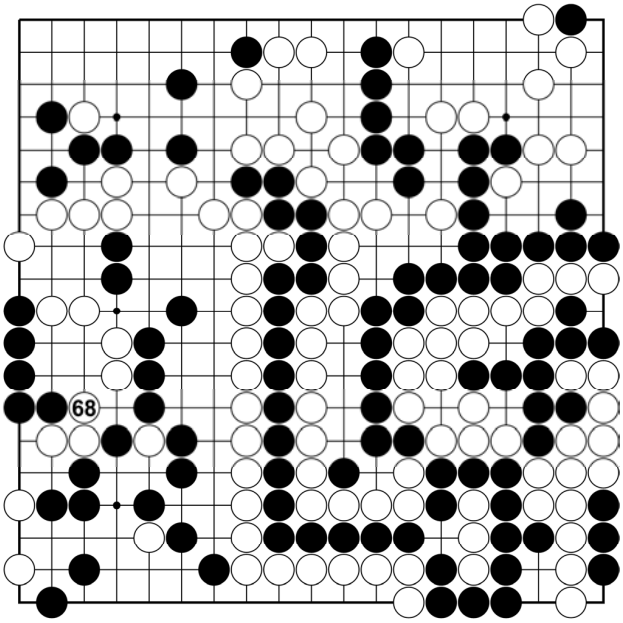
Because Black cannot live in the top right any more, the sequence continues in the centre, and on the left side, as in the Main Path of the "official" solution. According to our amateurish estimation Black wins by a small margin.

If Black **67** is played later (with **93**), this results in a change in the order of moves,

[to the sequence on page 101]

if White then chooses a peaceful variation (what she is not forced to do).

[to the sequence on page 108]



"White Pays First on the Left Side"

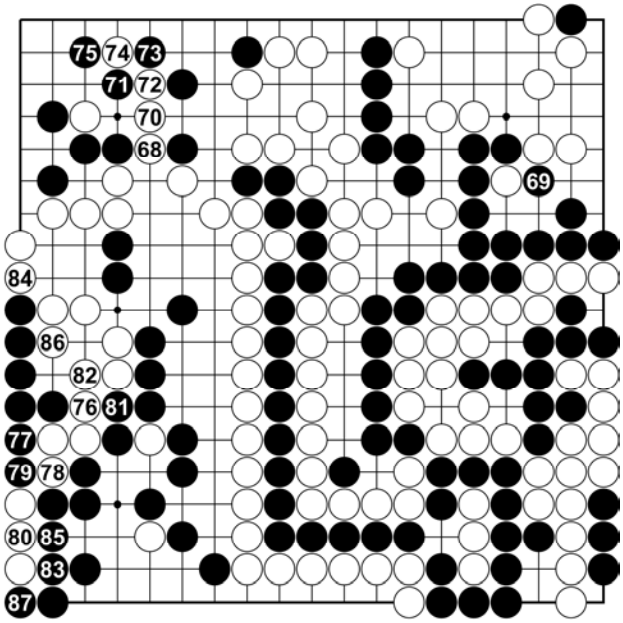
White **68** = **L**.

In our opinion, after this white answer, what results is probably a change in the order of moves, and Black wins.

Variations hereafter can be found in the chapter "Leaving the Battlefield (II)".

[to the variations on page 115]

2009

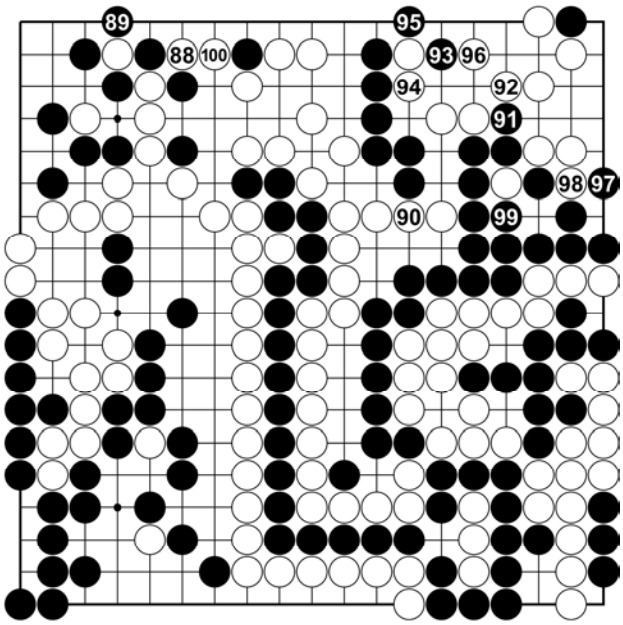


"White Plays in the Top Left Corner"<2/3>

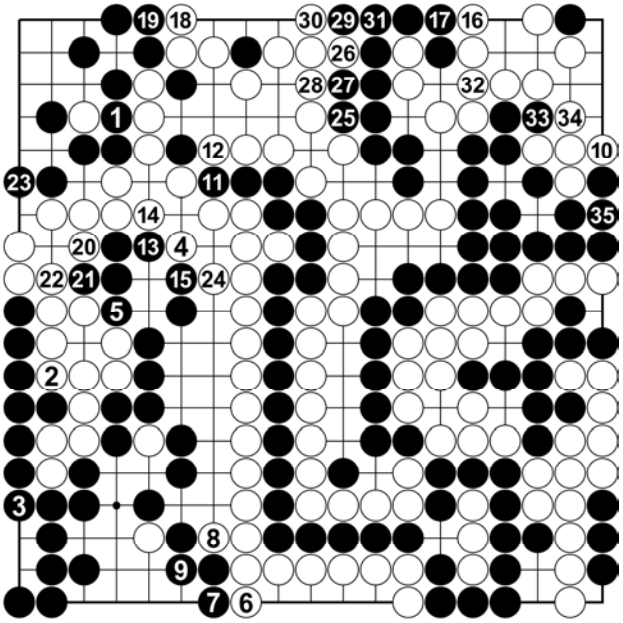
White **68** = **F**.

In 2009, Yoon Young-Sun 5p very kindly helps us with her professional knowledge (as she had done several times before).

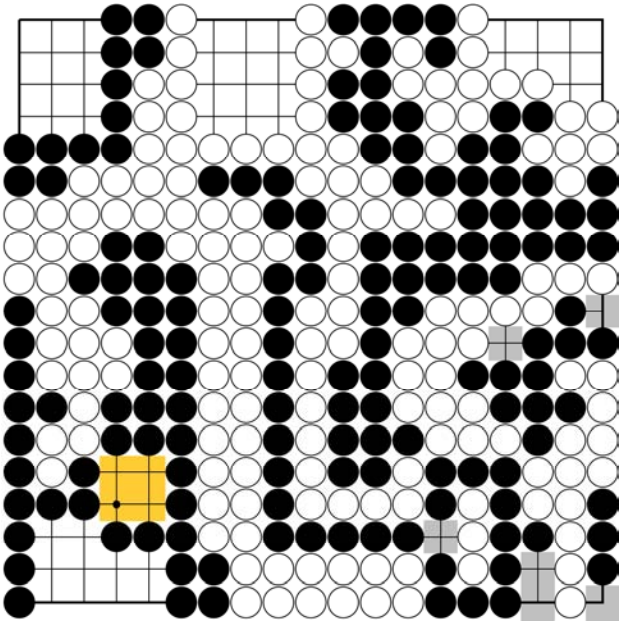
According to her estimation, **68** is strongest for White. Black must secure two Eyes on the right with **69** (because Black cannot now force White to capture the 20 black stones in the temporary Hanezeki), White can continue in the top left corner. Nevertheless, probably White cannot prevent a Black win in the end.



(W 88 - W 100) <2/5>



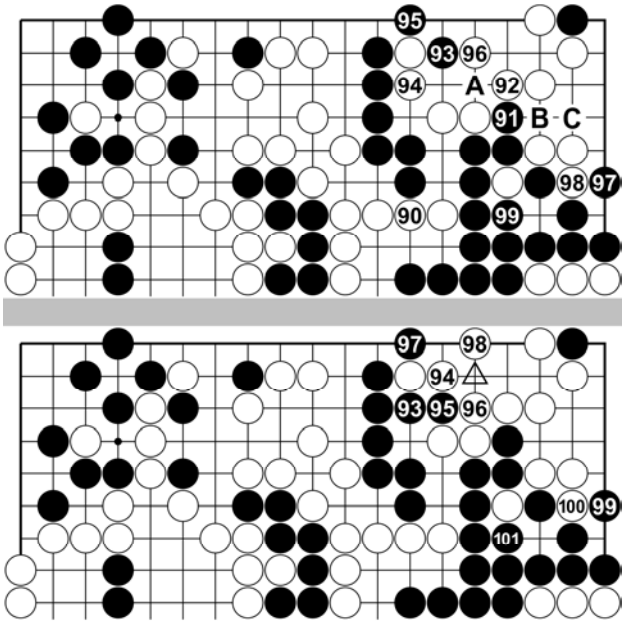
(B 101 – B 135)



"The Final Result"

Black wins by 4 points.

I am sorry, but more detailed diagrams are not available yet !

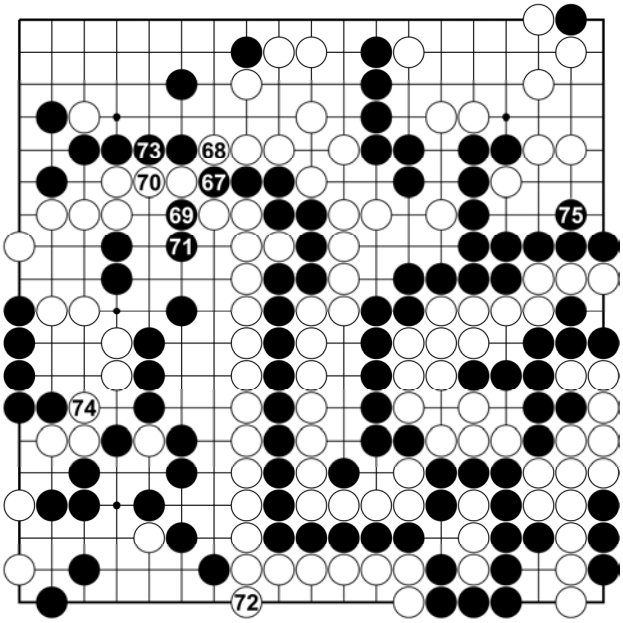


"Harry's Idea for Hasami-Tsuke"

Harry Fearnley (2d, Great Britain) joins the team of Joachim and me.

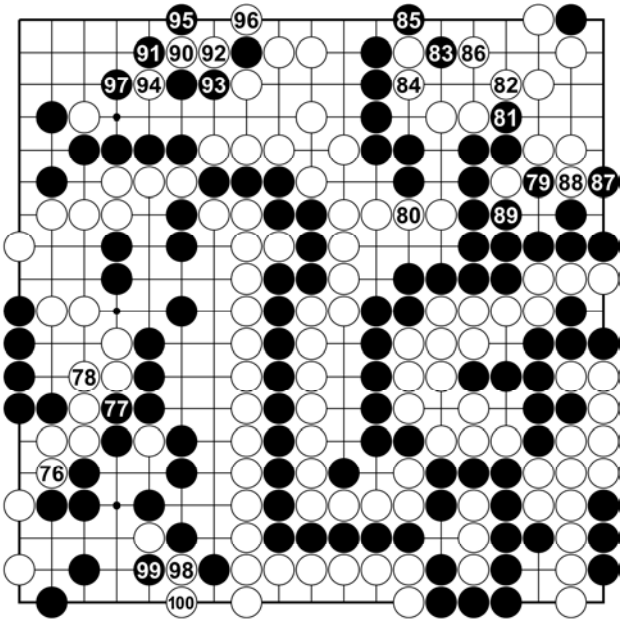
He asks himself (and so us, too) particularly whether the Hasami-Tsuke (clamp) with **93** would be possible in the top right corner. It is! Black is able (even if he possesses no Eyes) to connect this stone after a white Atari - **A** is a false Eye for White, and an extra liberty for Black. Compared to our previous sequence Black gets a further advantage of 1 point.

Black **97** is from Yoon Sensei and opens the chance for a Gote-Endgame later on with Black at **C**. If necessary, Black can instead exchange **B** for White **C** in Sente.



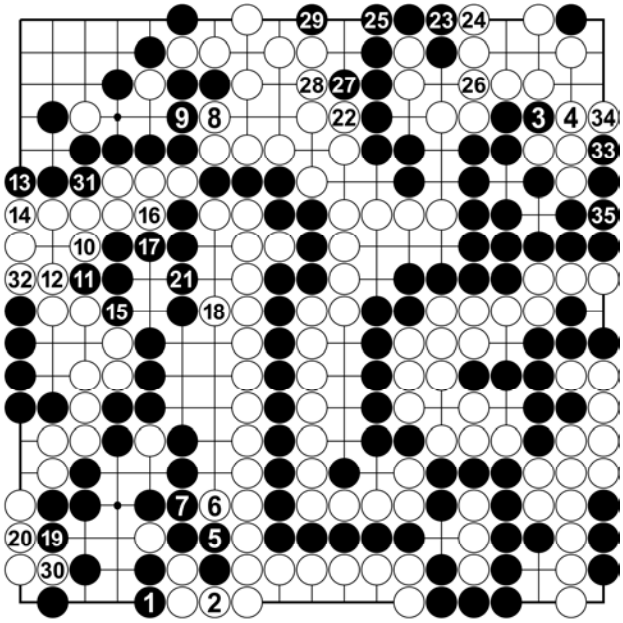
(B 67 – W 74)

Harry still has the idea to continue a little bit in the "official" sequence, as far as White **74**, before playing the "bad shape" move on the right with Black **75**.



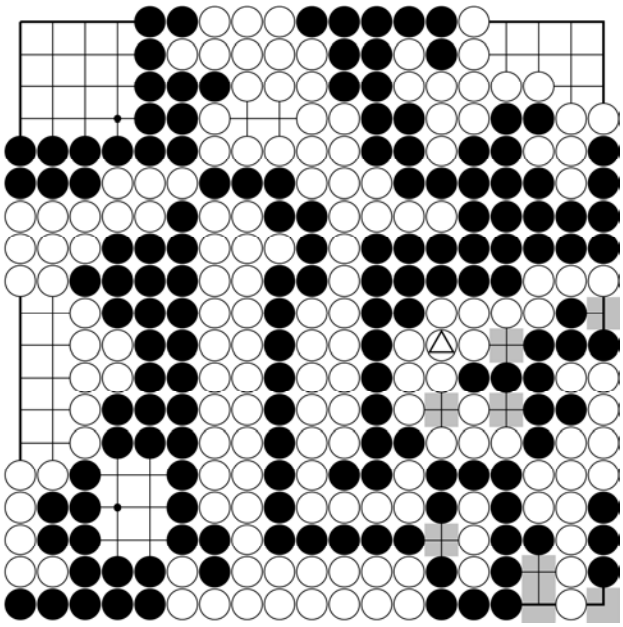
(W 76 - W 100) <3/1>

If White plays **76** at White **88**, we revert to the “official line” except that Black has stolen several points from White. However, if White takes profit on the left with White **76** as in this diagram, then Black has to get 2 eyes at the top. The game will continue something like this.



(B 101 – B 135)

However, this will become extremely close for Black, our attempts ended with ...



"The Final Result"

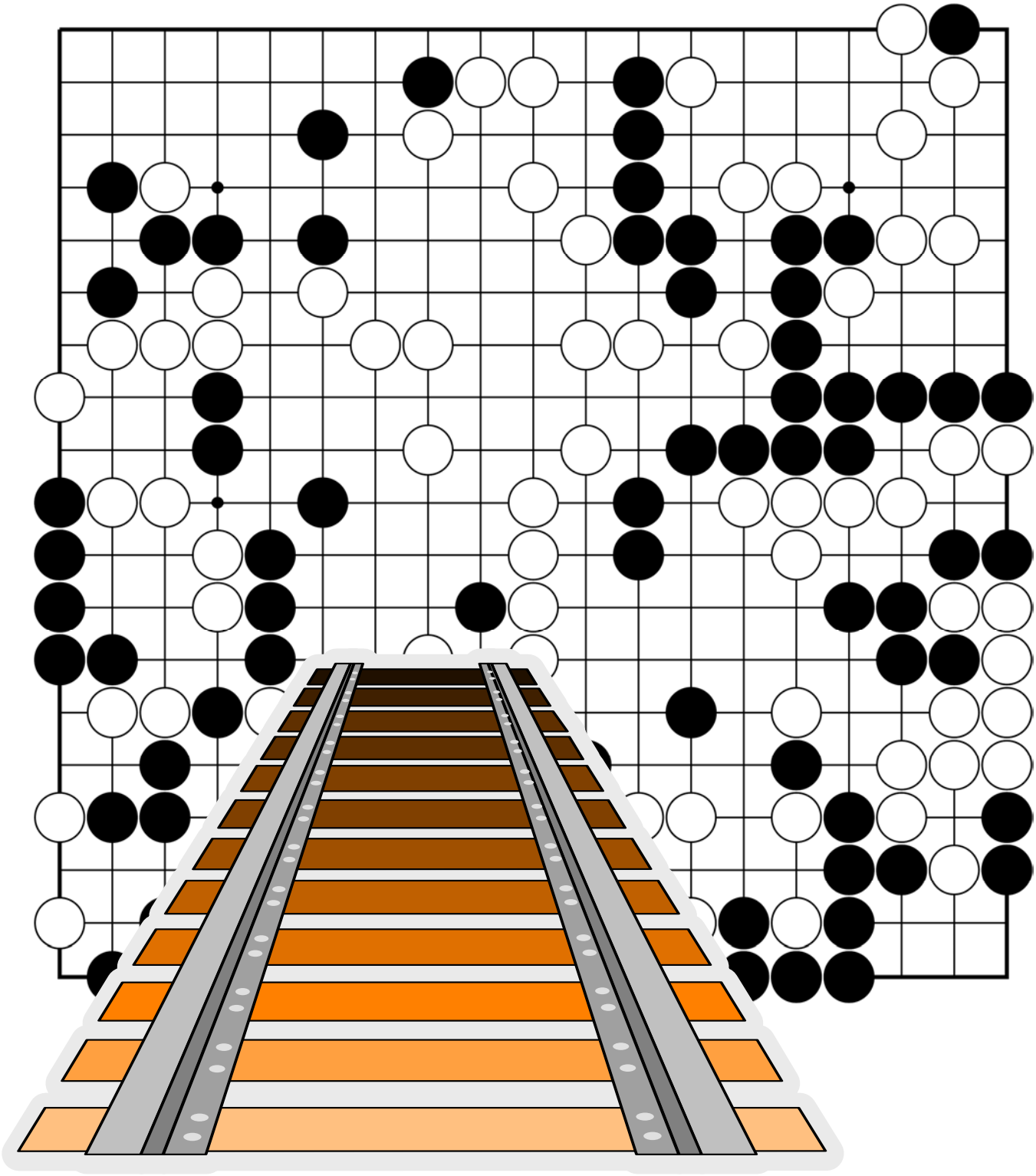
... **Jigo** (a drawn game).

Therefore Black cannot afford to play the second Throw-in any more; the result without the Throw-in (marked with a triangle) would be a close result: **Black +1**.

I am sorry, but more detailed diagrams are not available yet !

Igo Hatsuyoron, Problem 120

Main Path



Main Path

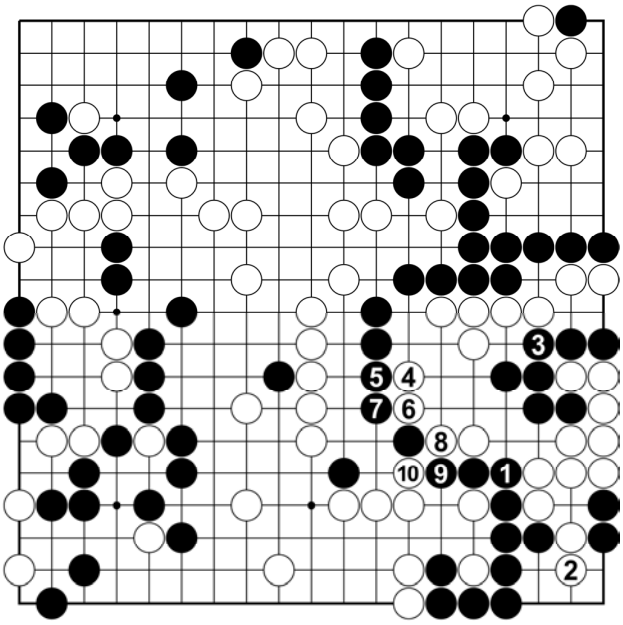


Figure 001 (B 1 – W 10)

B 1: Primary topic of this problem is the status of the big black group in the upper right, but action starts in the lower right corner.

W 4: White tries to escape into the centre, ...

B 9: ... what Black can prevent successfully.

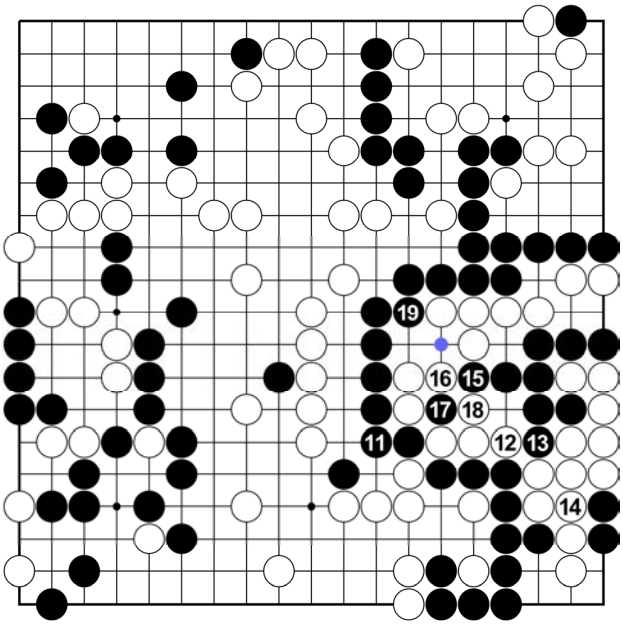


Figure 011 (B 11 – B 19) <1/0>

("<x/y>" on the right of the caption means "x black / y white captured stones".)

B 17: Throwing in at **17** is necessary for Black, ...

B 19: ... but following the available sources he should refrain from doing so again with this move.

[see variation on page 39]

Explanations on this second Throw-in follow in a separate chapter. We were unable to find a sequence there after ending badly for Black.

[see explanations on page 73]

The two white groups on the right side and the black one between them form part of a temporary Seki. The big black top right group can only get one Eye. So Black must try to live with his stones at the bottom or at least get enough liberties, what would enable him to capture the white stones in the bottom right corner, resolving the temporary Seki.

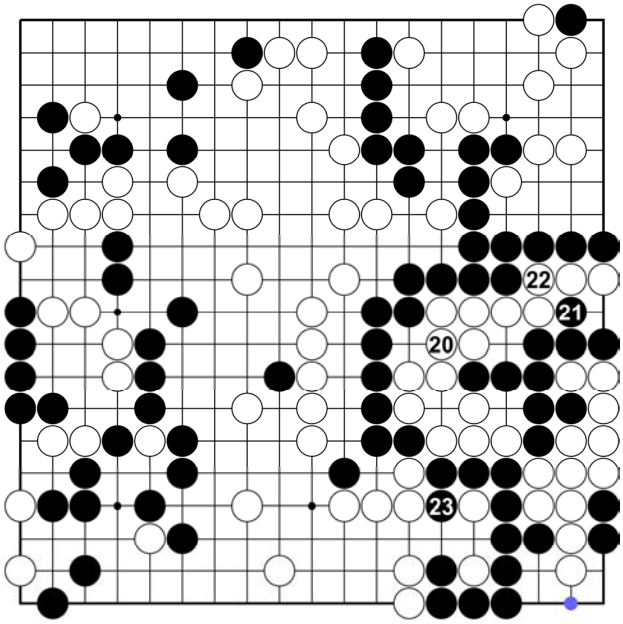


Figure 020 (W 20 – B 23)

B 21: The exchange of Black **21** and White **22** is very important at this moment. Otherwise White would have the option to play at **21** herself, forcing Black to fill in one liberty of his upper group with a move at **22** - and this additional black stone may be in danger of being captured some time in the future, forming part of White's territory.

B 23: Black cannot play on the 2-1-point in the corner.

[see variation on page 39]

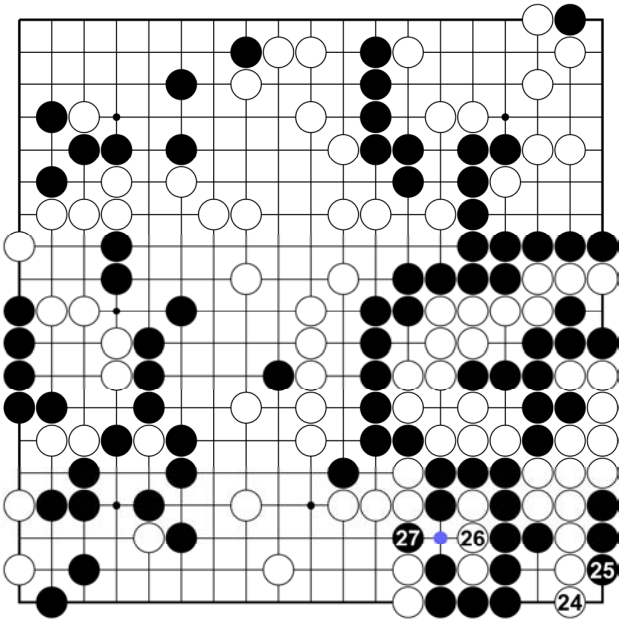


Figure 024 (W 24 – B 27)

W 24: This move should not be played at **25** by White (Black would be forced to answer at **24**).

[see variation on page 40]

B 27: Black has to run for the life of his group with **27**, as he is unable to capture the three white stones instead.

[see variation on page 46]

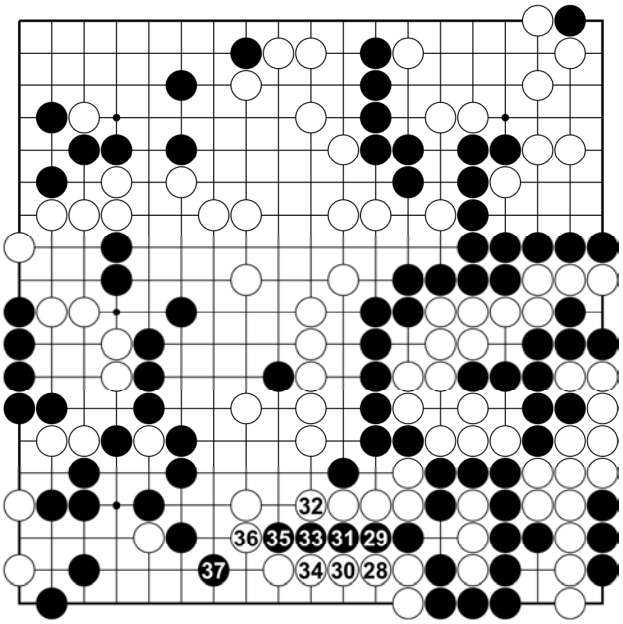


Figure 028 (W 28 – B 37)

W 28: White cannot give Atari at **29**.

[see variation on page 48]

W 36: Black's path to the left is now stopped by White. After the Kikashi of **37** Black runs upwards.

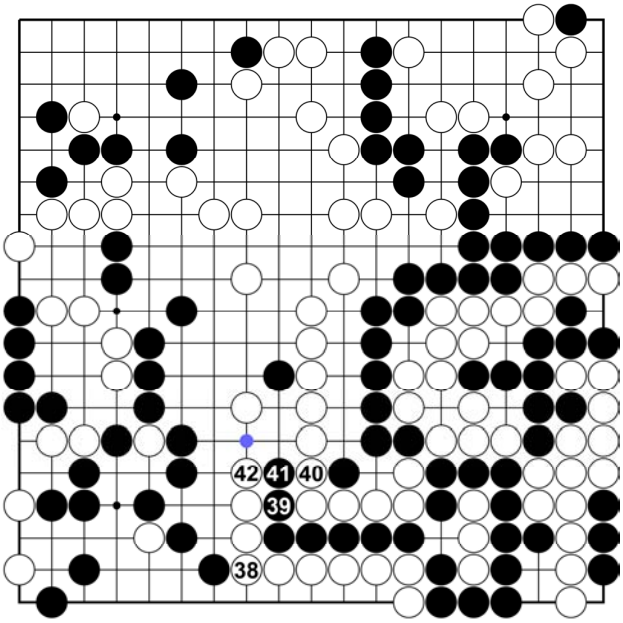


Figure 038 (W 38 – W 42)

W 42: White must never allow the black chain of stones to have more than two liberties. A Geta will be too slow here.

[see variation on page 48]

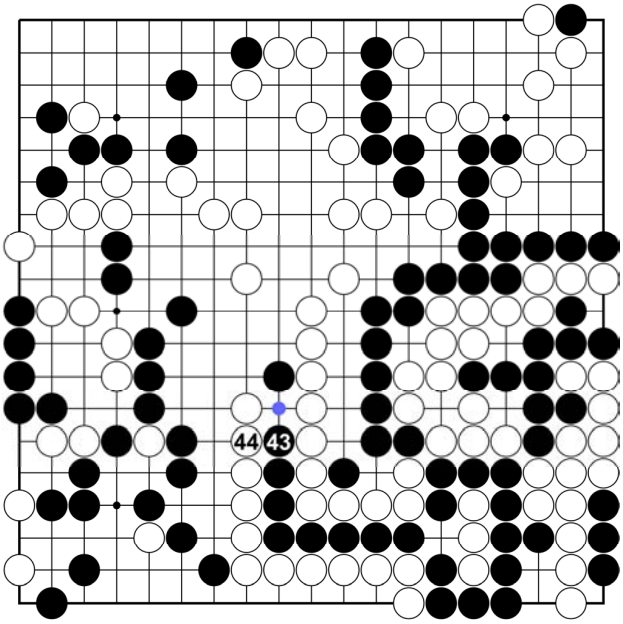


Figure 043 (B 43 – W 44)

W 44: White cannot block Black's path successfully, too.

[see variation on page 49]

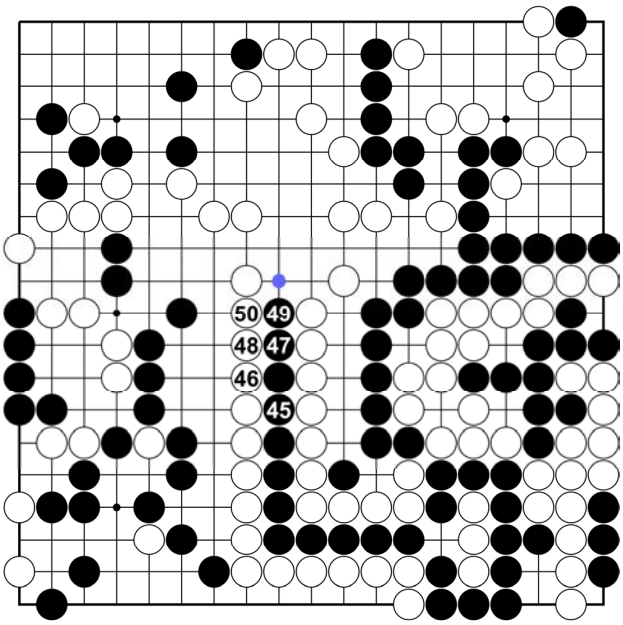


Figure 045 (B 45 – W 50)

W 46, 48: To try a Geta (at **48** or **50**) with these moves will not be successful, as shown at the variation for White **42**.

W 50: Even some moves later White will have no success in blocking Black's path.

[see variation on page 51]

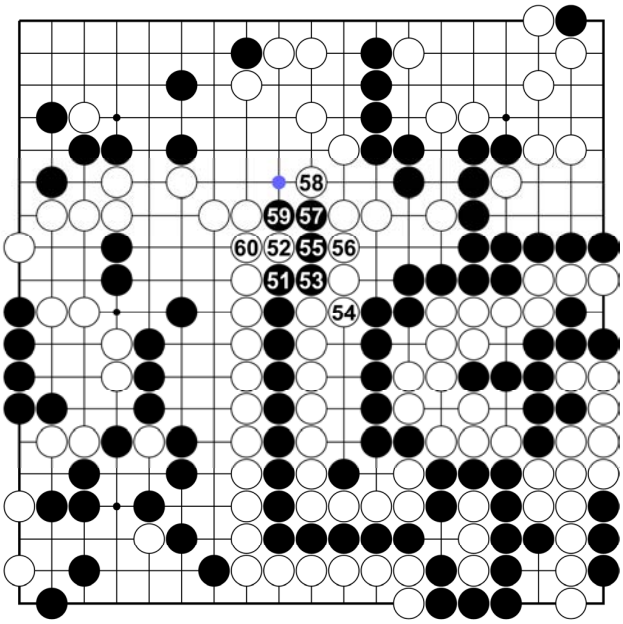


Figure 051 (B 51 – W 60)

W 60: White is unable to block above **59** with this move, as she will not win the following Ko.

[see variation on page 52]

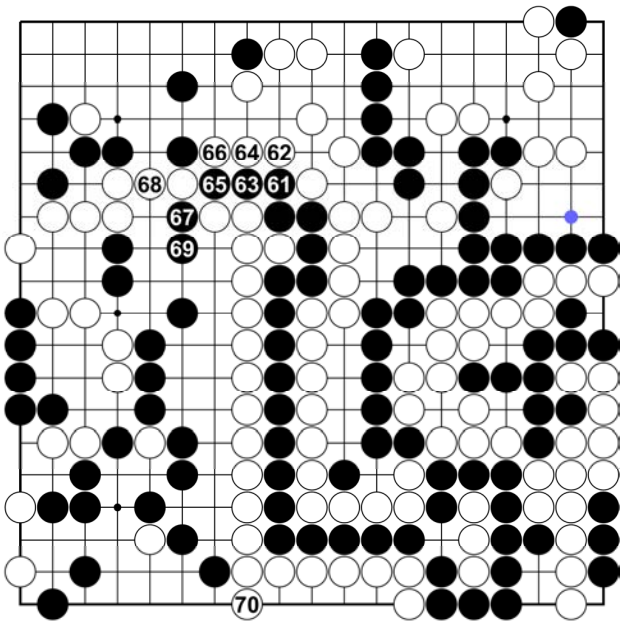


Figure 061 (B 61 – W 70)

Update 2009:

B 65: This is the last moment Black can play the "bad-shape" move in the top right corner, which probably wins him the game.

But: This probability has not been proven by professionals yet !

[to the sequence on page 115]

B 67: Black is shut in now. Therefore he has to cut the white troops and ...

B 69: ... to save his cutting stone.

W 70: White must live on the lower side. She cannot go for the black top right group.

[see variation on page 53]

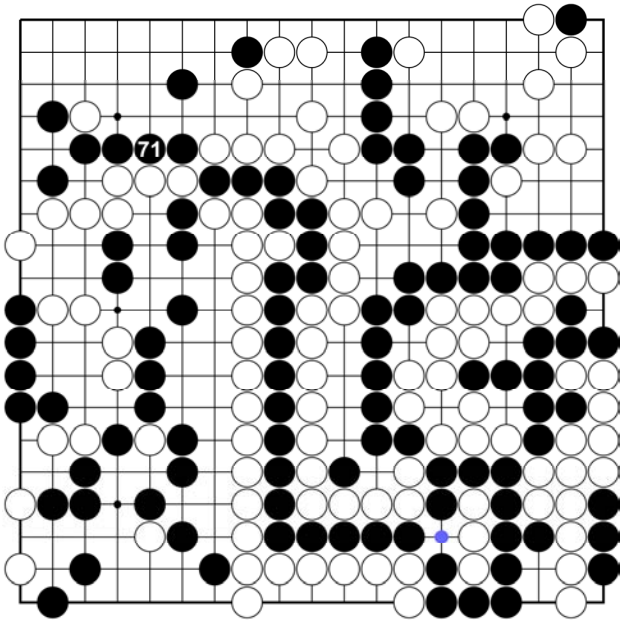


Figure 071 (B 71)

B 71: Black's only option left is to try to kill the white group on the left. Black cannot capture the three white stones inside his encircled centre group.

[see variation on page 54]

Black must protect his top left corner; he cannot play on the left side instead. In this case White would answer with **71** herself and we get a result that is similar to a variation shown later.

[to the sequence on page 119]

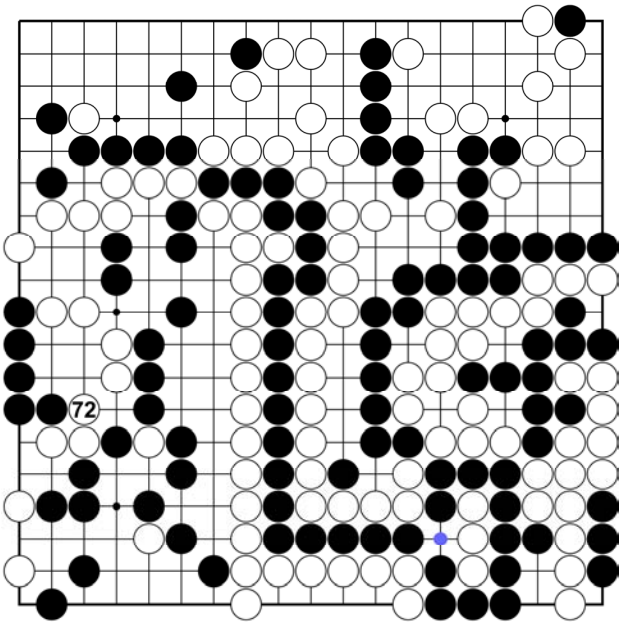


Figure 072 (W 72)

W 72: But on the other side White cannot capture the black centre group, too.

[see variation on page 55]

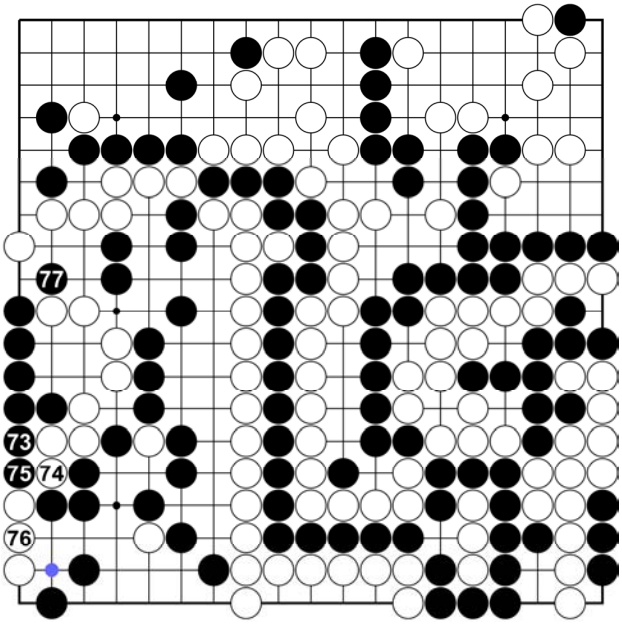


Figure 074 (W 74 – B 77)

B 77: The obvious looking idea to look after the three white stones on the lower left will end in White's life on the left side.

[see variation on page 56]

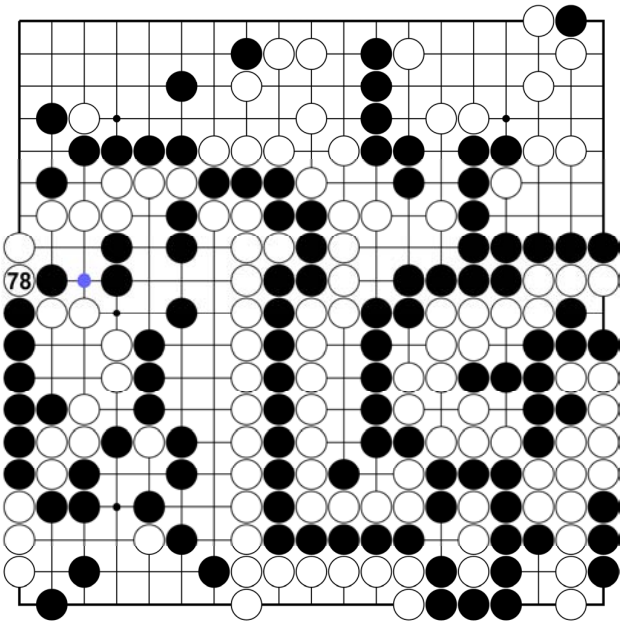


Figure 078 (W 78)

W 78: The attempt to connect on the third line is condemned to failure.

[see variation on page 57]

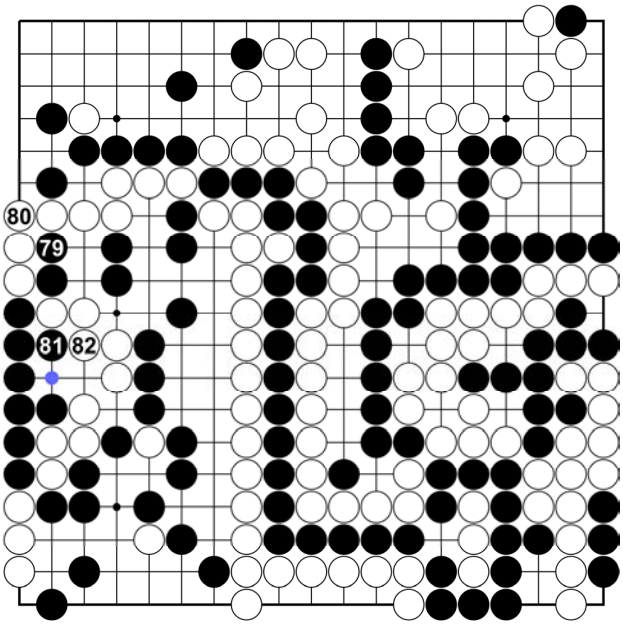


Figure 079 (B 79 – W 82)

B 81: May look like more effective one point lower in creating a Dango, but that will not proof true.

[see variation on page 57]

W 82: White is denied from throwing in.

[see variation on page 58]

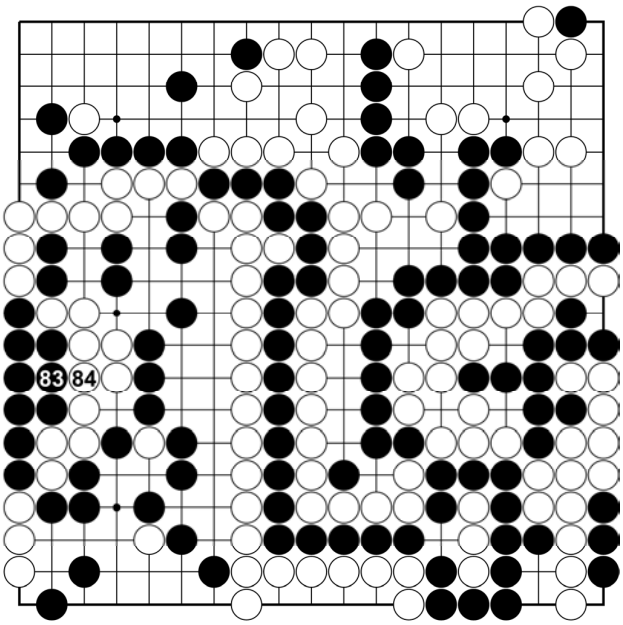


Figure 083 (B 83 – W 84) <1□/□>

B 83: Black has built an oversized Nakade on the left.

W 84: Even after White captures nine black stones, surprisingly enough she is unable to get two Eyes.

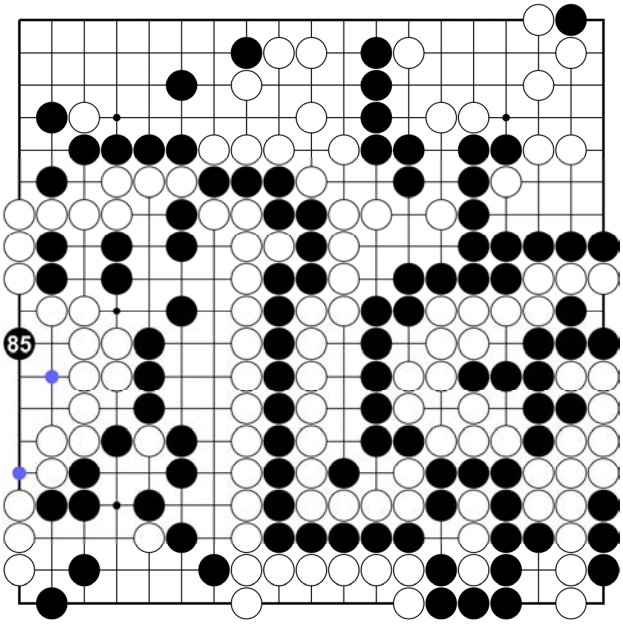


Figure 085 (B 85)

B 85: On the other side, Black is unable to reduce the space of White's Eye to a smaller one.

[see variations on page 58]

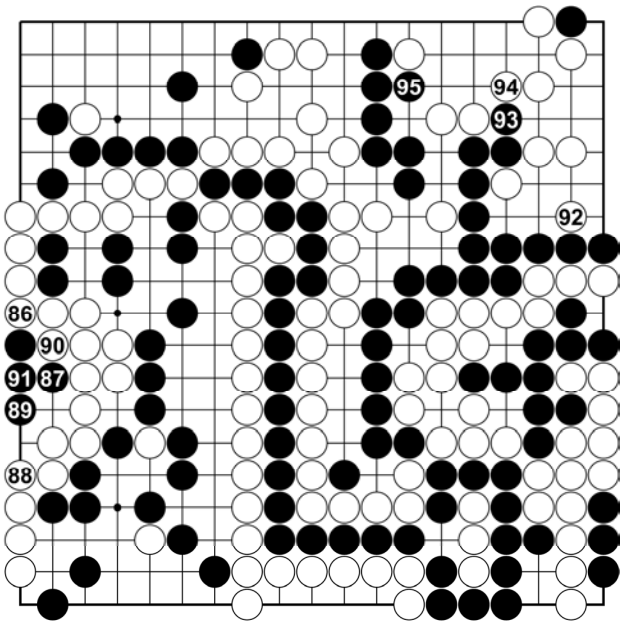


Figure 086 (W 86 – B 95)

B 91: My question, if this move could be played at **92**, is discussed in the "Questions" chapter.

[see explanations on page 35]

B 93, 95: Black reduces the white territory in the top right by two points with each of these moves.

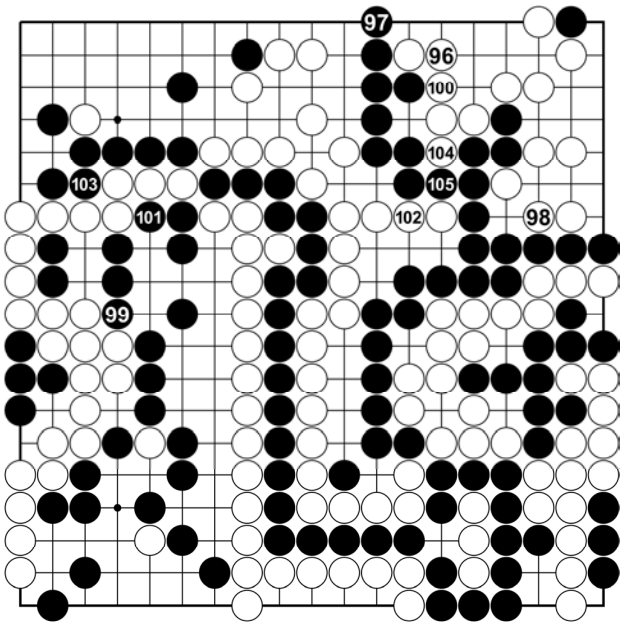


Figure 096 (W 96 – B 105)

B 97: But he cannot go any further after this Sagari, what also destroys two points of white territory without affecting the liberties of his upper right group.

B 99: Any further move in the top right corner would cost him one of his life-spending liberties.

[see variation on page 59]

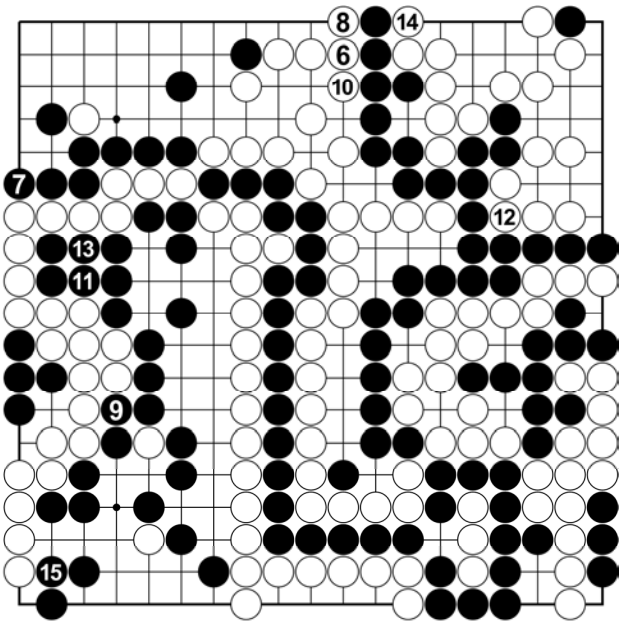


Figure 106 (W 106 – B 115)

(In Figures and Diagrams where all move numbers are greater than 100 only the last two digits of the current move numbers are displayed.)

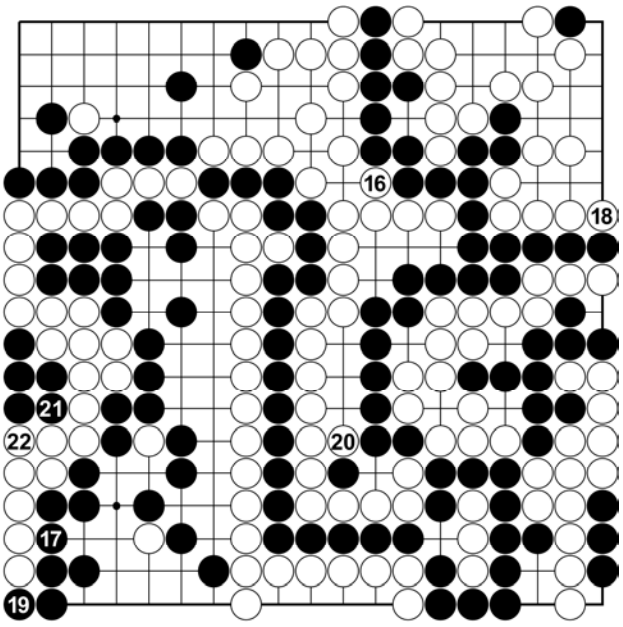


Figure 116 (W 116 – W 122) <15/0>

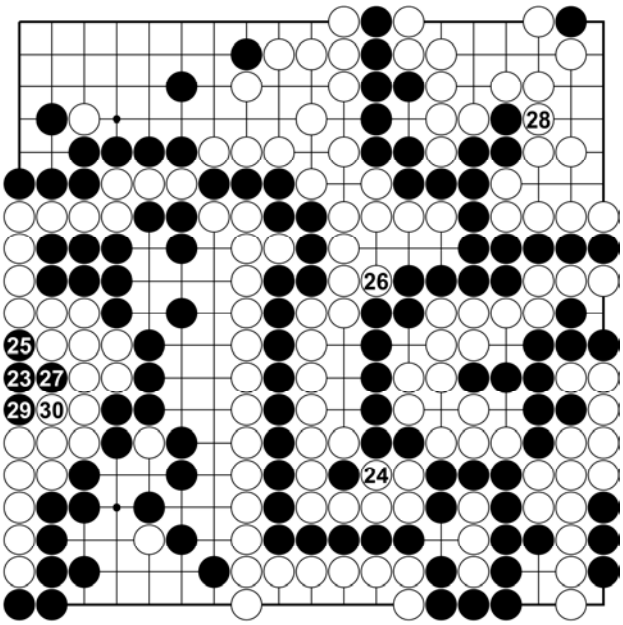


Figure 123 (B 123 – W 130) <20/0>

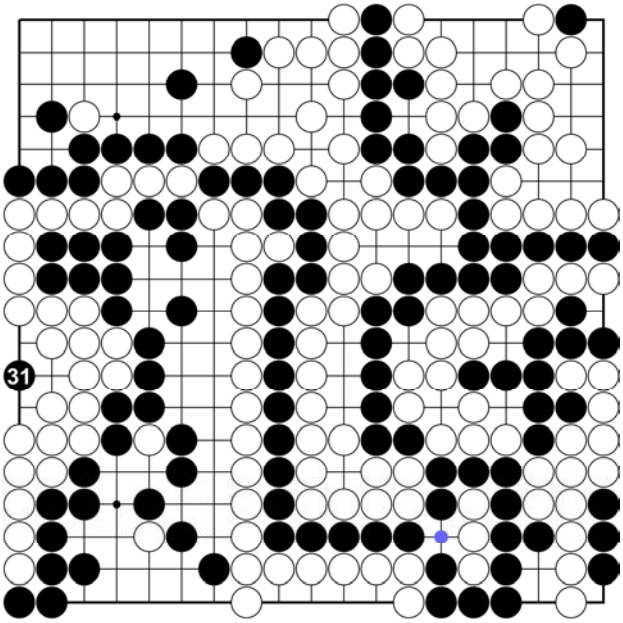


Figure 131 (B 131)

B 131: Black must make a Placement into the centre of the white 4-point-Eye on the left.

[see variation on page 61]

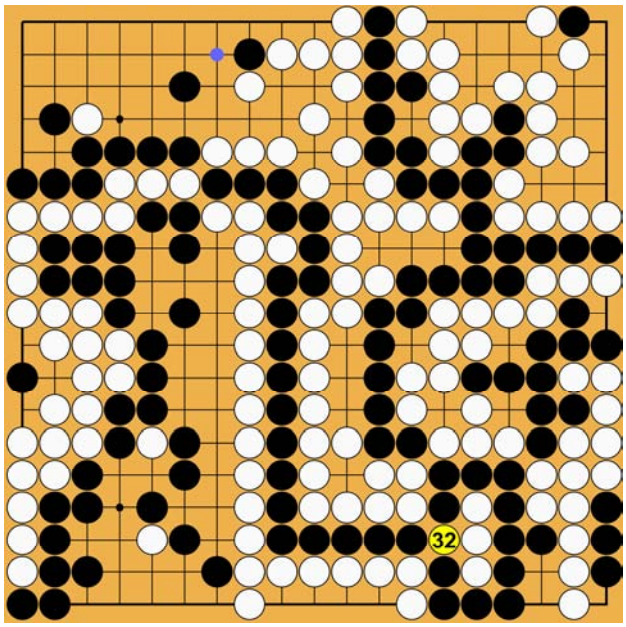


Figure 132 (W 132) <40/0>

W 132: To the surprise of the whole Go world White (who has listened carefully to a German Kyu player) now chooses a move for **132** that could not have been played successfully for the previous sixty moves.

She captures the twenty black centre stones !

To see what has been assumed so far to be the best move for White, please:

[see variation on page 62]

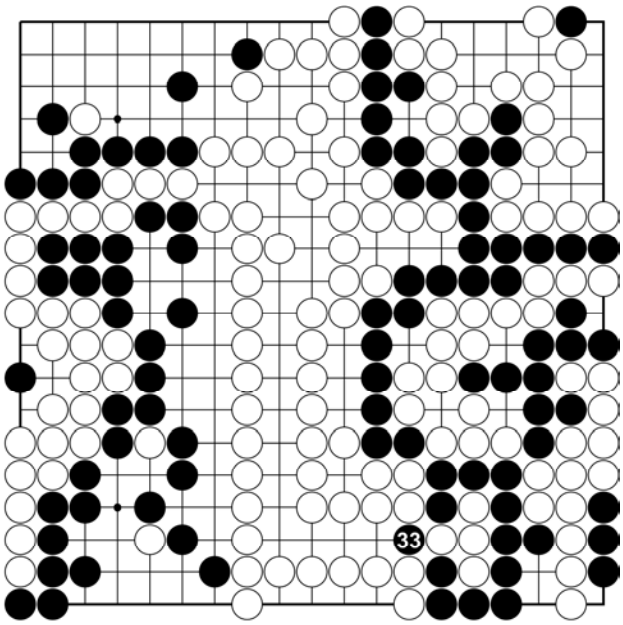


Figure 133 (B 133) <40/4>

B 133: Black has to capture the white group in the bottom right corner.

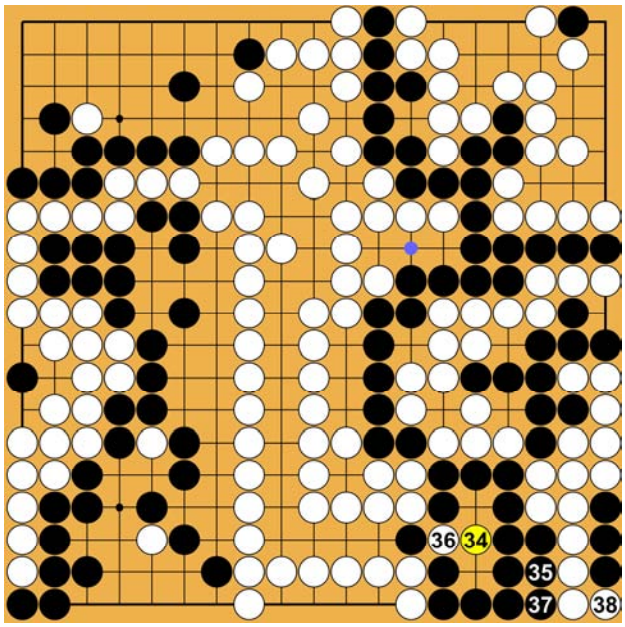


Figure 134 (W 134 – W 138) <43/4>

W 134: A very important Placement.

As mentioned at the end of the variation for Black **99** (please refer to page 59), White would be one move behind, should she continue to take liberties of the black top right group with **134**. Here Black loses some points of territory.

[see variation on page 66]

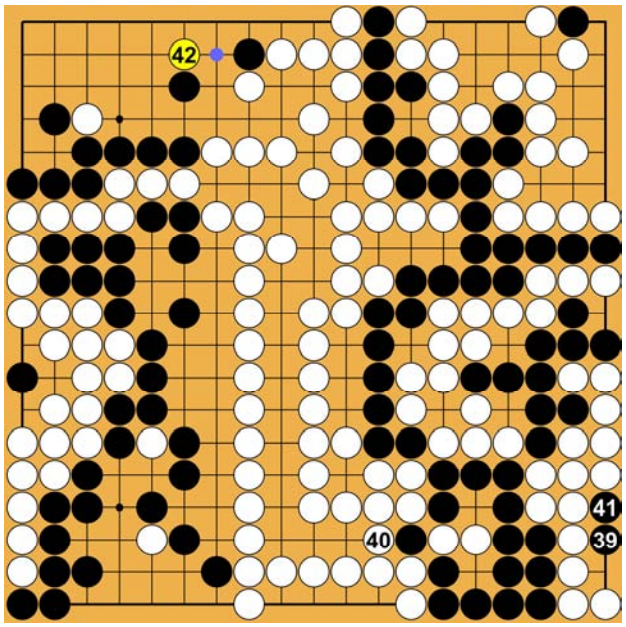


Figure 139 (B 139 – B 141) <44/4>

W 142: This Tsuke has been found by Yamada Shinji 4p. It gives White a better result in the top left corner than the Atari one point to the right.

[see variation on page 68]

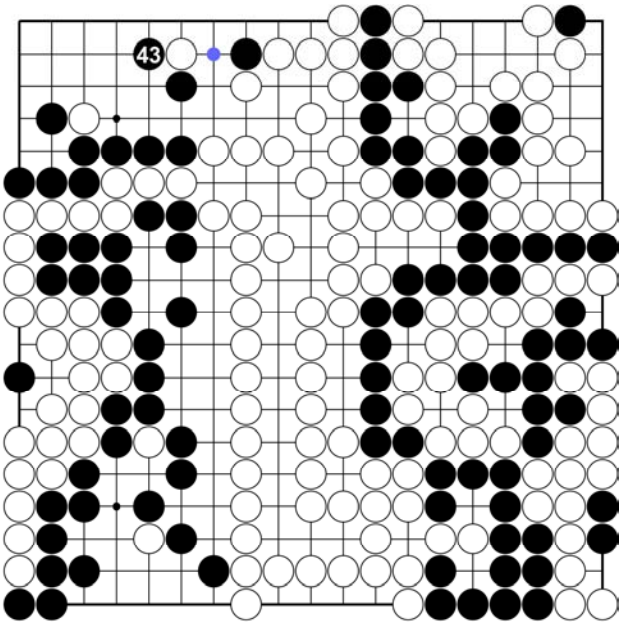


Figure 143 (B 143)

B 143: Black is unable to resist.

[see variation on page 69]

Please note that the variation contains a Seki. Thus the sequence of Yamada Sensei is only possible after the white group on the left side securely lives (that means after taking the black centre group off the board).

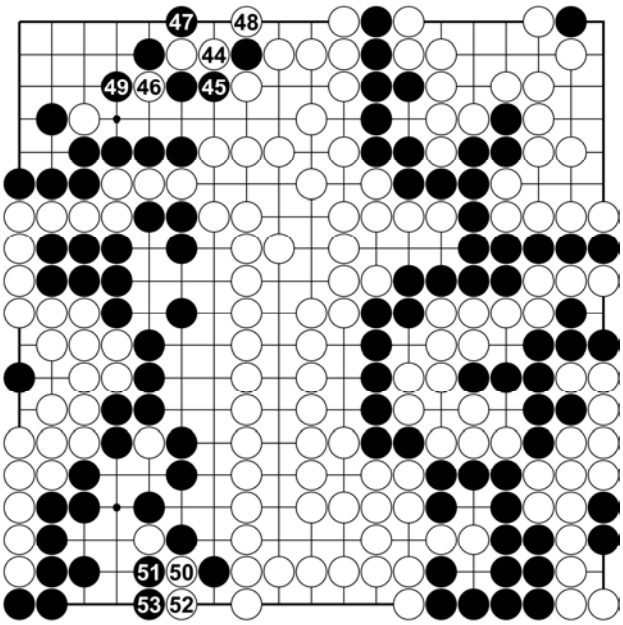


Figure 144 (W 144 – B 153) <45/4>

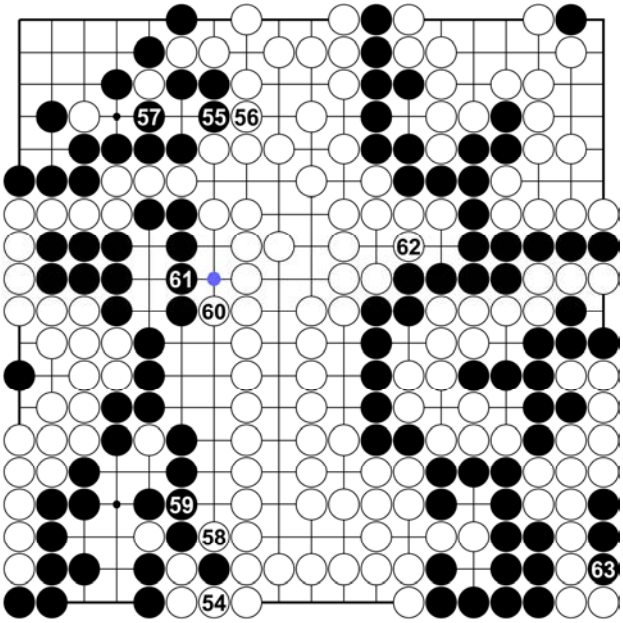


Figure 154 (W 154 – B 163) <46/19>

B 155: The order of moves is really important here. It would be unfavourable for Black to connect his one stone that is in Atari.

[see variation on page 69]

W 160: Is Sente and prevents black activities in the open space in the centre.

[see variation on page 70]

B 161: Black must connect.

[see variation on page 71]

W 162: White has Sente to take the last valuable point.

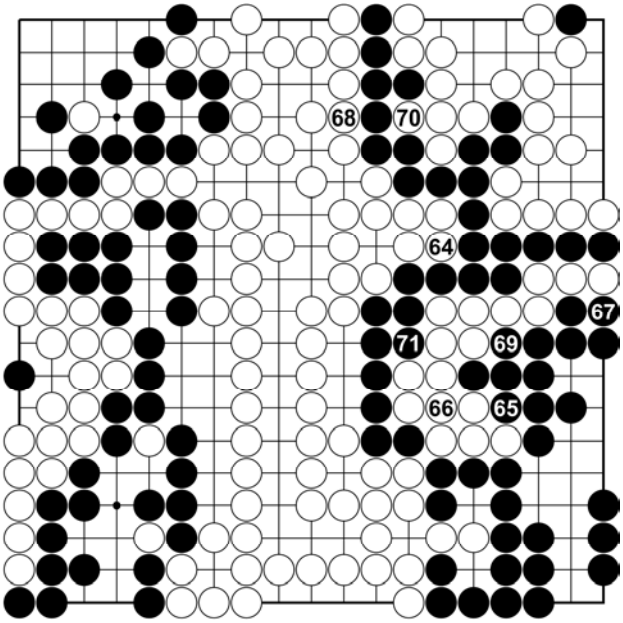


Figure 164 (W 164 – B 171) <46/36>

B 171: Eventually Black has to take the white stones on the right off the board.

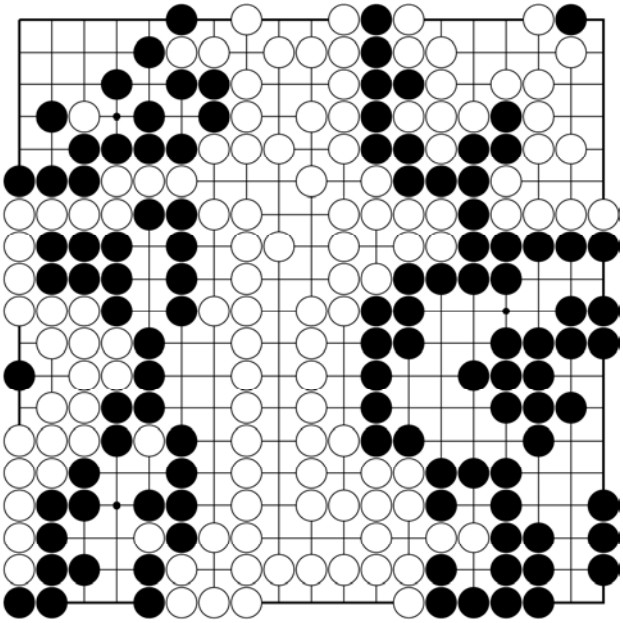


Figure "The End"

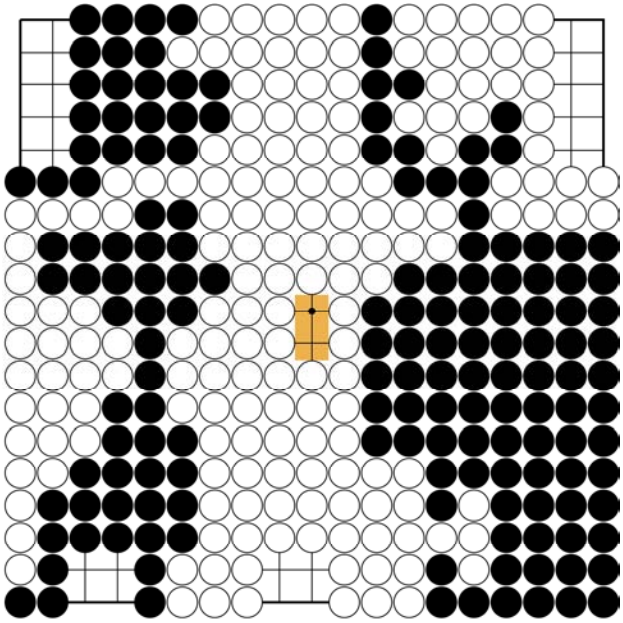
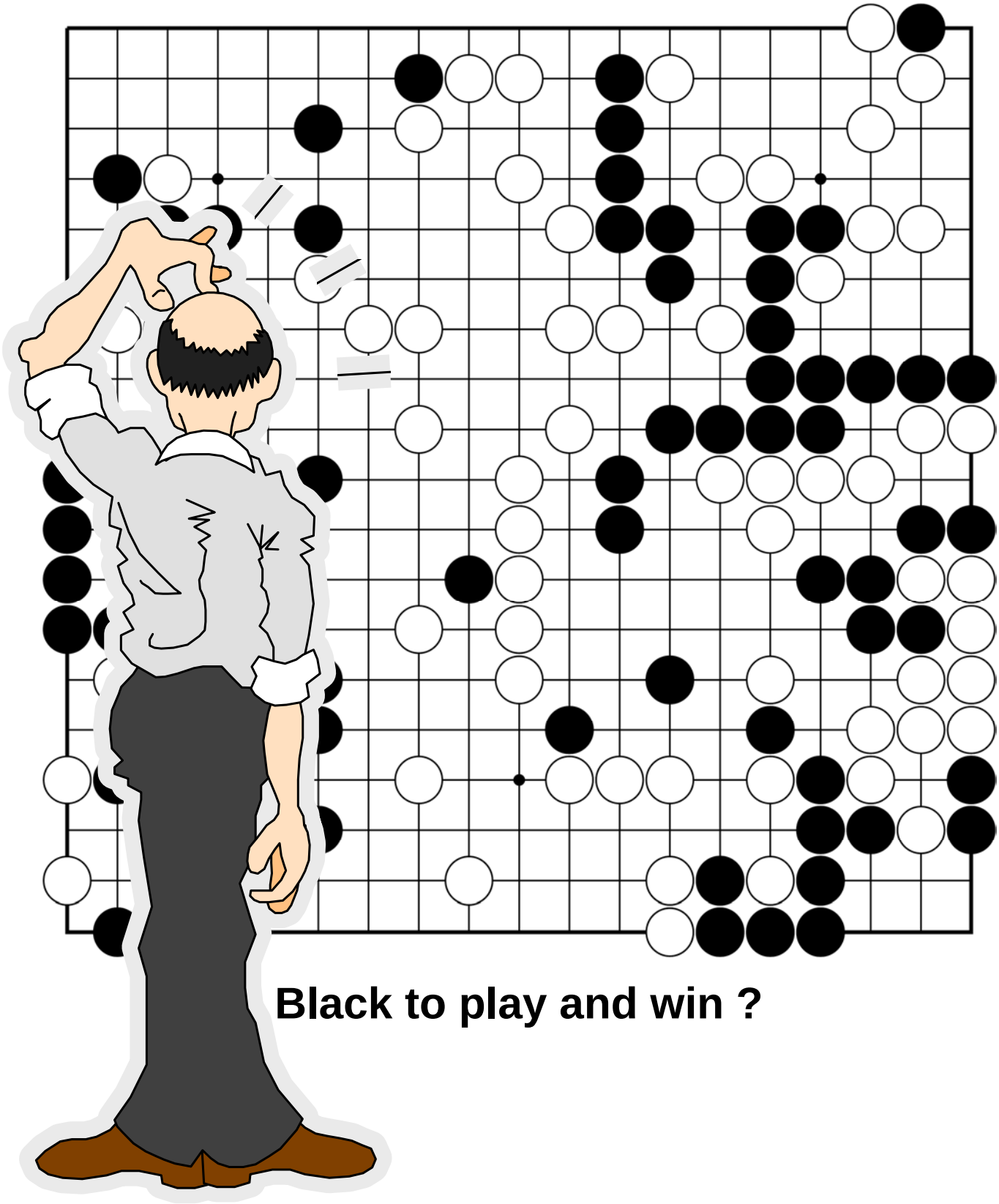


Figure "The Score"

White wins by 2 points !

Igo Hatsuyoron, Problem 120

Questions

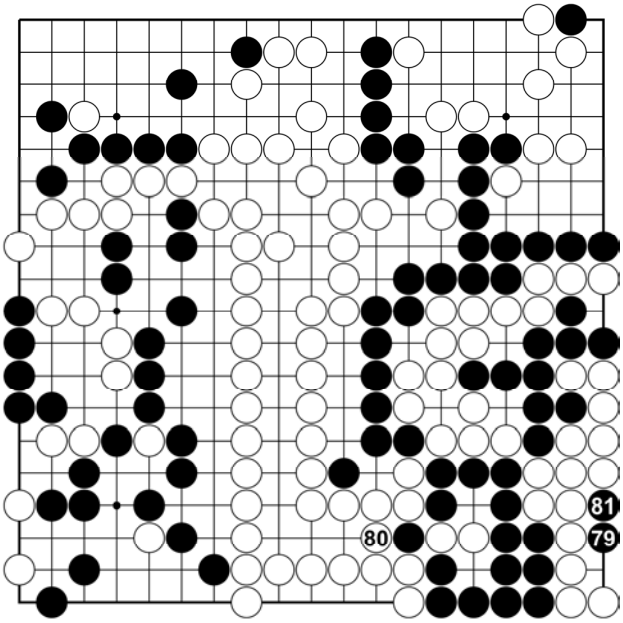


Black to play and win ?

The Most Difficult Problem (for)Ever (unsolved ?)

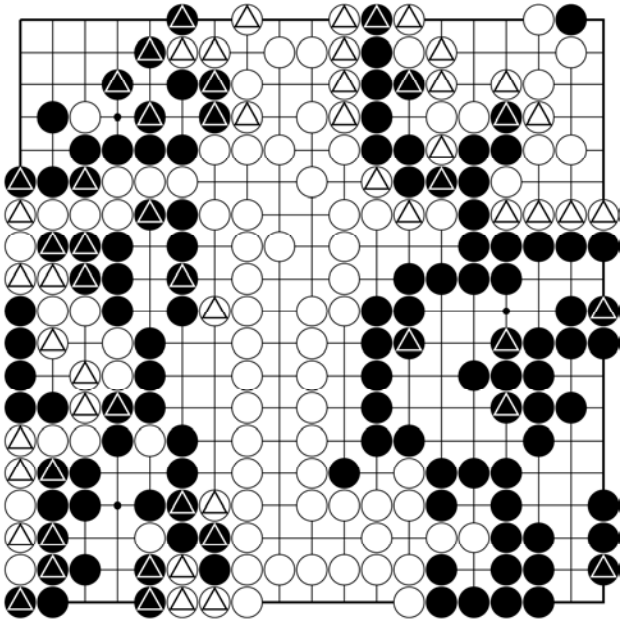
There are many books about Blind Spots of the Amateurs. But what can be the reason for the Blind Spot of the Professionals in this problem ?

Do you remember the comment on the alternative for White **72** (see page 55), where it was stated that taking the twenty black centre stones ends futile for White ?



"After early Taking the Black Centre"

Here again is shown the resulting board position. Black wins by a large margin, as the borders of the white territory are not settled yet and White cannot capture the five black stones on the left.



"Borders Settled as in the Main Path"

But let us see what the picture will show if we try to set the borders similar to the course of the Main Path and let Black take the white stones on the right off the board.

Now the black lead is much smaller than before, he is only about fourteen points ahead.

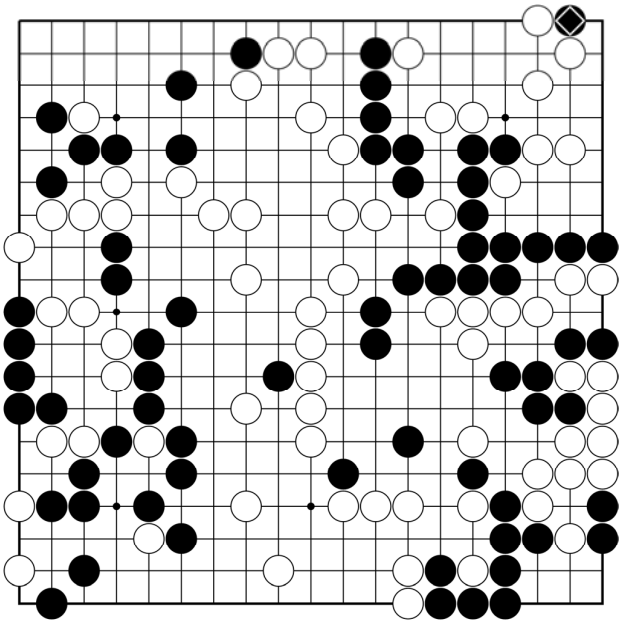
Please remember that in reality Black will play three + five + four + one stones to fill the big Nakade on the left, giving thirteen prisoners to White. White will be able to get additional two or three points in the centre, making a total of fifteen to sixteen points for White, what could turn the wheel of fortune in her favour.

So Black will lose his lead to an even greater extend, the closer we come to the End. This fact is it that seems to fall into oblivion between moves **72** and **132**. And it needed an Amateur to reveal the possibility of capturing that twenty black centre stones at the only moment, it could be executed successfully.

And we all will have to wait furthermore for the solution of the

Most Difficult Problem Ever

One black stone with a hidden meaning ?



"A Superfluous black Stone ?"

Since I had written the first DGoZ article about this problem, one question crossed my mind from time to time:

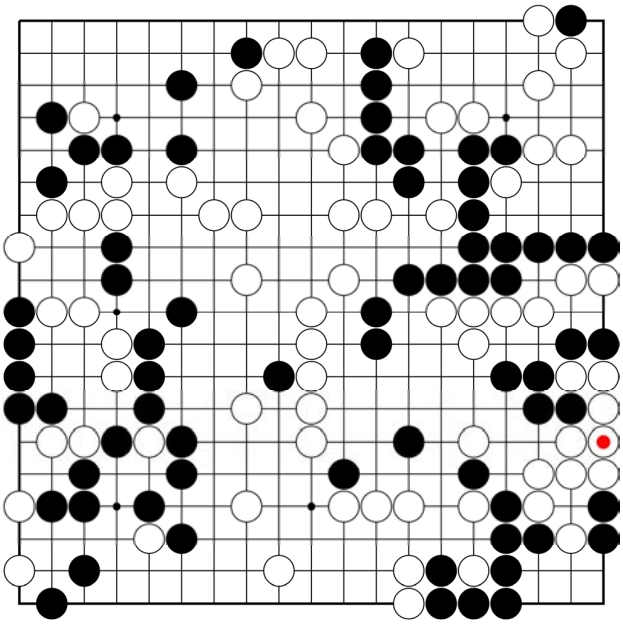
"What is the hidden meaning of the lonely black stone on the first row in the upper right (white) corner?"

Based on my amateurish understanding of the sequences shown here none of the stones from the problem setting can be removed from the board without affecting anyone of it somehow. With one exception – that black stone in the top right.

Update 2009:

This black stone seems to be important after the "bad shape" move to make several black moves Sente there in the top right corner.

"What about a 71. black stone ?"



"Has a Black Stone Been Captured ?"

This question arises, if one counts the number of black (70) and white (71) stones in the problem's setup and takes into account that it's Black's turn.

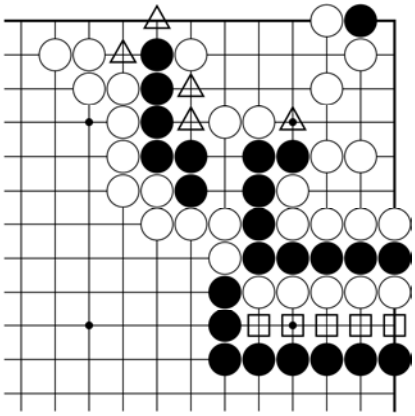
If ever, this black stone would have been possible only at the marked spot at the right edge. It would have been taken by White, later on White would have connected after a black Atari.

It would help repairing this small blemish in the problem's setup if Black wins with at least 2 points.

What about the top right corner ?

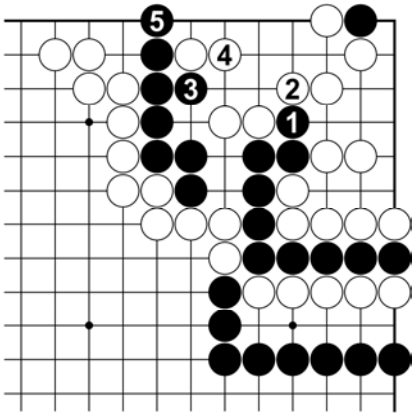
The top right corner seems to be the only place left to reduce white territory.

But one has to keep in mind that White always has the option of continuing the Semeai in the upper right after she captured the twenty black centre stones. Referring to this Semeai, the Placement she uses in the Main Path loses three moves.



"An Equivalent"

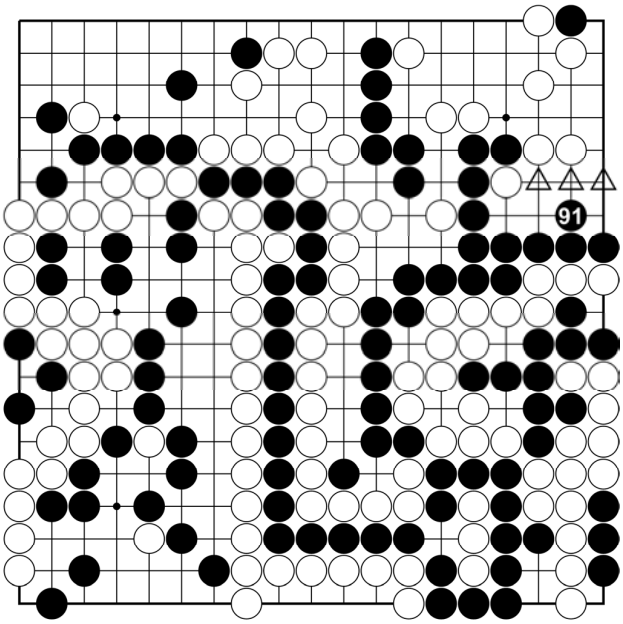
If one plays all other moves in that Semeai except those in the top right corner, one will get a position on the board that is equivalent to the Figure shown above. Both Black and White have five liberties left, it is Black's turn.



"Following the Main Path"

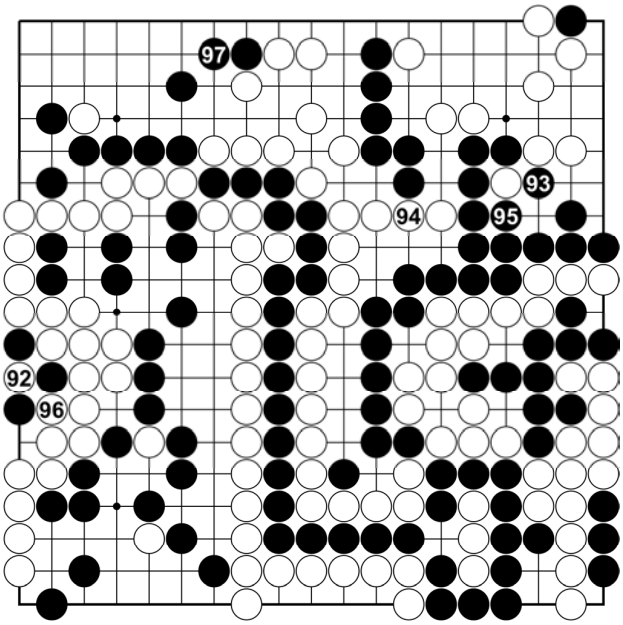
Will there be a sequence two or three points better for Black than following the Main Path ? I did not find any. One attempt can be found on page 84.

What about leaving the scope of action ?



"Leaving the Scope of Action" (B 91)

Another black move in the top right corner may be this one at **91** (in the Main Path Black connects the Atari on the left side with this move and White plays at this point with her **92**). This move destroys the three triangled points of white territory without hurting black liberties. White will need five moves to take black liberties in this area but one (instead of three moves before – but remember that connecting the open Atari on the left side will cost Black one move).



"Both Sides Live" (W 92 – B 97) <12/1>

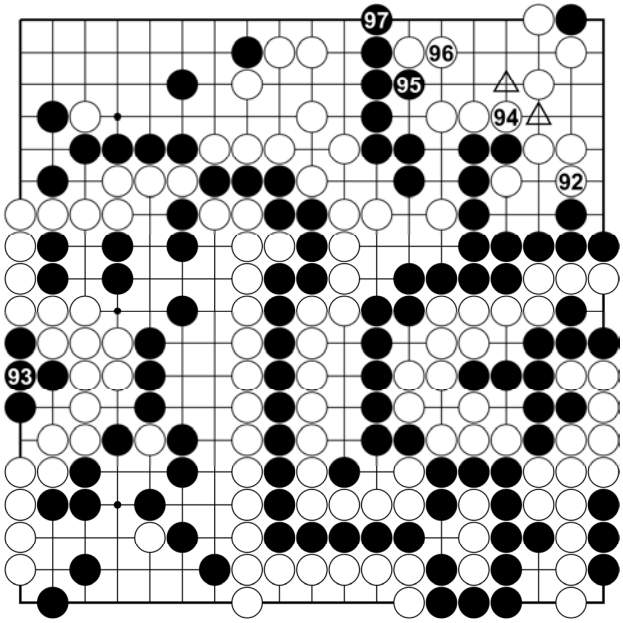
Perhaps it may be possible to put aside the question whether White will be able to win the game after the life-life-situation shown above, in which the whole bottom right quarter of the board will remain in Seki. I suppose that the game is extremely close.

I think the decisive question will be whether it would be possible for Black to prevent the white endgame in the upper left with the Hiki at **97**. Please note that this move is Sente against White's centre group. This group is now in danger to be reduced to only one Eye, what would force White to capture the twenty black centre stones, losing the game. But if White allows the black move at **97**, she will lose the game, too.

[see variation on page 108]

I suppose that White is not forced to resolve the Ko with **96**. Instead, she will be able to start the Endgame in the top left.

[see variation on page 110]



"Two of Three Points Lost" (W 92 – B 97)

If White follows a simpler path, she will answer at **92**, taking one black liberty. This move makes it also impossible for Black to get an Eye here.

So sooner or later Black will have to come back to the left side and connect at **93**, returning to what will follow the Main Path – with one decisive exception:

As shown here with the move at **94**, White will be able to prevent one of Black's Sente plays in the top right corner, resulting in a two-point advantage of the triangled points.

But Black has another option, winning him the game, in my opinion.

[see variation on page 101]

So White has to prevent that "bad shape" move of Black **91**.

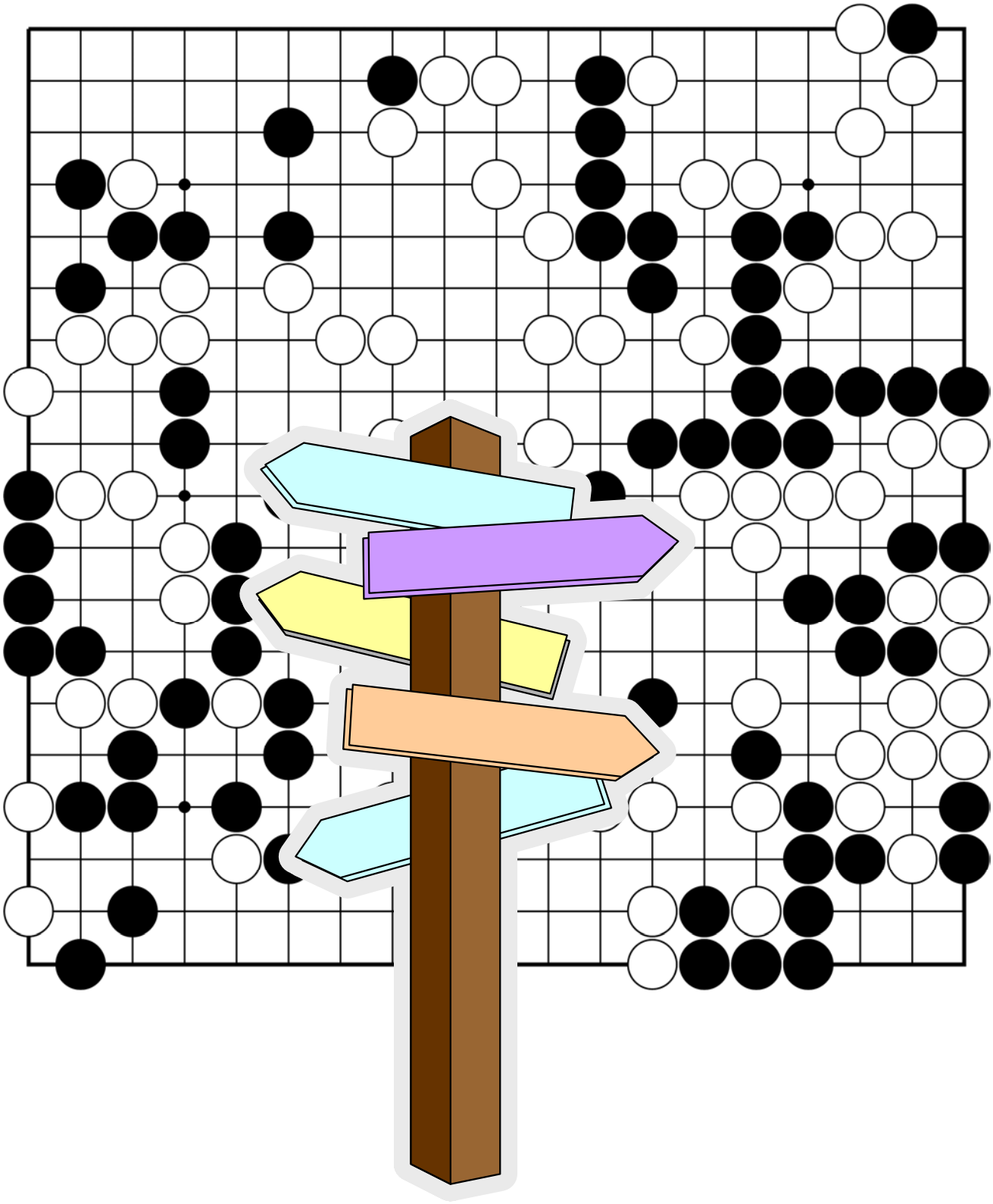
[see variation on page 111]

And the question remains whether Black has another chance earlier.

[see variation on page 115]

Igo Hatsuyoron, Problem 120

Variations

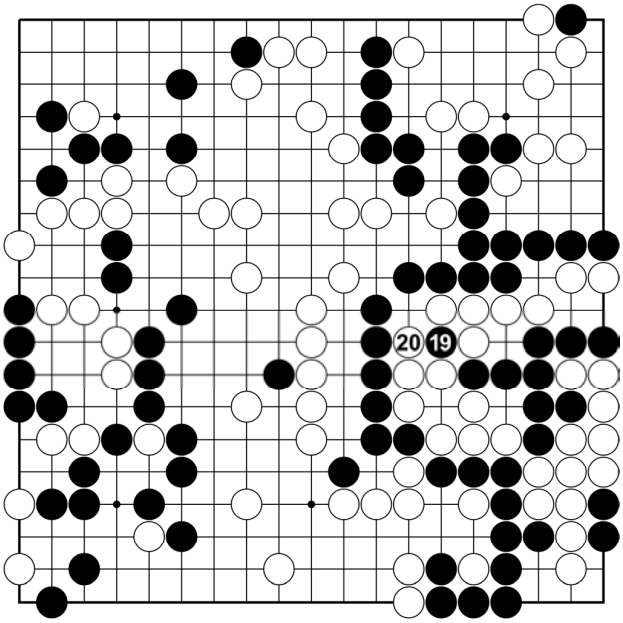


Summary

		Variation	Result		see Page
B 19		Second Throw-in.	All as below		39 / 73
B 21		In the lower right corner.	see W 132		
B 23		At the 2-1-point of the lower right.	W + R		39
W 24		At the 1-2-point in the lower right and ...			40
	B 27	... running out.	B + R		
	B 27	... capturing three stones.	B + 2	B + 4	43 / 79
B 27		Capture of three stones.	W + R		46
W 28		Atari from the outside.	B + R		48
W 42		Geta.	B + R		48
W 44		Attempt to block and ...			49
	B 45	... capturing three stones.	W + R		
	B 45	... reducing liberties.	B + R		50
W 50		Attempt to block and reducing liberties.	B + R		51
W 60		Attempt to block and playing Ko.	B + R		52
W 70		Reducing liberties.	B + R	B + R	53 / 83
B 71		Capturing three stones.	W + R		54
W 72		Capturing twenty stones.	B + R		55
B 77		Capturing stones in the lower left.	W + R		56
W 78		Attempt to connect on the third line.	B + R		57
B 81		Dango attempt.	W + R		57
W 82		Throw-in.	B + R		58
B 85		Throw-in below or Placement inside.	W + R		58
B 99		Push into the top right corner.	W + R		59
B 131		Capturing three stones.	W + R		61
W 132		Endgame on the left side.	B + 3	B + 5	62 / 94
		Without B 21 – W 22.	B + 1		64
W 134		Reducing liberties.	B + 2	B + 3	66 / 96
W 142		Atari in the upper left.	± 0		68
B 143		Attempt to cut.	W + R		69
B 155		Save one stone in the lower left.	W + 3		69
W 160		Another Sente in the centre.	W + 1		70
B 161		No direct answer.	W + 4		71

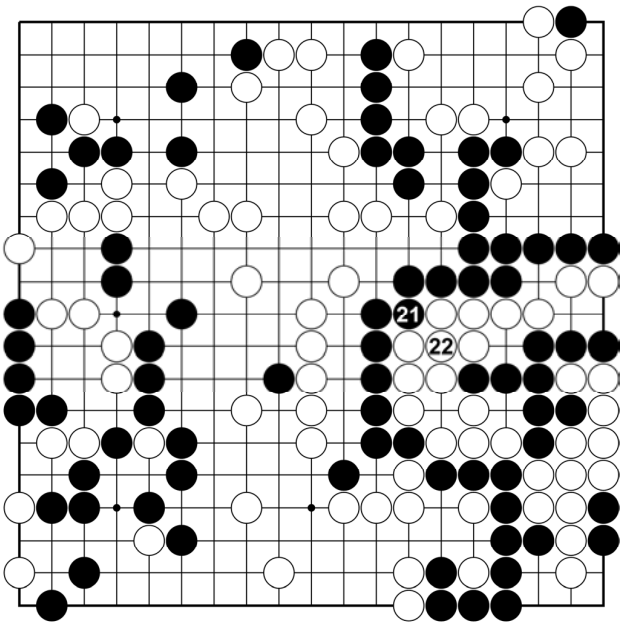
		Main Path	W + 2	W + 1	19 / 76

Variation for Black 19



Dia. 19.1 (B 19 – W 20) <2/0>

B 19: Throwing in for the second time is said to be not a good idea.

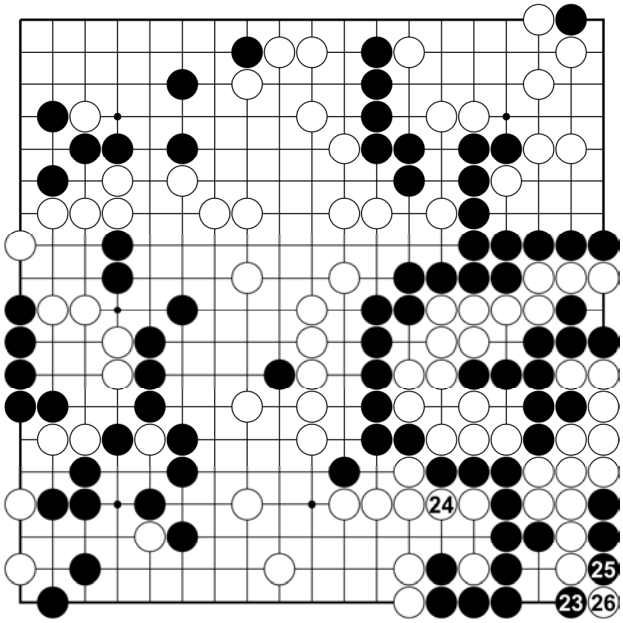


Dia. 19.2 (B 21 – W 22)

B 21: Black has to prevent a white Eye, thus filling in a very important liberty (which in the current opinion would be necessary in a Semeai later on).

[see explanations on page 75]

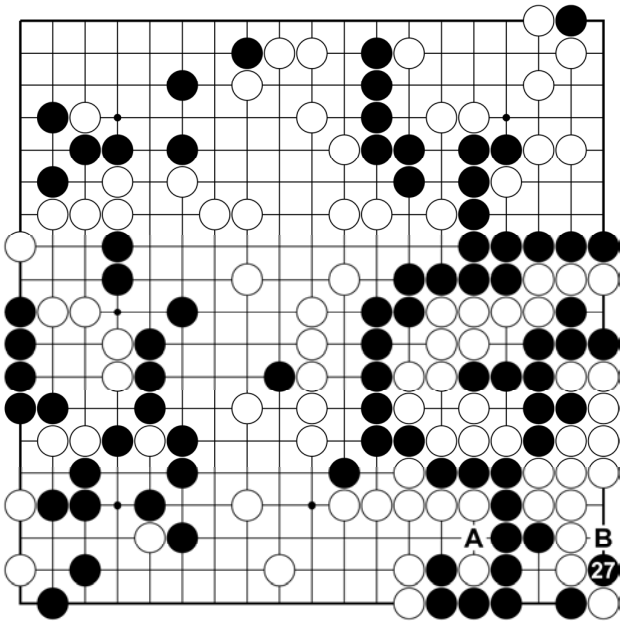
Variation for Black 23



Dia. 23.1 (B 22 – W 26) <4/0>

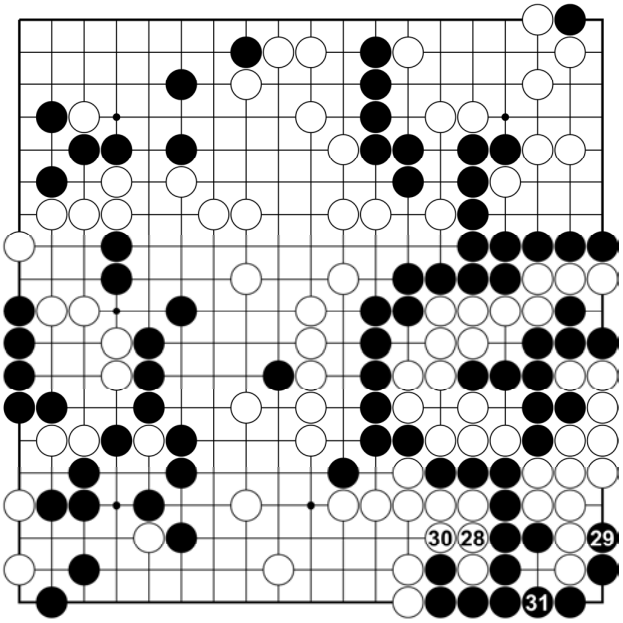
B 23: Black cannot play in the corner at the 2-1-point.

W 24: The simplest way for White is to play on the point spurn by Black herself and connect one of her stones.



Dia. 23.2 (B 27) <4/1>

B 27: Even if Black plays this stone at **A** or **B**, he would nothing change in the final result here.



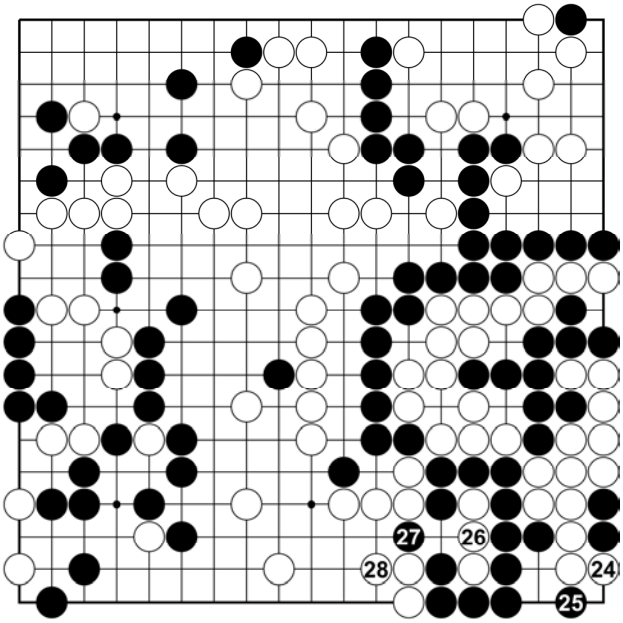
Dia. 23.3 (W 28 – B 31)

W 28: It is not necessary for White to play in the corner, as Black is signed by great approaching difficulties there. She takes outside liberties instead.

B 31: The resulting Seki in this corner does not really help Black.

White wins the game.

Variation for White 24

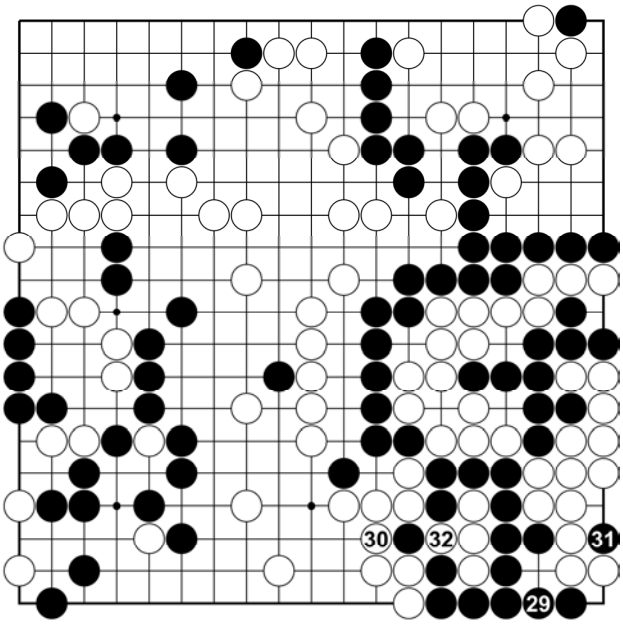


Dia. 24.1 (W 24 - W 28) <3/0>

W 24: There are no statements about this variation in the sources at my disposal. The commentary here was worked out together with Joachim Meinhardt.

B 25: This black answer is forced.

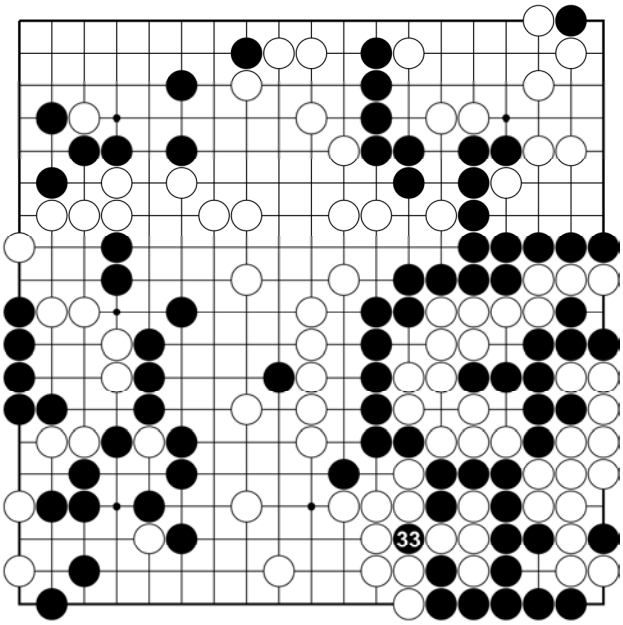
B 27: It is best for Black to follow the known course of the Main Path here. To capture the three white stones instead will be far more time-consuming.



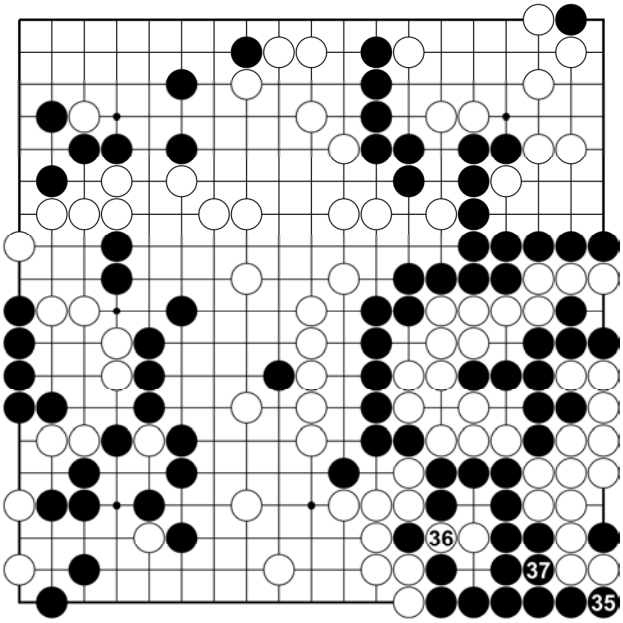
Dia. 24.2 (B 29 - W 32) <4/0>

B 29: Black can immediately attack the white group in the corner with

this move. Perhaps it will be more elegant to continue with **30** before.



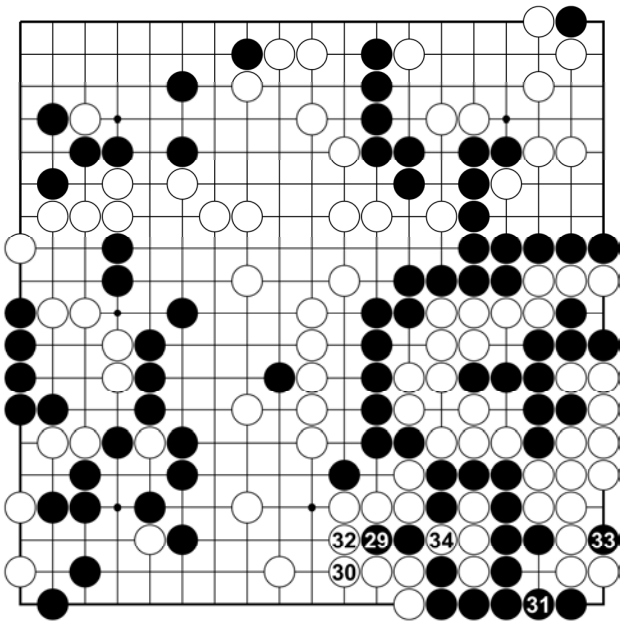
Dia. 24.3 (B 33) *<4/4>*



Dia. 24.4 (B 35 - B 37) *<5/4>*

B 37: Black wins the Semeai in the corner by one move.

Black wins the game.

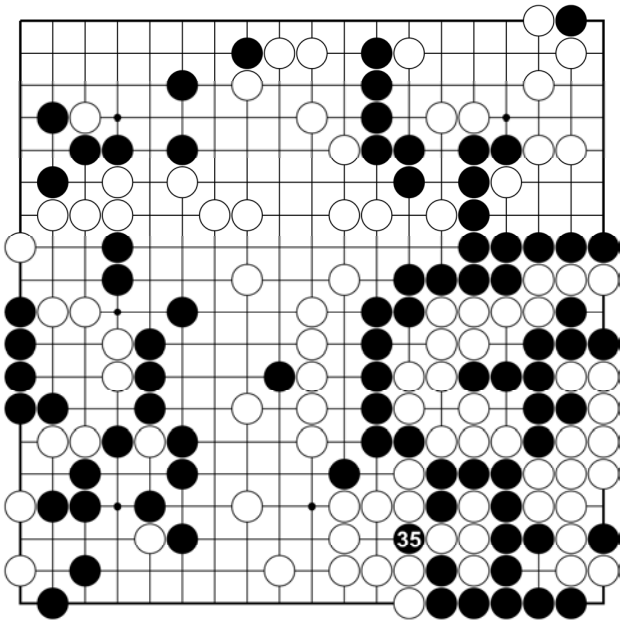


Dia. 24.5 (B 29 - W 34) *<5/0>*

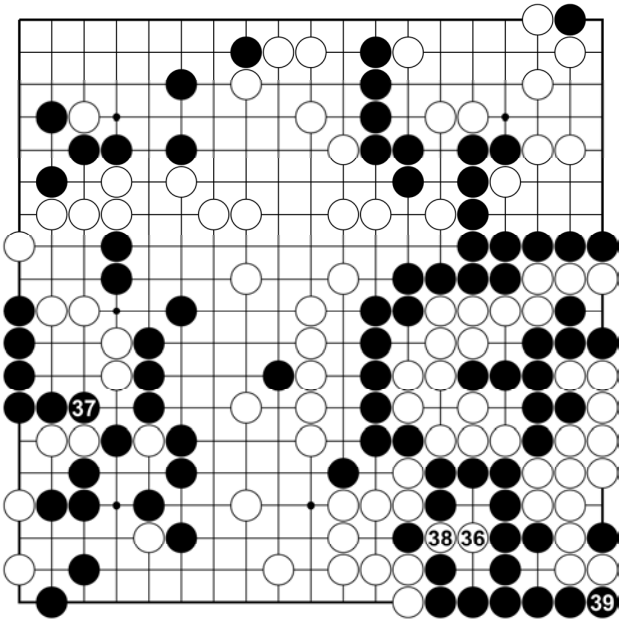
B 29: Black sacrifices a second stone in the centre.

B 31: Again Black starts the Semeai in the corner.

He could follow the Main Path for a while, too, beginning with **31** at **32**, but this would result only in giving away more stones to White.



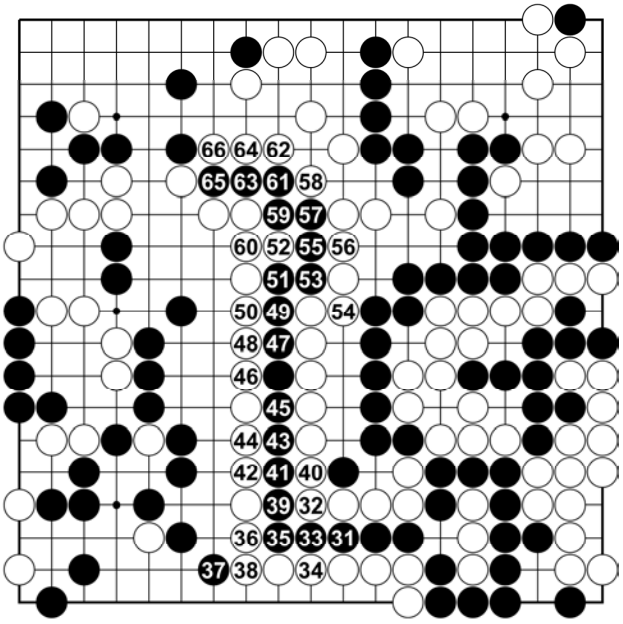
Dia. 24.6 (B 35) *<5/4>*



Dia. 24.7 (W 36 - B 39)

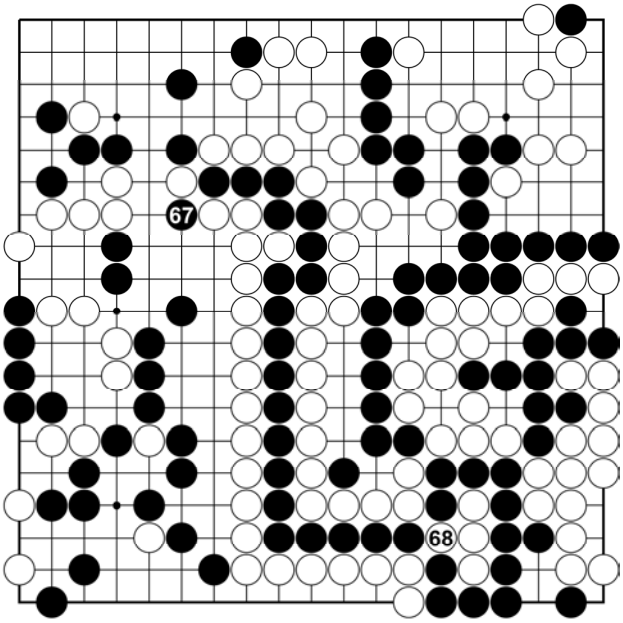
B 37: Black can play Tenuki once in the lower right and remains one step faster there.

Black wins the game.



Dia. 24.8 (W 24- W 28) <3/0>

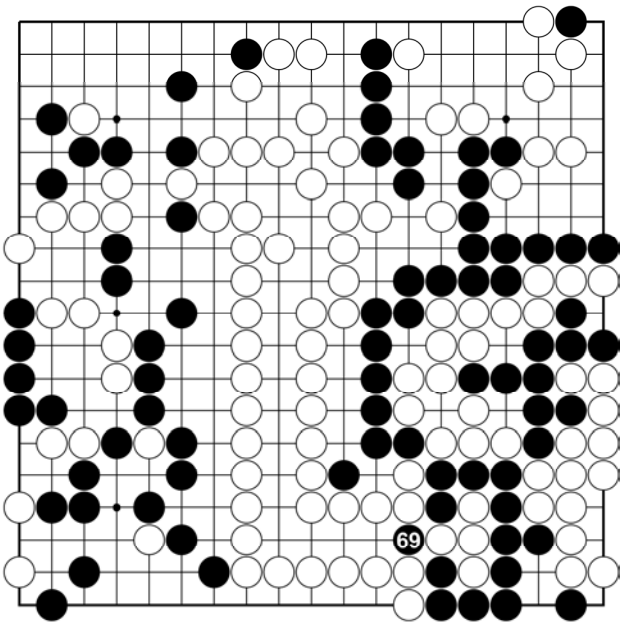
B 31 ... 65: At any time Black can interrupt his flight along the Main Path and capture the white group in the lower right corner.



Dia. 24.9 (B 67 - W 68) <23/0>

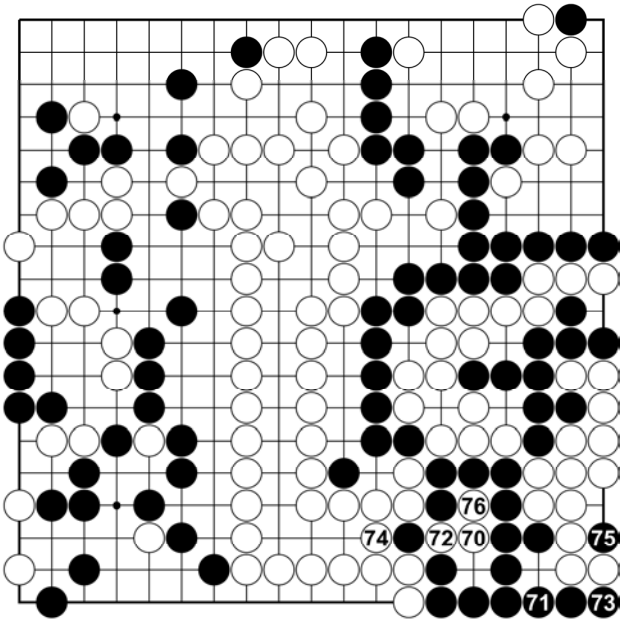
B 67: But waiting until the Atari of **67** has been one move too long. Black's last chance has been after White **66**.

W 68: This is why White takes the black stones in the centre off the board, before Black played the move in the corner.



Dia. 24.10 (B 69) <23/4>

B 69: Black recaptures.



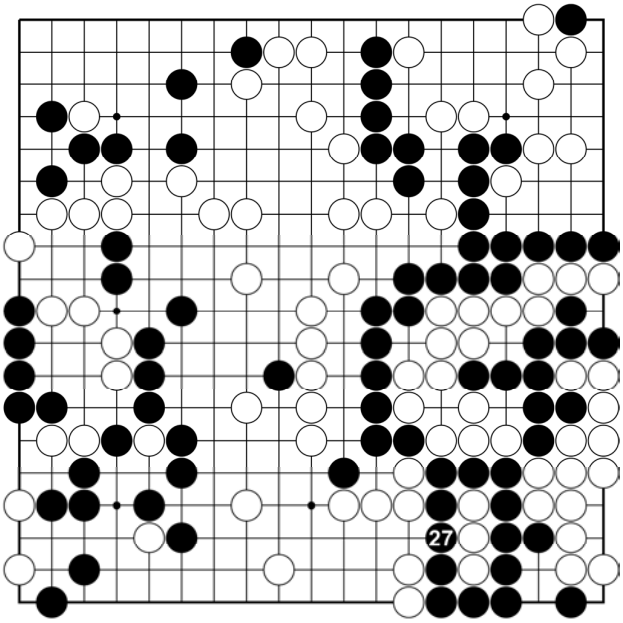
Dia. 24.11 (W 70 - W 76) <24/4>

W 70: White makes a placement, as usual.

B 73: The specific characteristic of this corner causes black difficulties in approaching the white stones.

W 76: Different from the Main Path White here is the decisive step faster. She gets the whole right side.

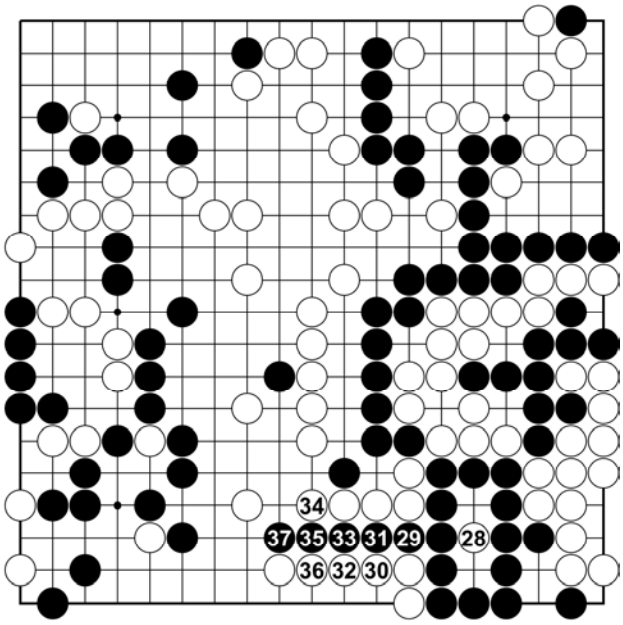
White wins the game.



Dia. 24.8 (B 27) <3/3>

B 27: Second possibility for Black is to capture the three white stones. But the following sequence will be much longer than the one shown before.

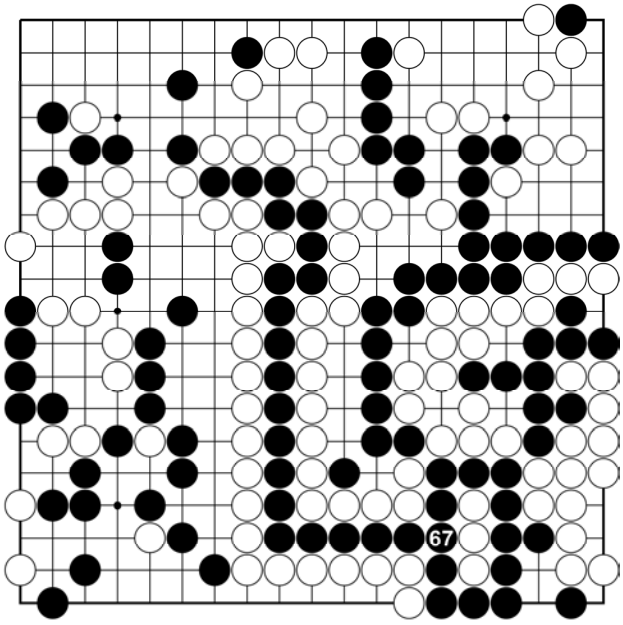
Above this move is possible at any time between Black **29** and Black **67**, but these variations are more likely to belong herein as a change in the order of moves.



Dia. 24.9 (W 28 – B 37)

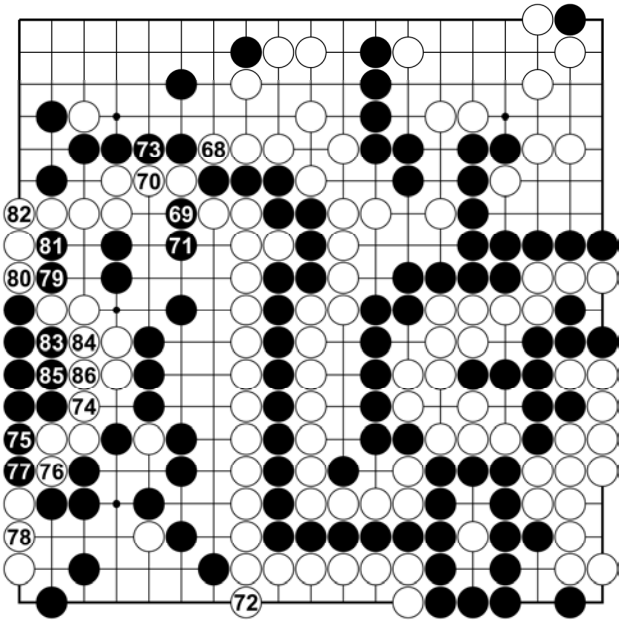
W 28: White must prevent two black Eyes. After that move the journey starts that is explained in detail in the Main Path.

Dias. ...

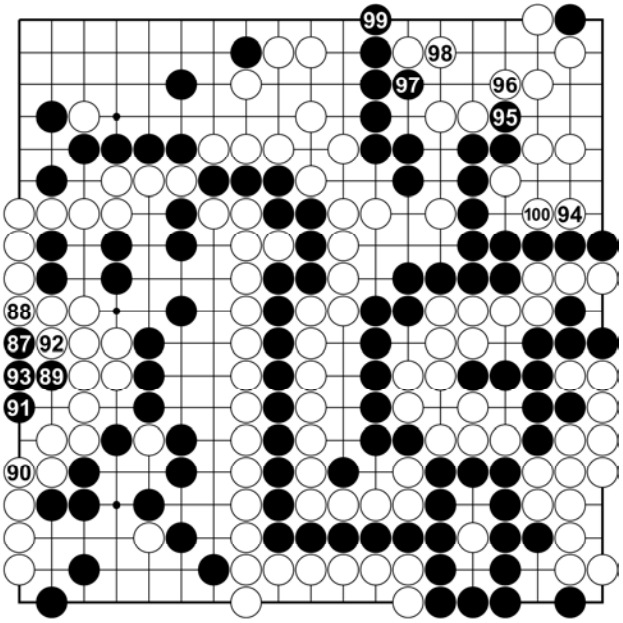


Dia. 24.10 (B 67) <3/3>

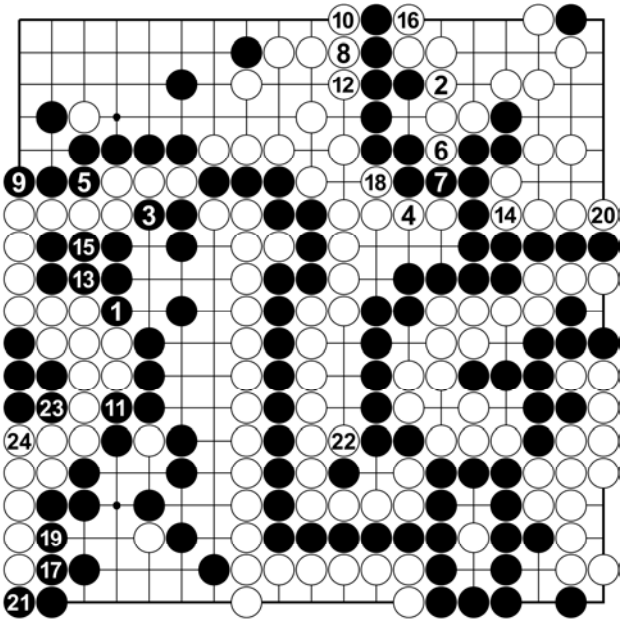
B 67: Or Black captures the three white stones in the lower right at least with this move. Now the Main Path follows in principle.



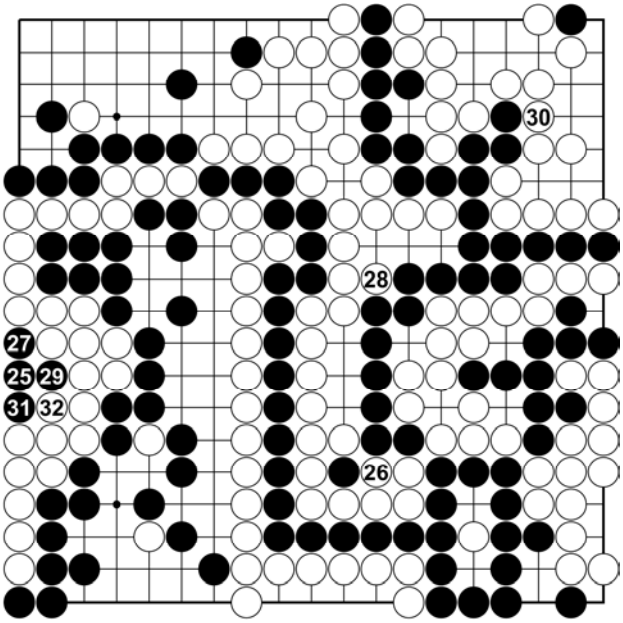
Dia. 24.11 (W 68 – W 86) <12/3>



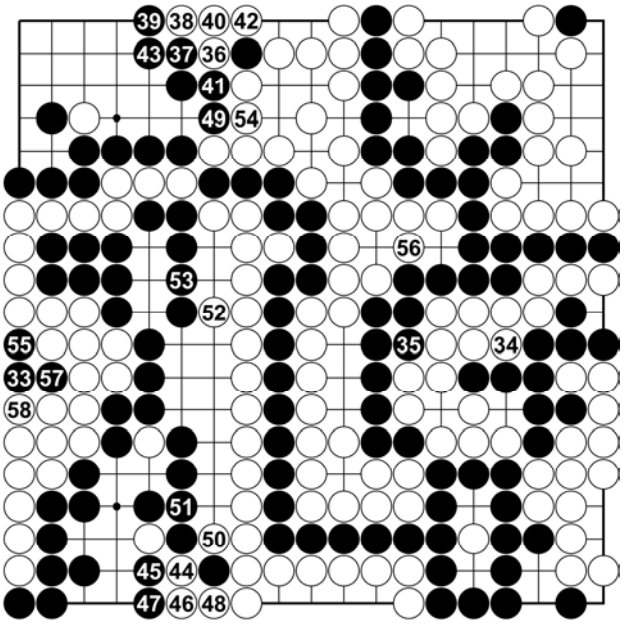
Dia. 24.12 (B 87 – W 100)



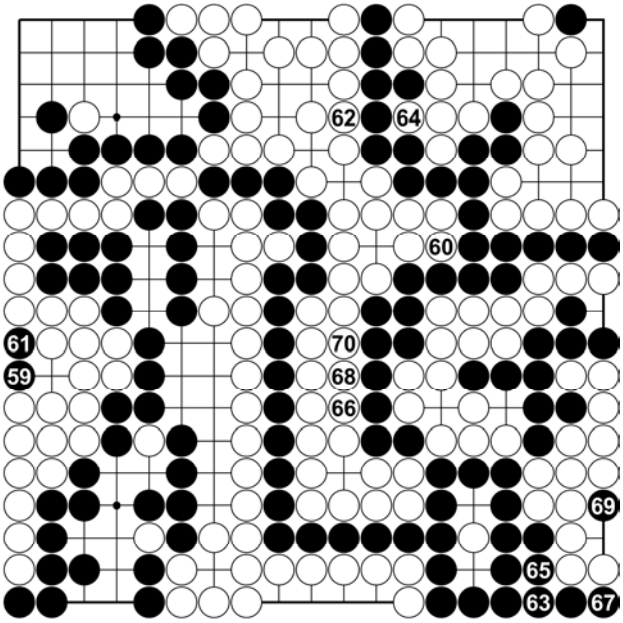
Dia. 24.13 (B 101 – W 124) <17/3>



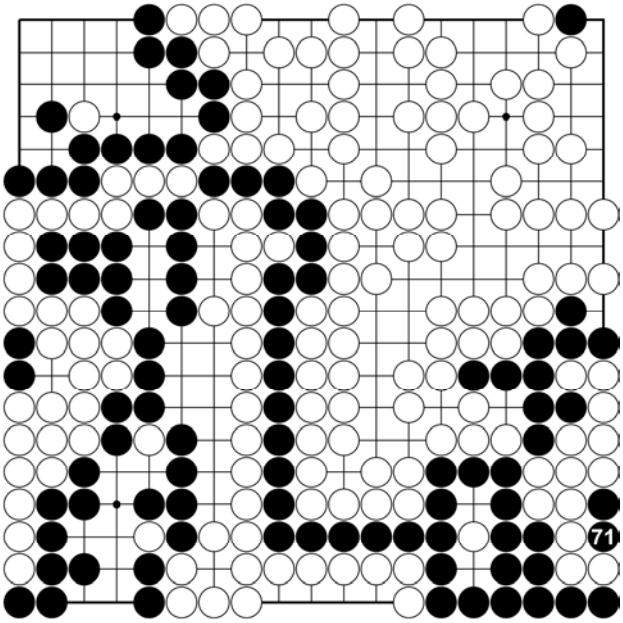
Dia. 24.14 (B 125 – W 132) <22/3>



Dia. 24.15 (B 133 – W 158) <27/3>

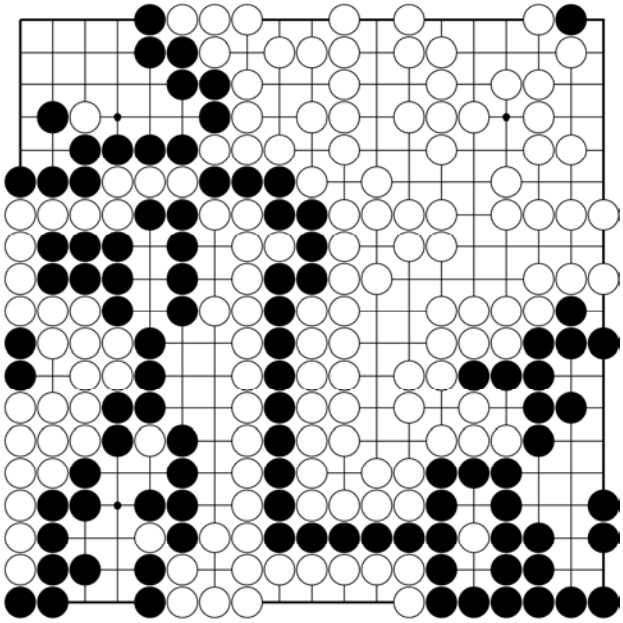


Dia. 24.16 (B 159 – W 170) <58/3>

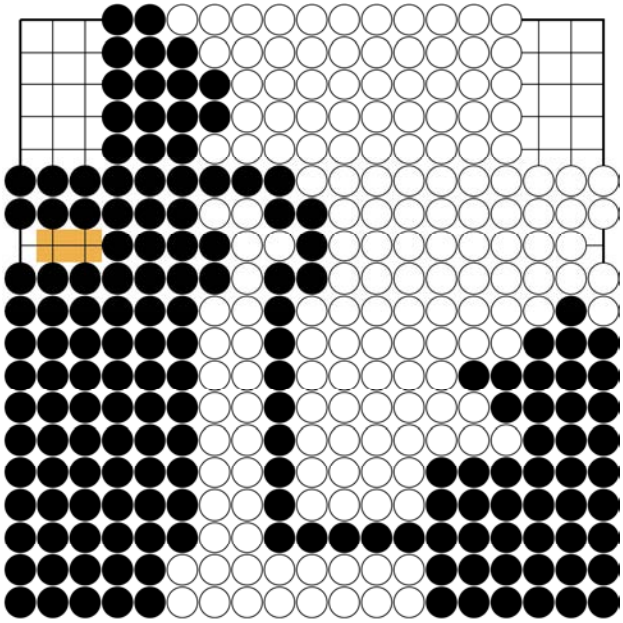


Dia. 24.17 (B 171) <58/16>

B 171: As in the Main Path, Black again gets the white stones in the lower right corner.

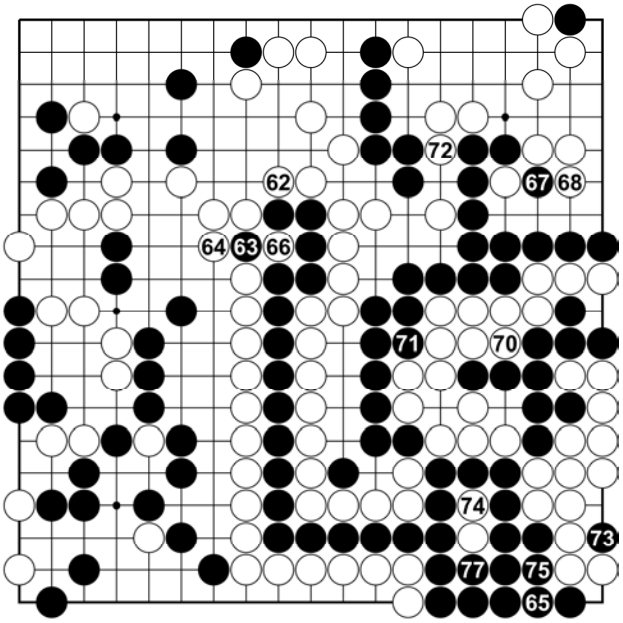


Dia. 24.18 "The End here"



Dia. 24.19 "The Score"

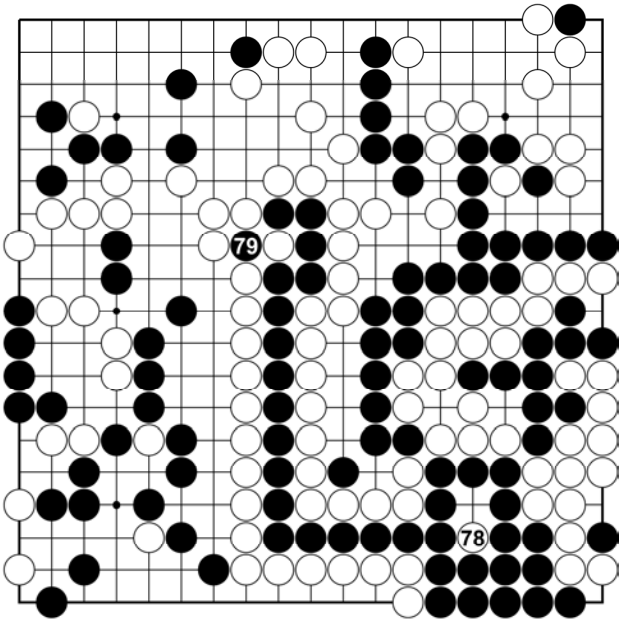
Black wins by 2 points.



Dia. 24.20 (W 62 – B 75) <7/5>
(moves not shown capture Ko)

W 62: White tries to get a Ko.

W 70: But she has only one internal Ko-Threat, what is not enough.

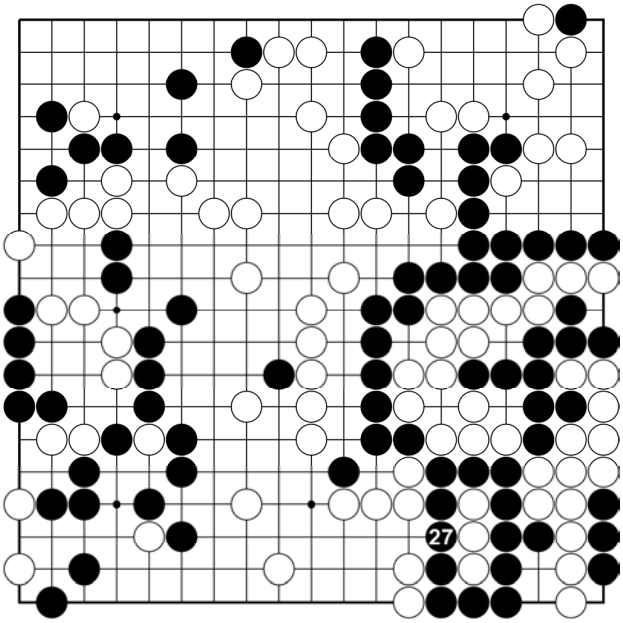


Dia. 24.21 (W 78 – B 79) <7/6>

B 79: White has no adequate Ko-Threat left, so Black will give Atari in the corner and win the Ko, wherever White plays next.

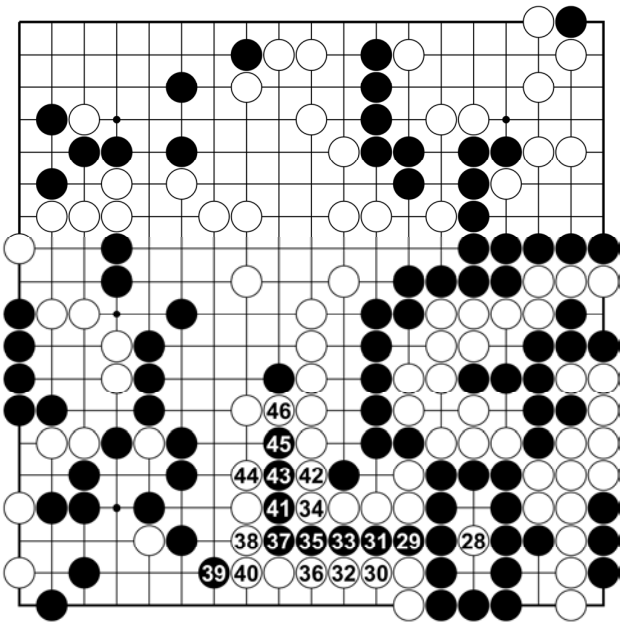
Black wins the game.

Variation for Black 27



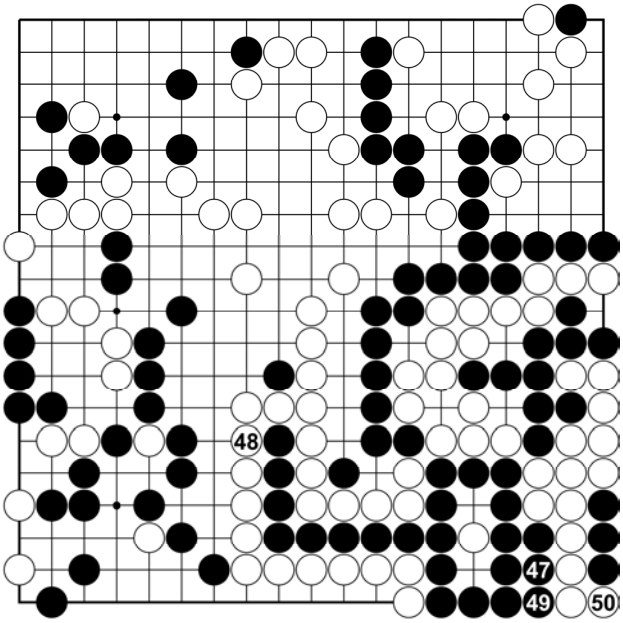
Dia. 27.1 (B 27) <1/3>

B 27: Black captures the three white stones.



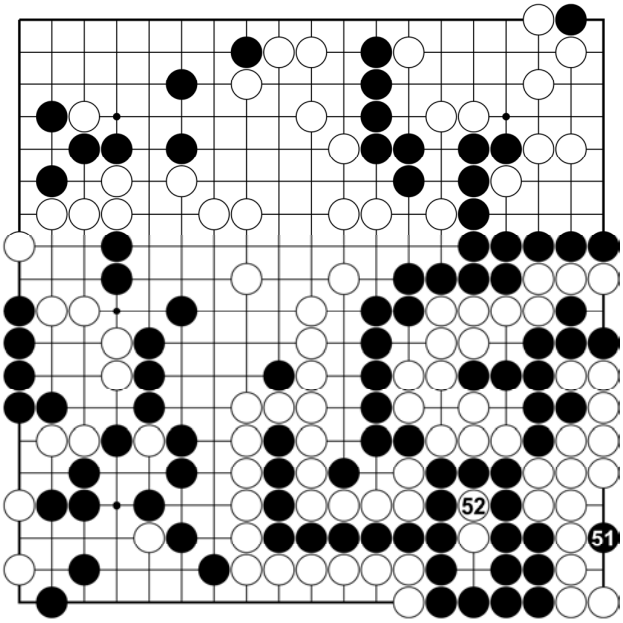
Dia. 27.2 (W 28 – W 46)

W 46: After blocking Black's escape there are two variations, none is good for Black.



Dia. 27.3 (B 47 – W 50) <4/3>

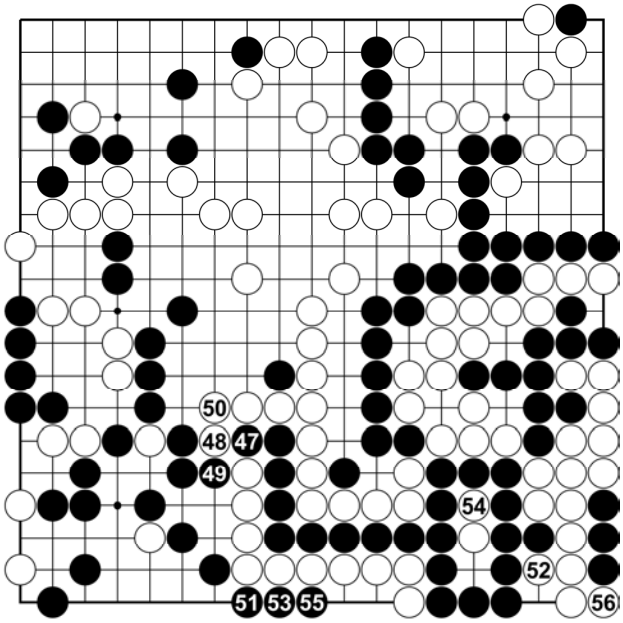
B 47: Going after the white stones in the corner ...



Dia. 27.4 (B 51 – W 52)

W 52: ... shows Black one liberty short.

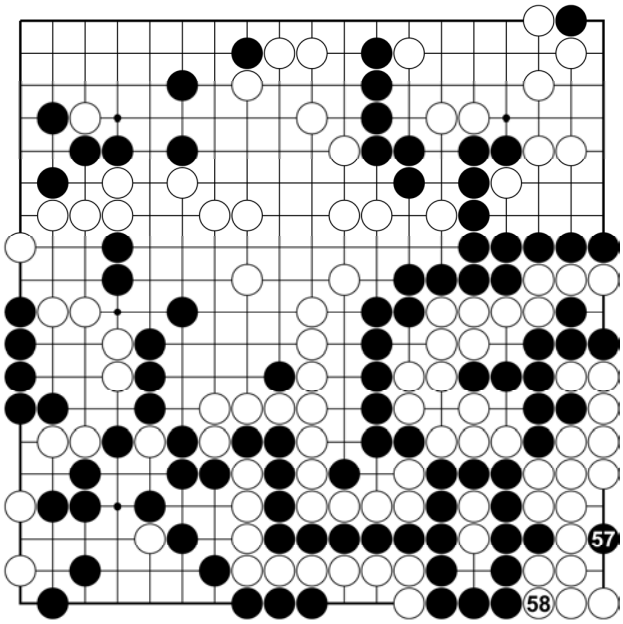
White wins the game.



Dia. 27.5 (B 47 – W 56) <4/3>

B 47: Black has no future on the left either.

B 51: Even if Black prevents two Eyes of the white group, ...

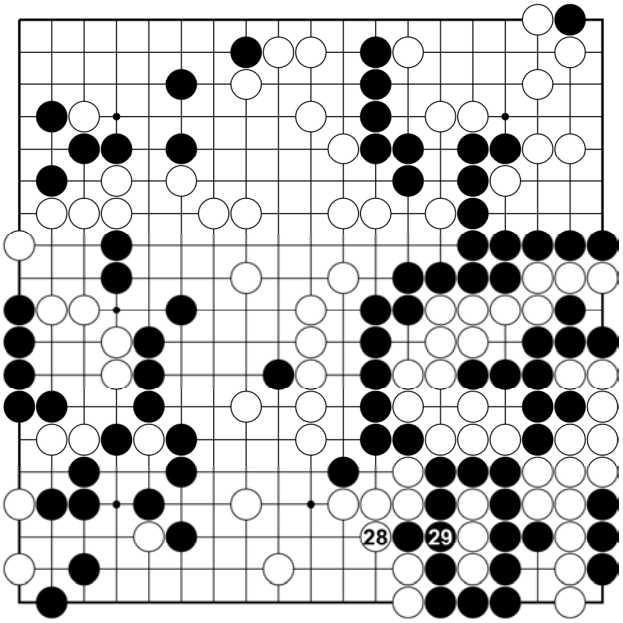


Dia. 27.6 (B 57 – W 58)

W 58: ... he arrives one step too late, as usual.

White wins the game.

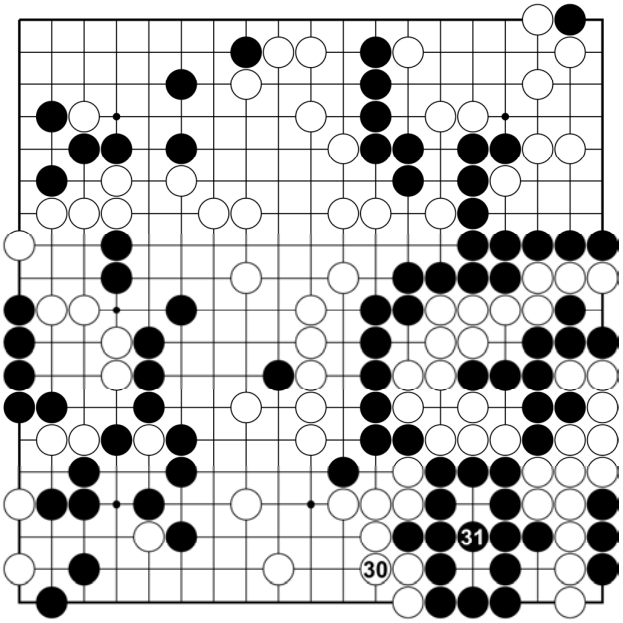
Variation for White 28



Dia. 28.1 (W 28 – B 29) <1/3>

W 28: White cannot give Atari here, ...

B 29: ... as Black will capture the three white stones inside his belly.

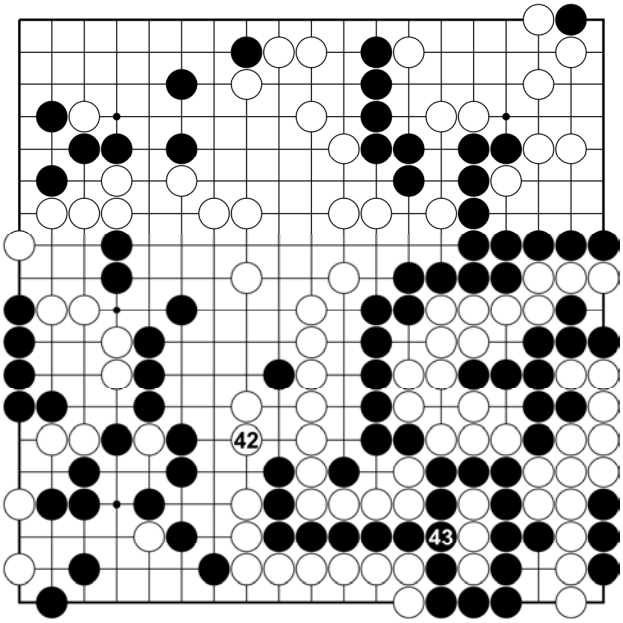


Dia. 28.2 (W 30 – B 31)

W 30: If White saves her two stones at the bottom, Black secures two Eyes with **31** and vice versa. These two points are Miai for black life, who can resolve the Seki on the right now.

Black wins the game.

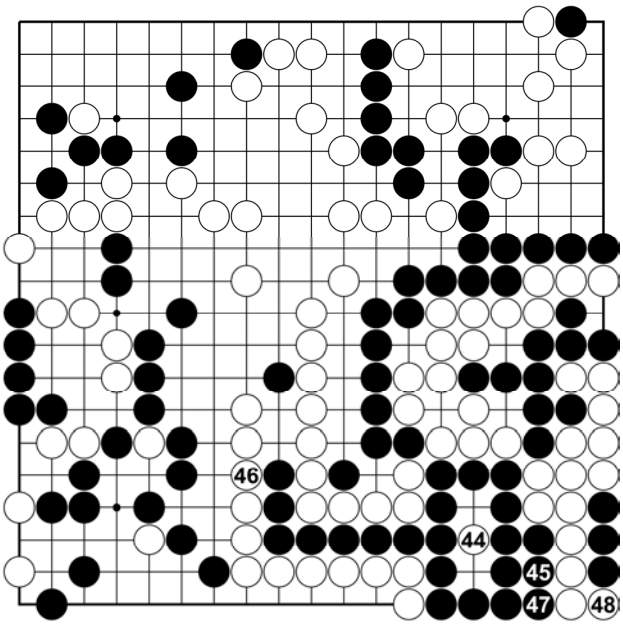
Variation for White 42



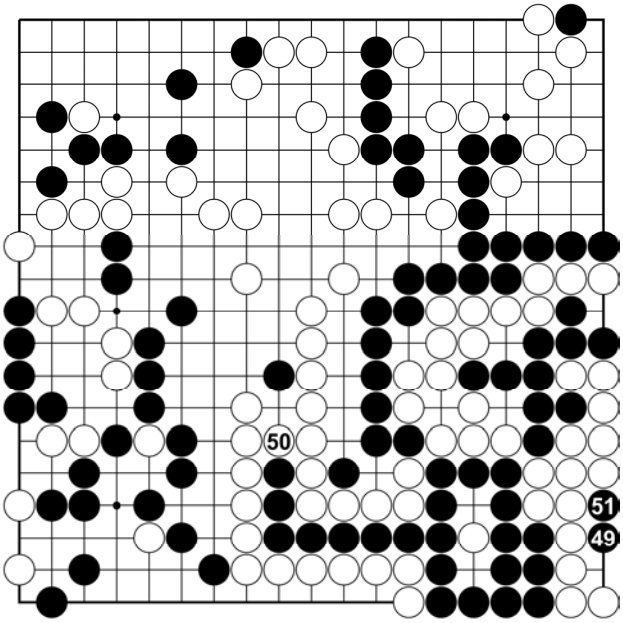
Dia. 42.1 (W 42 – B 43) <1/3>

W 42: A Geta is much too slow here.

B 43: The simplest measure for Black now is to capture the three white stones.



Dia. 42.2 (W 44 – W 48) <4/3>

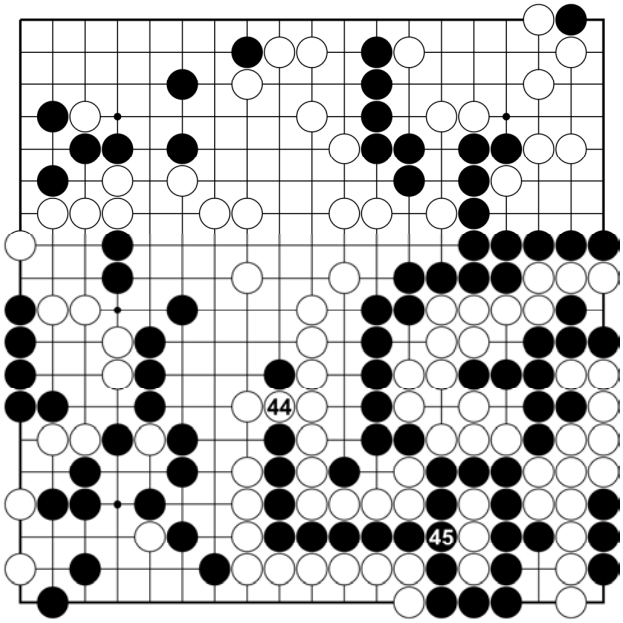


Dia. 42.3 (B 49 – B 51)

B 51: Black wins the Semeai in the corner by one move.

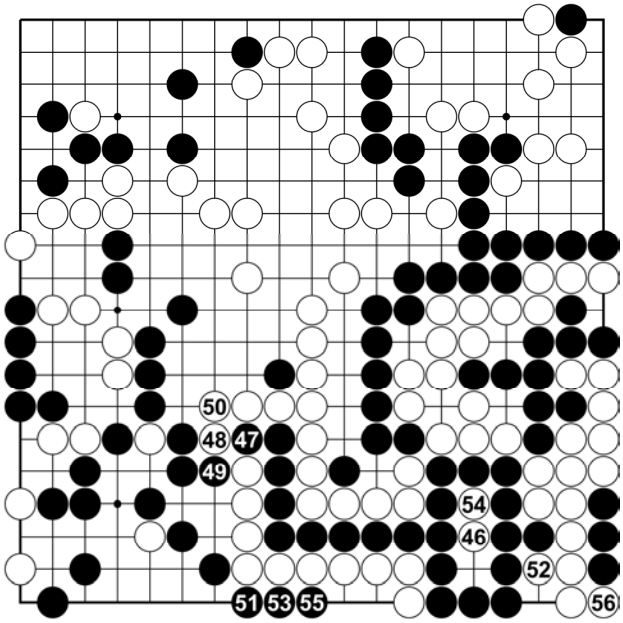
Black wins the game.

Variation for White 44



Dia. 44.1 (W 44 – B 45) <1/3>

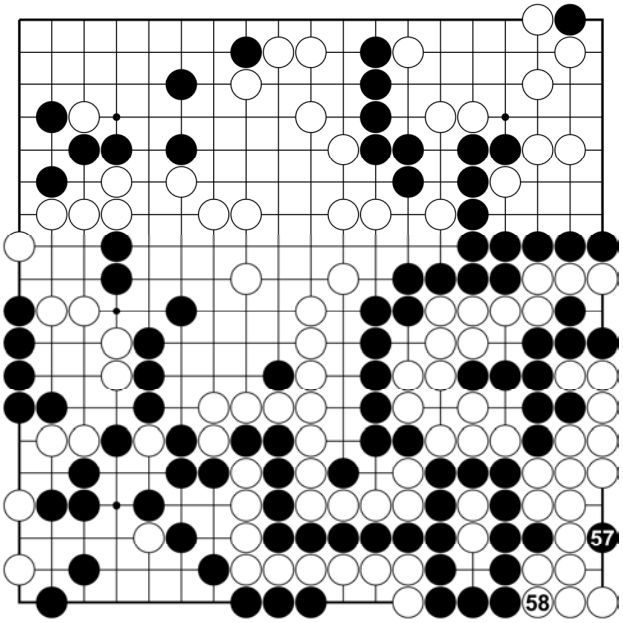
W 44: If White tries to confine Black, capturing with **45** is a mistake (as we have seen before).



Dia. 44.2 (W 46 – W 56) <4/3>

B 51: The white group at the bottom has only one Eye, but ...

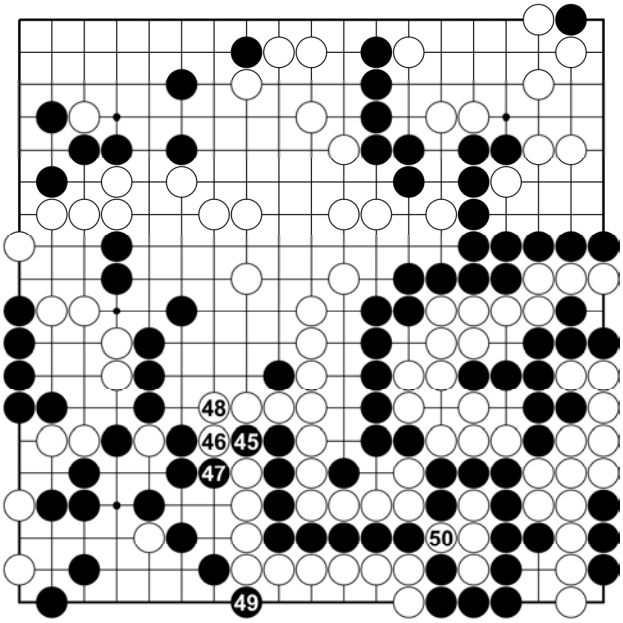
W 56: ... too much liberties left.



Dia. 44.3 (B 57 – W 58)

W 58: White wins the capturing race in the corner.

White wins the game.

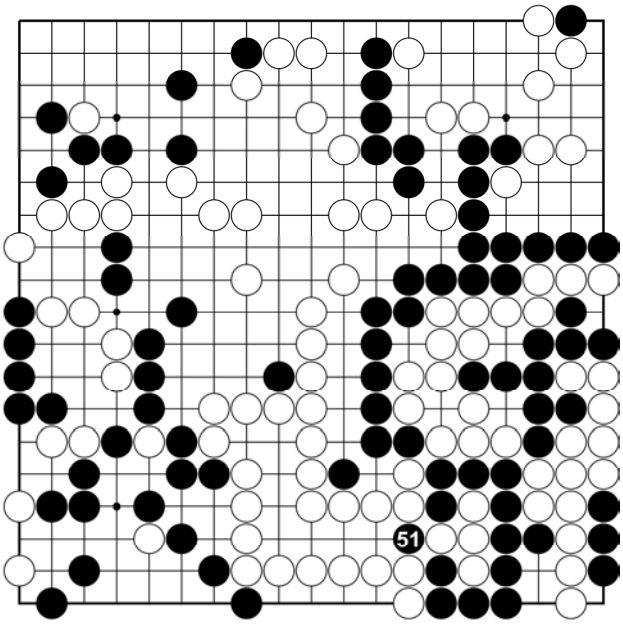


Dia. 44.4 (B 45 – W 50) *<10/0>*

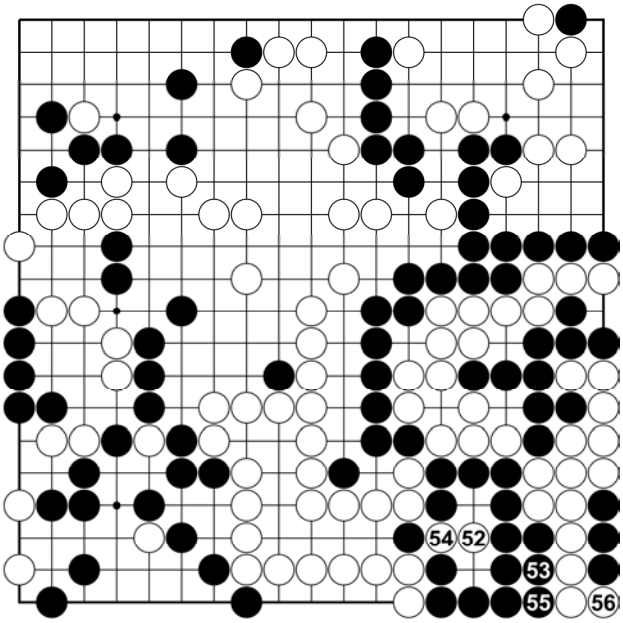
B 45: So Black has to chance the order of moves.

B 49: Hereafter, the white group at the bottom is reduced to one Eye as before.

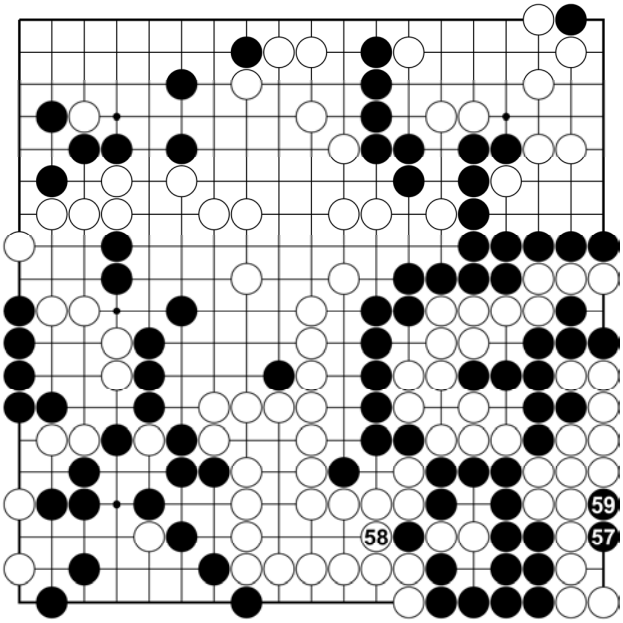
W 50: But here White eventually will be forced to capture the encircled ten black stones, where after ...



Dia. 44.5 (B 51) *<10/4>*



Dia. 44.6 (W 52 – W 56) <13/4>

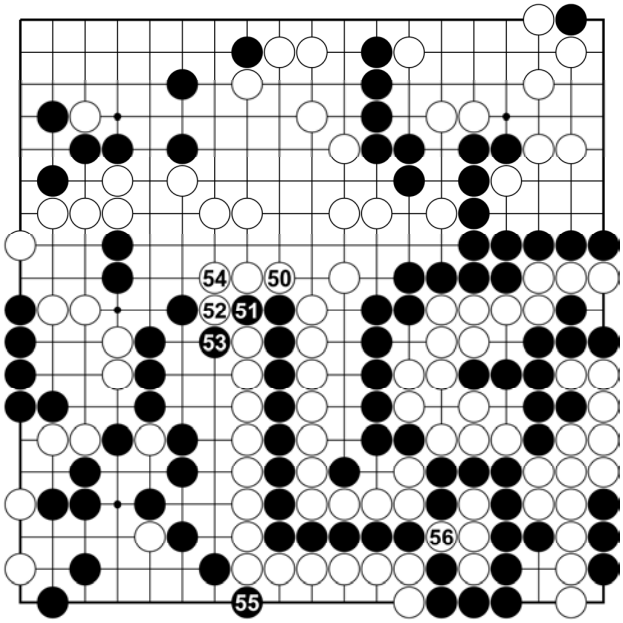


Dia. 44.7 (B 57 – B 59) <14/4>

B 69: ... it will be Black, who wins the capturing race in the corner now.

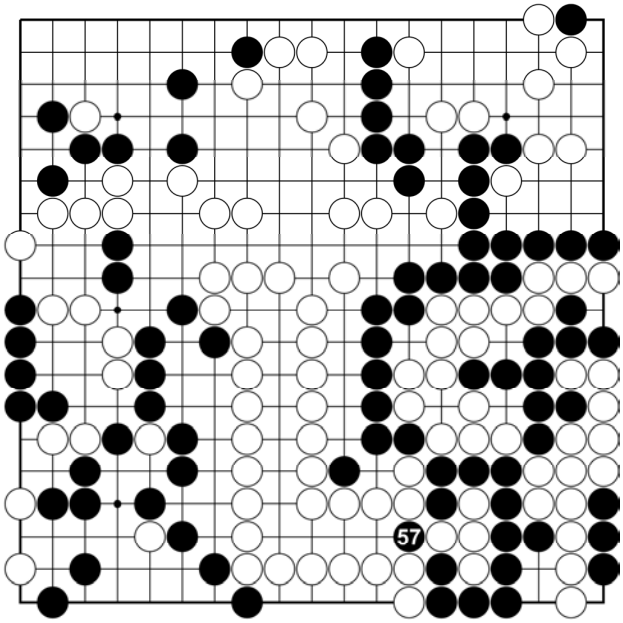
Black wins the game.

Variation for White 50

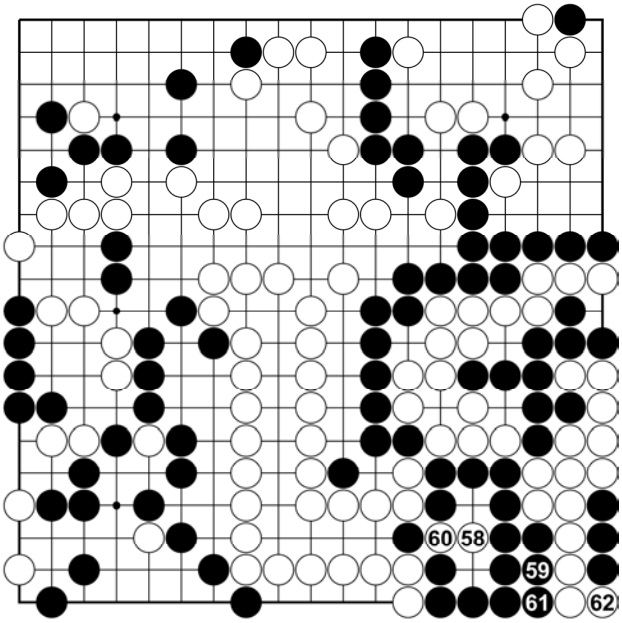


Dia. 50.1 (W 50 – W 56) <14/0>

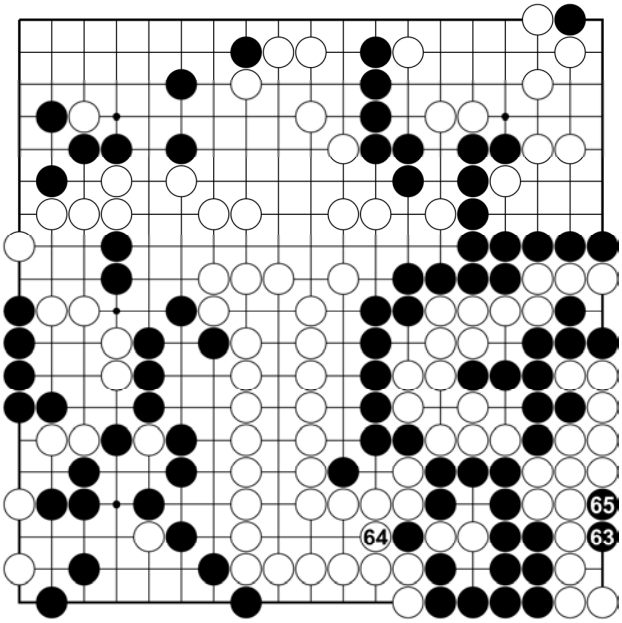
W 50: Blocking with White **50** leads to a similar result as blocking with White **44**.



Dia. 50.2 (B 57) <14/4>



Dia. 50.3 (W 58 – W 62) <17/4>

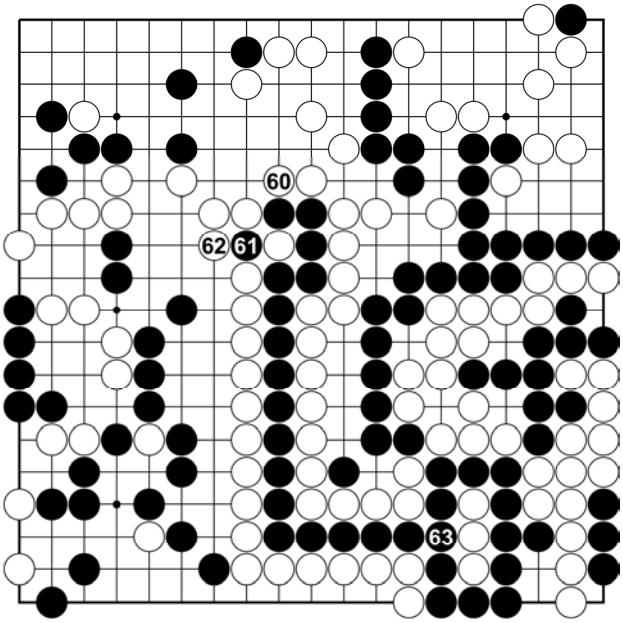


Dia. 50.4 (B 63 – B 65) <18/4>

B 83: White is one move too late.

Black wins the game.

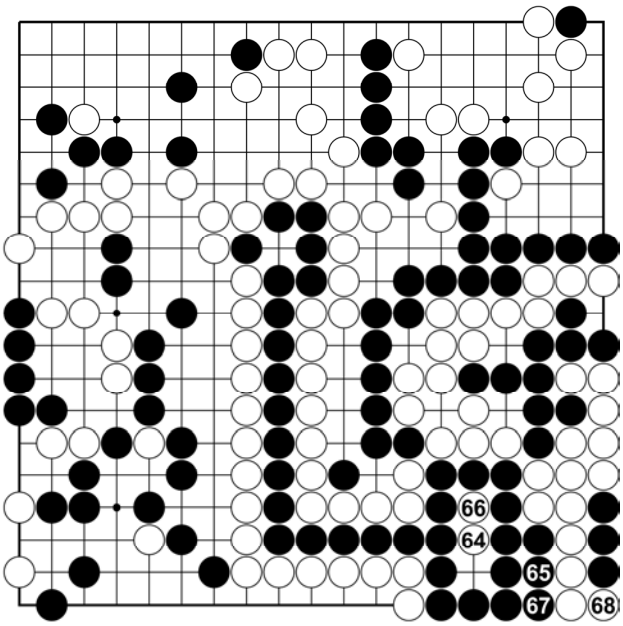
Variation for White 60



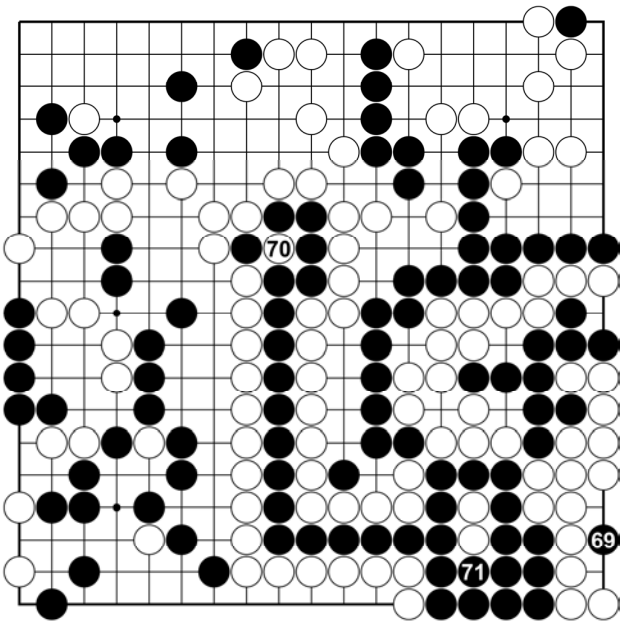
Dia. 60.1 (W 60 – B 63) <1/4>

W 60: White blocks Black's path.

B 61: Black captures the single white stone and gets an additional liberty, which enables him to capture three white stones with **63**. Because White is hindered to occupy each of the two liberties of the chain of black stones in the centre immediately, this seems to be a little bit like the variation for White **42** (refer to page 48).



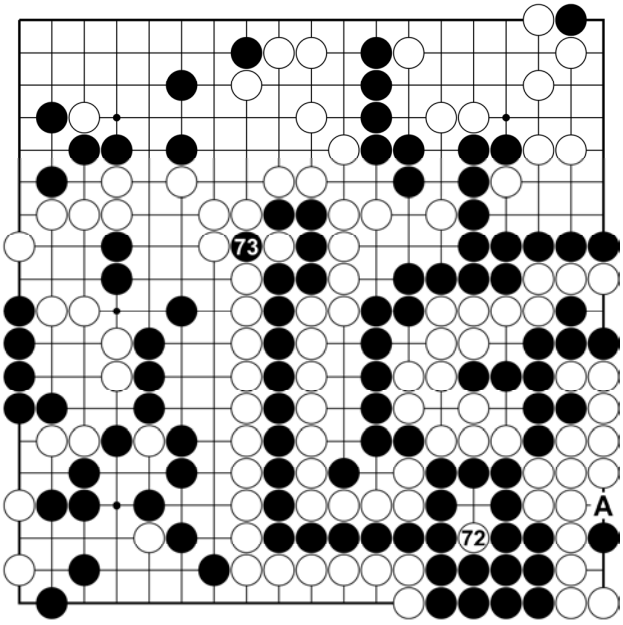
Dia. 60.2 (W 64 – W 68) <4/4>



Dia. 60.3 (B 69 – B 71) <5/6>

W 70: Guided by the proverb, White takes the Ko at the latest possible moment, ...

B 71: ... but Black has two liberties left.

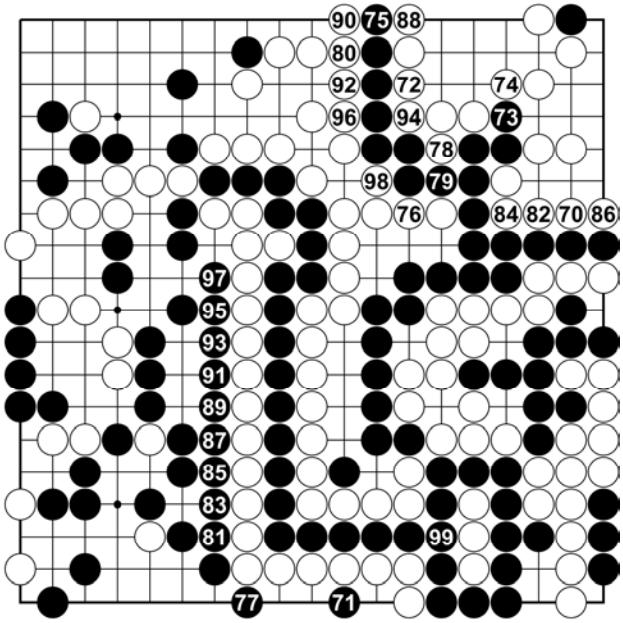


Dia. 60.4 (W 72 – B 73) <5/7>

B 73: Finally, Black takes the Ko back. On the whole board there are no adequate Ko-Threats for White. So Black will be able to capture the white stones in the lower right corner with **A**, giving White two moves in a row wherever she likes.

Black wins the game.

Variation for White 70

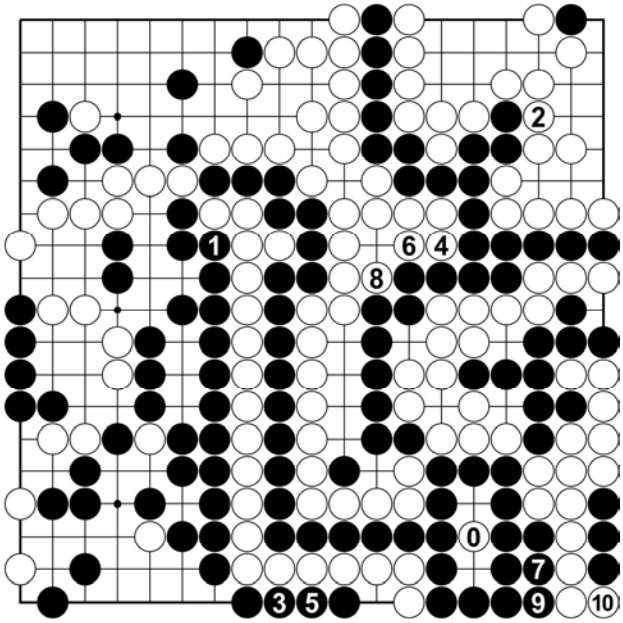


Dia. 70.1 (W 70 – B 99) <1/3>

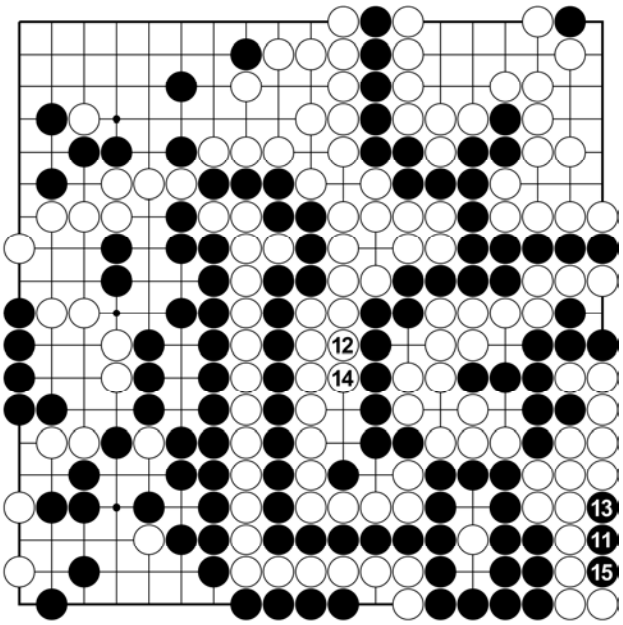
W 70: White starts to reduce the liberties of the black top right group.

B 71: Prevents two Eyes for White at the bottom.

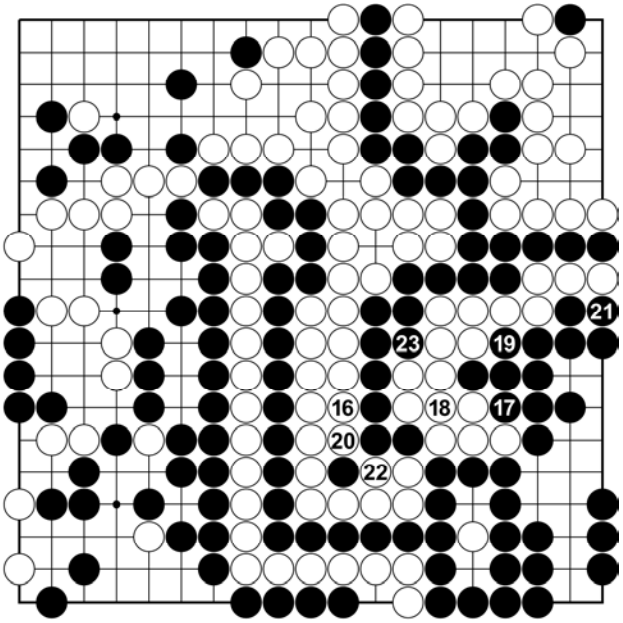
B 73, 75: Both of these territory reducing moves could be left out here, as they neither have an effect on the Semeai nor in principle on the result of the game in this variation.



Dia. 70.2 (W 100 – W 110) <4/3>



Dia. 70.3 (B 111 – B 115) <4/17>

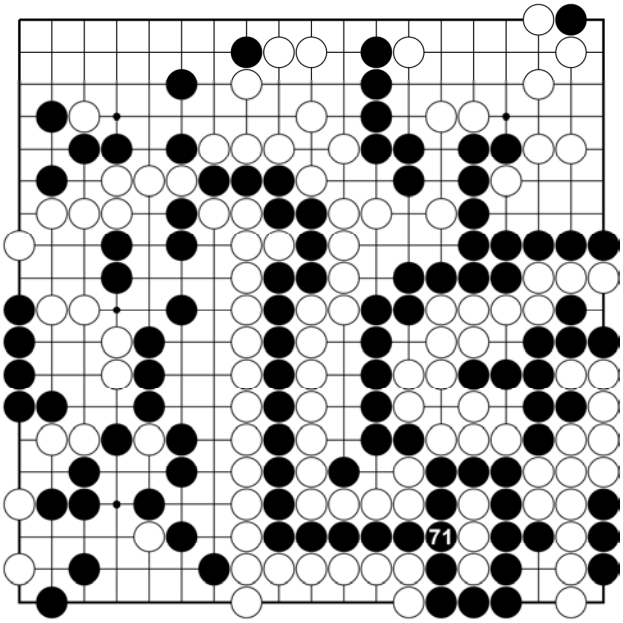


Dia. 70.4 (W 116 – B 121) <5/34>

B 121: Black wins the capturing race by one move.

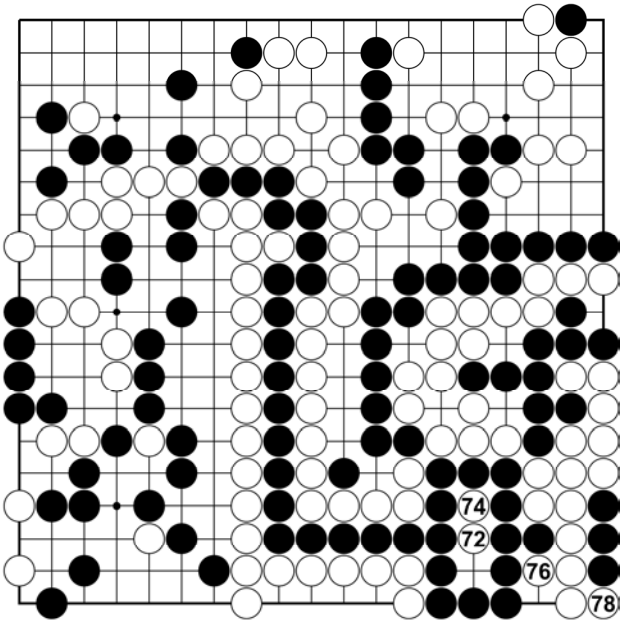
Black wins the game.

Variation for Black 71



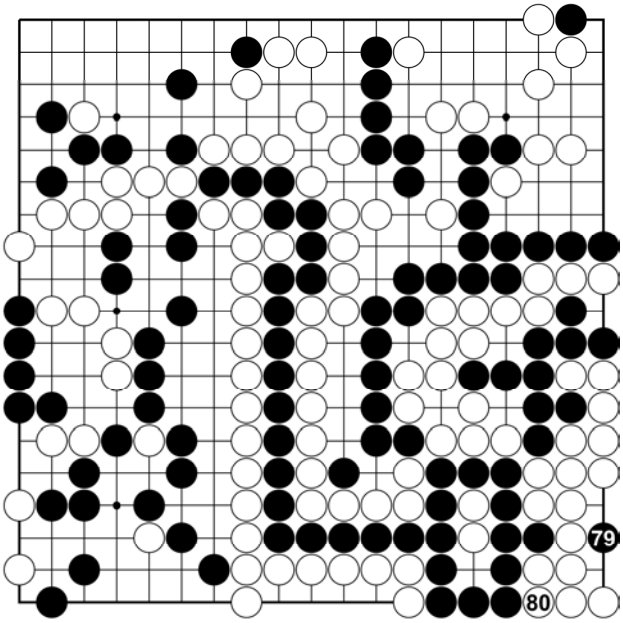
Dia. 71.1 (B 71) <1/3>

B 71: Black captures three white stones.



Dia. 71.2 (W 72 – W 78) <4/3>

W 72: This white Placement leaves Black helpless, as shown twice before. A black move at **76** would be answered by White **74**. At every time she wishes, White can take the black stones off the board.

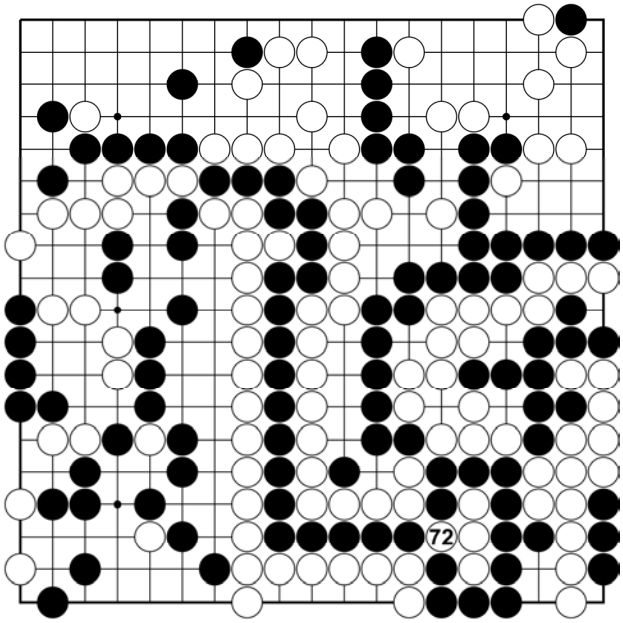


Dia. 71.3 (B 79 – W 80)

W 80: This resolves the Seki on the right; White captures the whole right side and wins by a large margin.

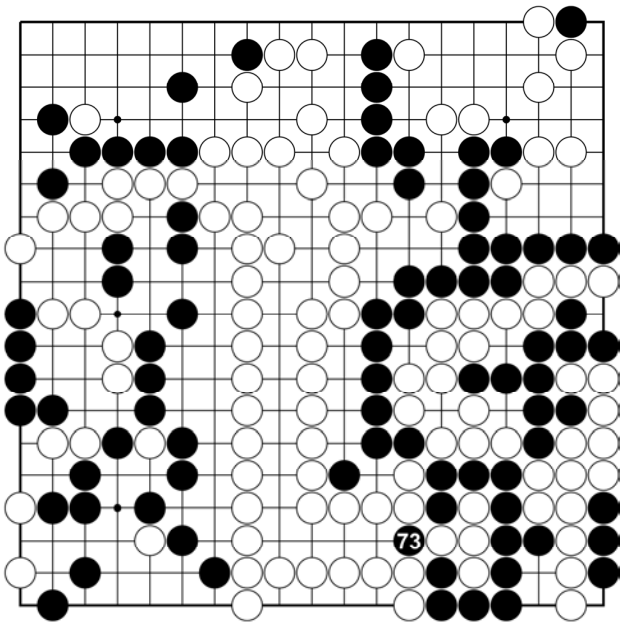
White wins the game.

Variation for White 72



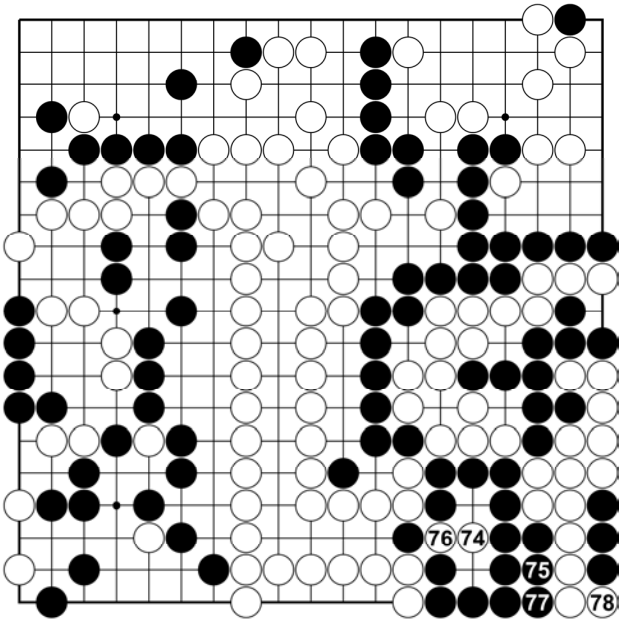
Dia. 72.1 (W 72) *<21/0>*

W 72: White captures the twenty black centre stones.



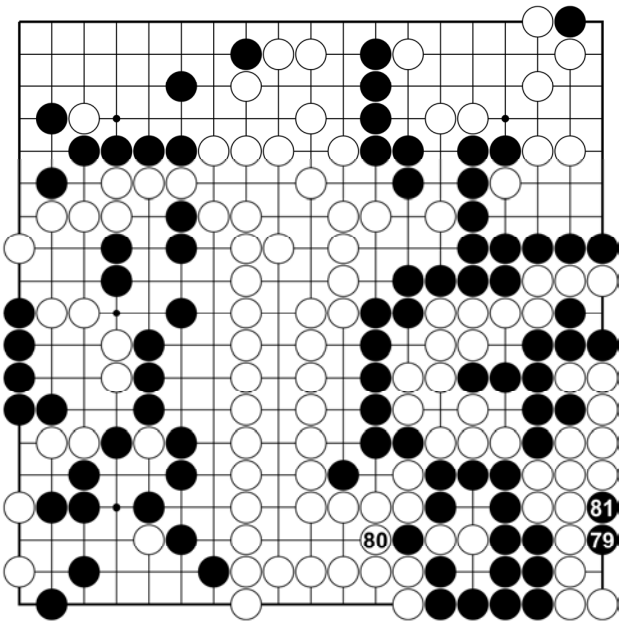
Dia. 72.2 (B 73) *<21/4>*

B 73: Black recaptures.



Dia. 72.3 (W 74 – W 78) <24/4>

W 74: White makes the usual Placement, but this time ...



Dia. 72.4 (B 79 – B 81) <25/4>

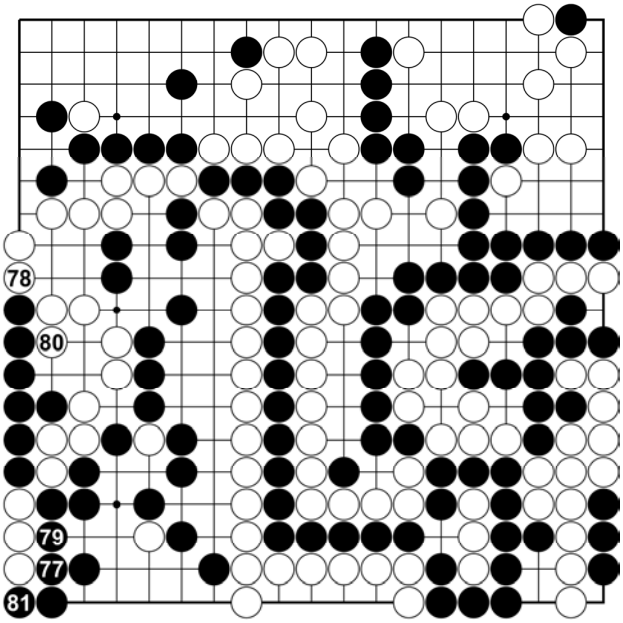
B 81: ... Black wins the Semeai in the corner and the game by a very comfortable margin.

Please keep two facts in mind for later:

1. The borders of the white territories are not settled yet.
2. The five black stones on the left side cannot be captured by White.

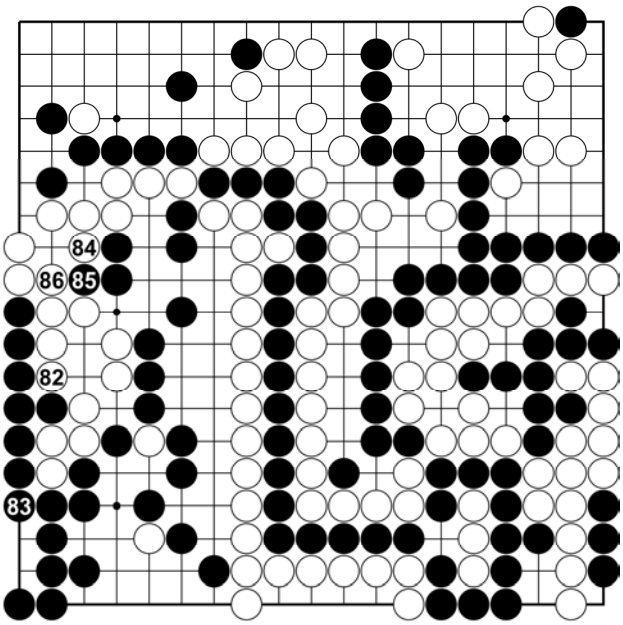
Black wins the game.

Variation for Black 77



Dia. 77.1 (B 79 – B 81) <1/3>

B 81: Black has success in his intention to capture the three white stones in the lower left, ...

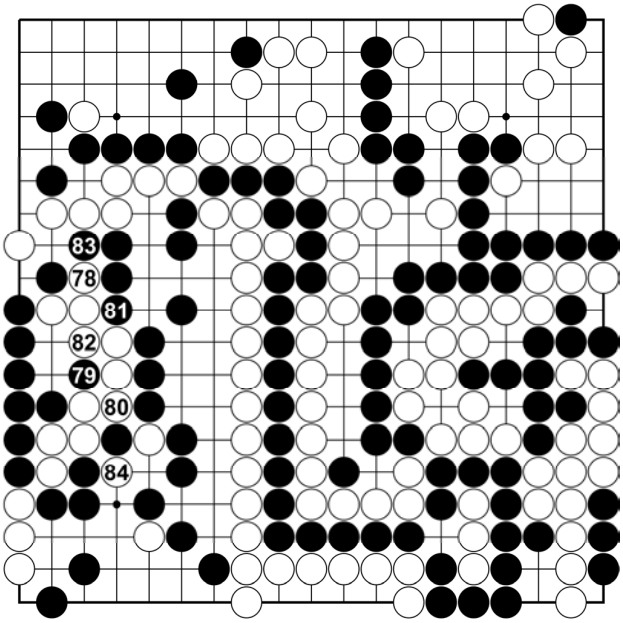


Dia. 77.2 (W 82 – W 86)

W 82: ... but White secures one Eye in Sente for herself with this move. The second Eye will arise some moves later.

White wins the game.

Variation for White 78

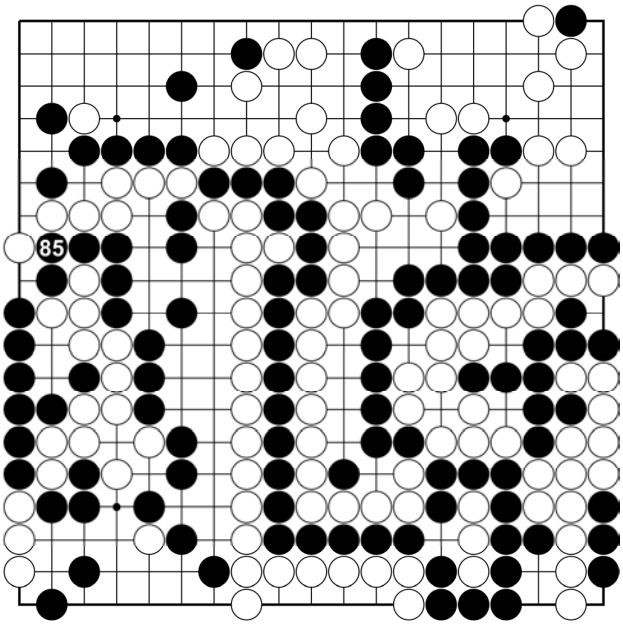


Dia. 78.1 (W 78 – W 84) <2/0>

W 78: White attempts to connect on the third line.

B 79: But Black has some Sente moves on the other side, beginning with this move.

W 84: To take one black stone off the board does not provide much help to the white group.

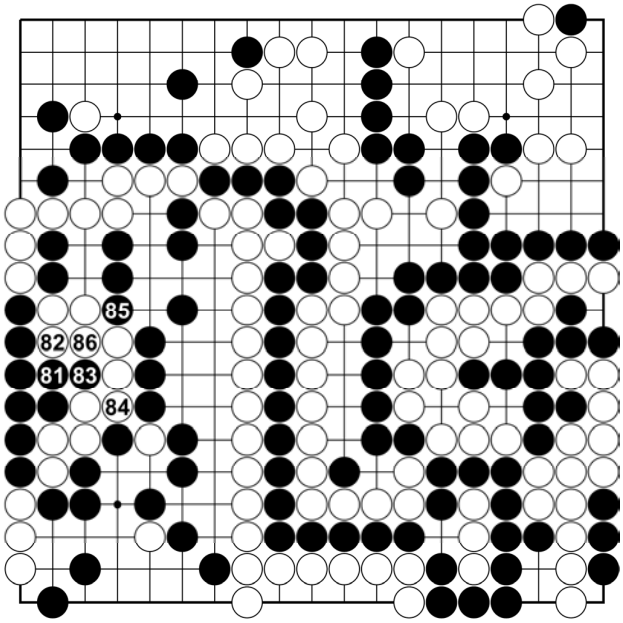


Dia. 78.2 (B 85)

B 85: She cannot escape the black encirclement.

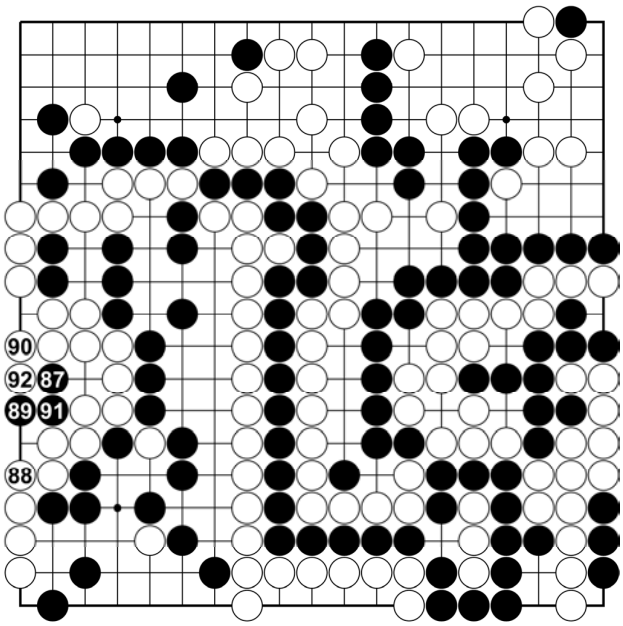
Black wins the game.

Variation for Black 81



Dia. 81.1 (B 81 – W 86) <10/0>

B 81: The Nakade may look more compact.

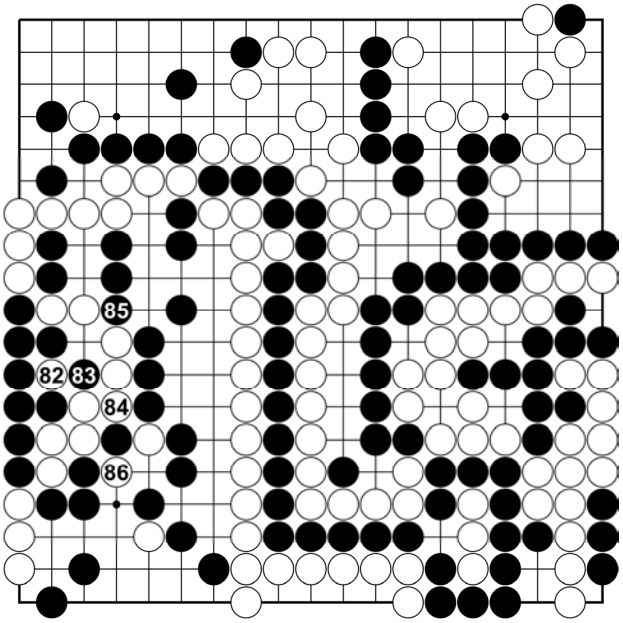


Dia. 81.2 (B 87 – W 92)

B 87: But it will turn out that after White has captured the black stones there are too many vital points inside her shape. Black cannot occupy all of them, so White finally gets a Seki.

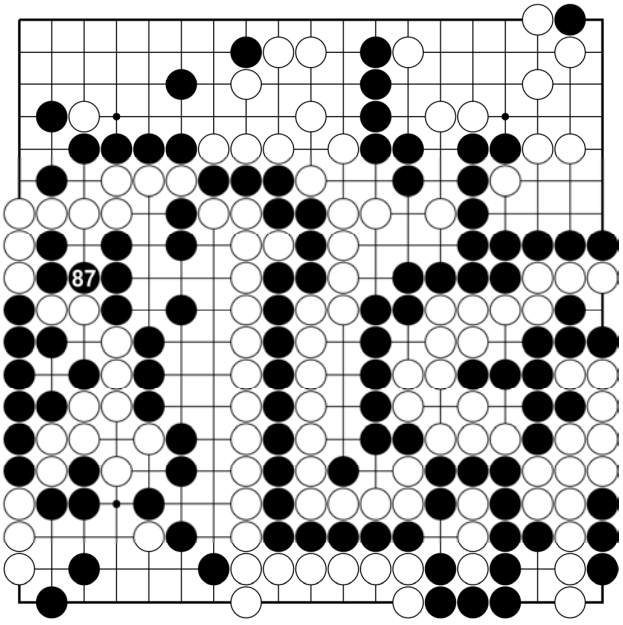
White wins the game.

Variation for White 82



Dia. 82.1 (W 82 – W 86) <2/1>

B 83, 85: Both moves are Sente. White has no choice but to capture the single black stone.

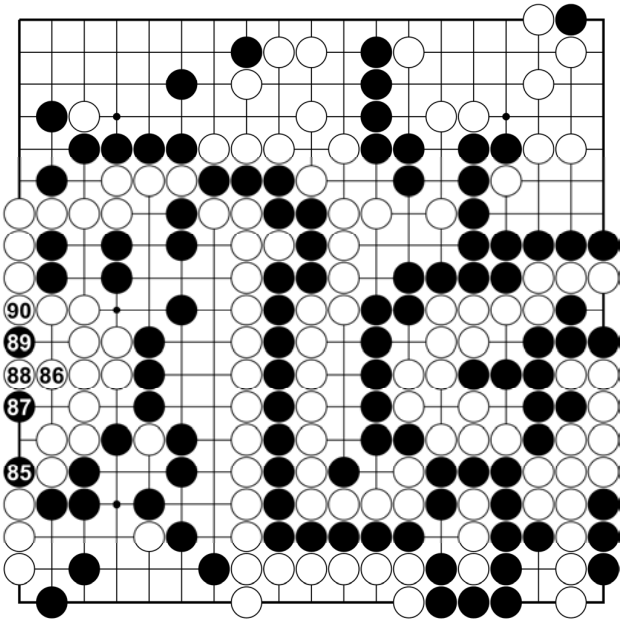


Dia. 82.2 (B 87)

B 87: White is unable to connect her two stones.

Black wins the game.

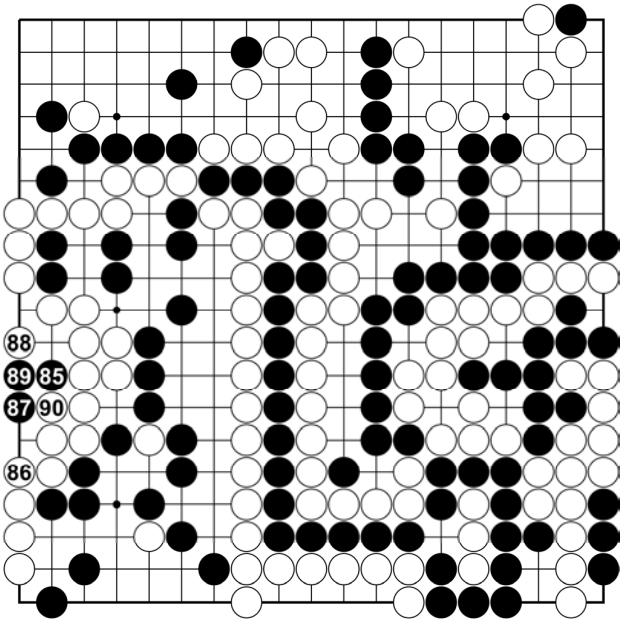
Variation for Black 85



Dia. 85.1 (B 85 – W 90)

B 85: Black throws in, but White gets two Eyes with **90** and lives. Black loses the right side and the centre.

White wins the game.

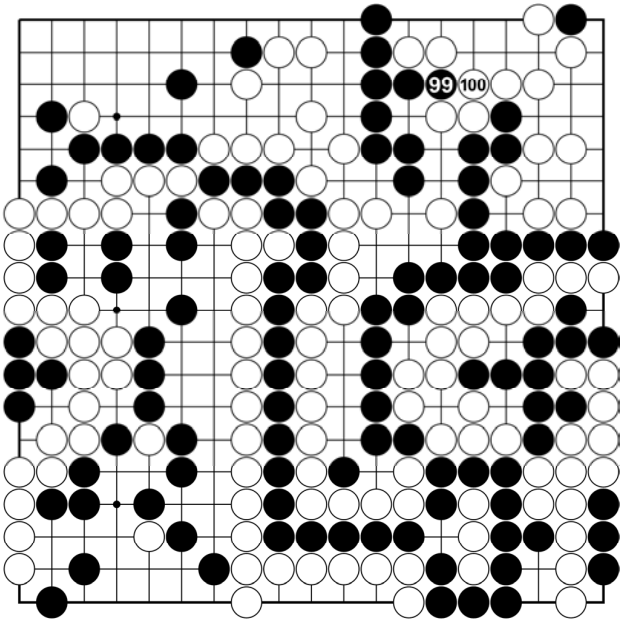


Dia. 85.2 (B 85 – W 90)

B 85: If Black plays on a vital point inside White's shape, she gets a Seki which also means that the white group cannot be captured anymore.

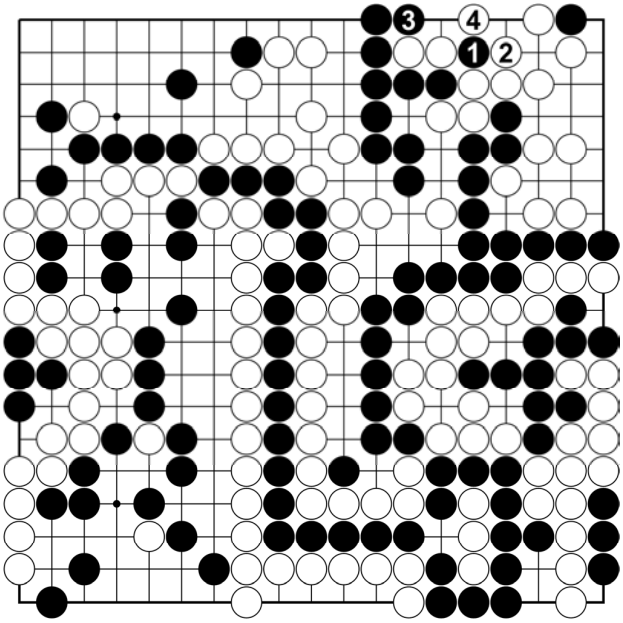
White wins the game.

Variation for Black 99



Dia. 99.1 (B 99 – W 100)

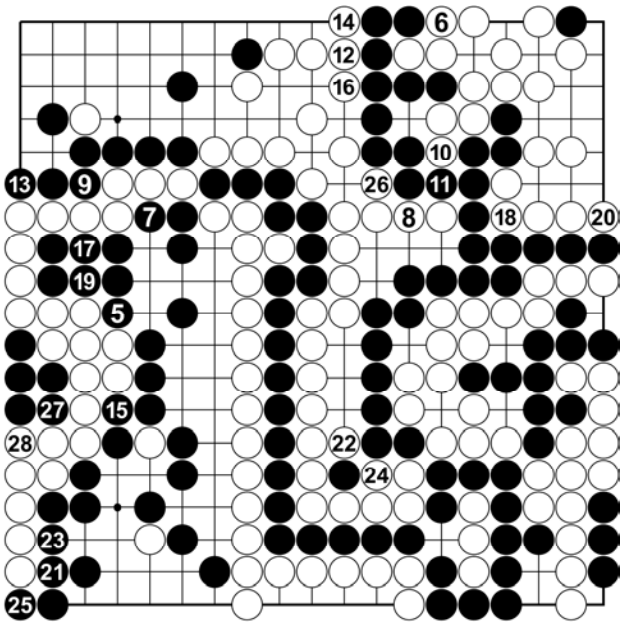
B 99: This move is one example, how Black could reduce the white corner territory.

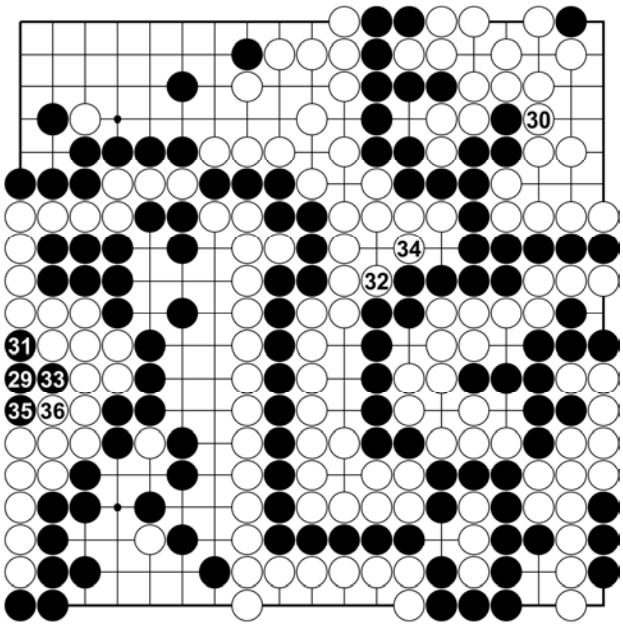


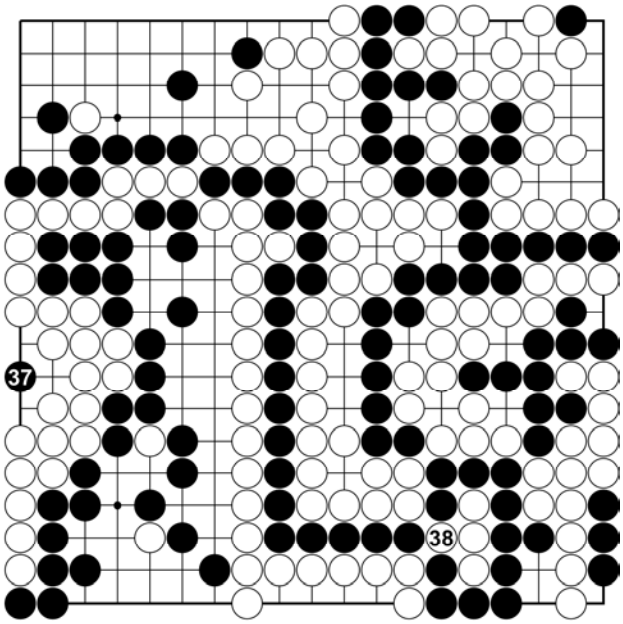
Dia. 99.2 (B 101 – W 104) *<11/0>*

B 103: It does not profit Black not to play this stone and to hope that White will have problems in approaching the black group. For White will be able to occupy all other liberties of this group or force Black to take one of them by himself.

W 104: Black reduced the white corner territory by three points in Sente. But he had lost one liberty by exchanging **99** against White **100**.

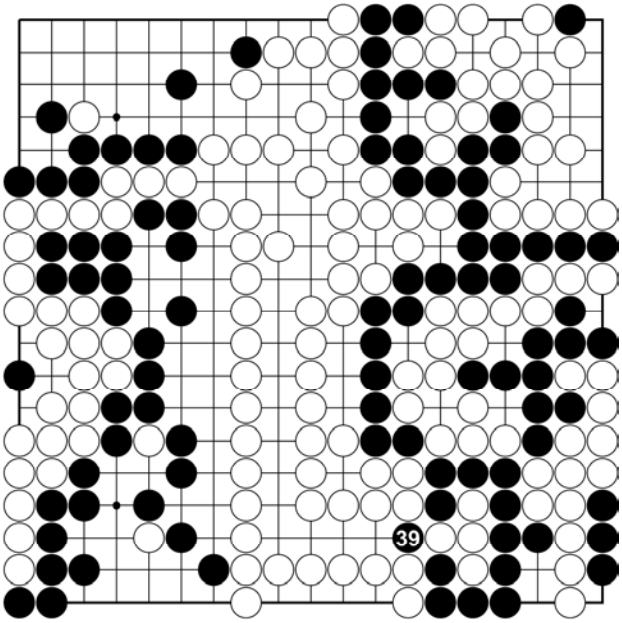






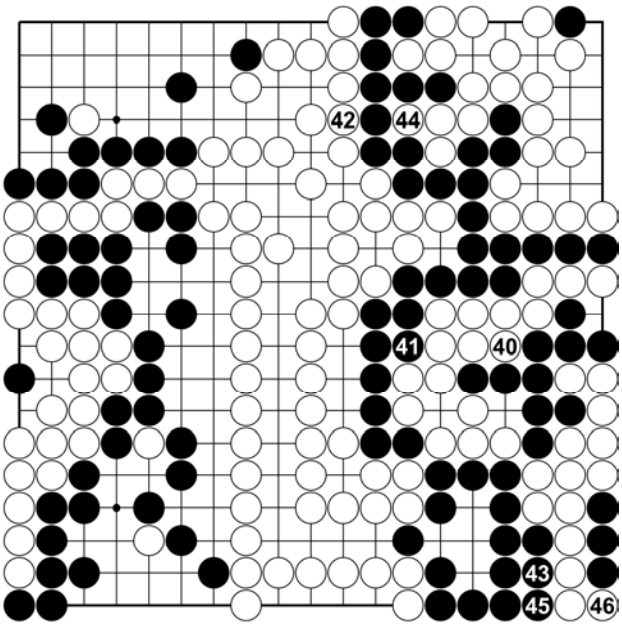
Dias. 99.3 - .5 (B 105 – W 138) *<41/0>*

W 138: White now captures the black centre group.



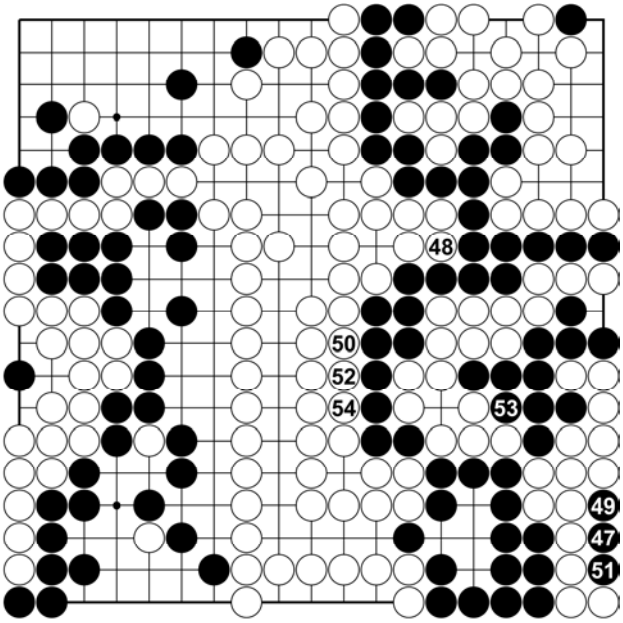
Dia. 99.6 (B 139) <41/4>

B 139: Black recaptures.



Dia. 99.7 (W 140 – W 146) <44/4>

W 140: And now White uses her option to continue filling black liberties.



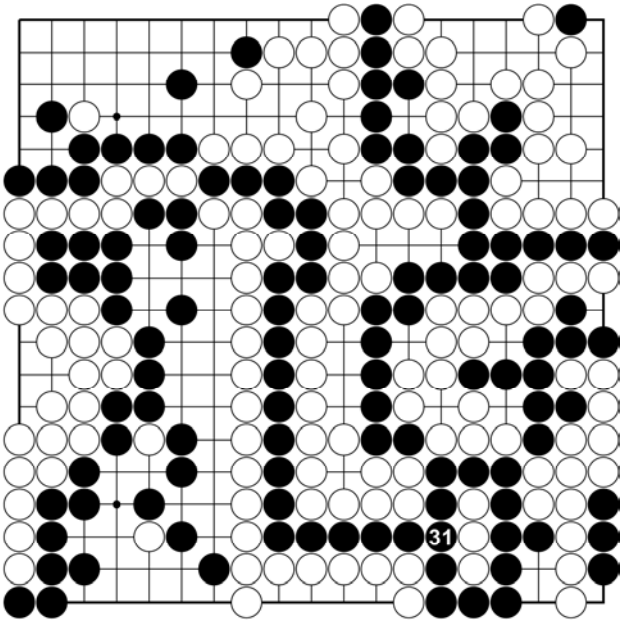
Dia. 99.8 (B 147 – W 152) <44/18>

W 152: In the end, White is one move ahead in the Semeai.

But if Black does not touch the top right corner as in the Main Path, White will not be successful with her option shown here.

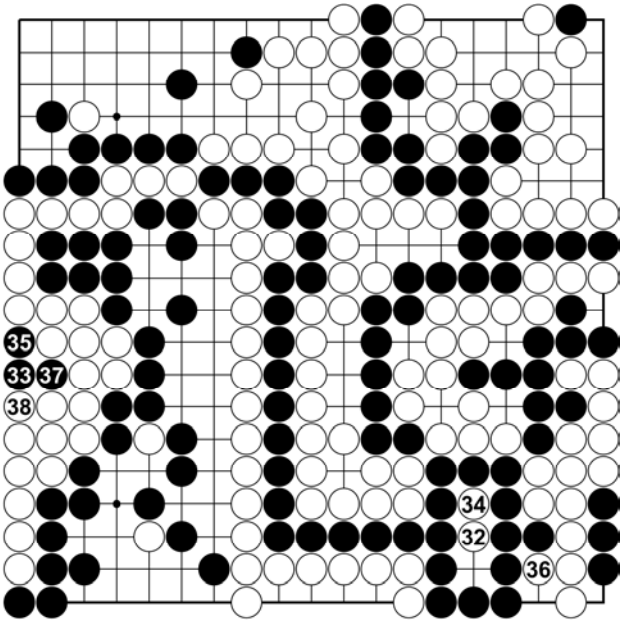
White wins the game.

Variation for Black 131



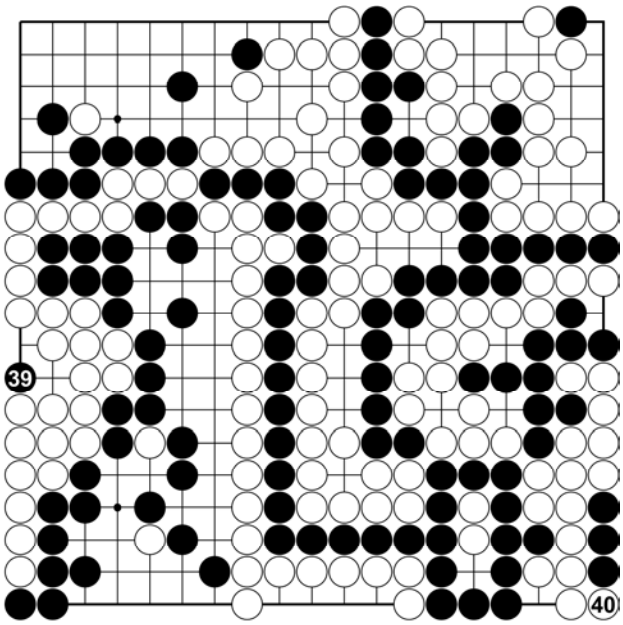
Dia. 131.1 (B 131) <20/3>

B 131: Even now Black will not be successful after capturing the three white stones inside his belly.

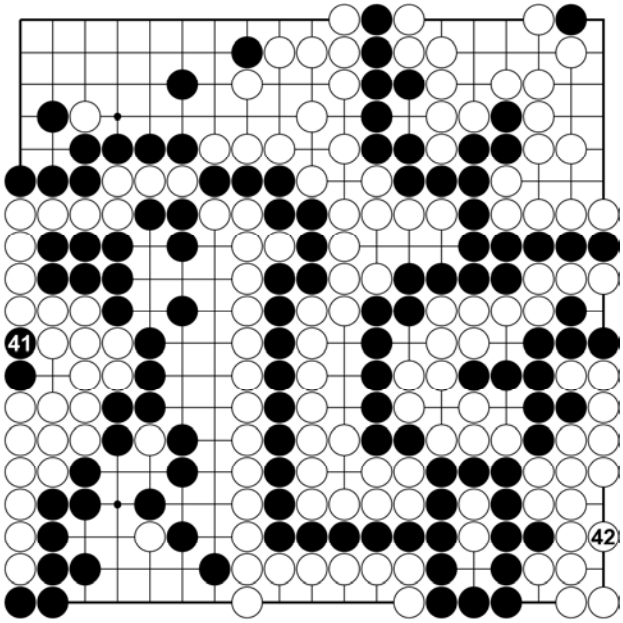


Dia. 131.2 (W 132 – W 138) <23/3>

W 134: White must plague the black centre group to be successful here. If she otherwise continues to take liberties of the black group in the upper right, Black would win with three points (it would result a change in the order of moves with the variation for White **132**).



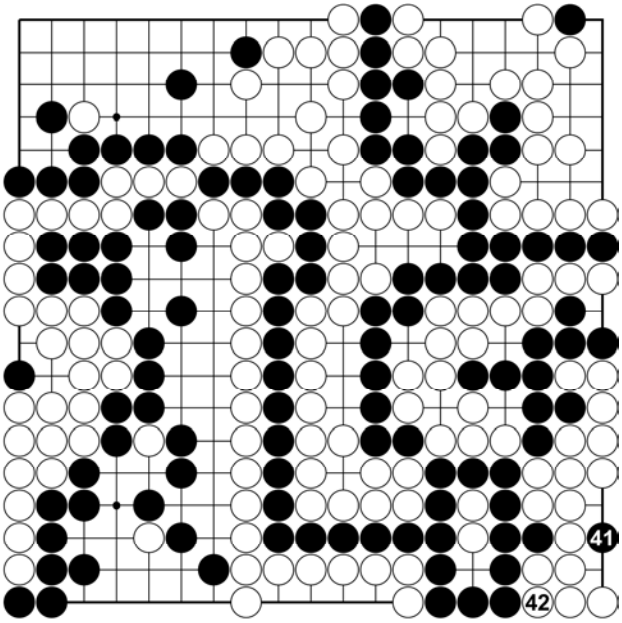
Dia. 131.3 (B 139 – W 140) <26/3>



Dia. 131.4 (B 141 – W 142)

B 141: If Black captures the white stones on the left, White gets two Eyes on the right with **142** and wins the game with ease.

White wins the game.



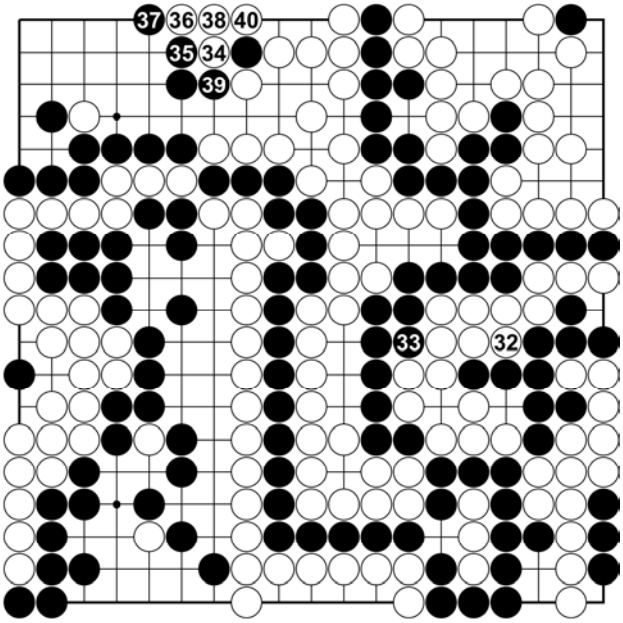
Dia. 131.5 (B 141 – W 142)

B 141: If Black prevents this by playing on the right side himself, White will give Atari to the black centre group.

Black is one move too late here. It is necessary for Black that he has already played a stone into the centre of the white 4-point-Nakade on the left, before he can capture the three white stones on the right with confidence. But as can be seen in the Main Path, White will not be so kind to give Black the opportunity to do so.

White wins the game.

Variation for White 132



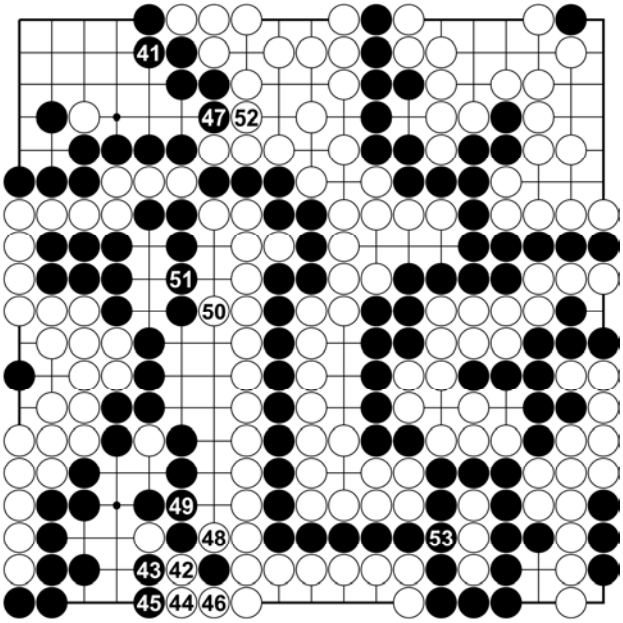
Dia. 132.1 (W 132 – B 140) *<21/0>*

This is what has been recognised as correct solution so far.

W 132: This move forces Black to take his own upper right group a liberty at **133**. This black stone will White provide an additional point, as the black group in the upper right will be captured and this stone will become an additional prisoner.

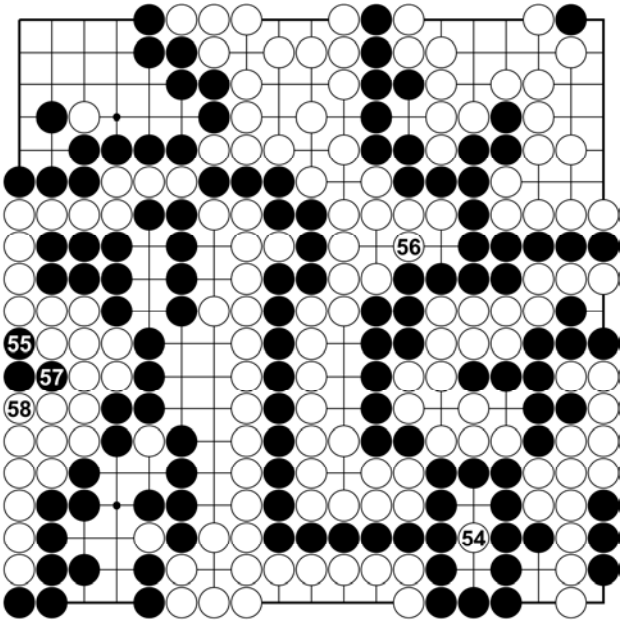
W 134: White can calm down and start the Endgame on the left side, because:

1. She is unable to prevent the loss of the lower right corner, even if she has Sente.
2. She can kill the black stones in the upper right, even if she has Gote.

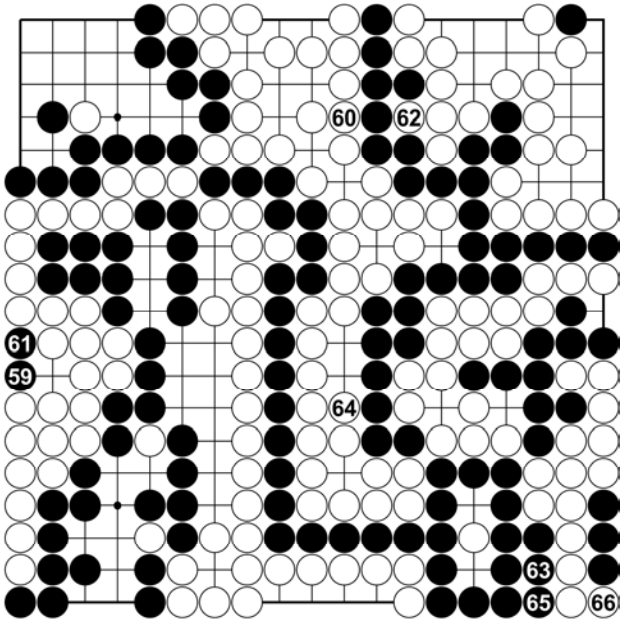


Dia. 132.2 (B 141 – B 153) <22/3>

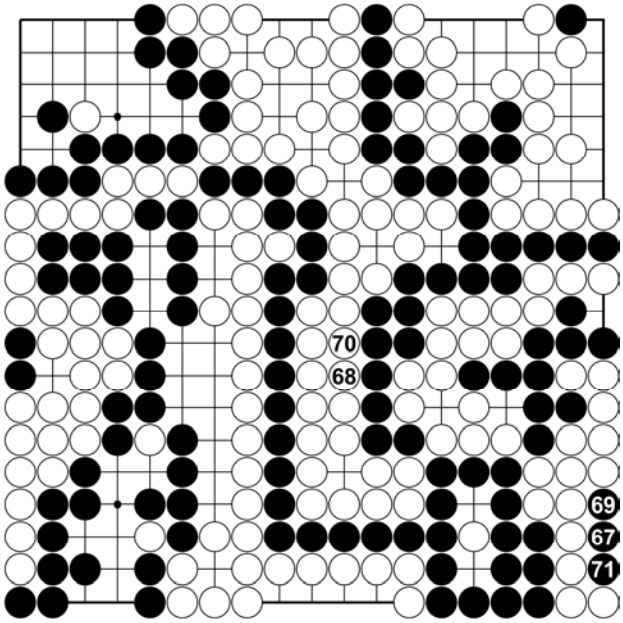
B 153: The presence of this single black stone in the centre of the white Eye on the left permits Black to capture the three white stones on the right now.



Dia. 132.3 (W 154 – W 158) <25/3>

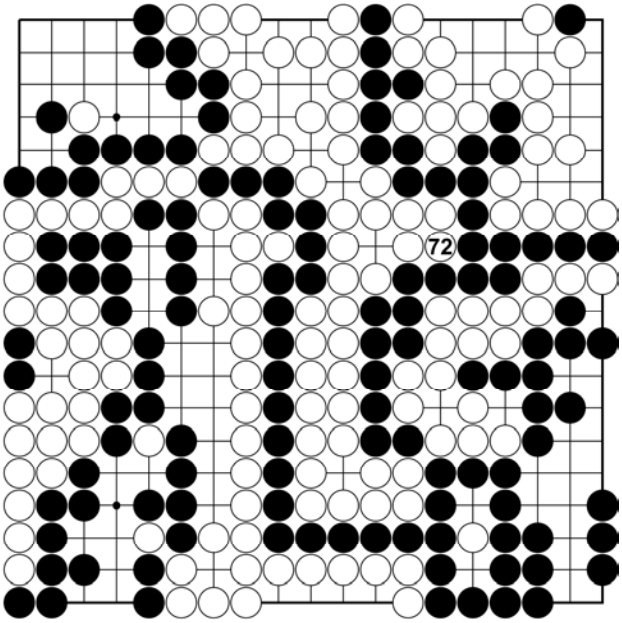


Dia. 132.4 (B 159 – W 166) <28/3>



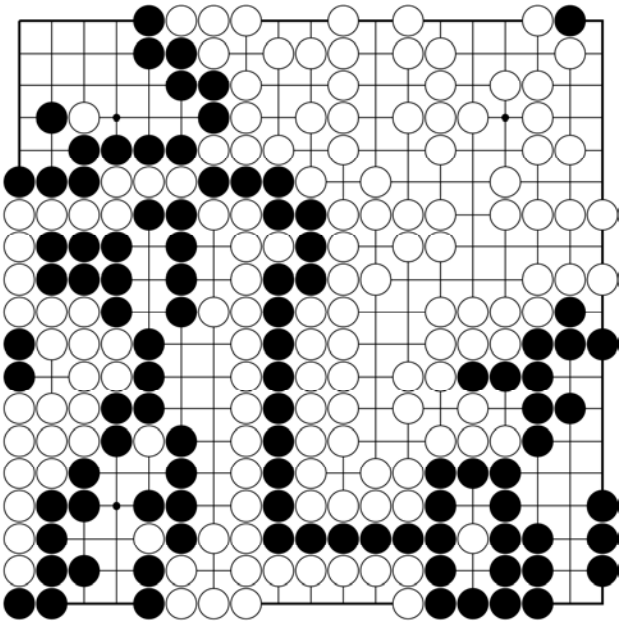
Dia. 132.5 (B 167 – B 171) <59/3>

B 171: Again Black is able to capture the white stones in the lower right corner.

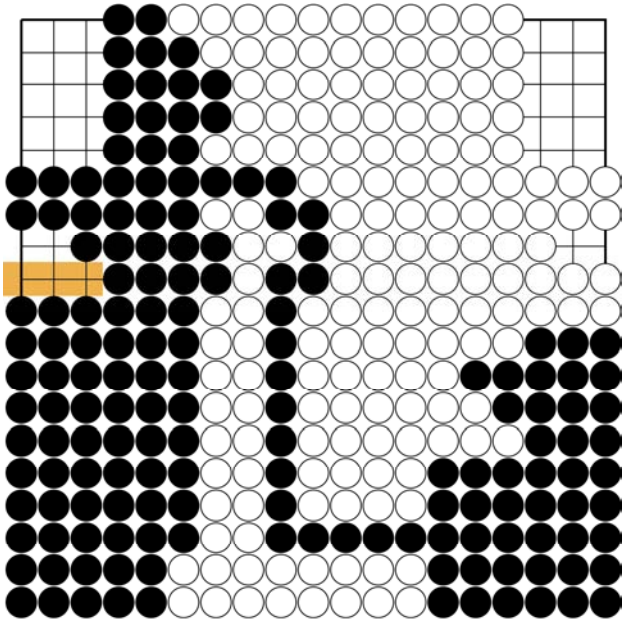


Dia. 132.8 (W 172) <59/17>

W 172: So he can get over that White takes the black group in the upper right off the board, as she will not win the game either.



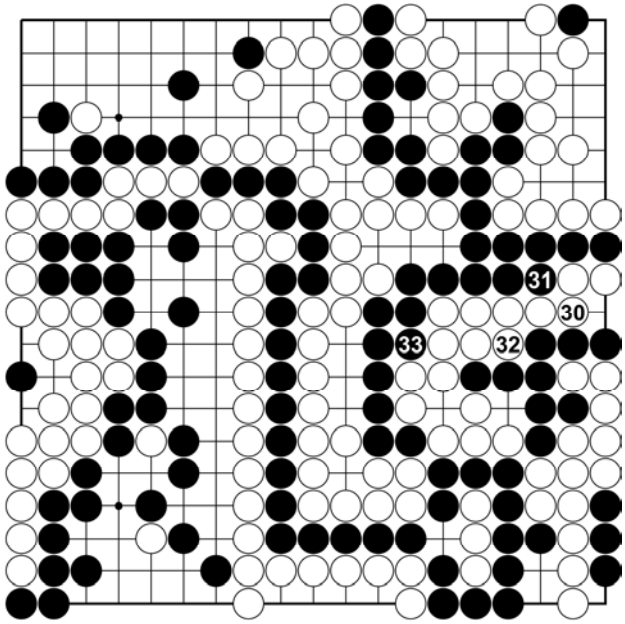
Dia. 132.7 "The End here"



Dia. 132.8 "The Score"

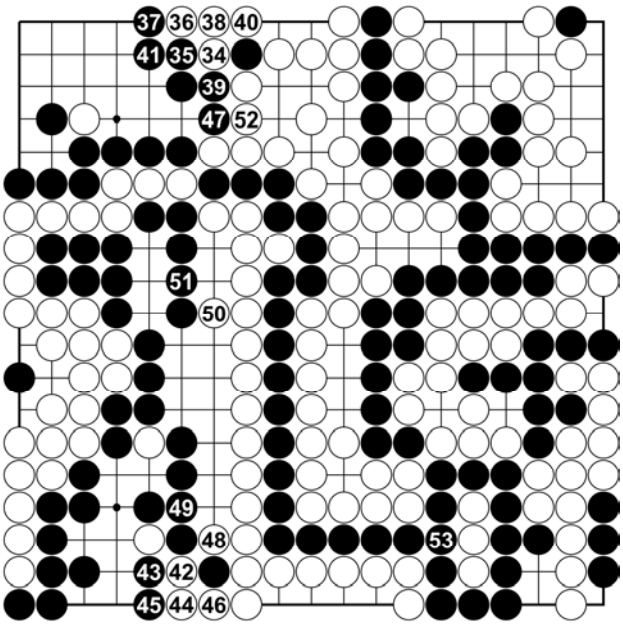
Black wins by 3 points.

Now we will explain why in principle it is so important to exchange the moves Black **21** and White **22** in the Main Path.

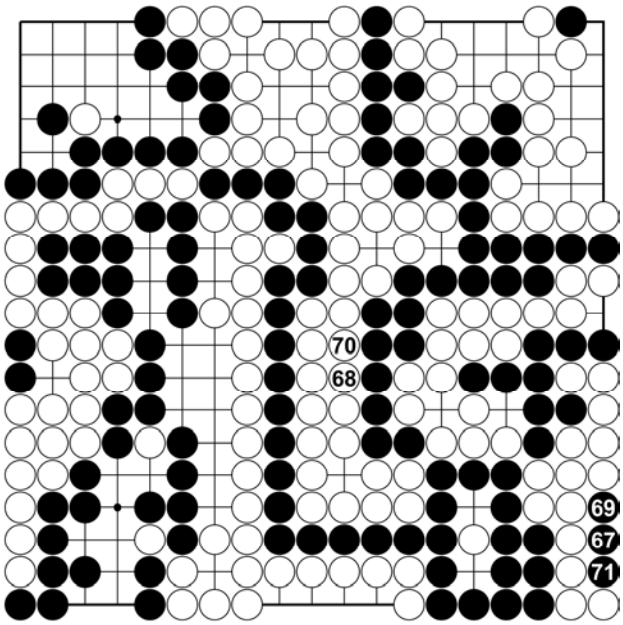


Dia. 132.9 (W 130 – B 133)

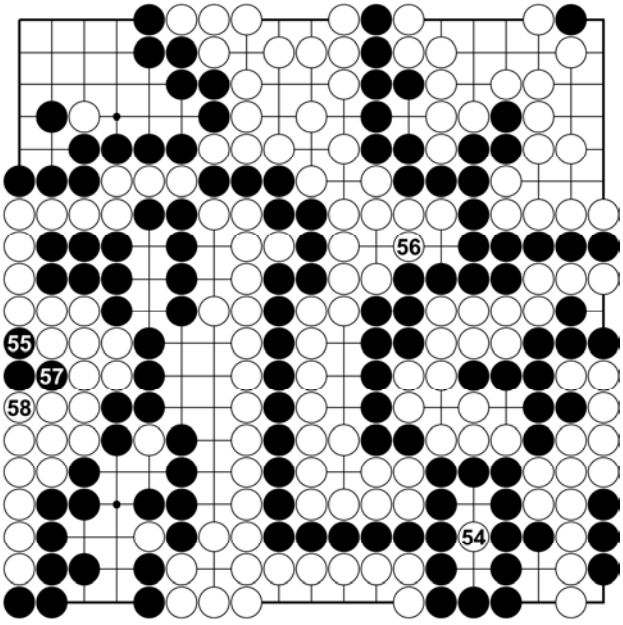
Without this exchange White will be able to play at **130** (here) herself, forcing Black to add a stone at **131**. The exchange of White **132** and Black **133** is as in the Main Path.



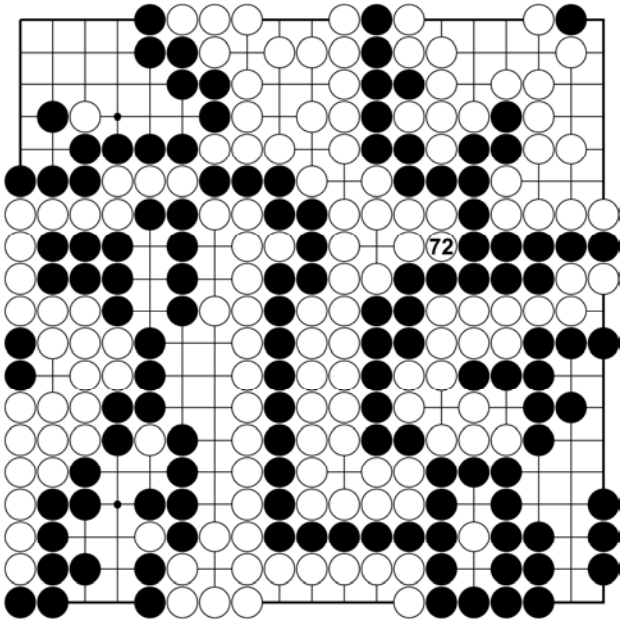
Dia. 132.10 (W 134 – B 153) <22/3>



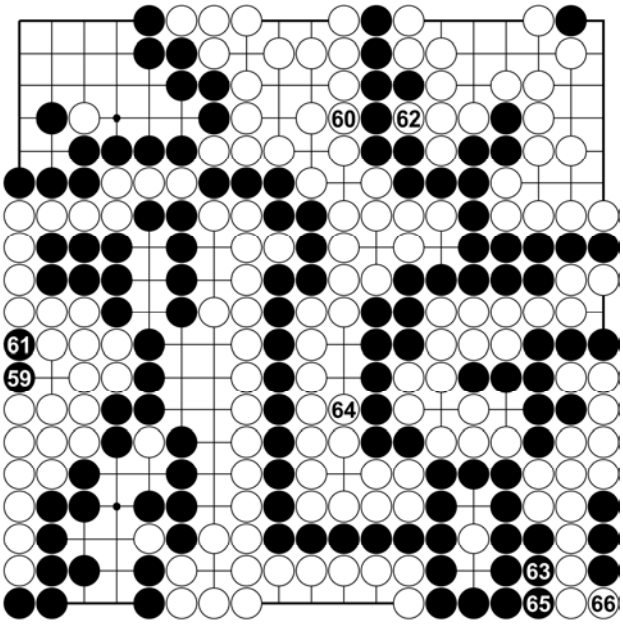
Dia. 132.13 (B 167 – B 171) <28/17>



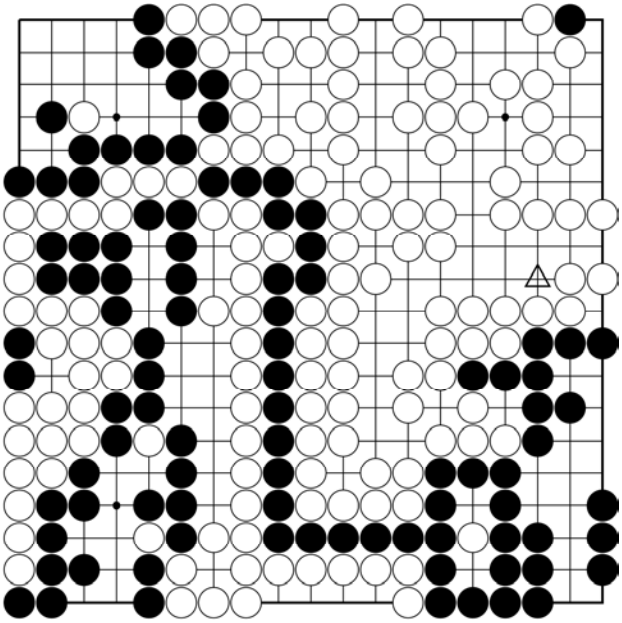
Dia. 132.11 (W 154 – W 158) <25/3>



Dia. 132.14 (W 172) <60/17>

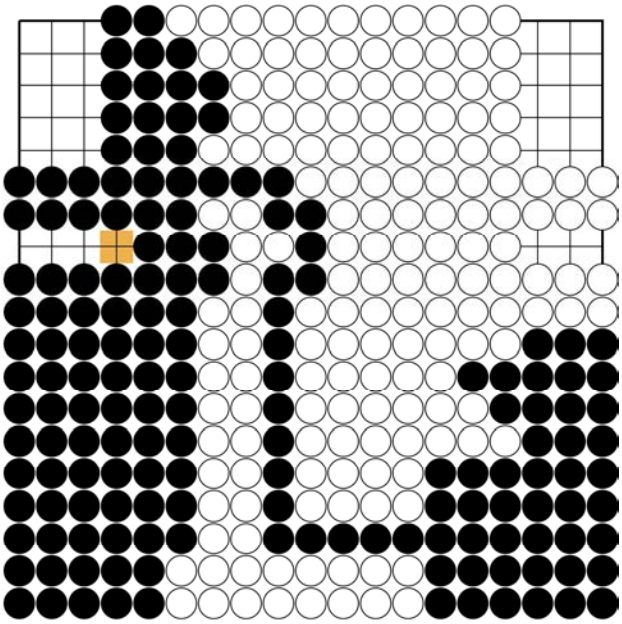


Dia. 132.12 (B 159 – W 166) <28/3>



Dia. 132.15 "The End here"

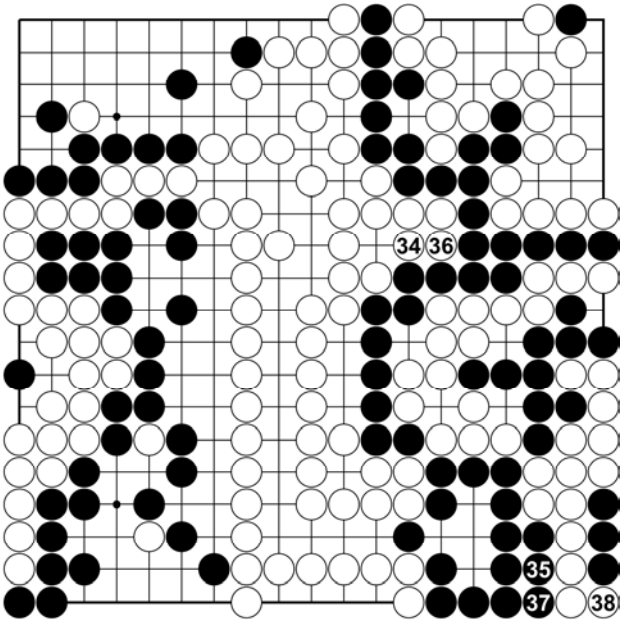
That black stone at **131** (the point marked with a triangle here) provides White with two additional points.



Dia. 132.16 "The Score"

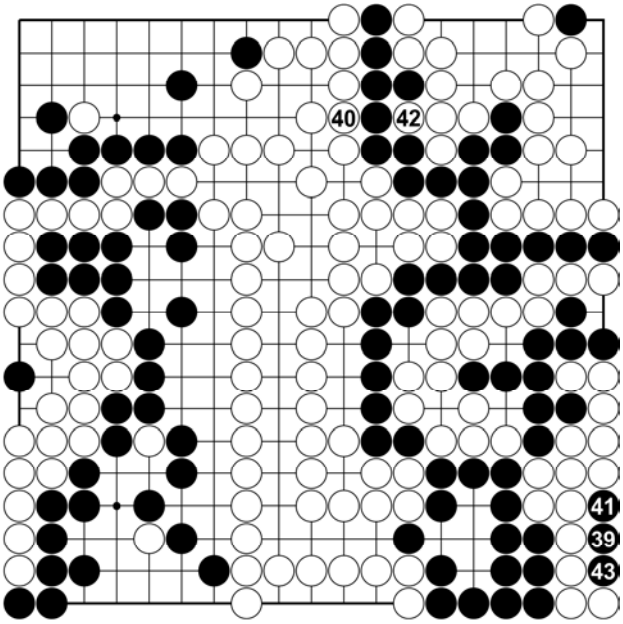
Black wins by 1 point.

Variation for White 134

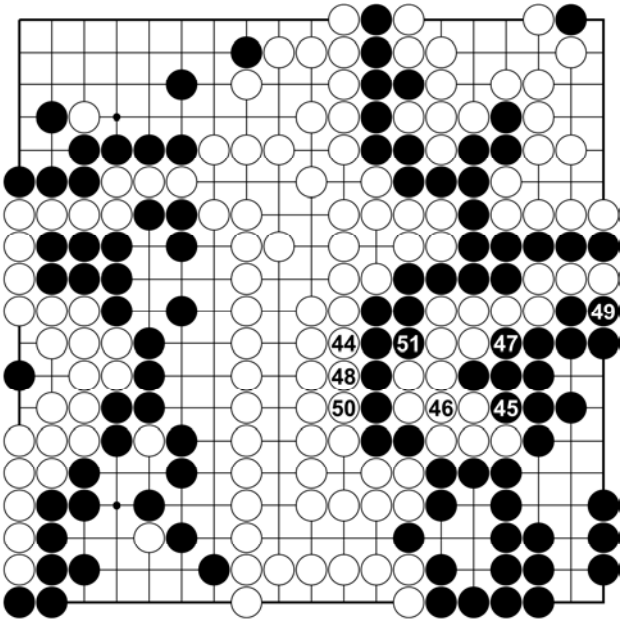


Dia. 134.1 (W 134 – W 138) <43/4>

W 134: If White continues to take black liberties ...

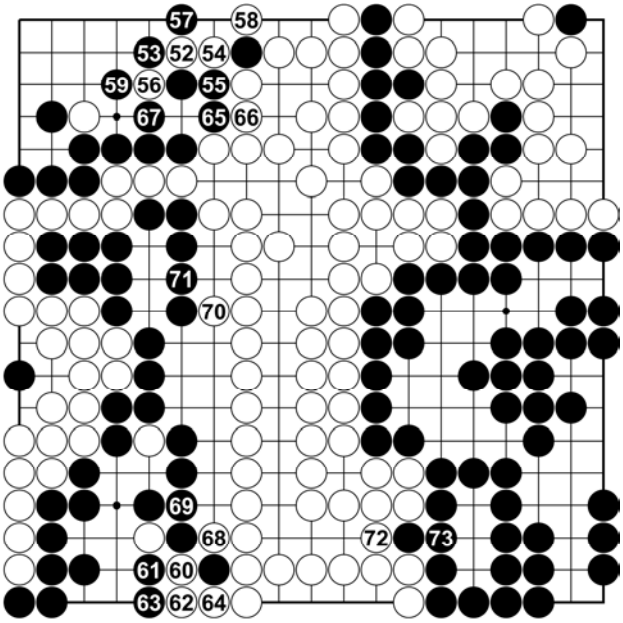


Dia. 134.2 (B 139 – B 143) <43/18>



Dia. 134.3 (W 144 – B 151) <43/35>

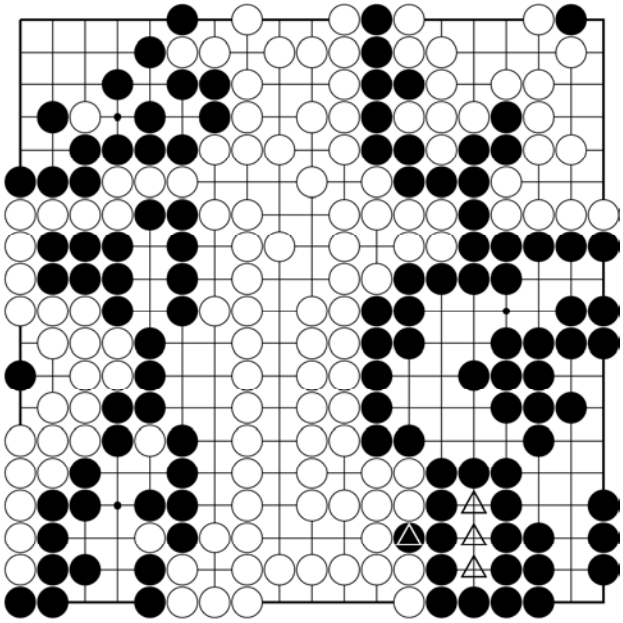
W 150: ... she will finally be one step too late.



Dia. 134.4 (W 152 – B 173) <45/36>

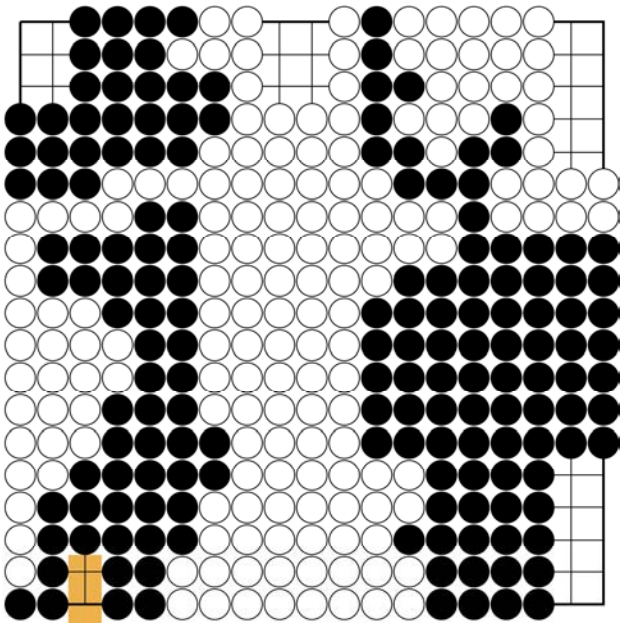
W 152: The endgame on the left side is "business as usual".

W 172: White closes the remaining gap in the lower right.



Dia. 134.5 "The End here"

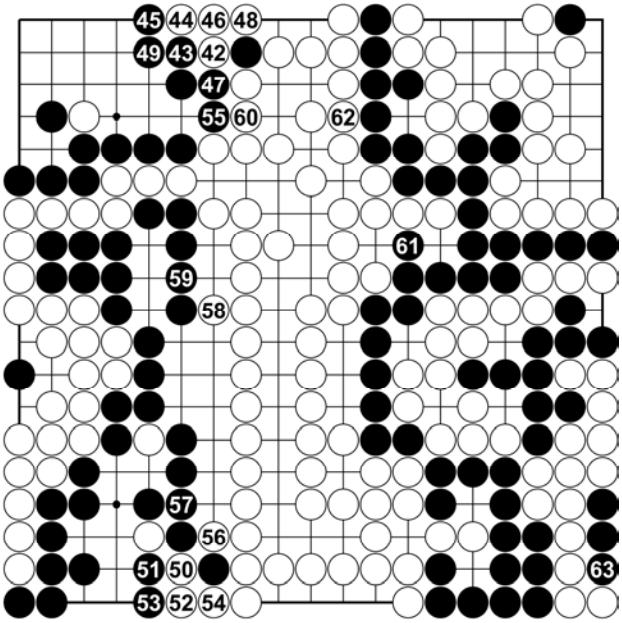
Now it is clearly visible, that White has lost four points in the lower right. The marked black stone is no white prisoner any more and the three marked points are black territory now.



Dia. 134.6 "The Score"

Black wins by 2 points.

Variation for White 142



Dia. 142.1 (W 142 – B 163) <46/18>

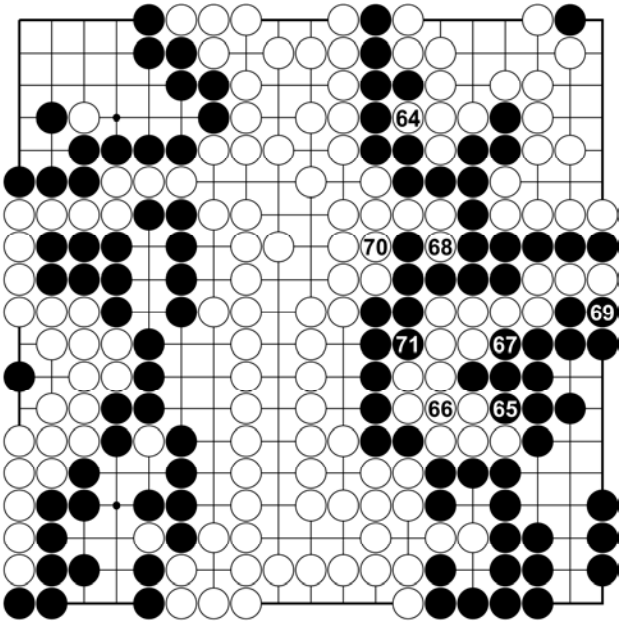
W 142: This Atari starts the combination used so far in the top left corner.

You will recognise that Black has one more point of territory here compared to the Main Path.

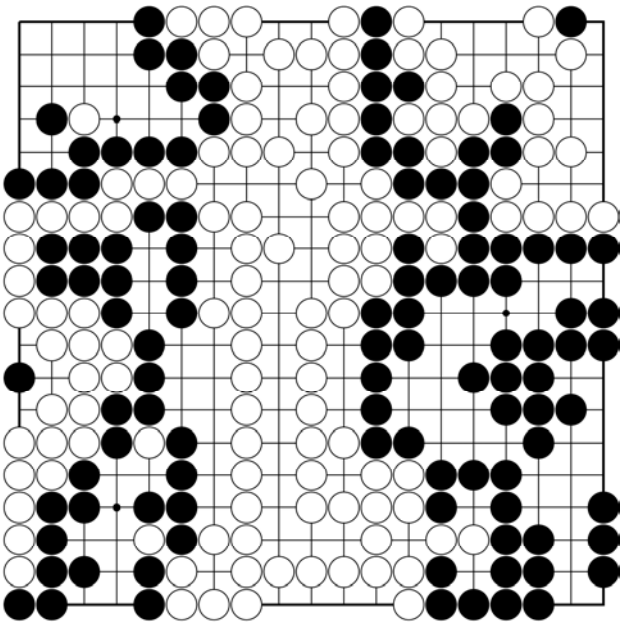
W 152: The sequence continues similar to that in the Main Path.

W 160: But White ends in Gote, ...

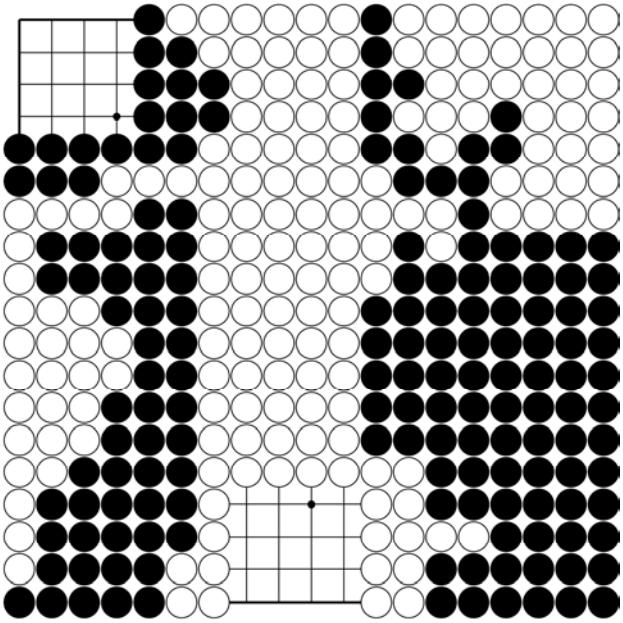
B 161: ... what enables Black to make the last valuable move this time. But even these two won points do not help Black to turn the tables.



Dia. 142.2 (W 162 – B 171) <46/35>



Dia. 142.3 "The End here"

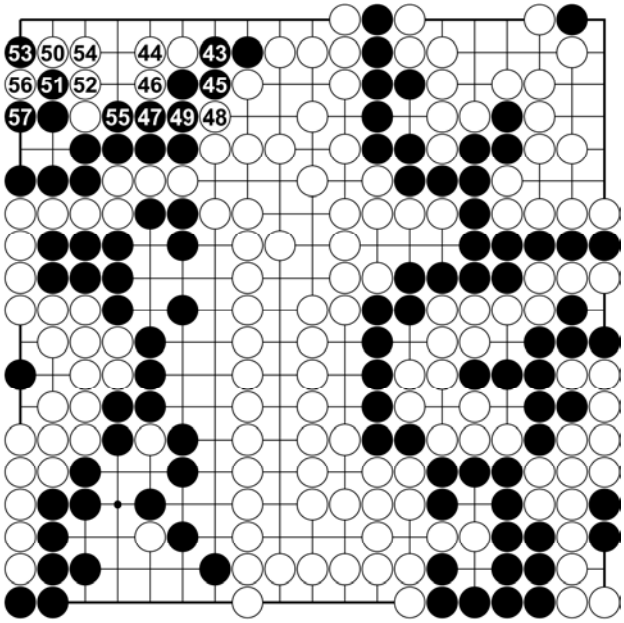


Dia. 142.4 "The Score"

The result is a draw now.

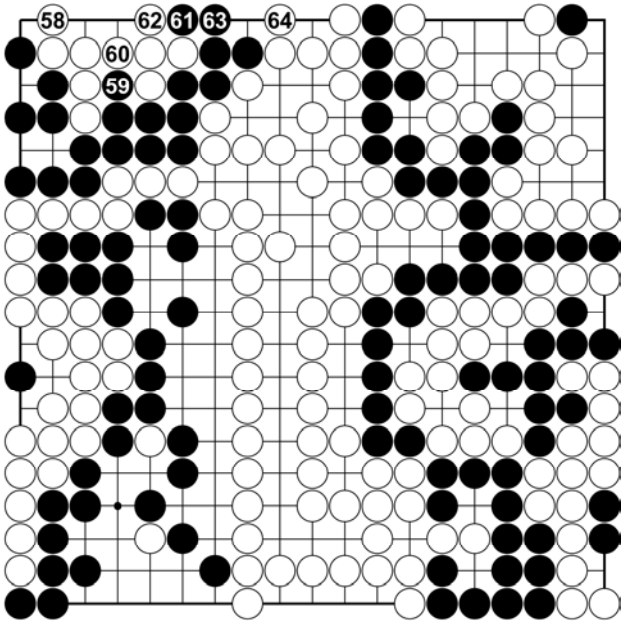
Jigo !

Variation for Black 143



Dia. 143.1 (B 143 – B 157) <45/5>

B 143: Black tries to capture the single white stone.

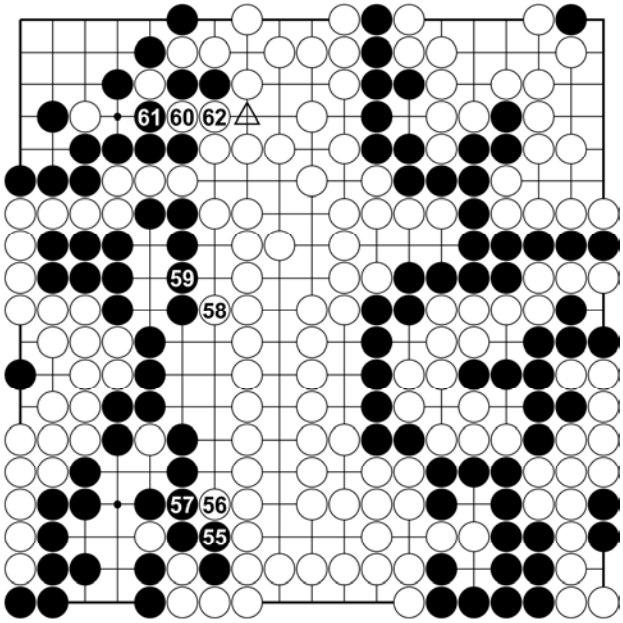


Dia. 143.2 (W 158 – W 164) <45/5>

W 164: In the end, all black efforts result in a Seki, which means zero points of territory in the corner and the loss of the game.

White wins the game.

Variation for Black 155

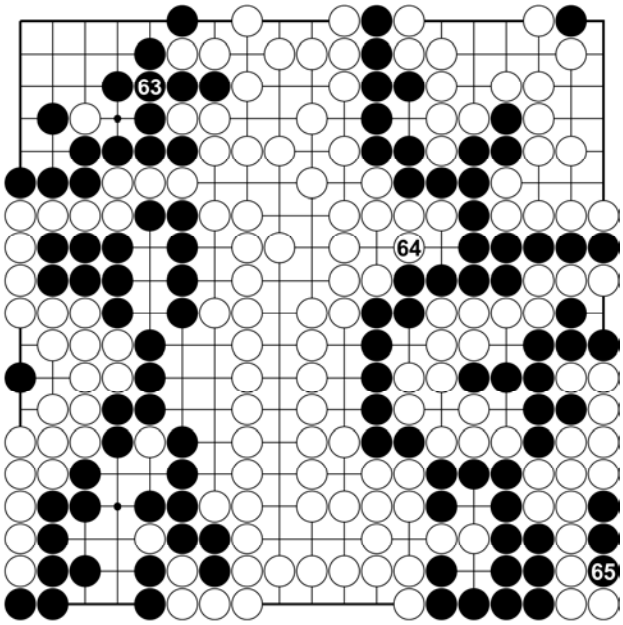


Dia. 155.1 (B 155 – W 162) <45/5>

B 155: The order of moves cannot be changed here, in contrary to the correct solution identified in the Weiqi FaYangLun. One saved stone means two points won.

W 156, 158: Both Sente.

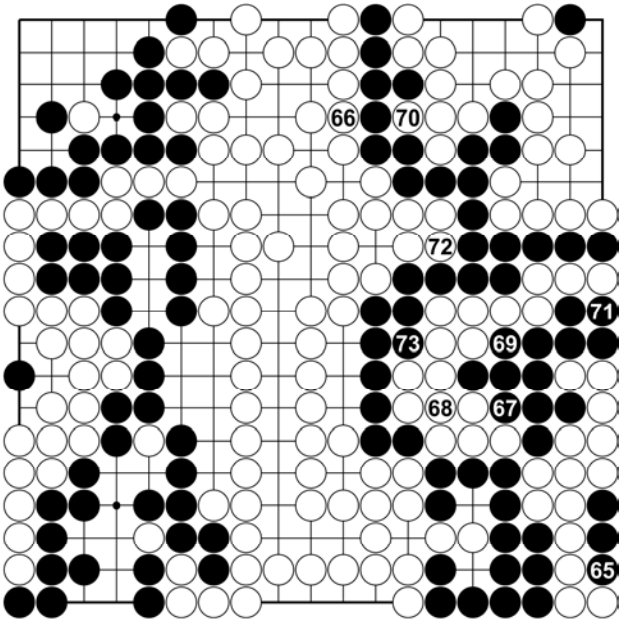
W 160: This point is no black territory any more and the triangled point is now white territory, combining to a two point loss for Black.



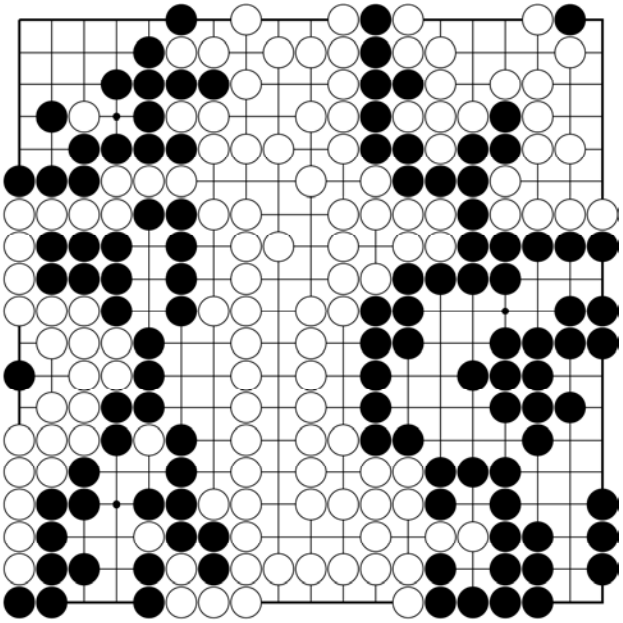
Dia. 155.2 (B 163 – B 165) <45/19>

B 163: This is the third point Black loses here.

W 164: As before, White gets the last valuable point on the board.



Dia. 155.3 (B 165 – B 173) <45/36>

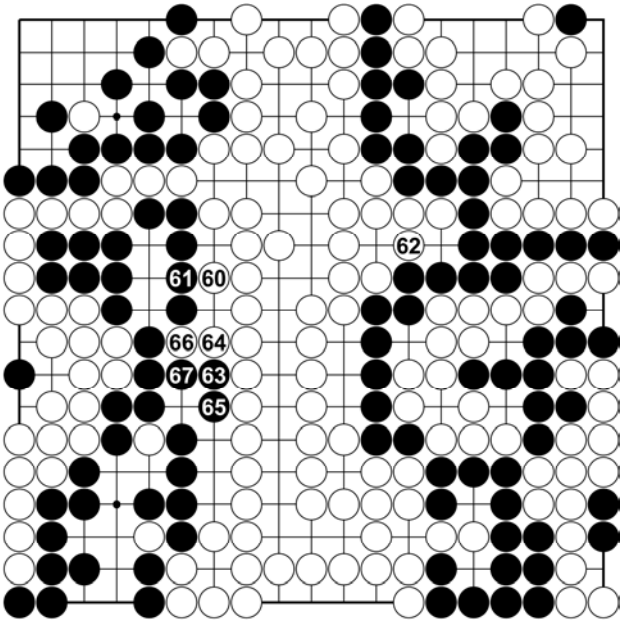


Dia. 155.4 "The End here"

A two point win combined with a three point loss gives a one point loss for Black compared with the Main Path.

White wins by 3 points.

Variation for White 160

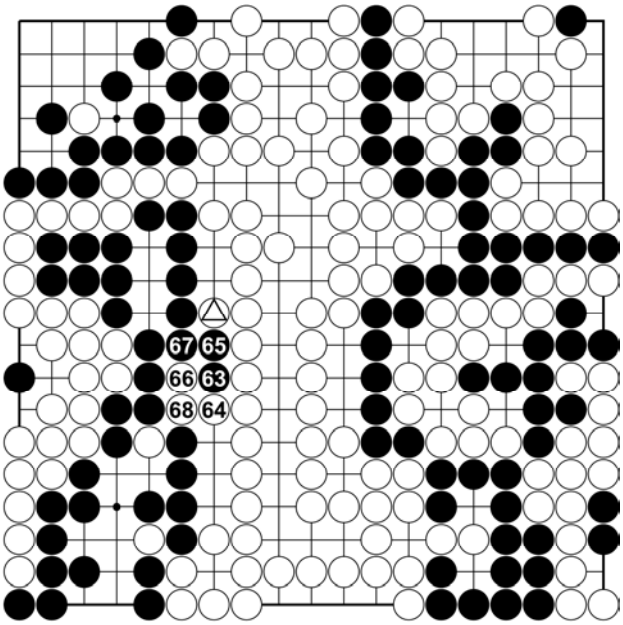


Dia. 160.1 (W 160 – B 167)

W 160: Sente, too, but works only in one direction.

B 163: Black can now get an additional point in the centre.

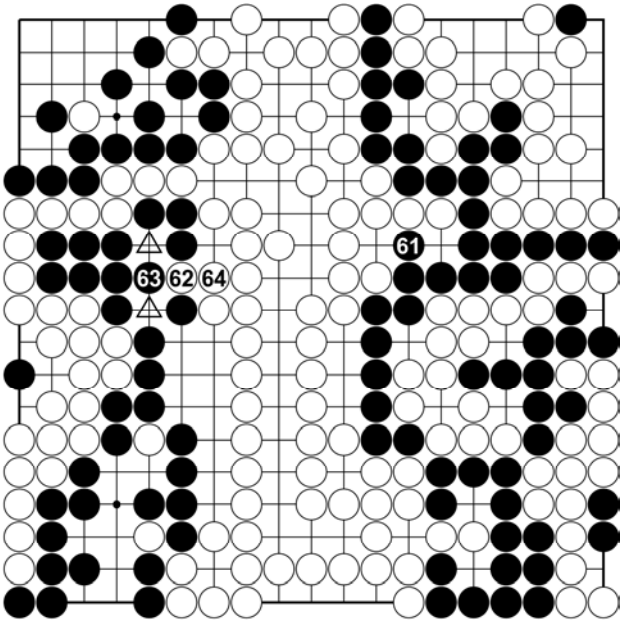
White wins by 1 point.



Dia. 160.2 (B 163 – W 168)

W 168: What White can prevent, if the triangled stone is played correctly as in the Main Path.

Variation for Black 161



Dia. 161.1 (B 161 – W 164)

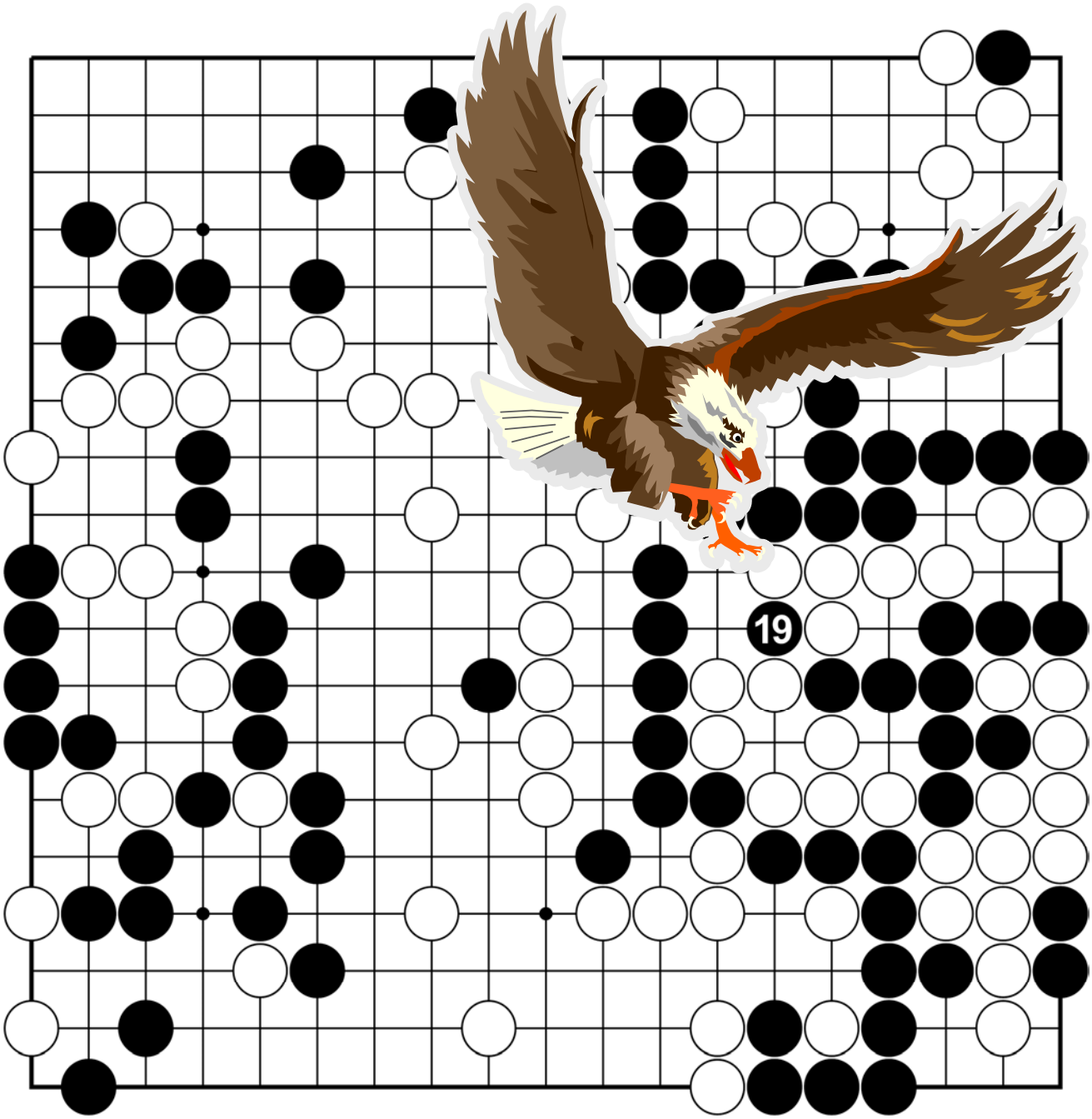
B 161: Black prevents White from making one point of territory here.

W 162: But White destroys three points (two triangled and **163**) of black territory in return. So this combination favours White by two points compared to the Main Path.

White wins by 4 points.

Igo Hatsuyoron, Problem 120

The 2nd Throw-in



B 19 - possible ?

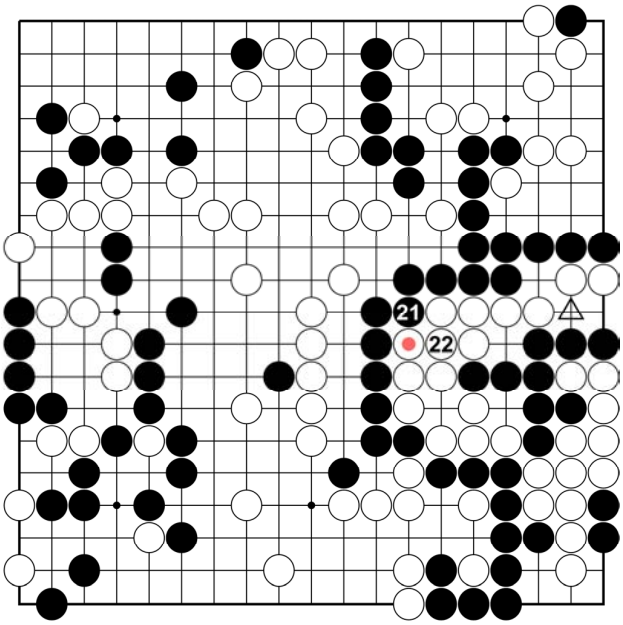
Summary

		Sub Variation	Result	see Page
W 26		Taking two stones in the lower right.	B + 4	79
W 72		Semeai in the upper right.	B + R	83
B 97		Hasami-Tsuke in the upper right and ...		
	B 129	... reducing liberties on the left.	W + 1	84
	B 129	... connecting the stone in Atari.	W + R	87
B 127		Playing in the lower right corner and ...		
	W 138	… continuing the Semeai.	W +R	88
		B 139 … capturing three white stones.	W +R	92
	W 138	… capturing the black centre group.	± 0	90
		B 159 … answering on the left.	W +1	93
W 134		Starting the Endgame in the upper left.	B + 5	94
W 136		Continuing the Semeai.	B + 3	96

Variation for the Main Path — W + 1 — 73

Explanations on the Variation for Black 19

The various sources agree that Black must not throw in a second time with his move **19**, as this would cost him a liberty urgently needed in the late future.



Dia. 19e.1: Consequences on Dia. 19.2

Here again it is shown that black has to prevent a white Eye with **21**, taking himself the above mentioned liberty. But he remains Sente, because White has to connect at **22**.

Unlike the Main Path there result two consequences now:

1. The circled white stone has been added on the board. Not only the black group above, but also the white group below have lost one of their liberties.
2. A white move on the triangled point is not Sente anymore. A white move here forces Black in the Main Path to take himself a liberty by his own.

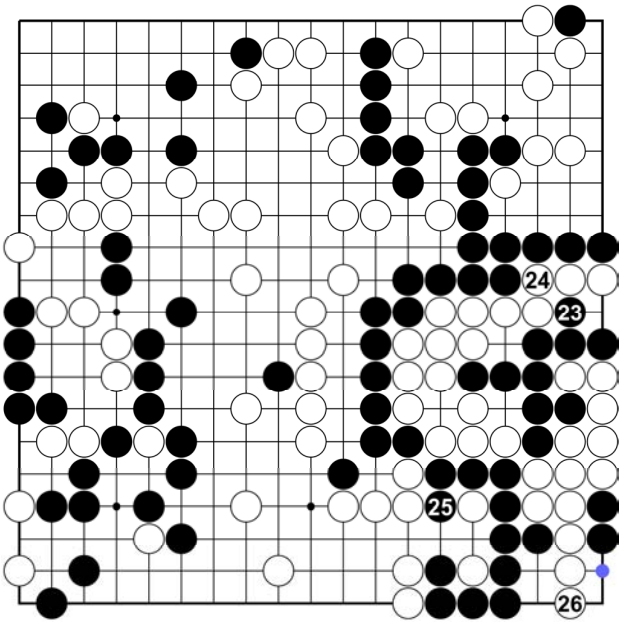
In the sources available to me there are no sequences found to proof the statement mentioned above. So I have tried to find an answer by myself. You will find the results explained below.

In my opinion, all countable variations after that second black Throw-in end 1 or 2 points better for Black than without. So it remains mysterious why this move should be forbidden.

Update 2009:

This move is a loss of one point for Black, if the Seki in the lower right remains stable until the end of the game.

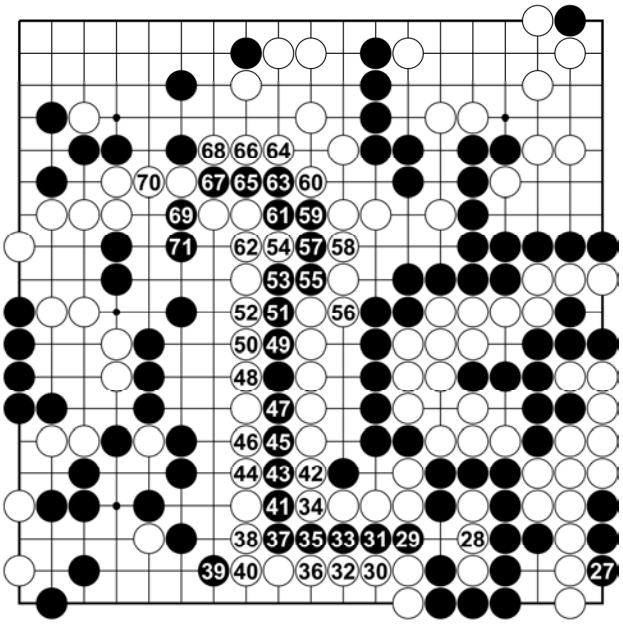
Variation for the Main Path



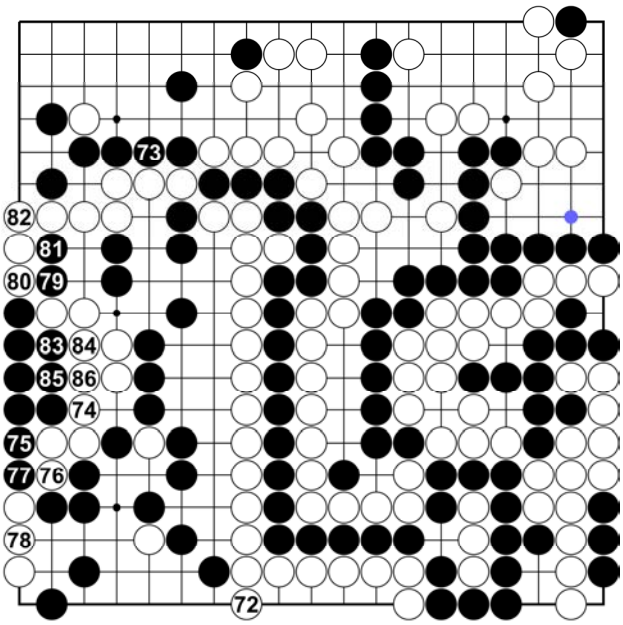
Dia. 19e.2 (B 23 – W 26)

W 26: One road to Semeai starts with this move at the other 2-1-point of the bottom right corner.

[see variation on page 79]



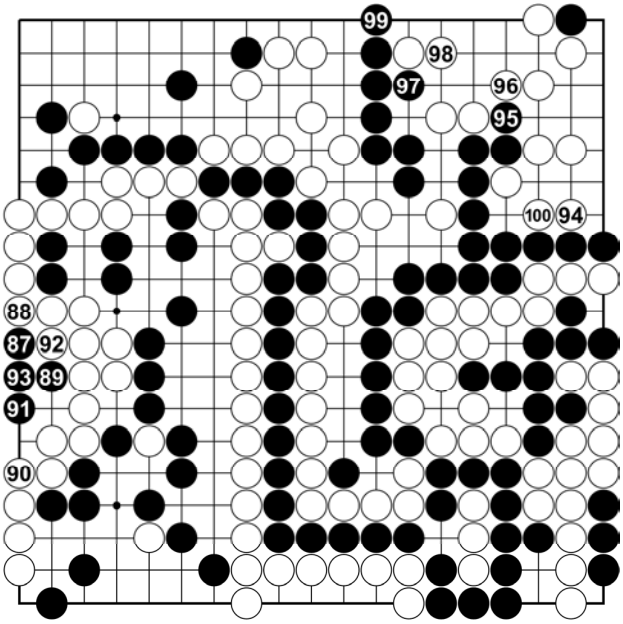
Dia. 19e.3 (B 27 – B 71)



Dia. 19e.4 (W 72 – W 86) <11/0>

W 72: Instead of saving her centre group White could start the Semeai with the black group in the upper right.

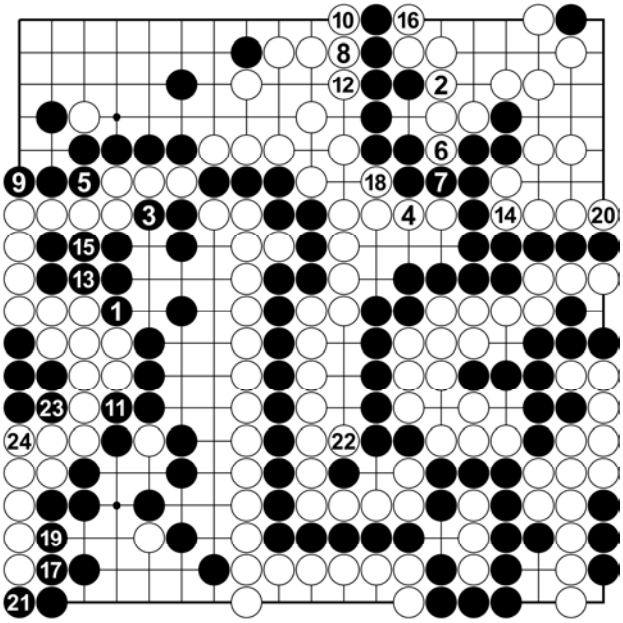
[see variation on page 83]



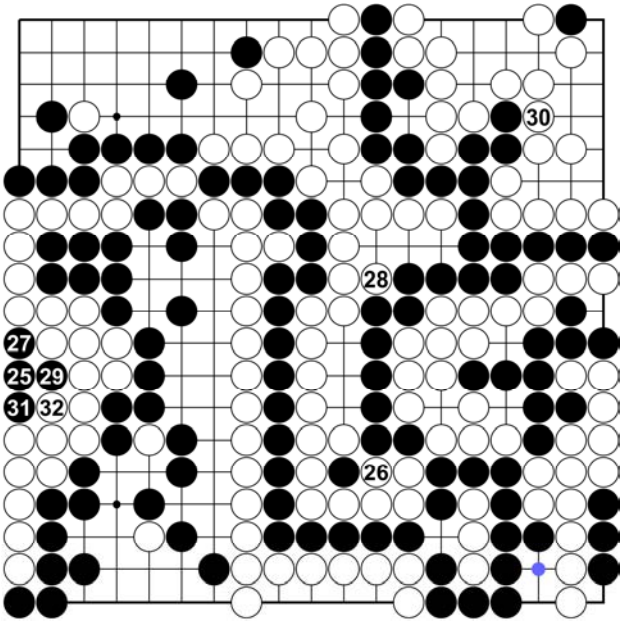
Dia. 19e.5 (B 87 – W 100)

B 97: The upper right corner seems to remain as the only place on the board where White could lose some additional points of territory. So what about a move on **98** instead ?

[see variation on page 84]



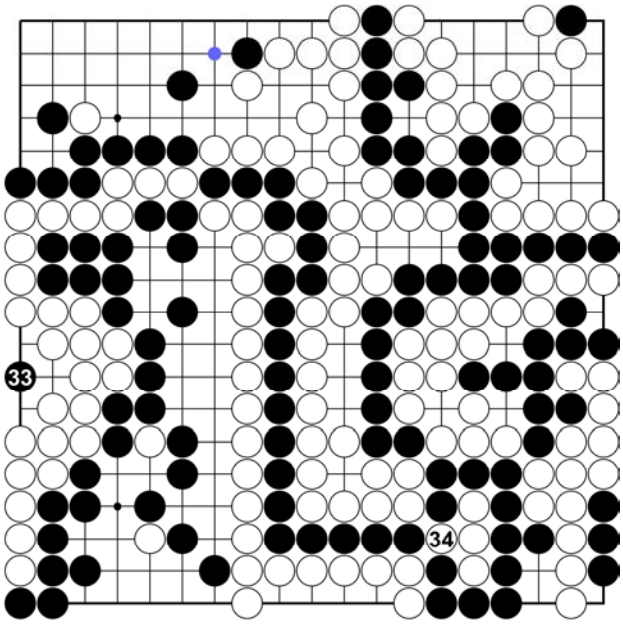
Dia. 19e.6 (B 101 – W 124) <16/0>



Dia. 19e.7 (B 125 – W 132) <21/0>

B 127: It is not possible for Black to interrupt the sequence on the left side and to play (for example) this move in the lower right corner, hoping (mistakenly) for an additional 1-point advantage.

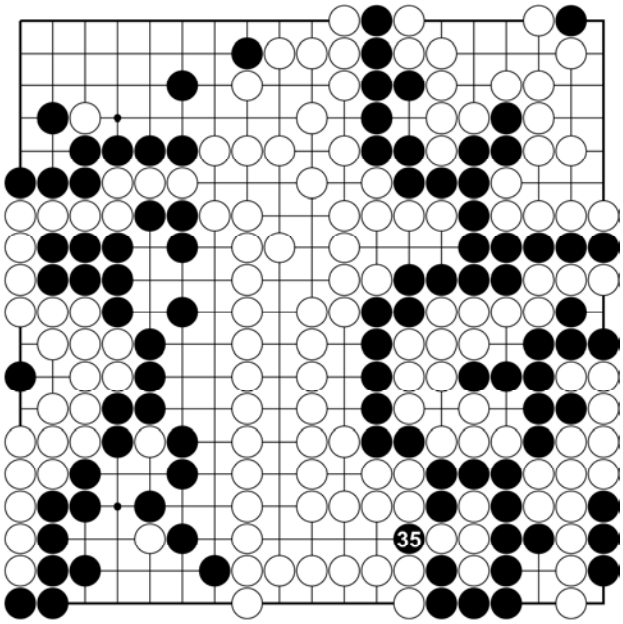
[see variation on page 88]



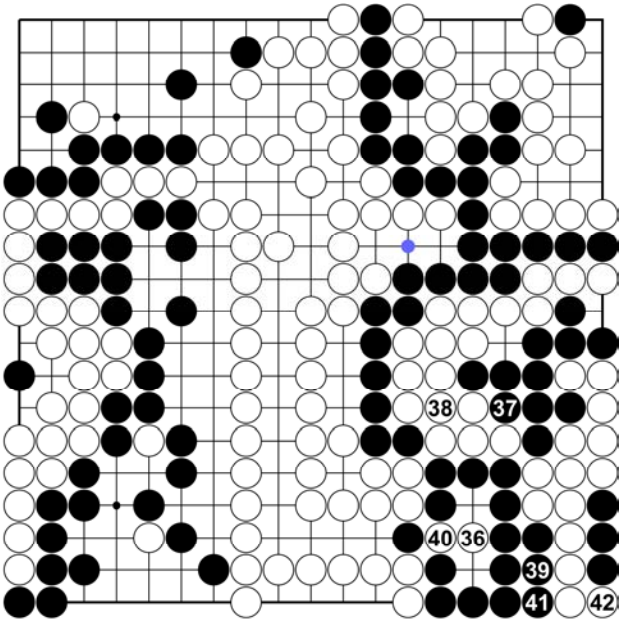
Dia. 19e.8 (B 133 – W 134) <41/0>

W 134: White could follow the sequence in the Weiqi FaYangLun with an Atari in the upper left.

[see variation on page 94]



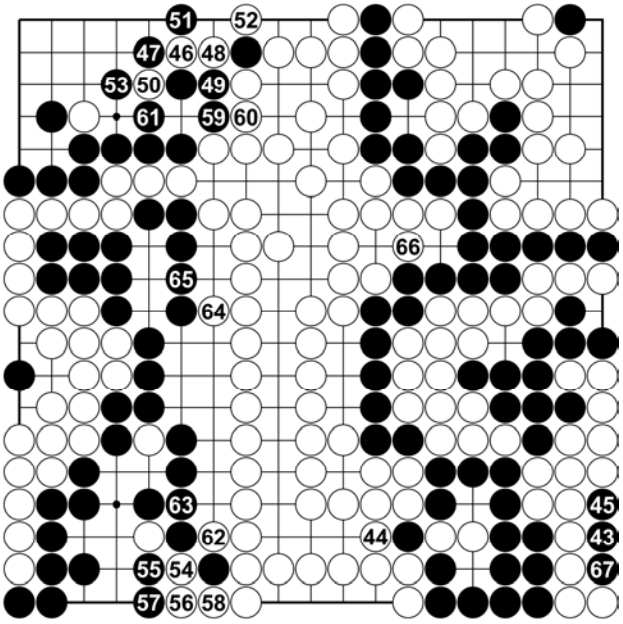
Dia. 19e.9 (B 135) <41/4>



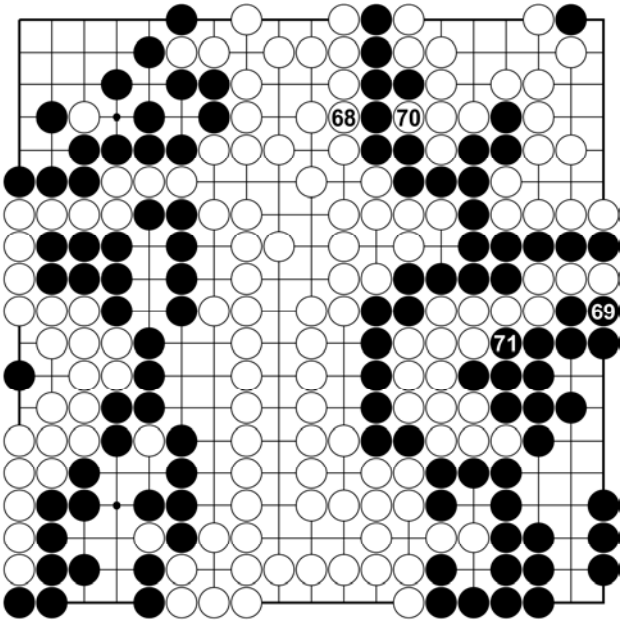
Dia. 19e.10 (W 136 – W 142) <44/4>

W 136: This is the last possible moment to start a Semeai in the upper right.

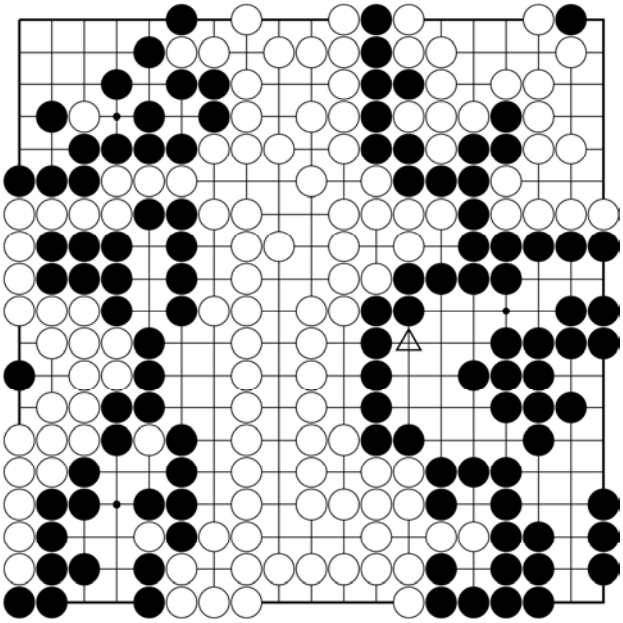
[see variation on page 96]



Dia. 19e.11 (B 143 – B 167) <47/19>

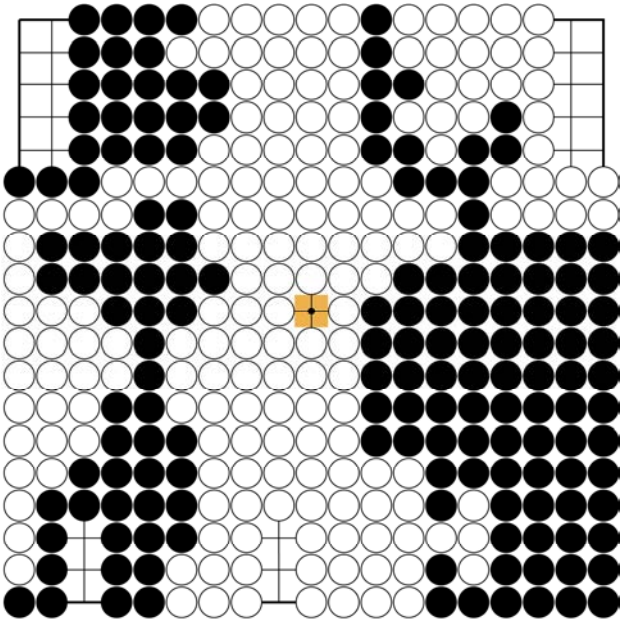


Dia. 19e.12 (B 163 – B 171) <47/37>



Dia. 19e.13 "The End here"

Black has captured one additional white stone on the marked point, what more than compensates for the loss of that one black stone for the second Throw-in.



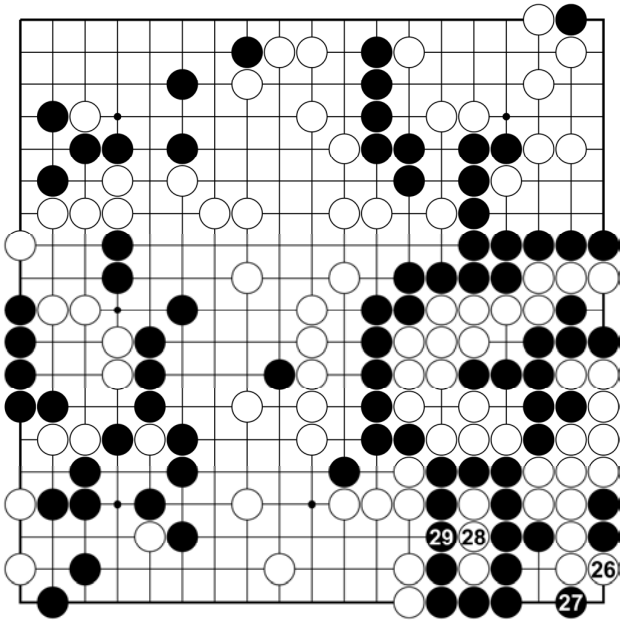
Dia. 19e.14 "The Score"

So Black was able to narrow the gap a little bit.

White wins by 1 point.

Because this variation is one point better for Black than the Main Path, I would be very interested in getting knowledge of the Semeai mentioned in the sources, which ends in Black's defeat.

Sub variation for White 26

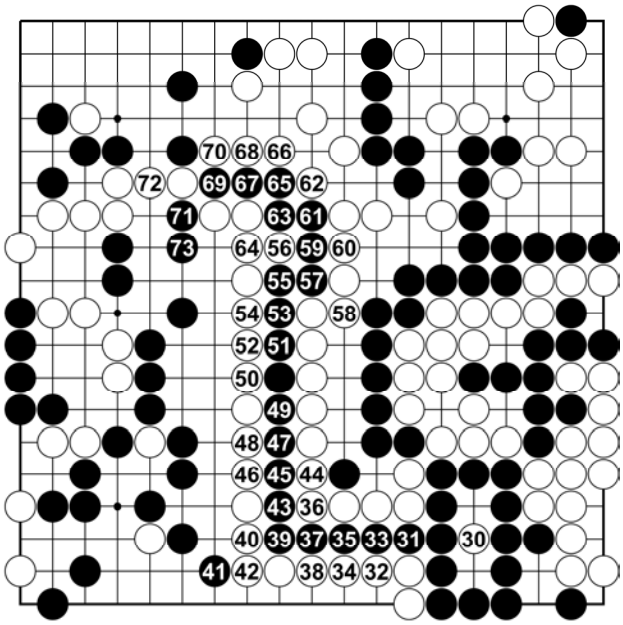


Dia. 19e26.1 (W 26 – B 29) <4/3>

W 26: White tries the variation that starts with taking the two black stones in the corner.

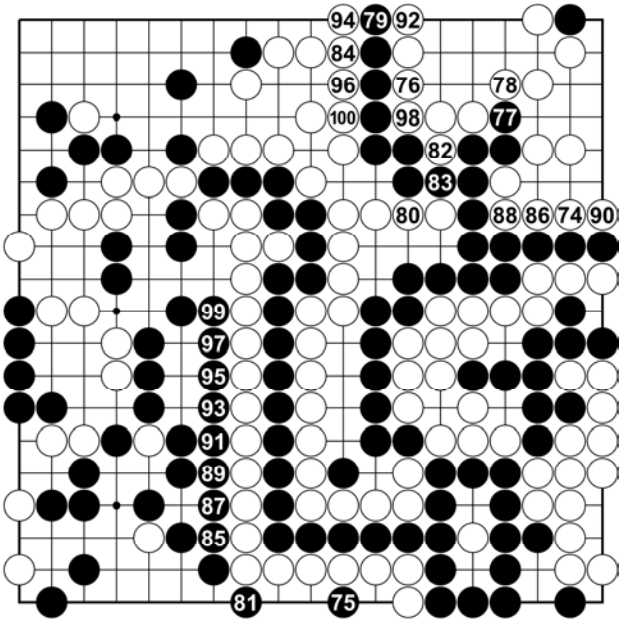
B 29: Please remember that following the Main Path here and playing this move one point to the left is much faster for Black.

We will use the following sequence to show something that might have an effect on other sequences, too.



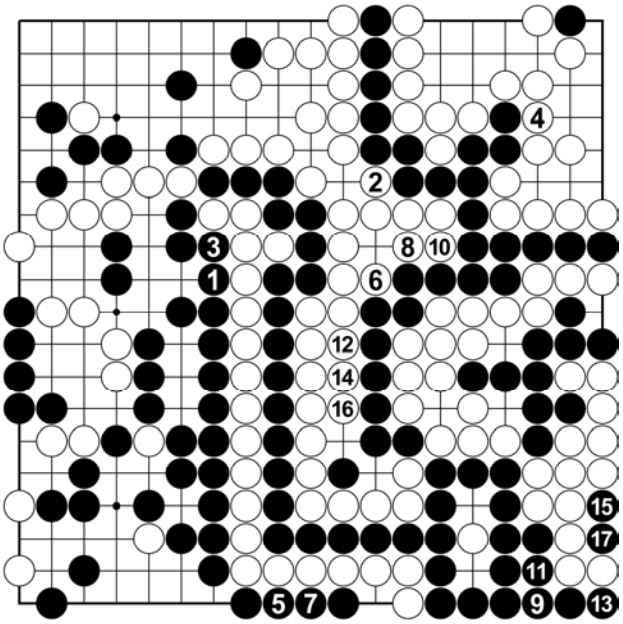
Dia. 19e26.2 (W 30 – B 73)

W 64: As usual White cannot hope on a Ko with **65**.

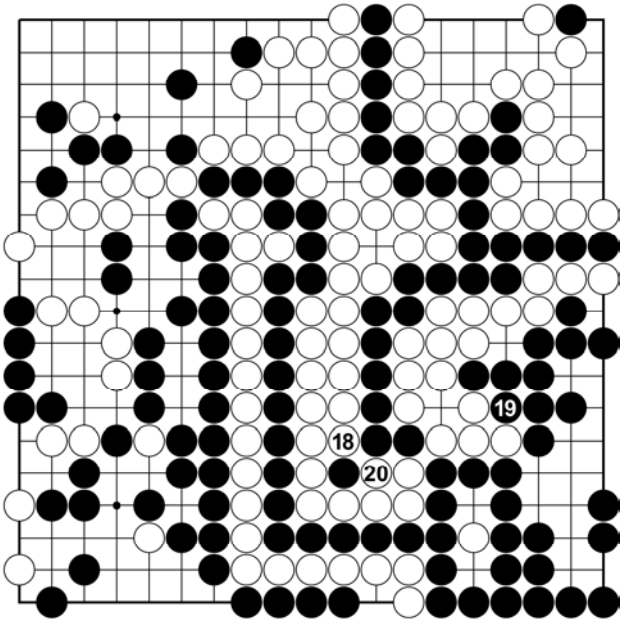


Dia. 19e26.3 (W 74 – W 100)

W 74: This move in the upper right (instead of **81**, see the following page) starts the Semeai variation here.

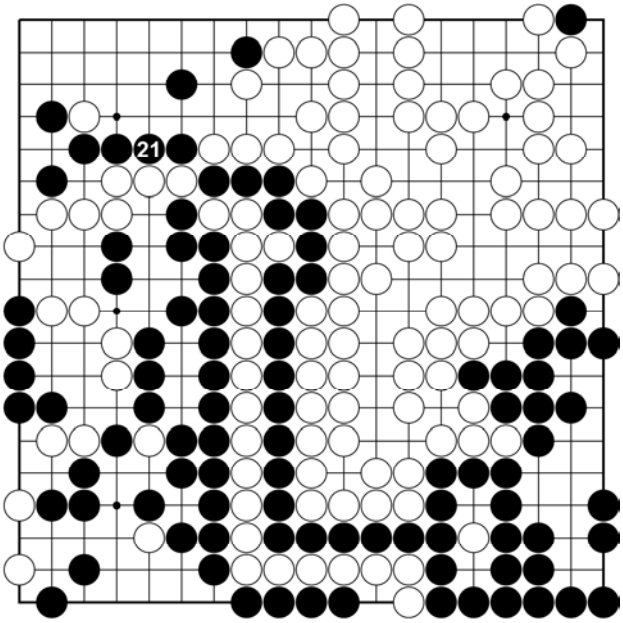


Dia. 19e26.4 (B 101 – B 117) <4/16>



Dia. 19e26.5 (W 118 – W 120) <34/16>

W 120: White is successful and wins the Semeai by one move.



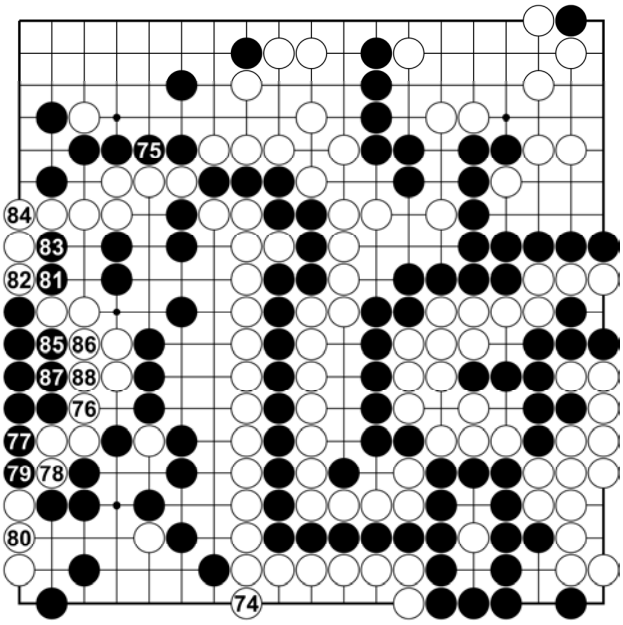
Dia. 19e26.6 (B 121)

B 121: But Black closes the upper left corner and wins the game either. All the white stones on the left side are dead.

Black wins the game.

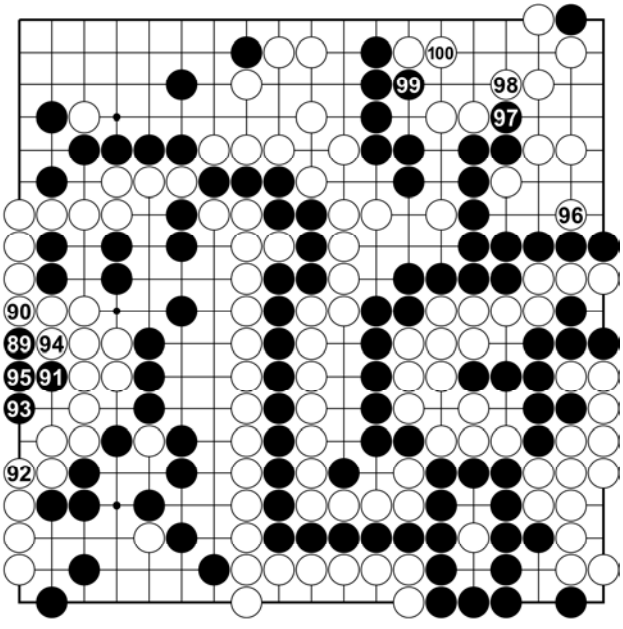
It seems to me that this move had not been recognised so far. Even if White would be successful in the variation for White **70** in the Main Path – without the second Throw-in with Black **19** (refer to page 53) – in

winning the Semeai in the upper right, she would lose the game by this move, too.

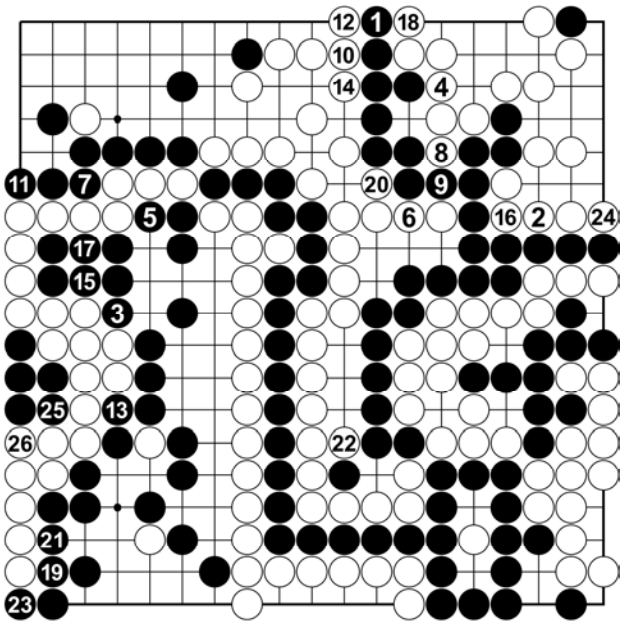


Dia. 19e26.7 (W 74 – W 88) <13/3>

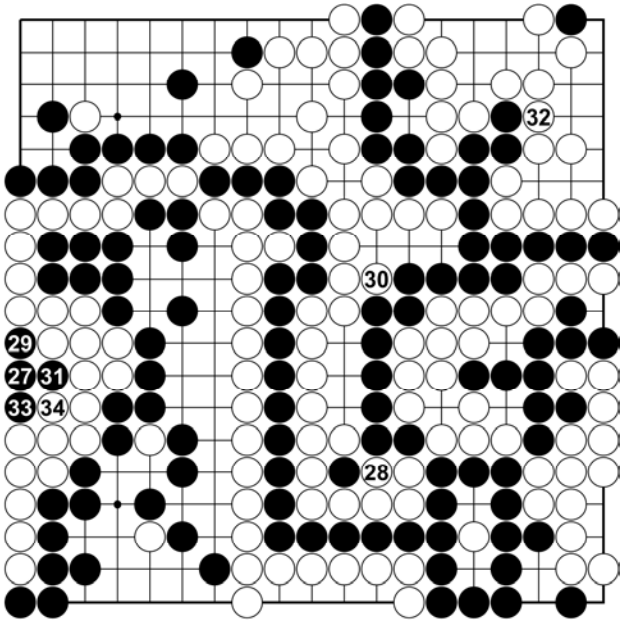
W 74: By saving her centre stones White chooses the "peaceful" variation. Without the second black Throw-in she finally got the black upper right group. Black in return captured the white group in the lower left. Let's see, what the result will be here.



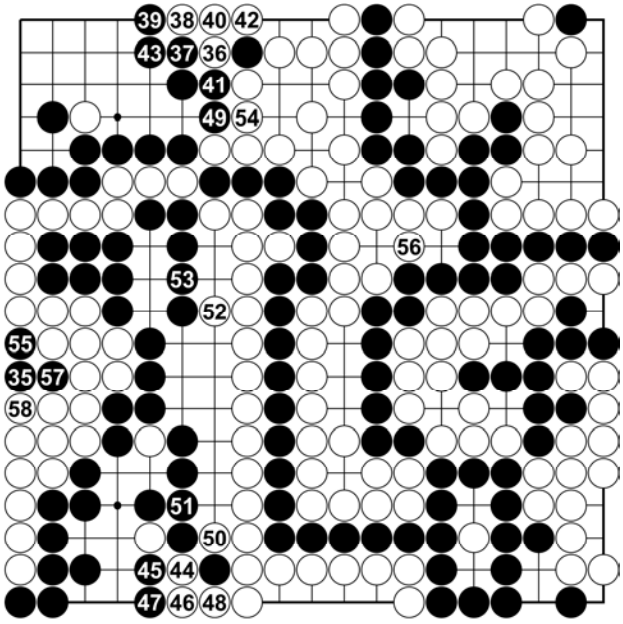
Dia. 19e26.8 (B 89 – W 100)



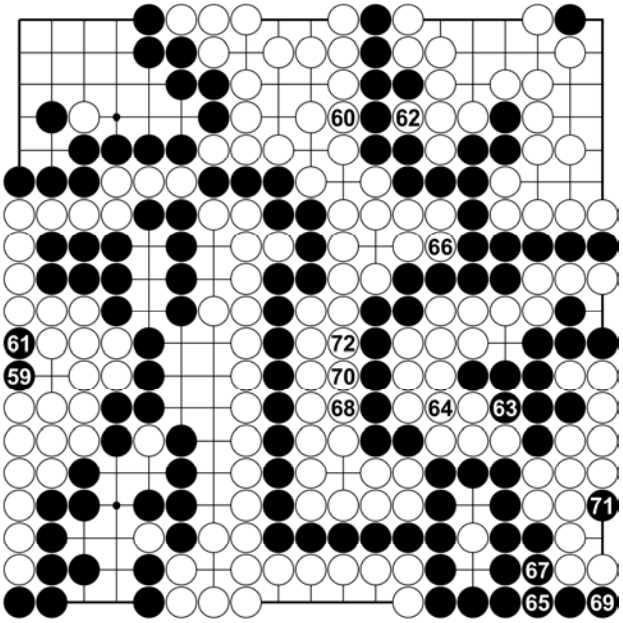
Dia. 19e26.9 (B 101 – W 126) <18/3>



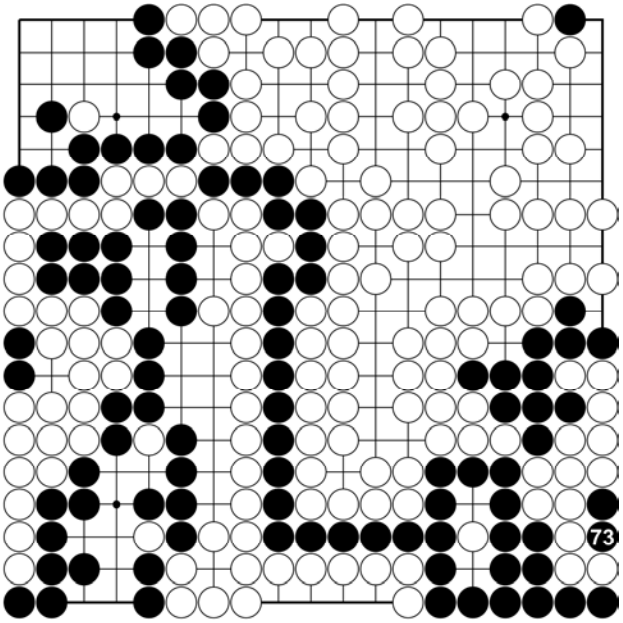
Dia. 19e26.10 (B 127 – W 134) <23/3>



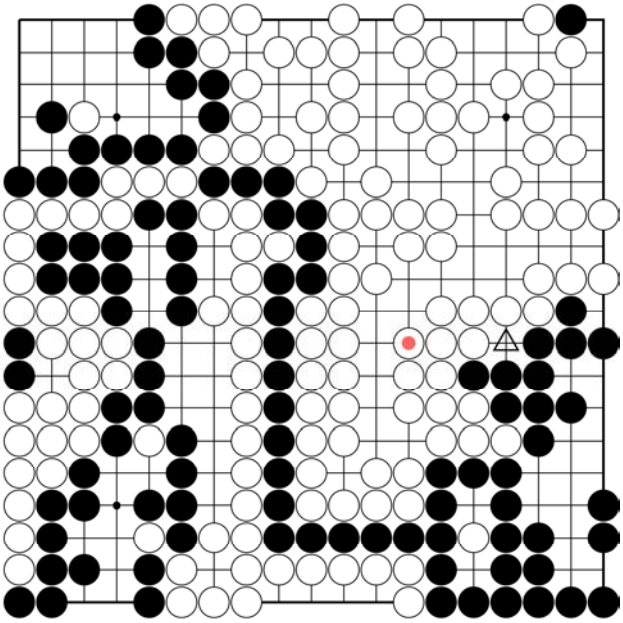
Dia. 19e26.11 (B 135 – W 158) <28/3>



Dia. 19e26.12 (B 159 – W 172) <58/3>

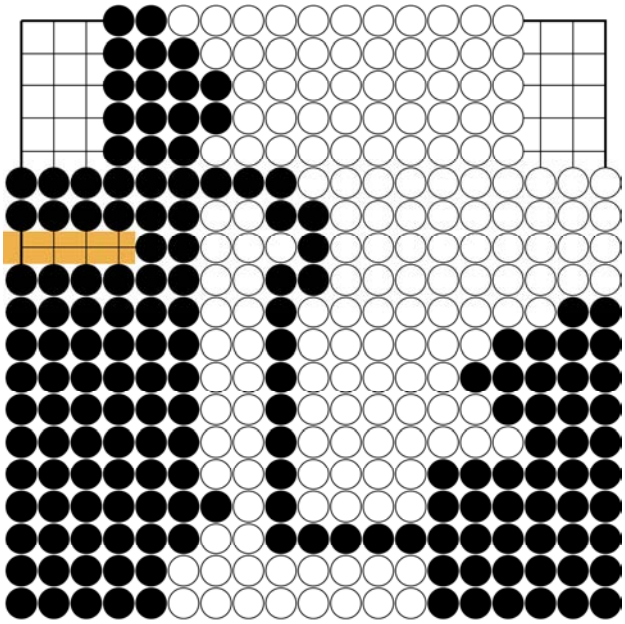


Dia. 19e26.13 (B 173) <58/16>



Dia. 19e26.14 "The End here"

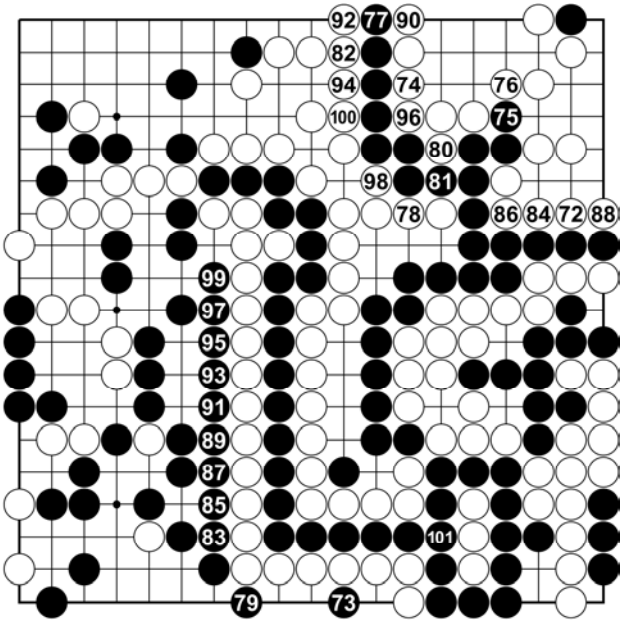
The result is the same here in principle. Both sides captured the groups on the right side of the board as before. The circled white stone would otherwise be a black one (= Black **135**) and White would have played the move **134** on the triangled point, taking a liberty of the black group below.



Dia. 19e26.15 "The Score"

Black wins by 4 points.

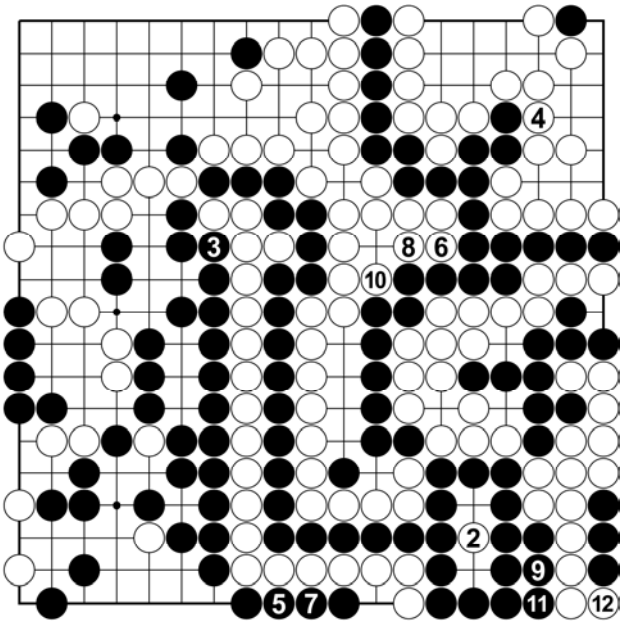
Sub variation for White 72



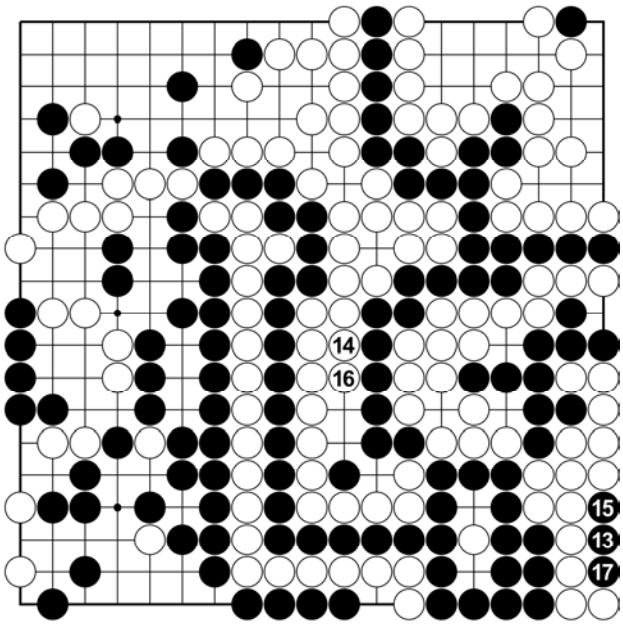
Dia. 19e72.1 (W 72 – B 101) *<2/3>*

W 72: White now starts reducing the liberties of the black group in the upper right without securing her group on the lower side before.

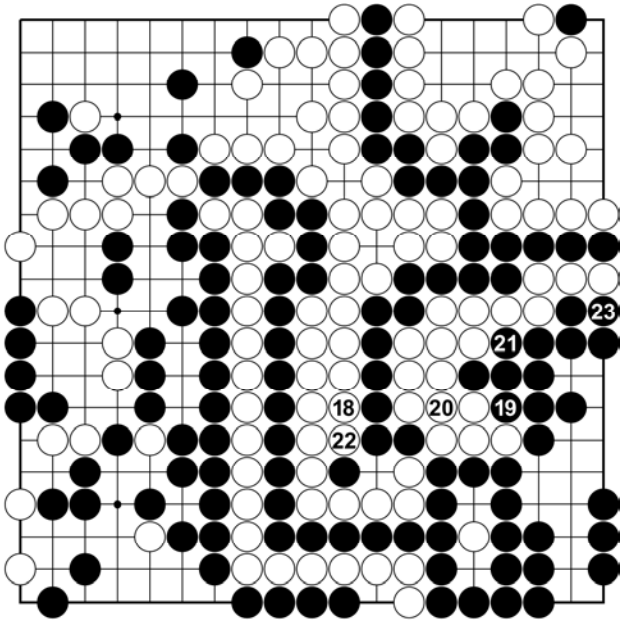
B 73: The Semeai follows a well known path.



Dia. 19e72.2 (W 102 – W 112) *<5/3>*

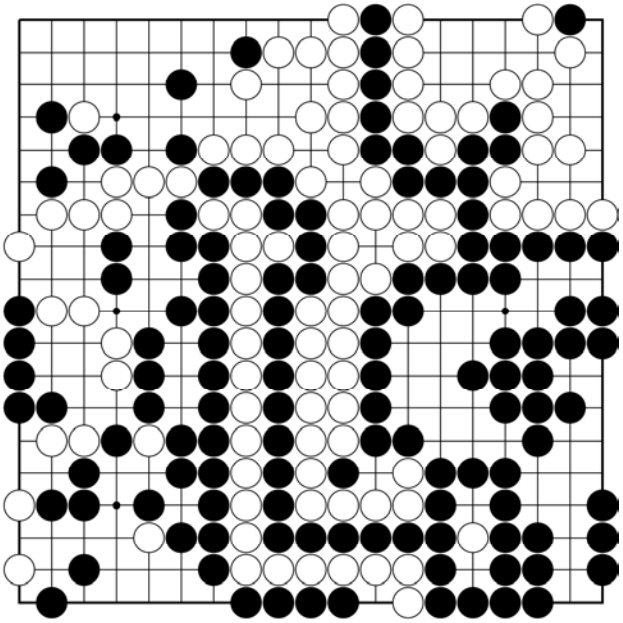


Dia. 19e72.3 (B 113 – B 117) *<5/17>*



Dia. 19e72.4 (W 118 – B 123) *<5/35>*

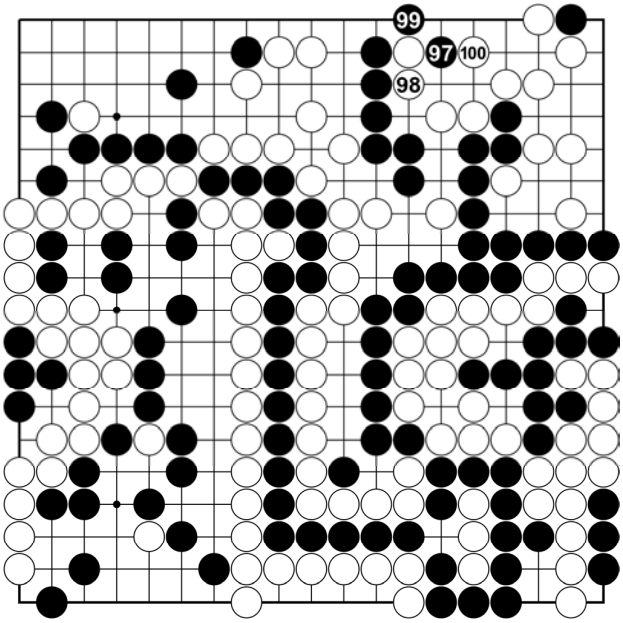
B 123: Black captures the white stones on the right side. Again, White is one move too late.



Dia. 19e72.5 "The End here"

Black wins the game.

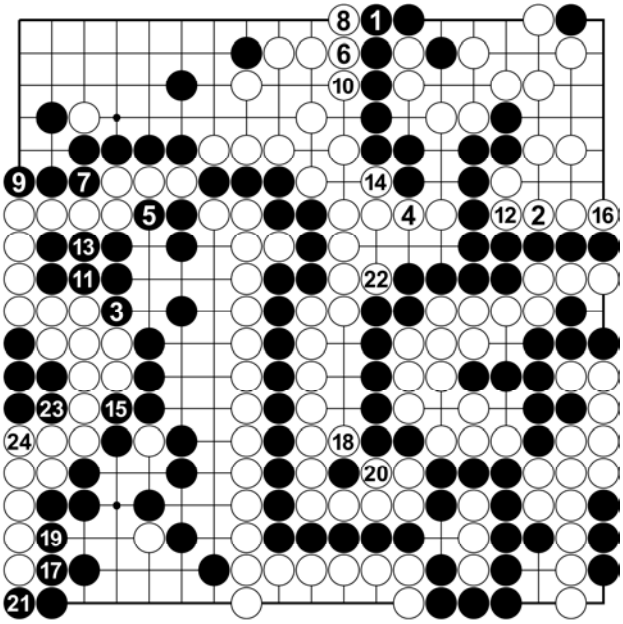
Sub variation for B 97



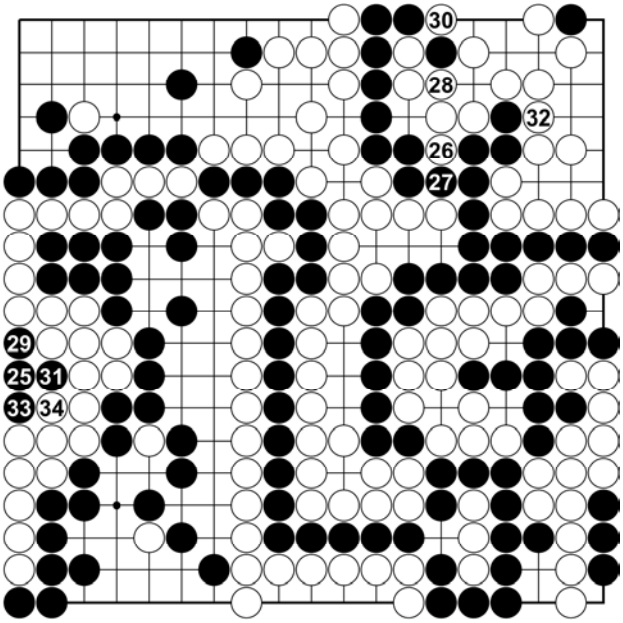
Dia. 19e97.1 (B 97 – W 100)

B 97: This Hasami-Tsuke seems to be an obvious alternative at this moment to reduce the white upper right corner. In my opinion there must be a reason why it is not mentioned in the published sources. Joachim Meinhardt was so kind to help me with the following sequences and the commentary.

W 100: Prevents further black actions in this area.



Dia. 19e97.2 (W 98 - W 124) <1.7/0>



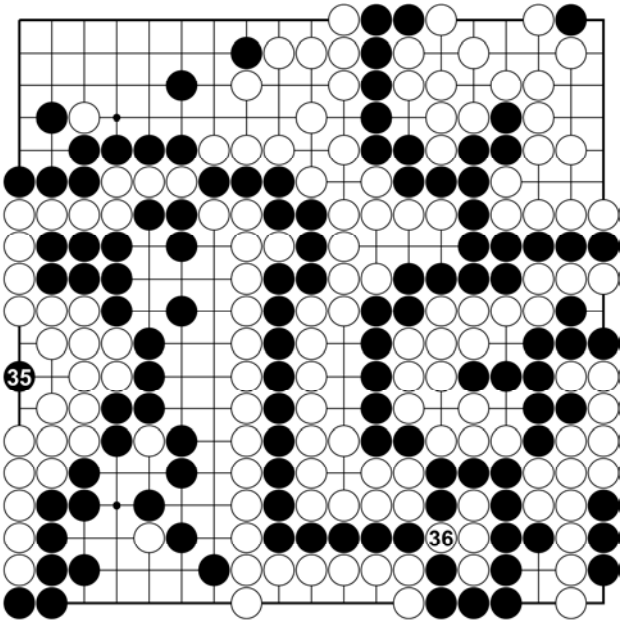
Dia. 19e97.3 (B 125 – W 134) <22/0>

W 128: White must be on her guard and force Black to answer the question "To connect or not to connect ?" before she takes the chain of black stones in the centre off the board. Otherwise she will give opportunities to Black to turn the tables (the top right group would have sufficient liberties to connect at **130**, gaining 4 points).

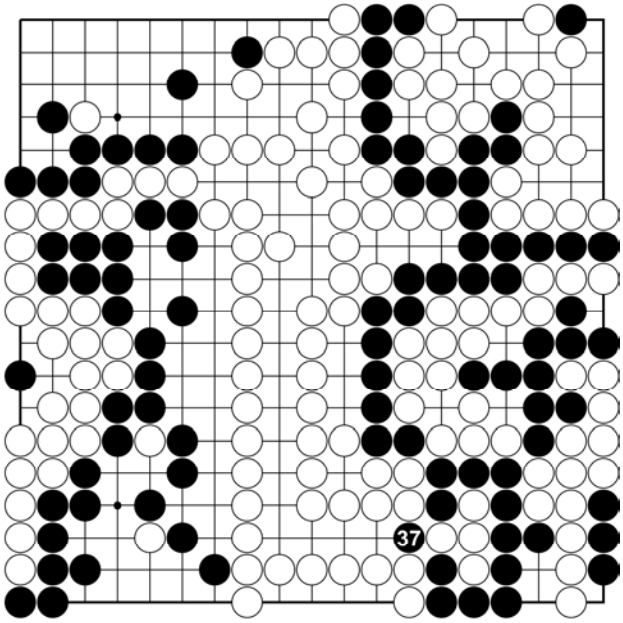
B 129: It is not possible for Black to connect his stone in Atari with a move at **130**.

[see variation on page 87]

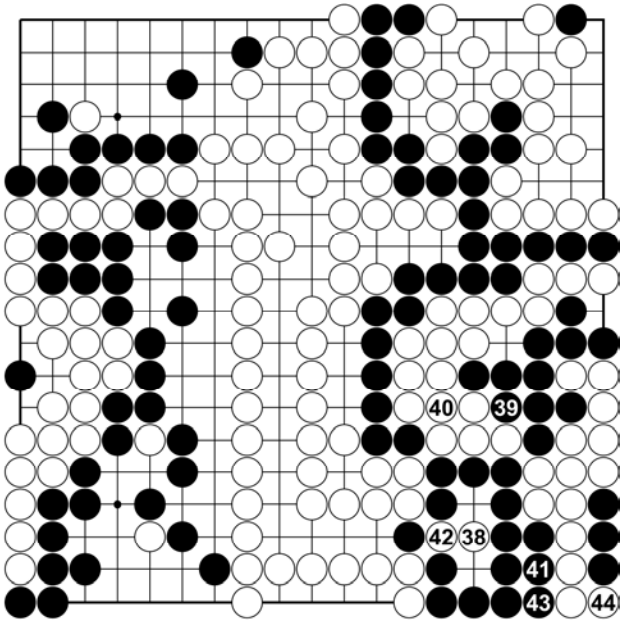
B 131: The following sequence is equivalent to that of the Main Path.



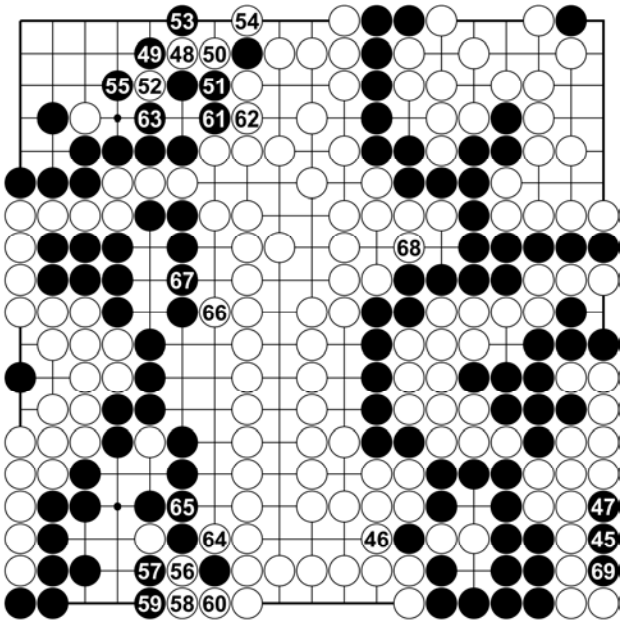
Dia. 19e97.4 (B 135 – W 136) <42/0>



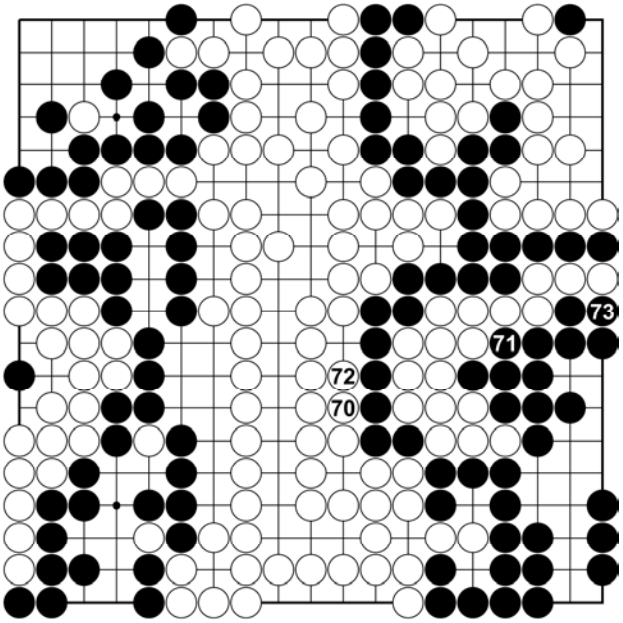
Dia. 19e97.5 (B 137) <42/4>



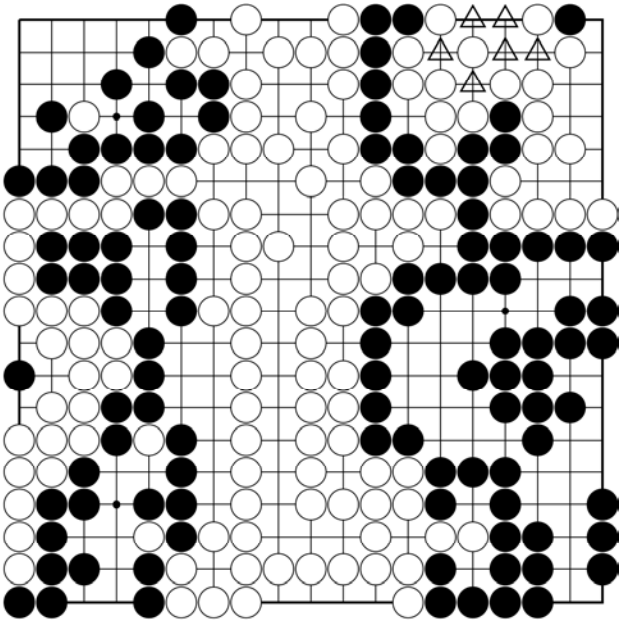
Dia. 19e97.6 (W 138 – W 144) <45/4>



Dia. 19e97.7 (B 145 – B 169) <48/19>

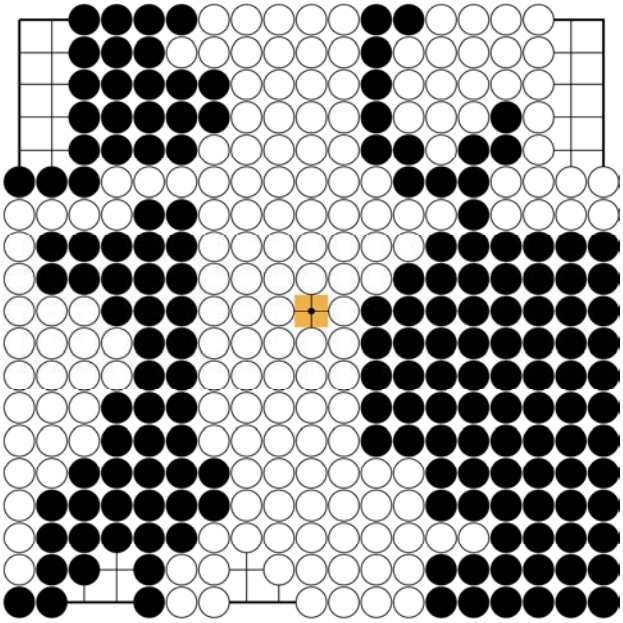


Dia. 19e97.8 (W 170 – B 173) <48/37>



Dia. 19e97.9 "The End here"

All black efforts in the top right corner had no effect on the final result. As before, White has seven points in the marked area, including the captured black stone.

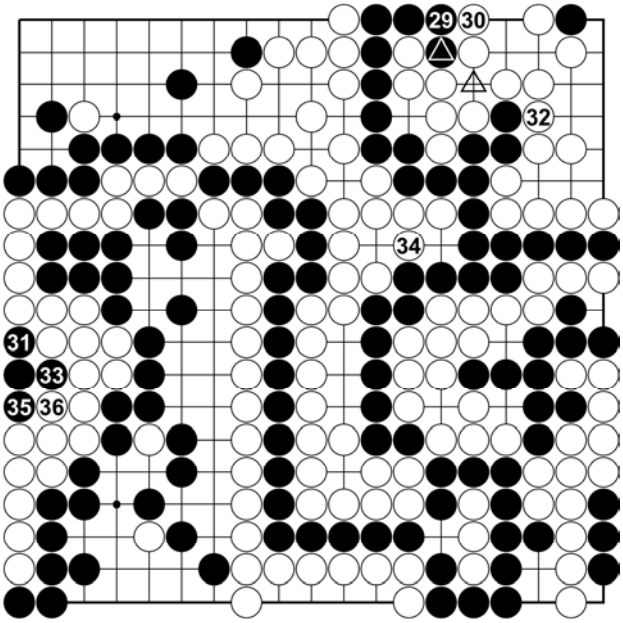


Dia. 19e97.10 "The Score"

White wins by 1 point.

Because this variation is one point better for Black than the Main Path, I would be very interested in getting knowledge of the Semeai mentioned in the sources, which ends in Black's defeat.

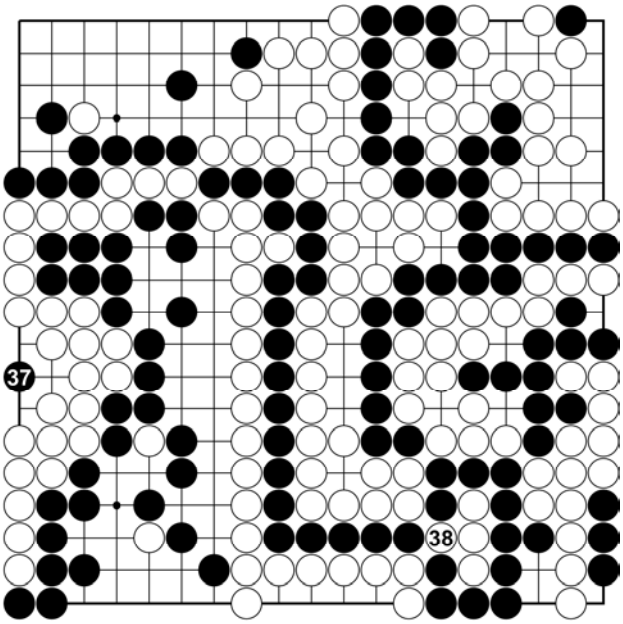
Sub² variation for B 129



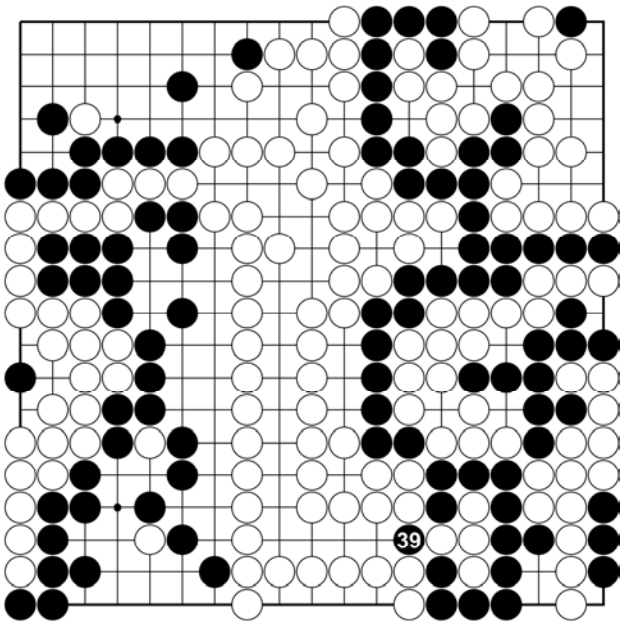
Dia. 97n129.1 (B 129 – W 136) <21/0>

B 129: Black connects his endangered stone in the top right.

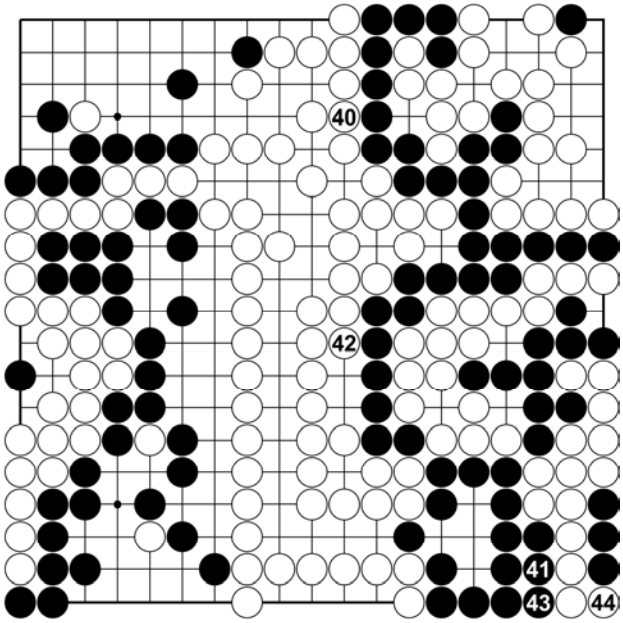
White would lose four points (three triangled and one at **130**), what would be sufficient for Black to turn the tables. But remember that the black group has to survive this manoeuvre, despite Black has lost a move here.



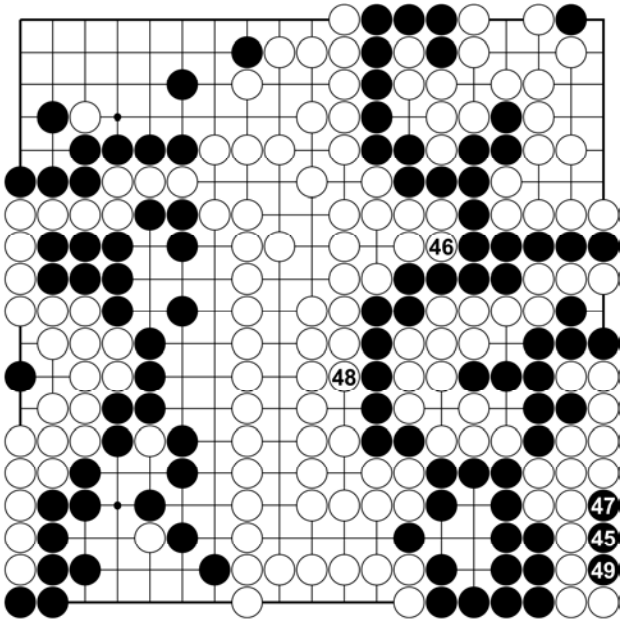
Dia. 97n129.2 (B 137 – W 138) <41/0>



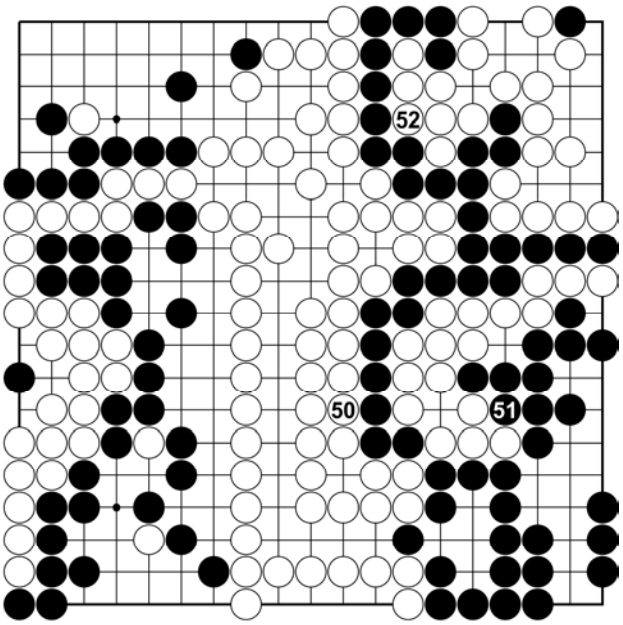
Dia. 97n129.3 (B 139) <41/4>



Dia. 97n129.4 (W 140 – W 144) <44/4>

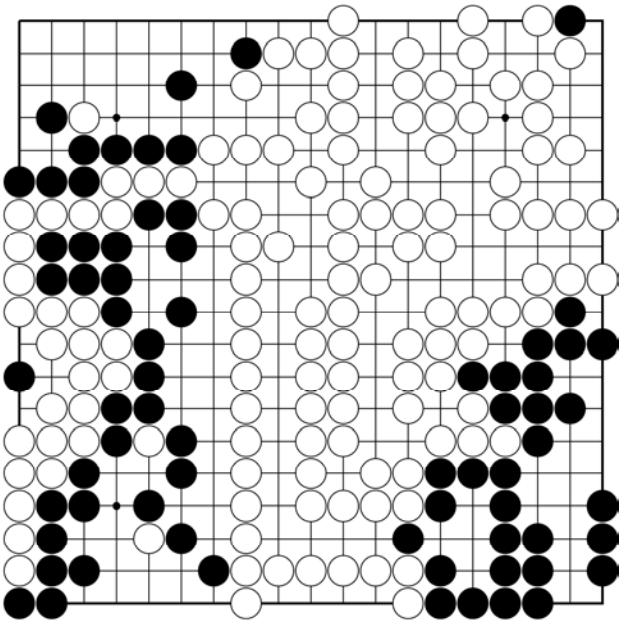


Dia. 97n129.5 (B 145 – B 149) <44/18>



Dia. 97n129.6 (W 150 – W 152) <76/18>

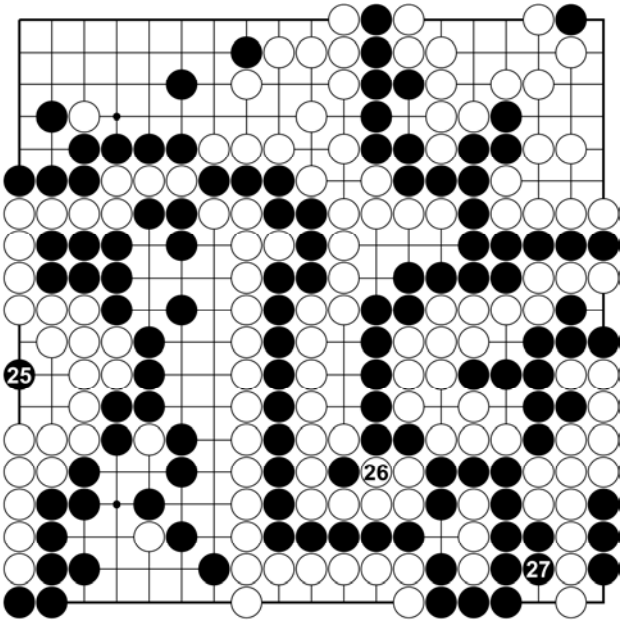
W 152: Because Black has lost a move in the beginning, he is one move too late in the end. White wins the game with ease.



Dia. 97n129.7 "The End here"

White wins the game.

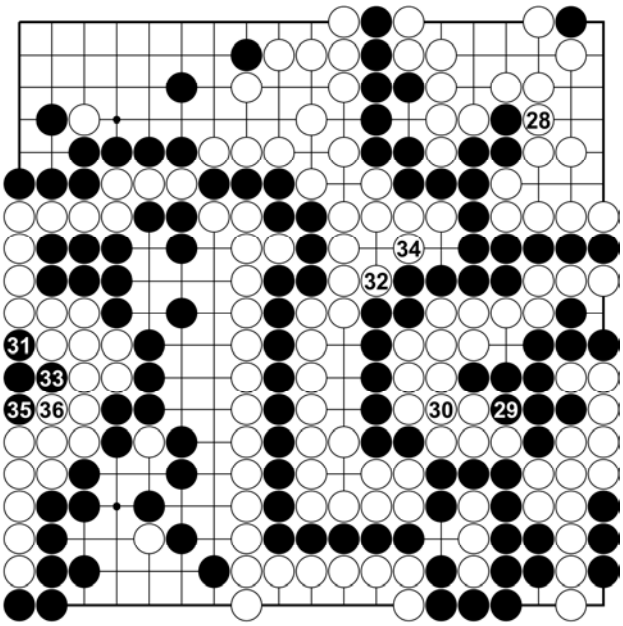
Sub Variation for B 127



Dia. 19e127.1 (B 125 – B 127) <17/0>

B 127: At any moment (except for such Eye stealing moves like **125** here) after having completed the four-stone-formation inside White's Eye on the left side (with **93**), Black (mistakenly) could have the idea to play at the 3-2-point of the lower right corner.

That is because in every variation analysed so far Black would play at this point after White captured the twenty black stones in the centre.

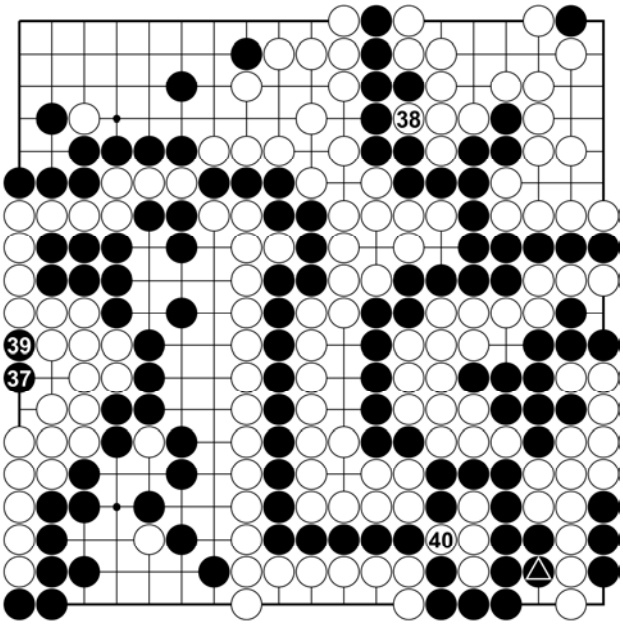


Dia. 19e127.2 (W 128 – W 136) <21/0>

W 128: White follows the Main Path for the time being.

She cannot answer inside the Seki in the lower right, as this would make it possible for Black to resolve it.

Capturing the twenty black centre stones at this moment loses the game, too.



Dia. 19e127.3 (B 137 - W 140) <41/0>

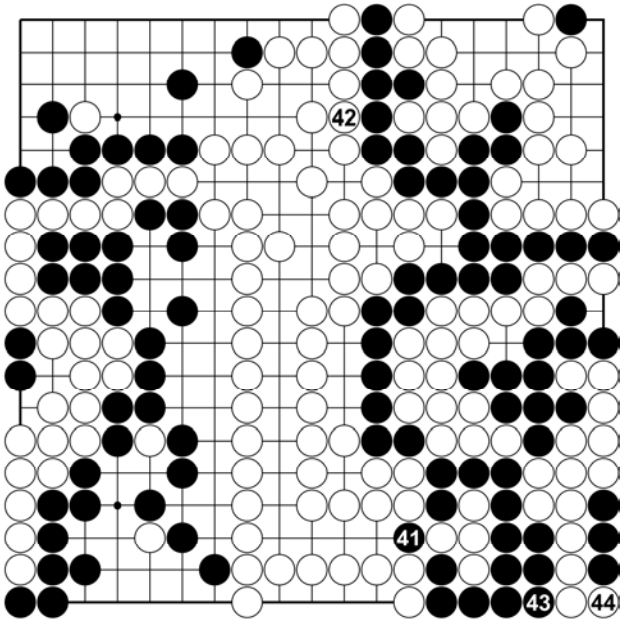
W 138: White simply continues to take black liberties in the upper right. Capturing the black stones in the centre (at **140** as "usual") would be not correct here.

[see variation on page 90]

B 139: Black cannot capture the three white stones, because his earlier played marked stone took his centre group a liberty.

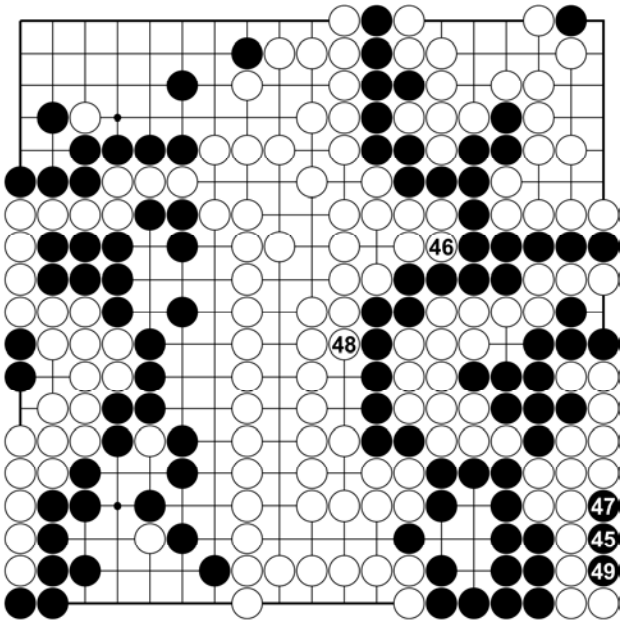
[see variation on page 92]

W 140: Now it is the right moment to capture the black centre group.

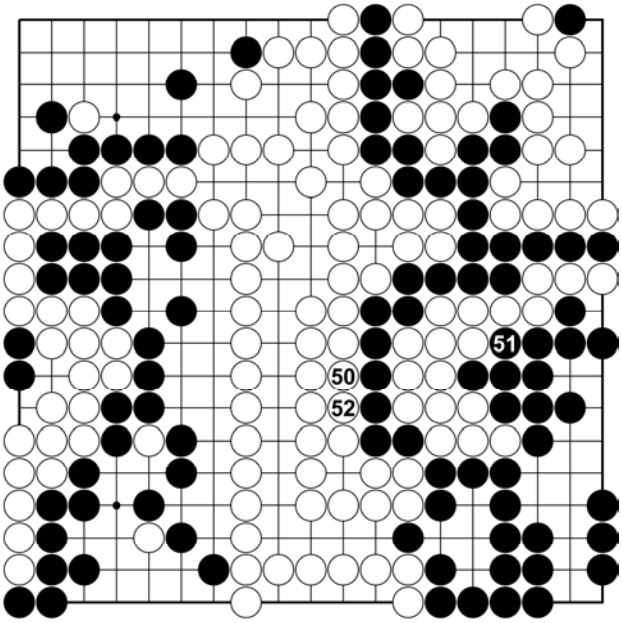


Dia. 19e127.4 (B 141 - W 144) <44/4>

W 142: White does not make the Placement now, but continues to occupy liberties of the black group in the upper right.

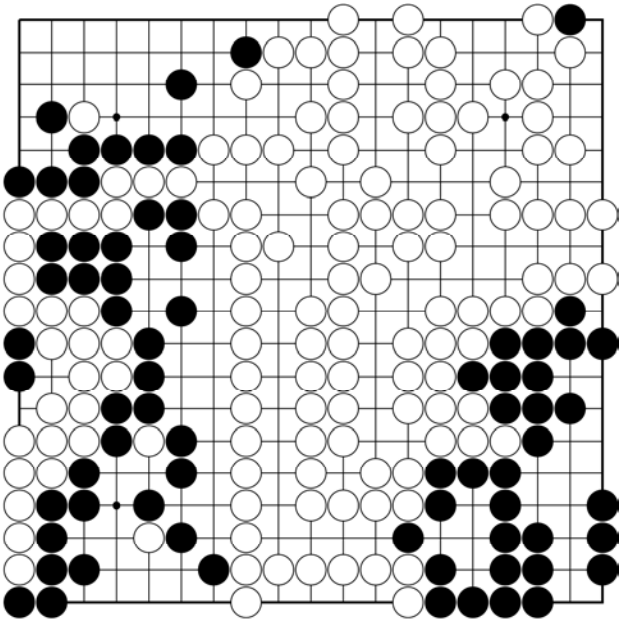


Dia. 19e127.5 (B 145 – B 149) <44/18>



Dia. 19e127.6 (W 150 - W 152) *<74/18>*

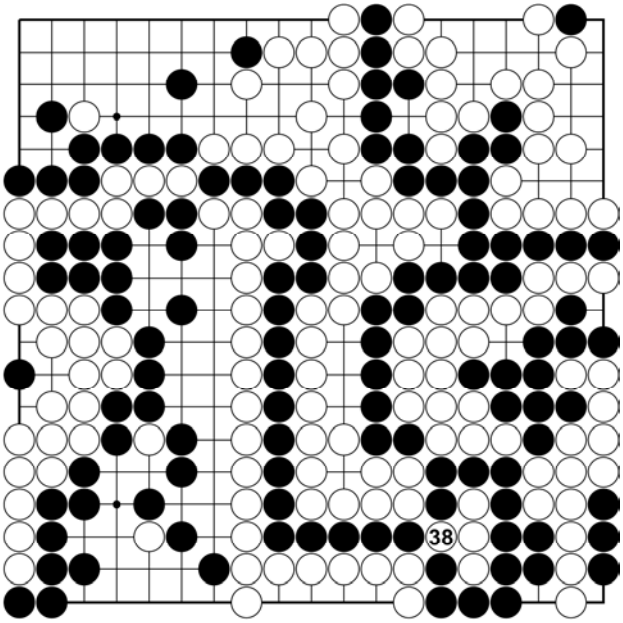
W 152: Black is that one move too late, he had lost in the beginning by playing in the lower right instead of continuing the "usual" sequence on the left side.



Dia. 19e127.7 "The End here"

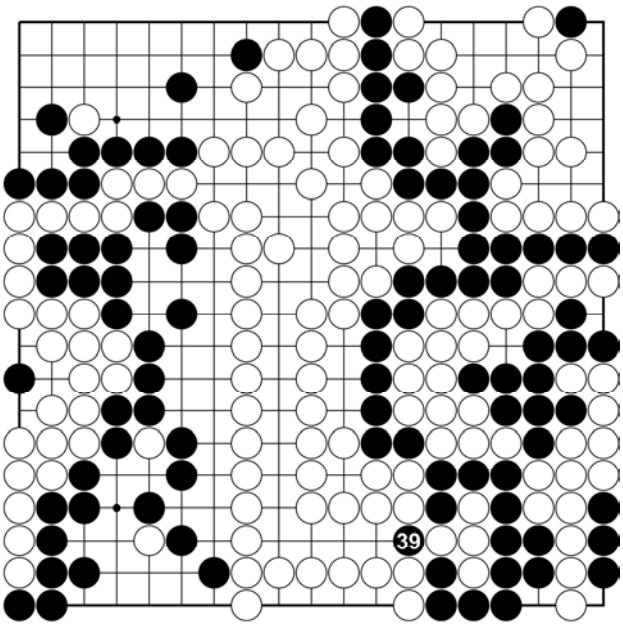
White wins the game.

Sub² variation for W 138

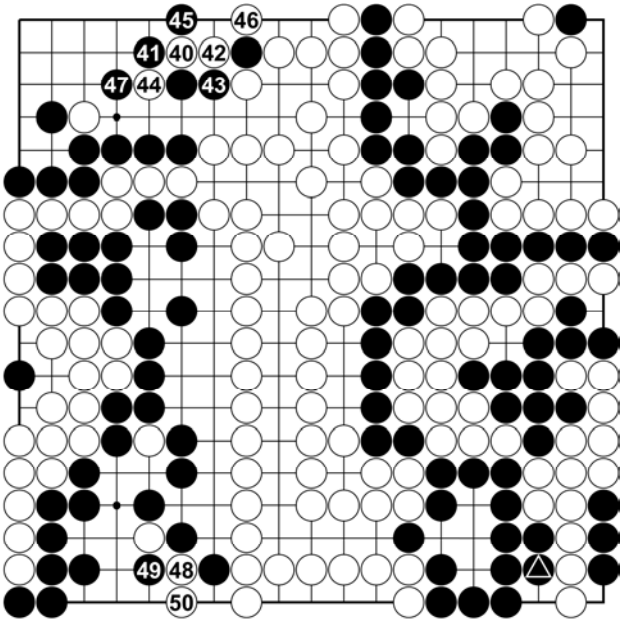


Dia. 127n138.1 (W 138) *<41/0>*

W 138: Capturing the twenty black centre stones is a little bit too hasty.



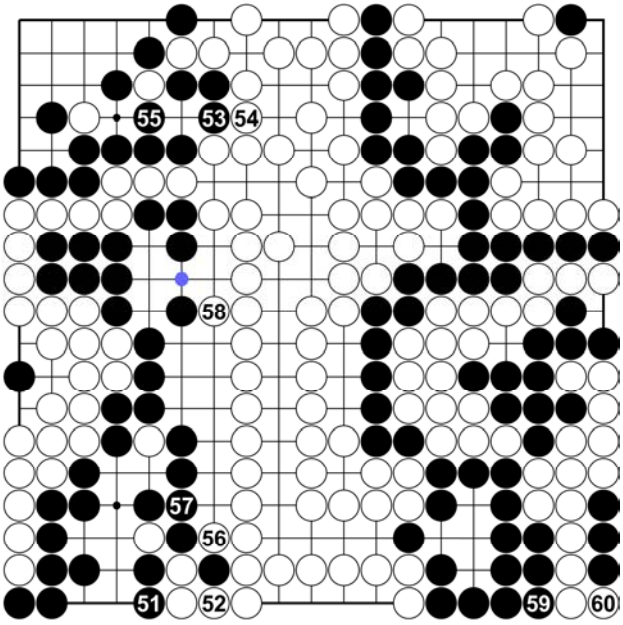
Dia. 127n138.2 (B 139) *<41/4>*



Dia. 127n138.3 (W 140 – W 150) <42/4>

W 140: It is best for White to start with the Tsuke of Yamada Shinji in the upper right.

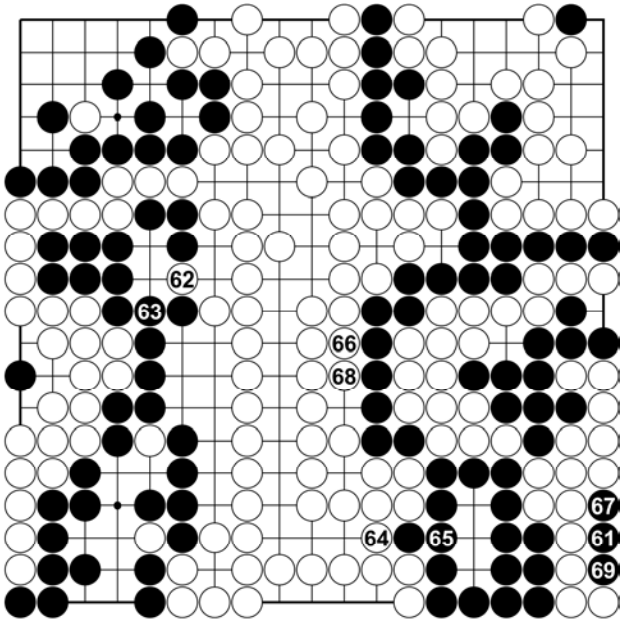
This time she does not make the Placement inside the four stones Black captured with 139, but keeps it in reserve. Because Black already has the marked stone (= 127) in place, a white Placement would be Gote.



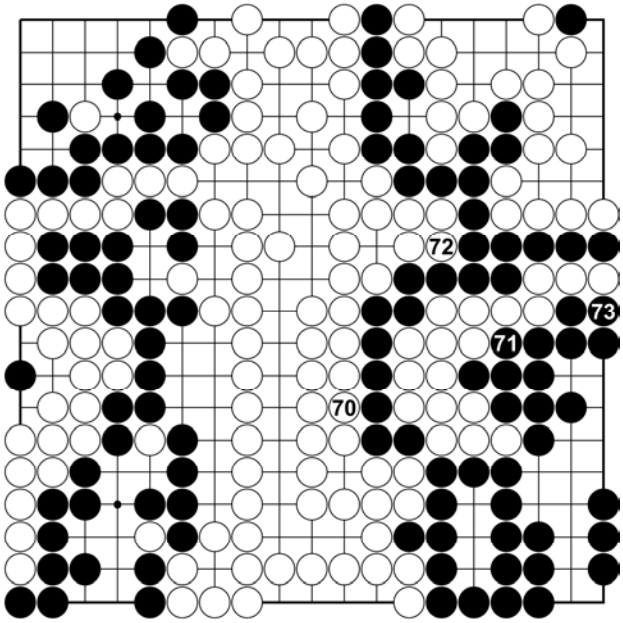
Dia. 127n138.4 (B 151 – W 160) <46/5>

B 159: Black must be careful here. It is not correct to follow the known path of the "usual" Endgame on the left side.

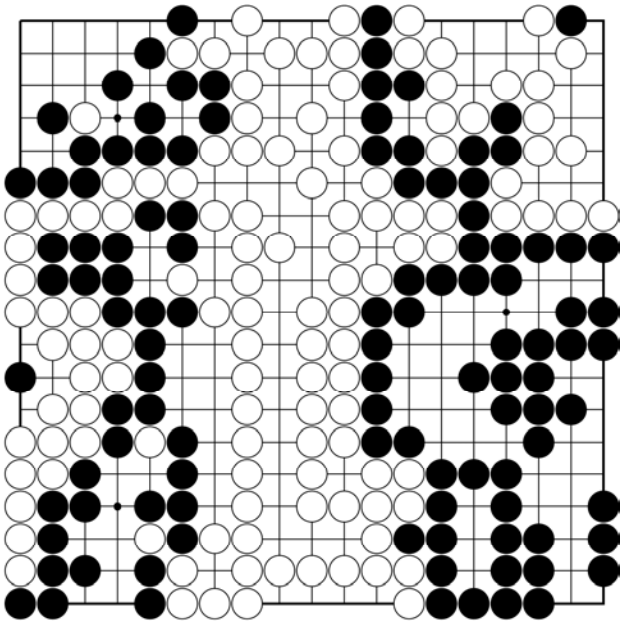
[see variation on page 93]



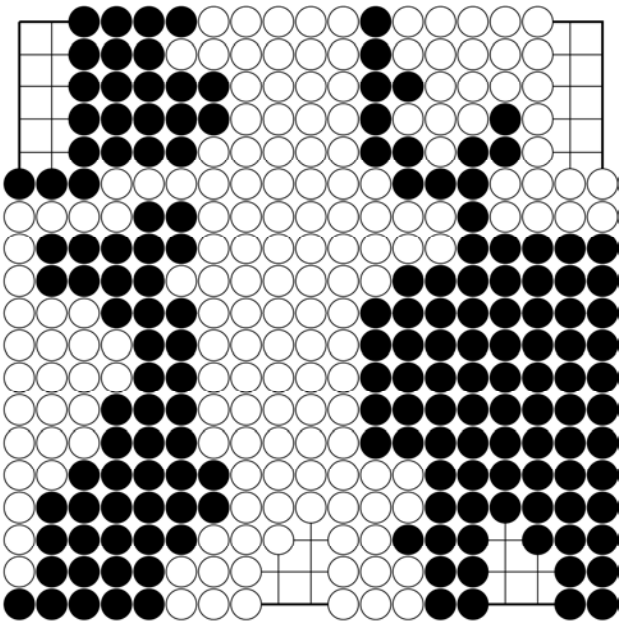
Dia. 127n138.5 (B 161 – B 169) <46/19>



Dia. 127n138.6 (W 170 – B 173) <46/37>



Dia. 127n138.7 "The End here"

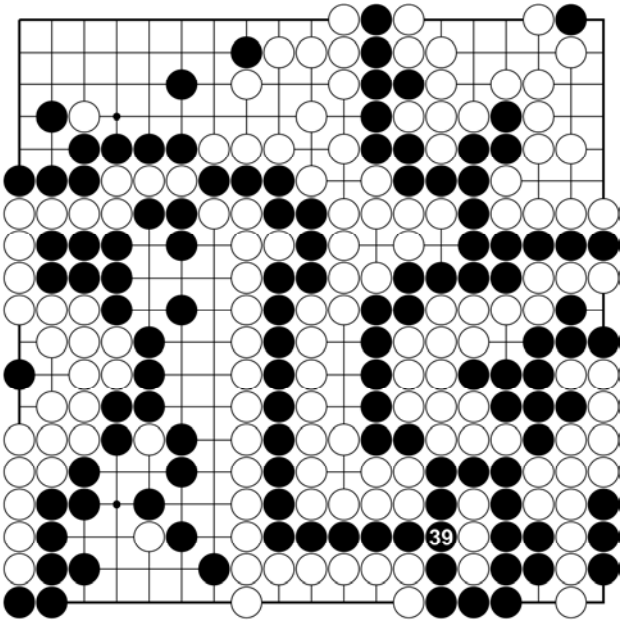


Dia. 127n138.8 "The Score"

White's mistake had cost her the game, but Black will not win either. A 1-point advantage compared to the main variation after the second Throw-in is not enough to turn the tables.

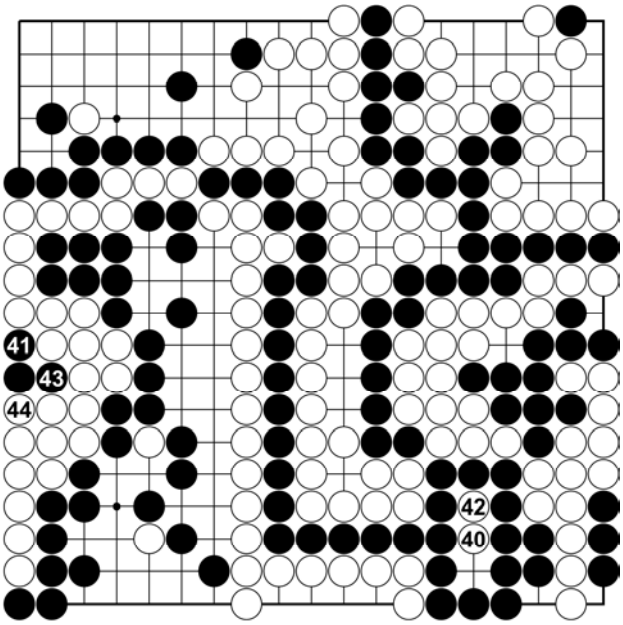
Jigo.

Sub² variation for B 139



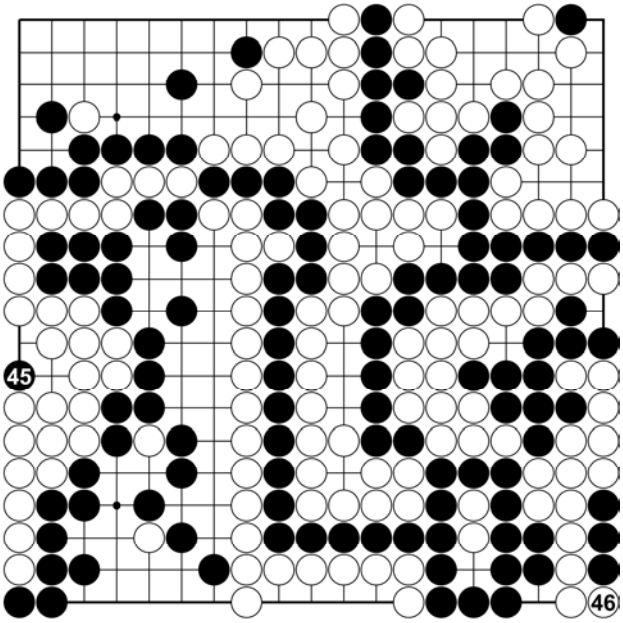
Dia. 127n139.1 (B 139) <21/3>

B 139: In contrast to what is known as "correct" sequence in the Weiqi FaYangLun, it is not correct to capture the three white stones.

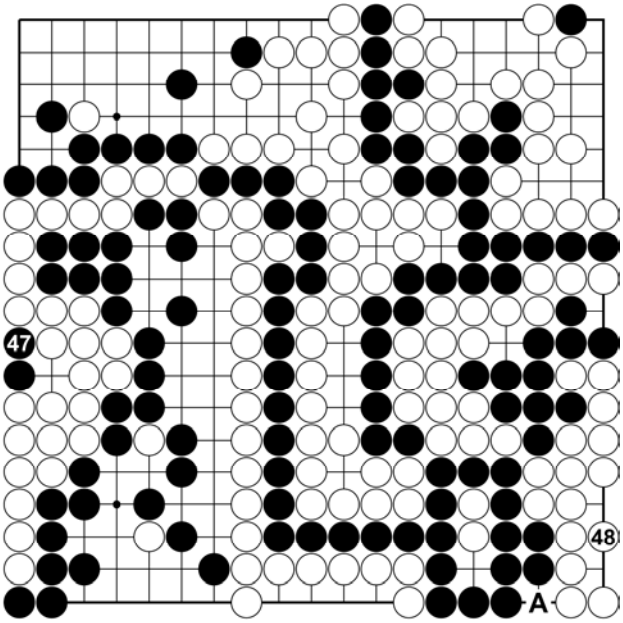


Dia. 127n139.2 (W 140 – W 144) <24/3>

W 142: The key move, taking an inner liberty first.



Dia. 127n139.3 (B 145 – W 146) <27/3>

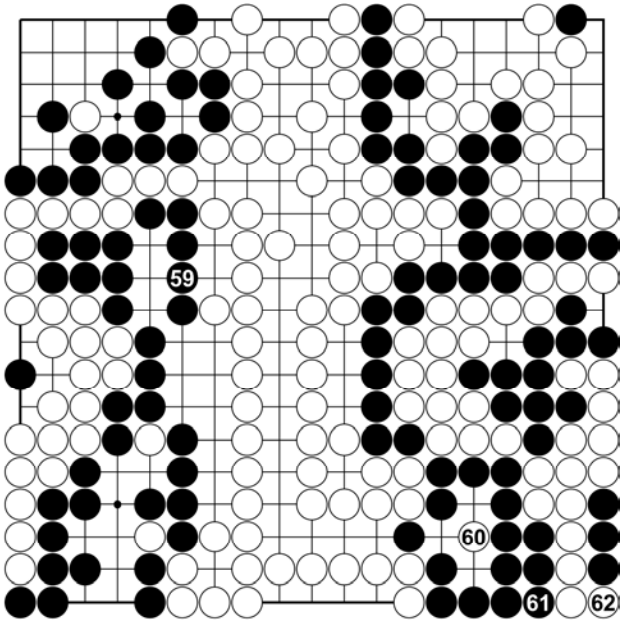


Dia. 127n139.4 (B 147 – W 148)

W 148: Black is one move too late. White lives in the corner, gets the whole right side and wins with ease. If Black plays **147** at **148**, White answers at **A** and captures a third black group.

White wins the game.

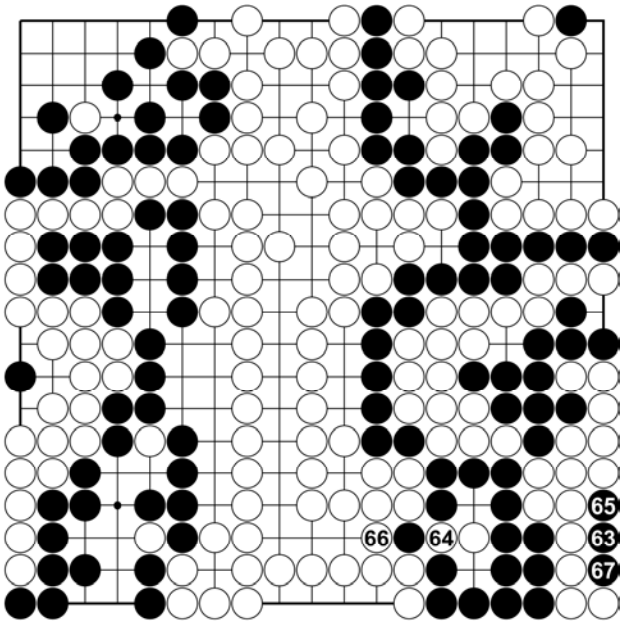
Sub³ variation for B 159



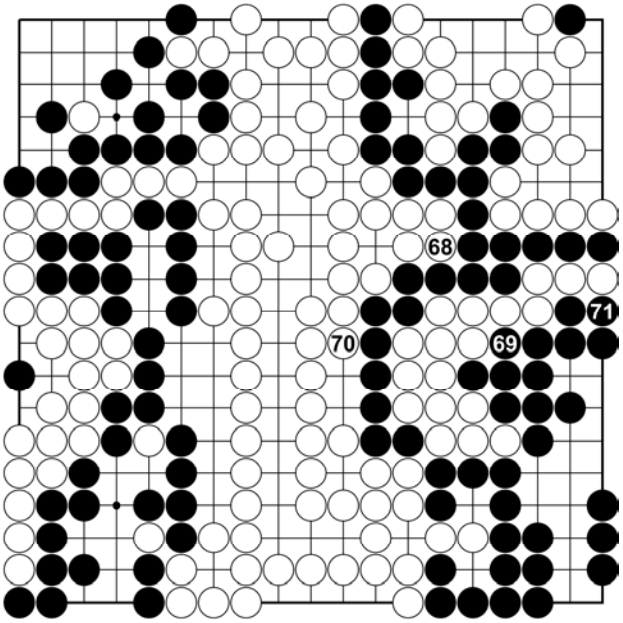
Dia. 127n159.1 (B 159 – W 162) <46/5>

B 159: It is a mistake to follow the known path here. This move saves only three points of territory, ...

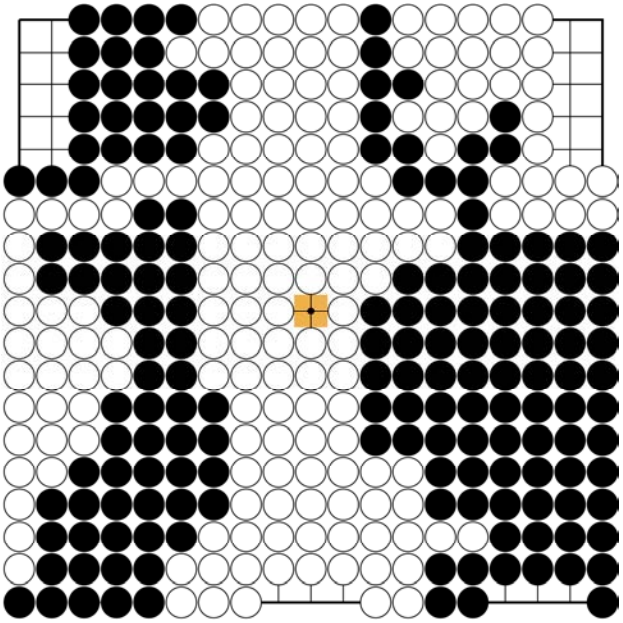
W 160: ... but White gets the well known 4-point advantage through this Placement in the lower right.



Dia. 127n159.2 (B 163 – B 167) <47/19>



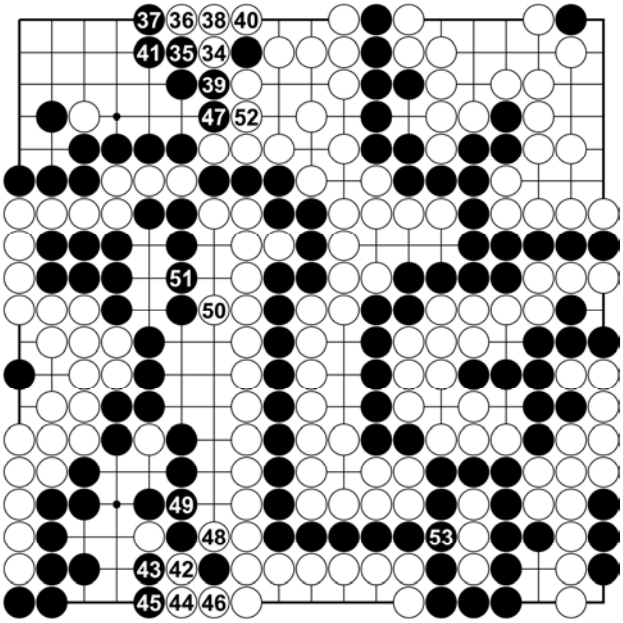
Dia. 127n159.3 (W 168 – B 171) <47/37>



Dia. 127n159.4 "The Score"

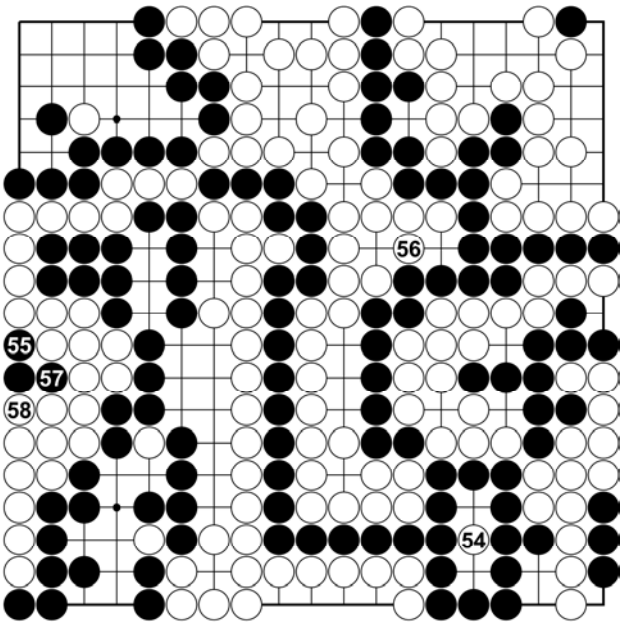
White wins by 1 point.

Sub variation for W 134

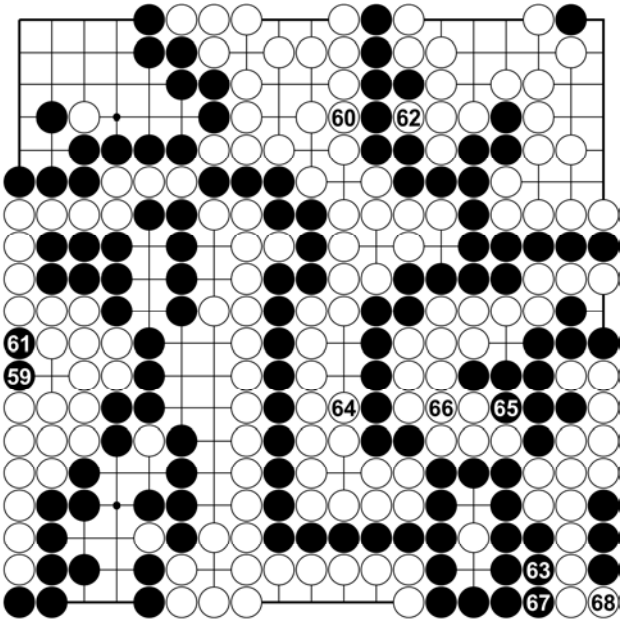


Dia. 19e134.1 (W 134 – B 153) <23/3>

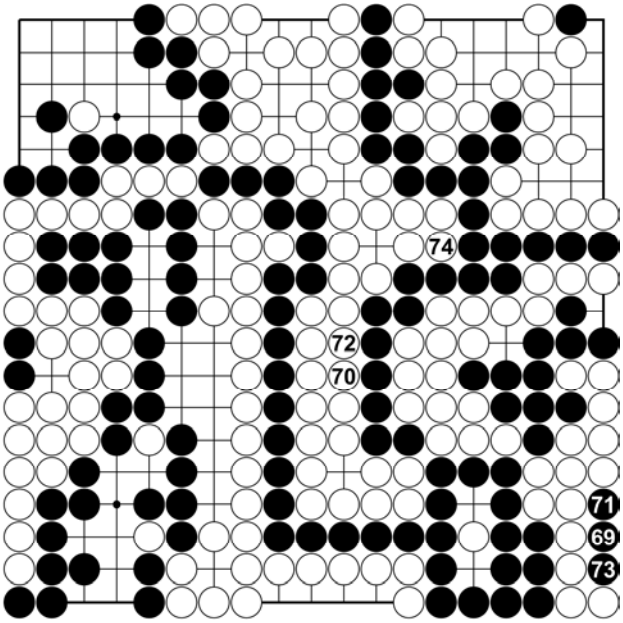
W 134: In the sequence that is shown as correct solution in the Weiqi FaYangLun Black gets the white lower right corner, White captures the black upper right group and nevertheless loses the game. As you will see, this outcome does not chance here.



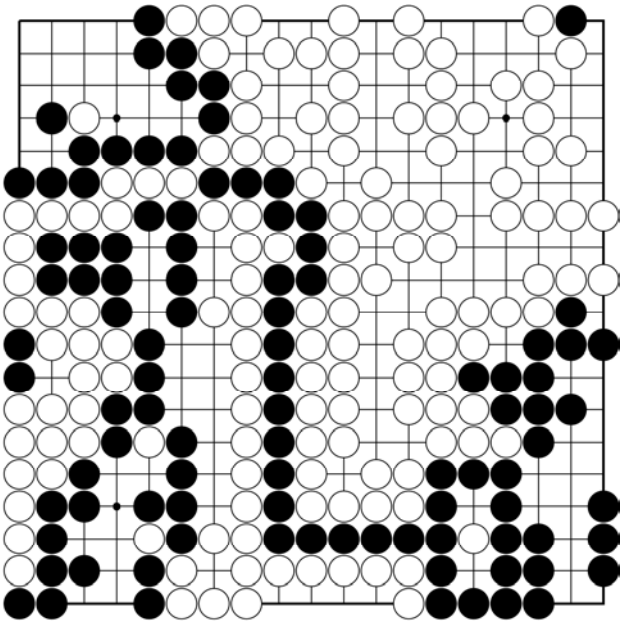
Dia. 19e134.2 (W 154 – W 158) <26/3>



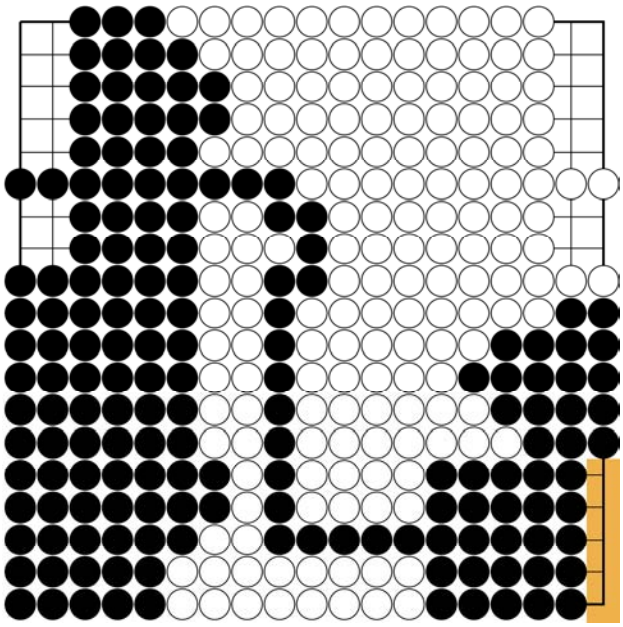
Dia. 19e134.3 (B 159 – W 168) <29/3>



Dia. 19e134.4 (B 169 – W 174) <59/17>



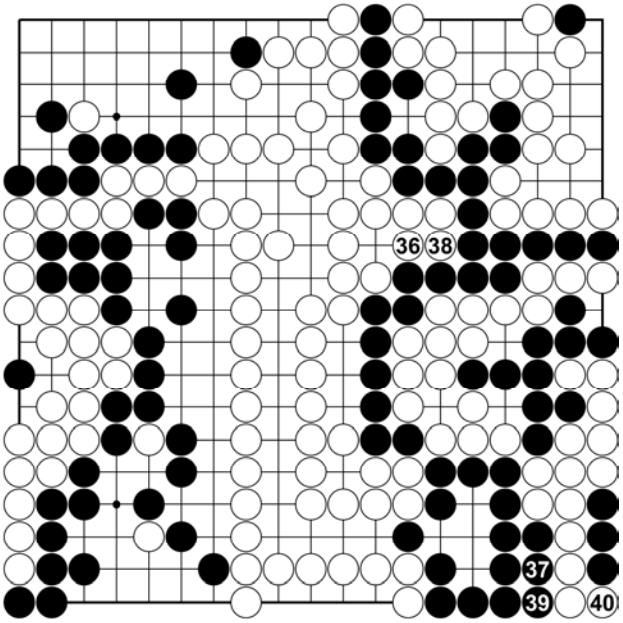
Dia. 19e134.5 "The End here"



Dia. 19e134.6 "The Score"

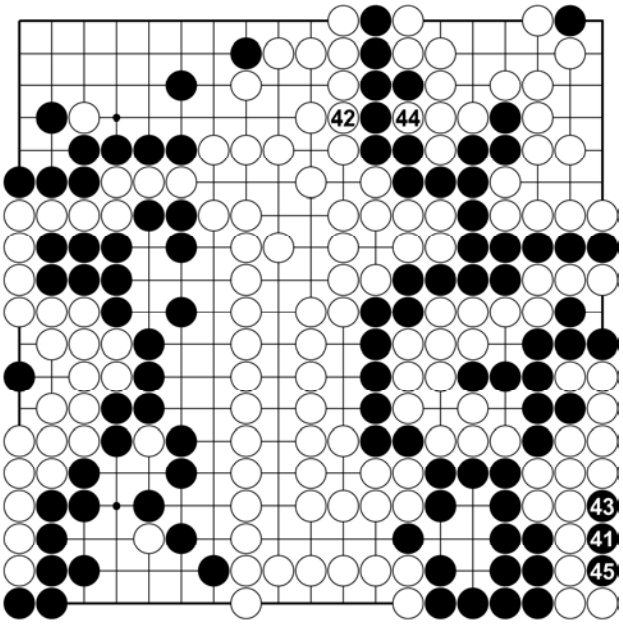
Black wins by 5 points.

Sub variation for W 136

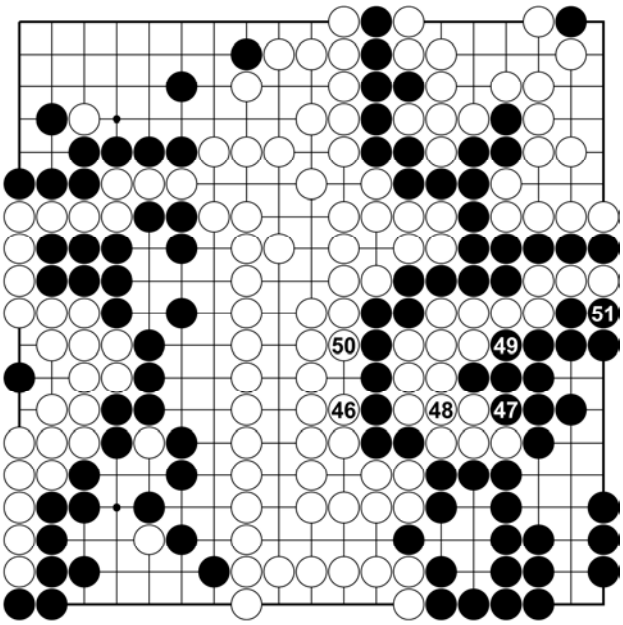


Dia. 19e136.1 (W 136 – W 140) <44/4>

W 136: In the Main Path variation for White **134** (is **136** here), White continues to occupy liberties of the black group in the upper right and nevertheless is one step too late.

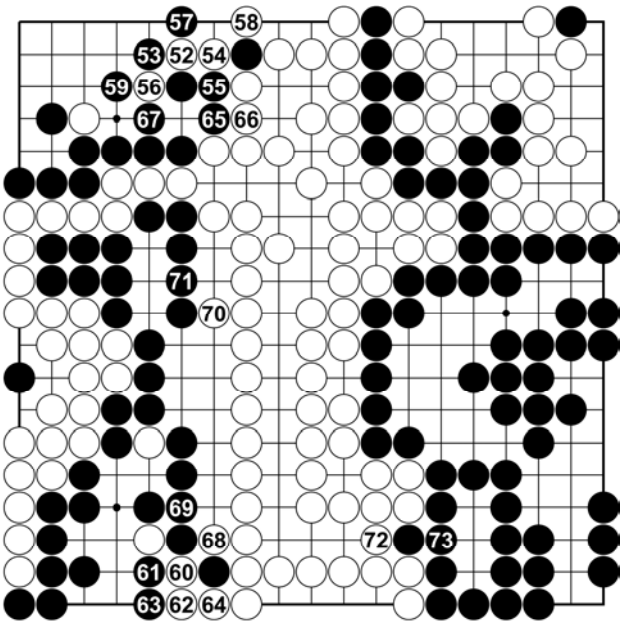


Dia. 19e136.2 (B 141 – B 145) <44/18>



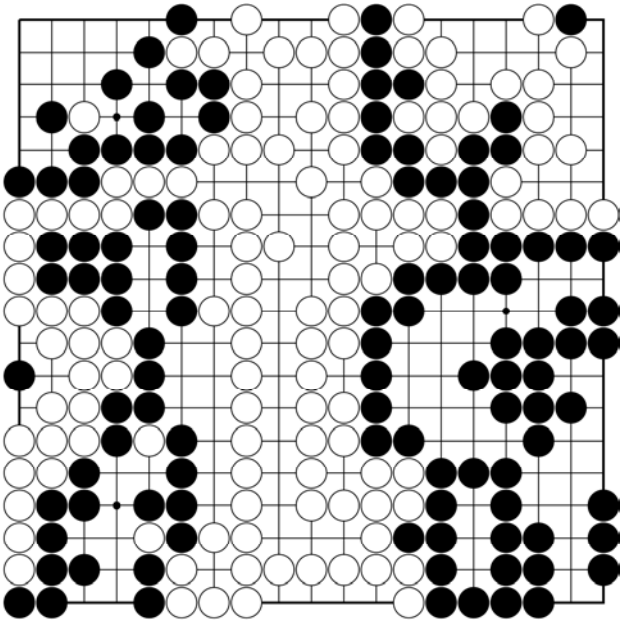
Dia. 19e136.3 (W 146 – B 151) <44/36>

B 151: What remains true here again, because Black takes the white stones off the board with this move.

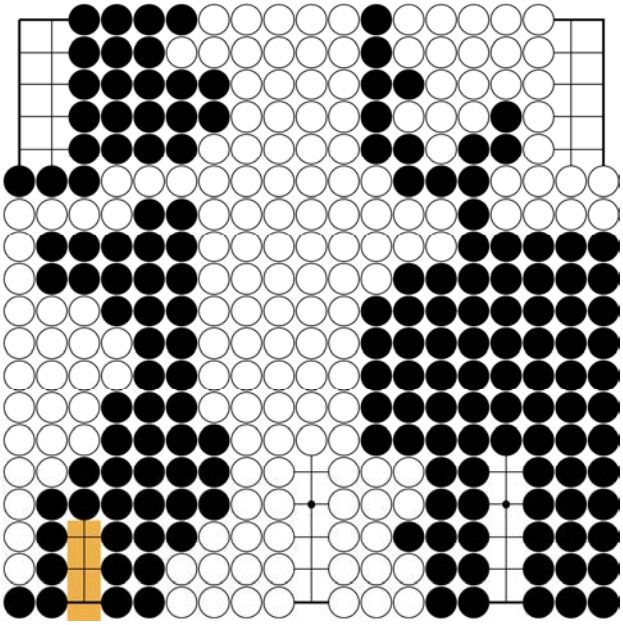


Dia. 19e136.4 (W 152 – B 171) <46/37>

W 152: White now starts the Endgame on the left side (and will lose as before).



Dia. 19e136.5 "The End here"

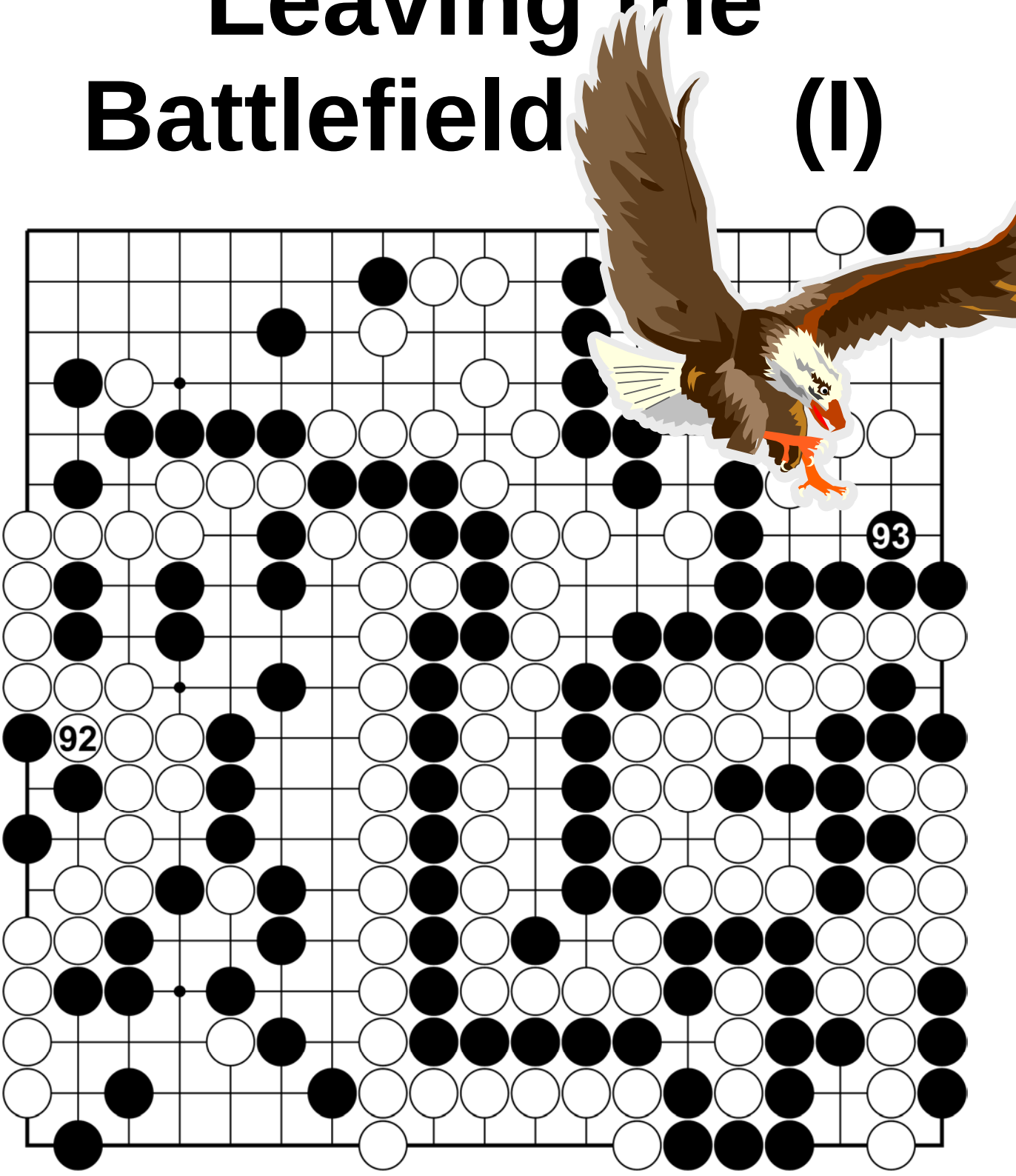


Dia. 19e136.6 "The Score"

Black wins by 3 points.

Igo Hatsuyoron, Problem 120

Leaving the Battlefield (I)



B 93 - too late

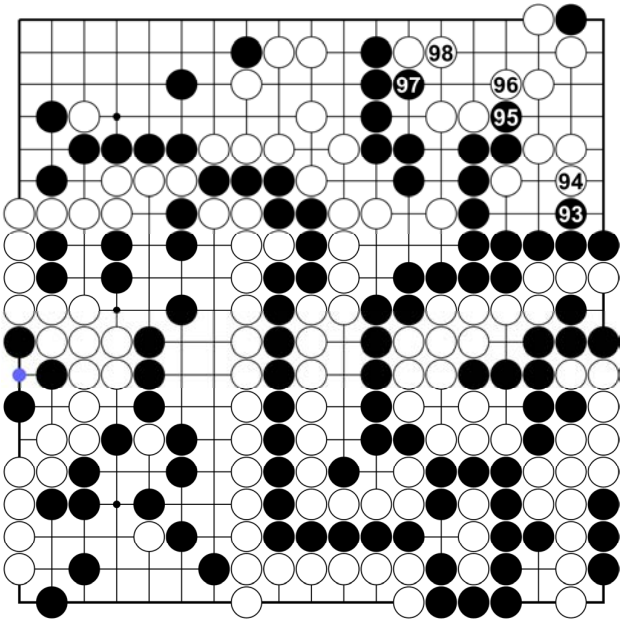
Summary

		Sub Variation	Result	see Page
W 94		Taking the Ko on the left side and ...		
	W 98	... resolving the Ko on the left.	B + 1	108
	W 98	... starting the upper left Endgame.	W +R	110
W 102		Cutting on the upper side.	B + 3	104
W 102		Connecting on the upper side.	B + 2	106

Variation for the Main Path	B + 1	101

Please take notice that the content of this chapter is based on our understanding at Amateur Kyu level only.

Sub Variation for Black 93



Dia. 19e93.1 (B 93 – W 98)

B 93: An idea of mine, coming into my mind during the discussions with Joachim Meinhardt. As stated in the "Questions" section (please refer to page 35), Black denies White from getting three points of territory here without hurting the number of liberties of his group.

W 94, 96, 98: Capturing the Ko on the left side could result in a "life-life" situation, where both the white group on the left and the black group in the upper right live.

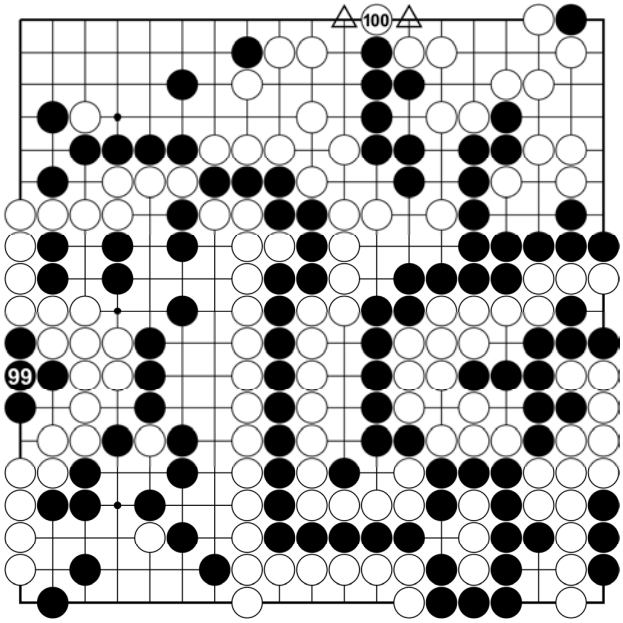
What we do not know with certainty is,

1. if this Ko capture would be an option for White to win the game and
2. – in addition – if White could afford not to resolve the Ko on the left with a second move there.

I am in fear that finding the answers will be a bit too advanced for someone on Amateur Kyu level.

For some results of our research:

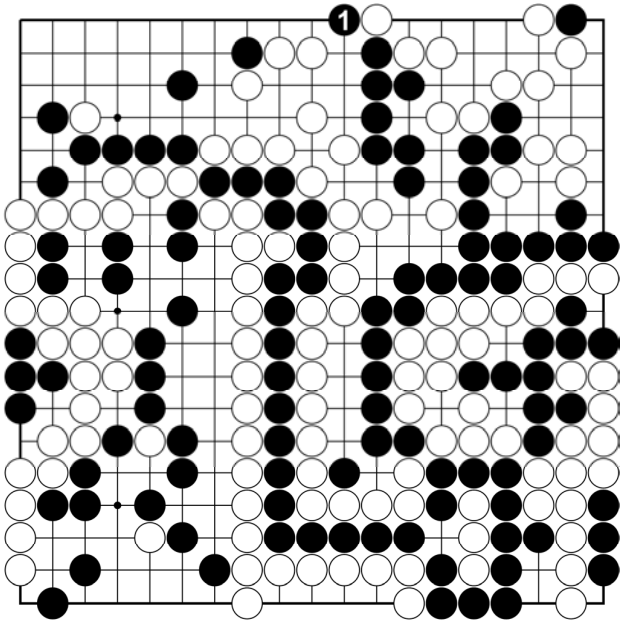
[see variation on page 108]



Dia. 19e93.2 (B 99 – W 100)

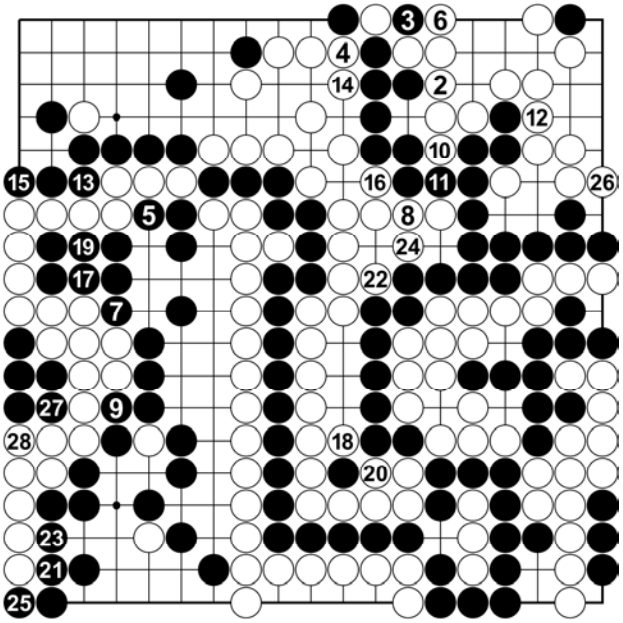
B 99: Black connects on the left, because playing at **100** would be Gote.

W 100: Now the question arises, if White will be able to keep the two marked points as territory, reducing the advantage of the black move at **93** to one point. To allow Black to play at this point would result in a 2-point loss for White.



Dia. 19e93.3 (B 101)

B 101: But as a matter of course Black wants more.



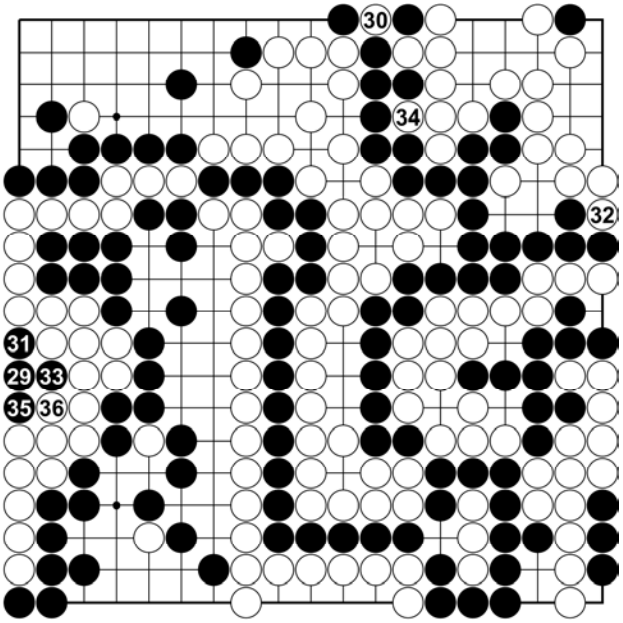
Dia. 19e93.4 (W 102 – W 128) *<17/1>*

W 102: Blocking solidly at **102** seems best for White. Other options would be cutting at **104**

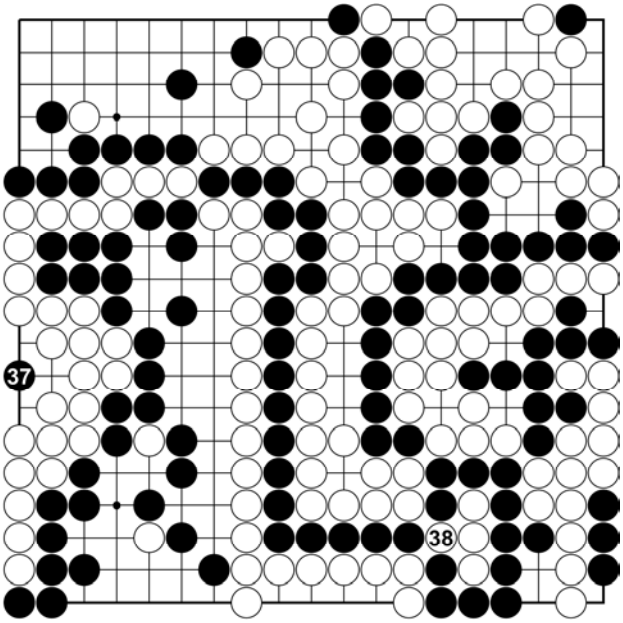
[see variation on page 104]

or connecting at **103**

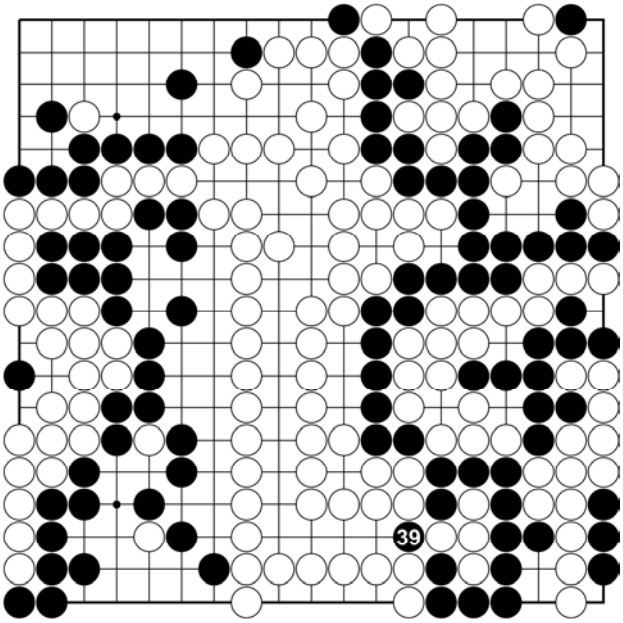
[see variation on page 106].



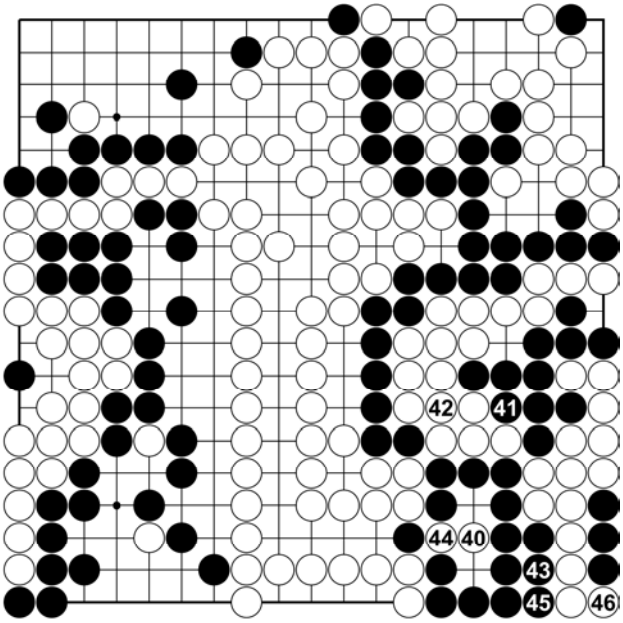
Dia. 19e93.5 (B 129 – W 136) *<22/1>*



Dia. 19e93.6 (B 137 – W 138) *<42/1>*

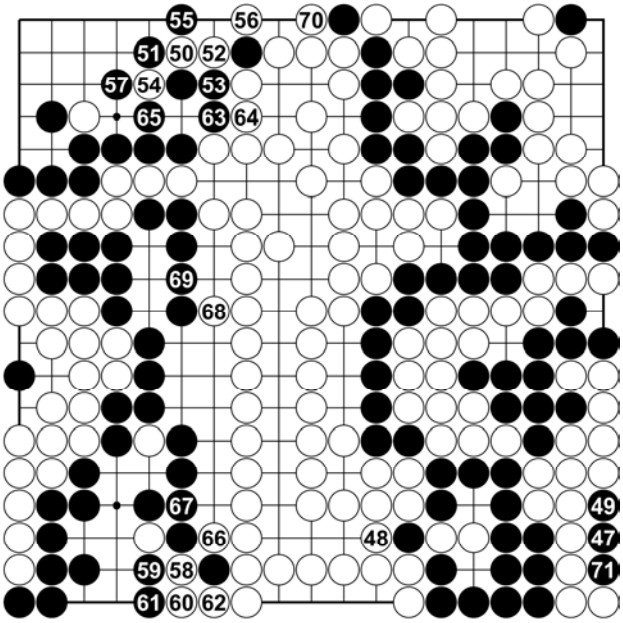


Dia. 19e93.7 (B 139) *<42/5>*

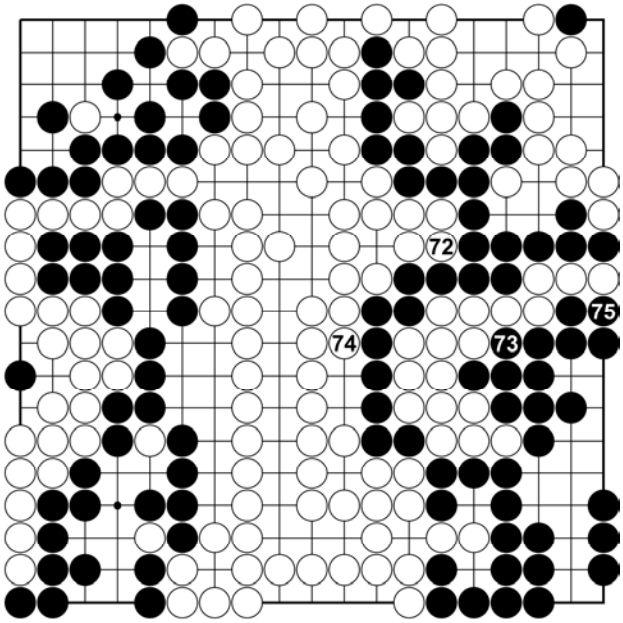


Dia. 19e93.8 (W 140 – W 146) <45/5>

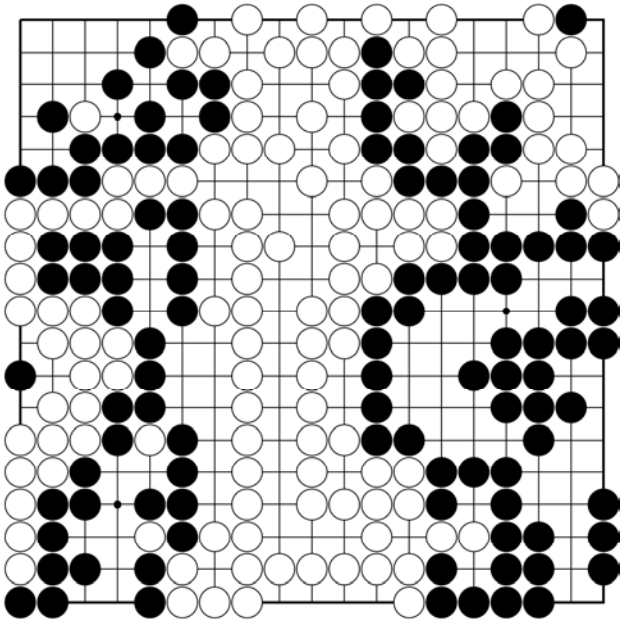
W 140: The black group in the upper right has seven liberties, so trying to start a Semeai there will be in vain.



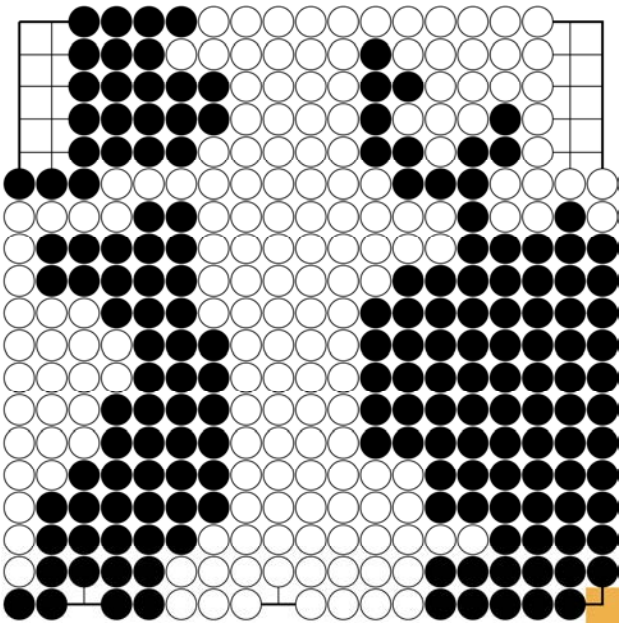
Dia. 19e93.9 (B 147 – B 171) <49/20>



Dia. 19e93.10 (W 172 – B 175) <49/38>



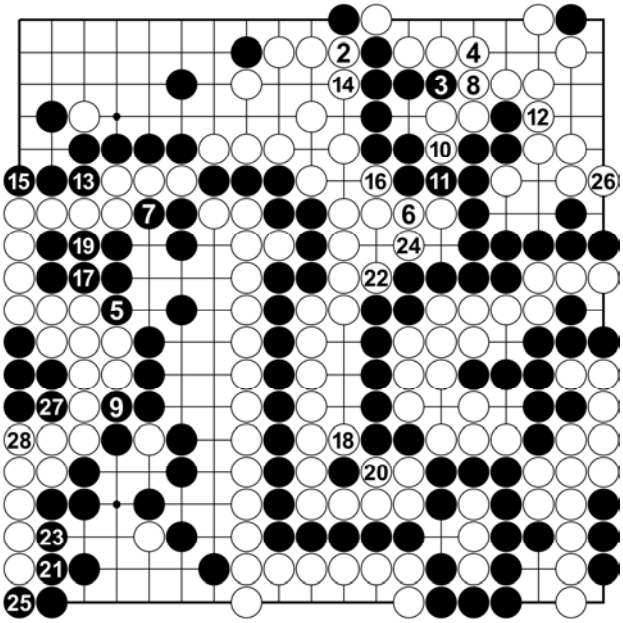
Dia. 19e93.11 "The End here"



Dia. 19e93.12 "The Score"

Black wins by 1 point.

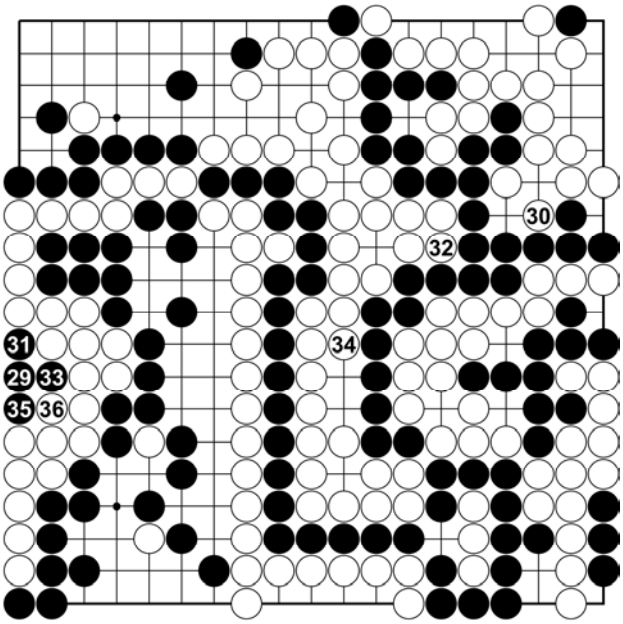
Sub² variation #1 for W 102



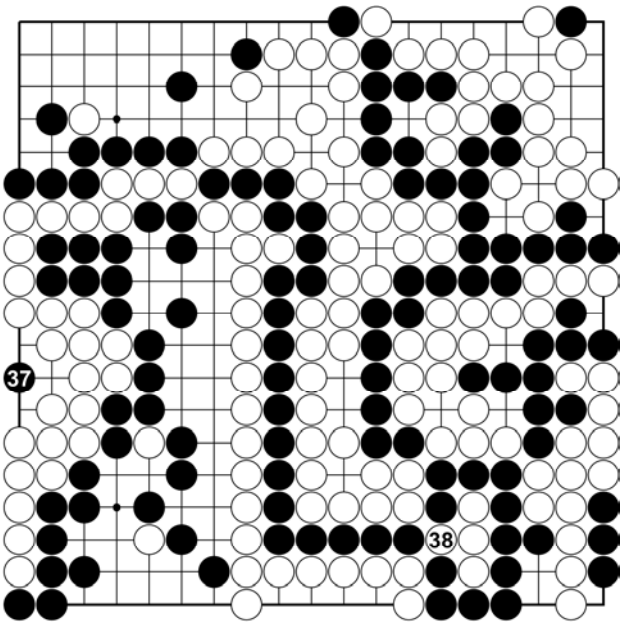
Dia. 93n102.1 (W 102 – W 128) <17/0>

B 103: Pushing once more into the white corner seems to be sufficient for Black.

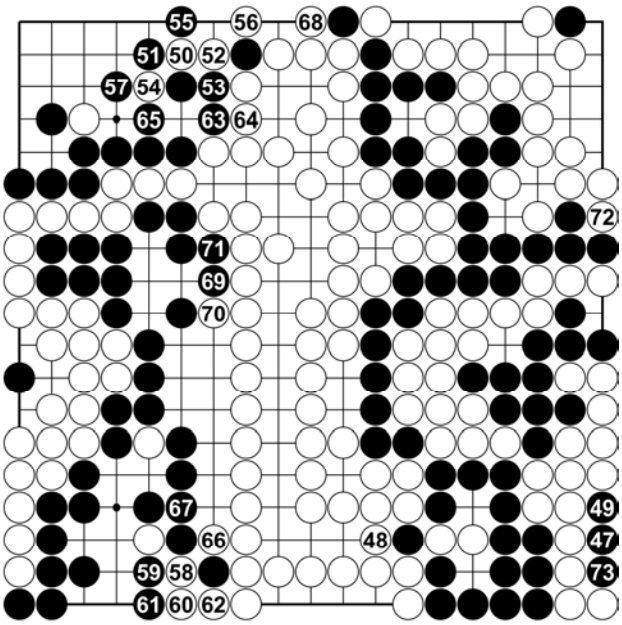
B 105: Black cannot capture two white stones with a move at **108**, because this would cost him one of his liberties.



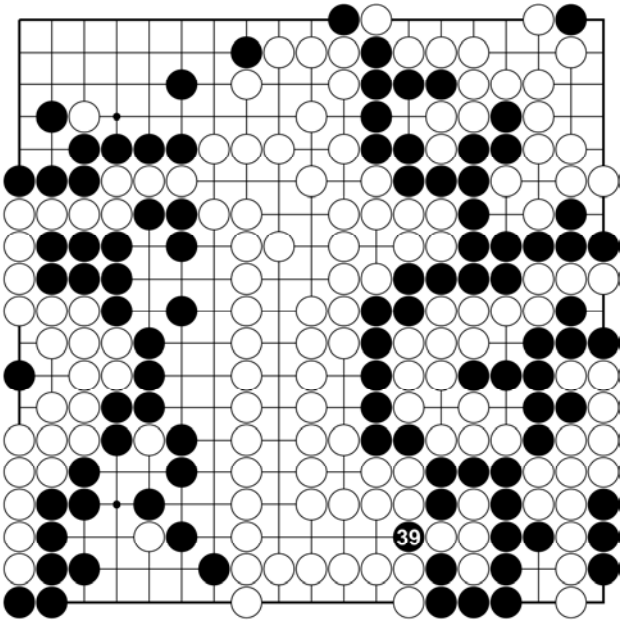
Dia. 93n102.2 (B 129 – W 136) <21/0>



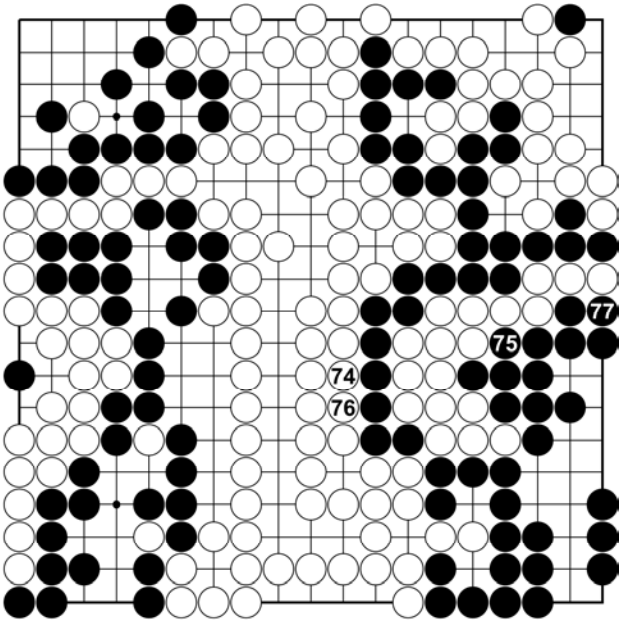
Dia. 93n102.3 (B 137 – W 138) <41/0>



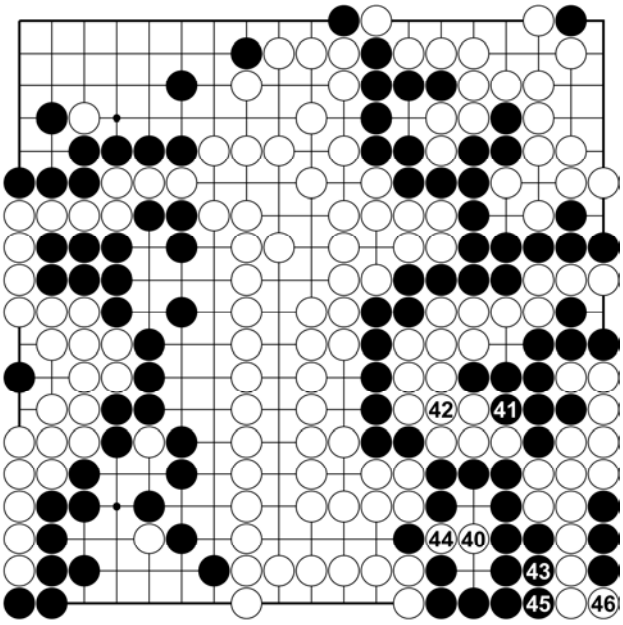
Dia. 93n102.6 (B 147 – B 173) <48/19>



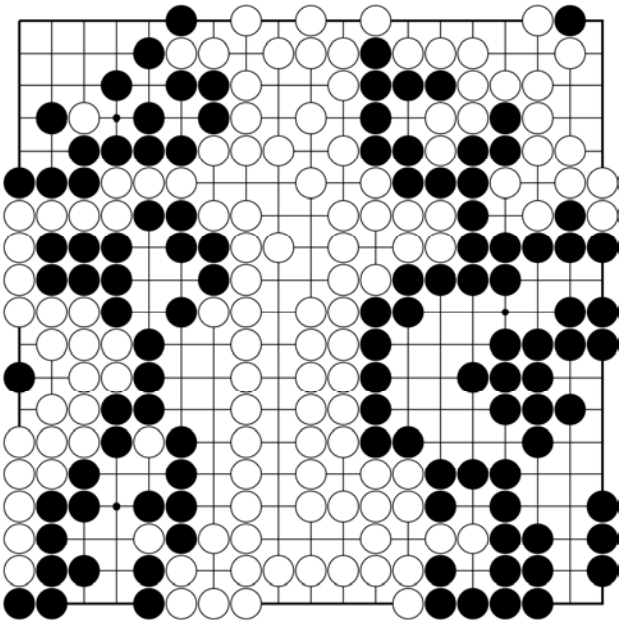
Dia. 93n102.4 (B 139) <41/4>



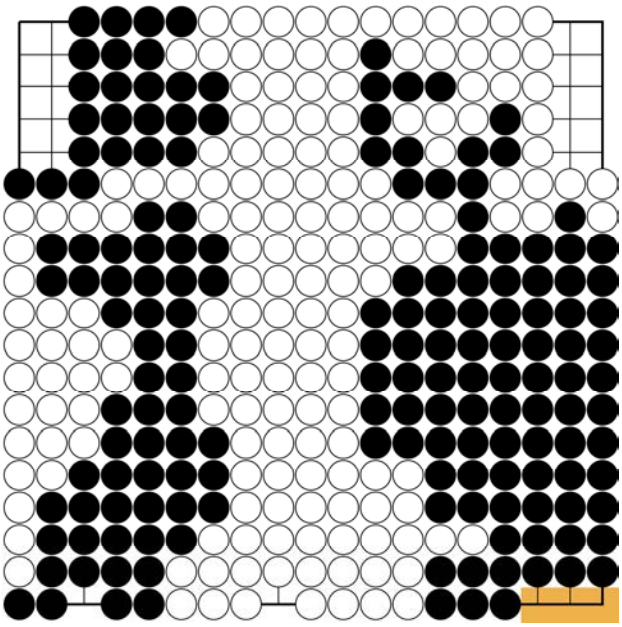
Dia. 93n102.7 (W 174 – B 177) <48/37>



Dia. 93n102.5 (W 140 – W 147) <44/4>



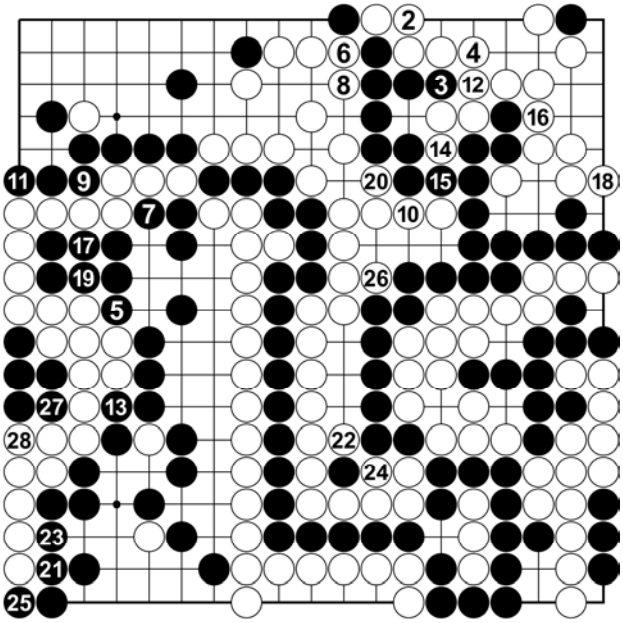
Dia. 93n102.8 "The End here"



Dia. 93n102.9 "The Score"

Black wins by 3 points.

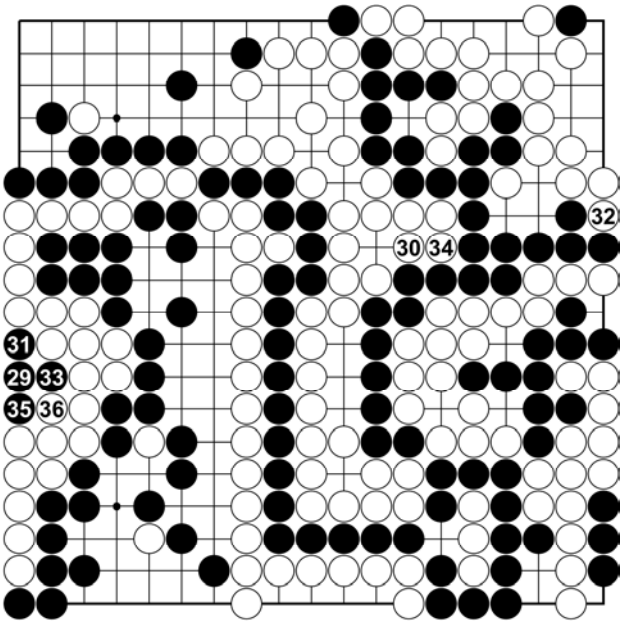
Sub² variation #2 for W 102



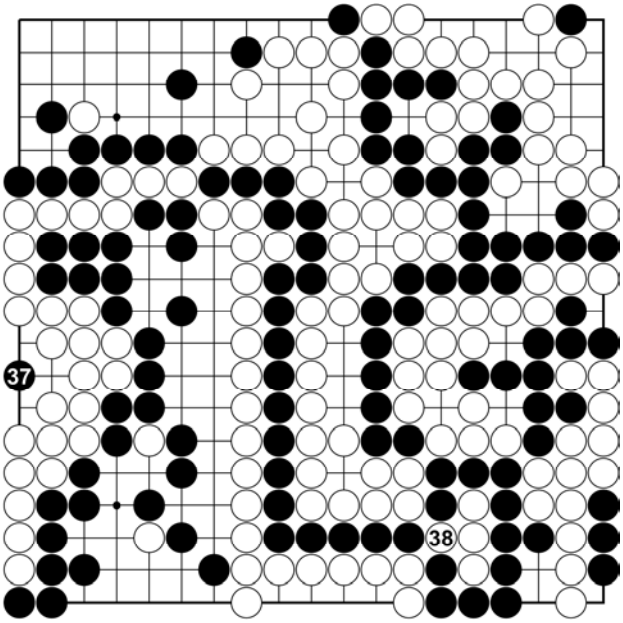
Dia. 93o102.1 (W 102 – W 128) <17/0>

W 102: White connects the stone in Atari, but has very bad shape here.

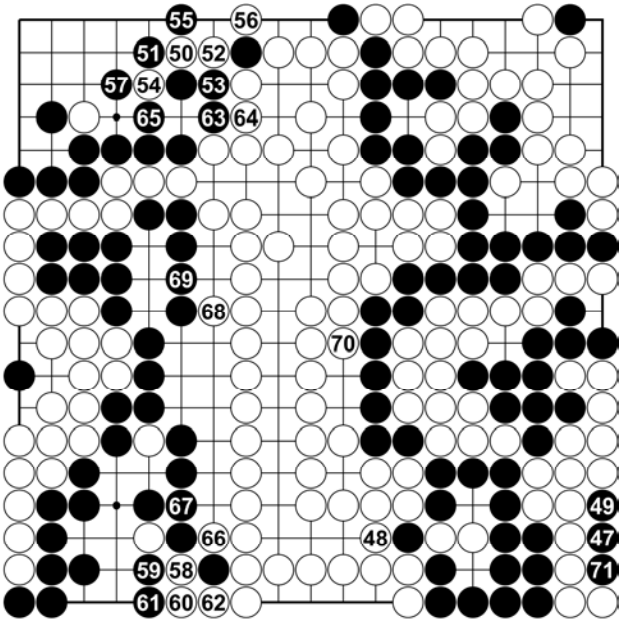
B 103: Again, pushing once more into the white corner seems to be sufficient for Black.



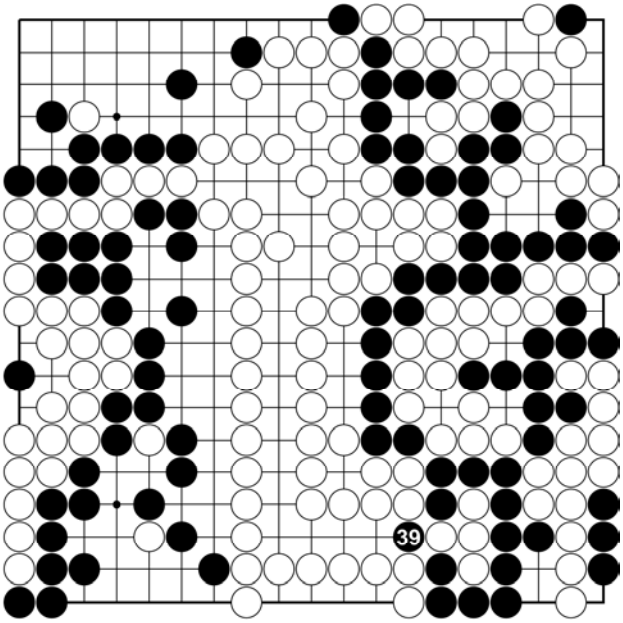
Dia. 93o102.2 (B 129 – W 136) <21/0>



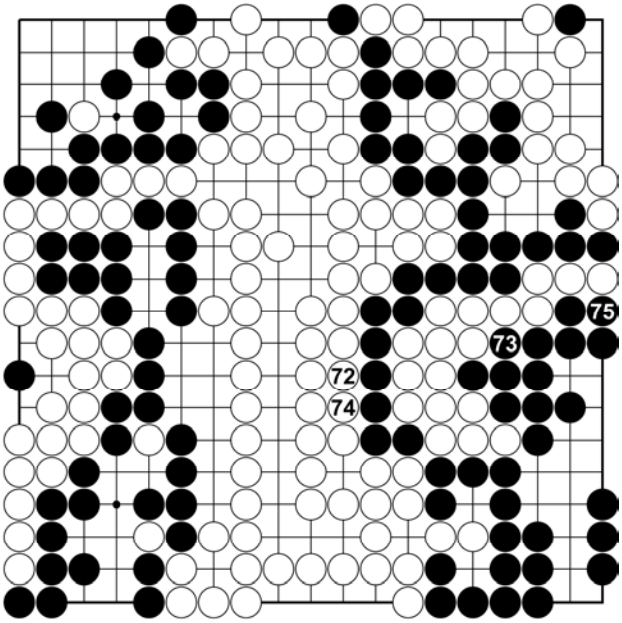
Dia. 93o102.3 (B 137 – W 138) <41/0>



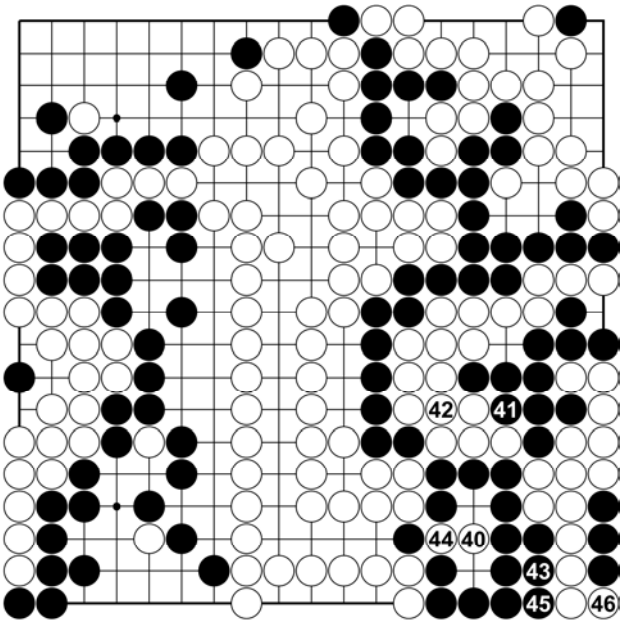
Dia. 93o102.6 (B 147 – B 171) <47/19>



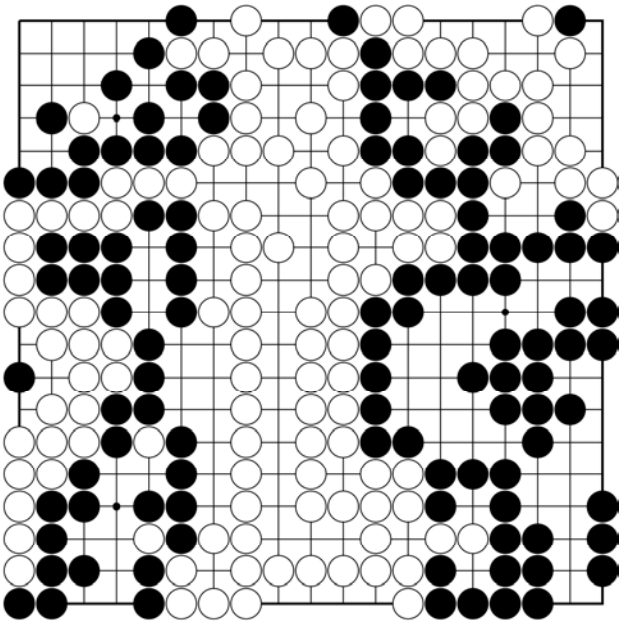
Dia. 93o102.4 (B 139) <41/4>



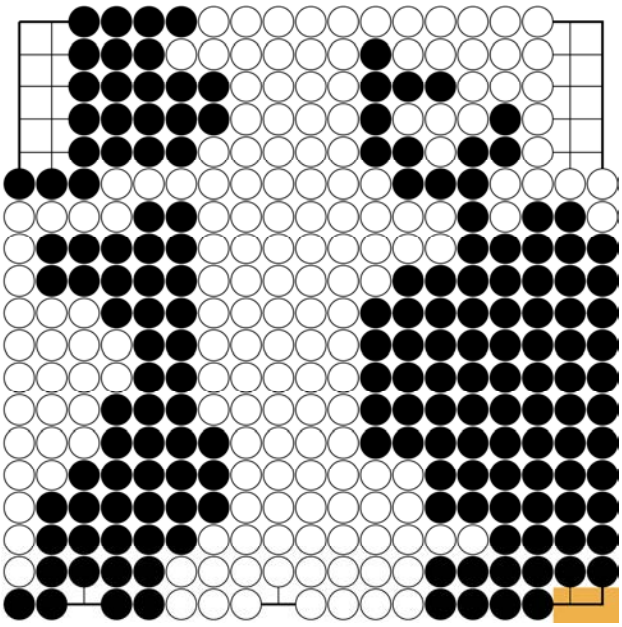
Dia. 93o102.7 (W 172 – B 175) <47/37>



Dia. 93o102.5 (W 140 – W 146) <44/4>



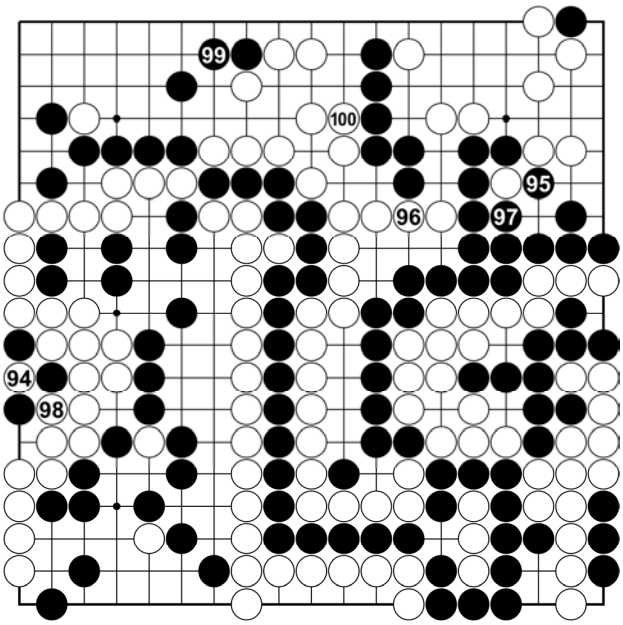
Dia. 93o102.8 "The End here"



Dia. 93o102.9 "The Score"

Black wins by 2 points.

Sub² variation for W 94



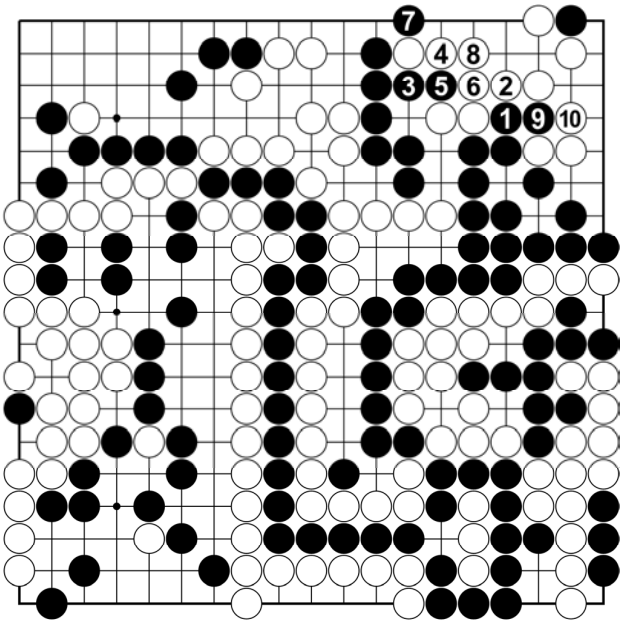
Dia. 93n094.1 (W 94 – W 100) <13/1>

W 94: Capturing the Ko on the left side could result in the "peaceful" variation shown above, in which both sides live.

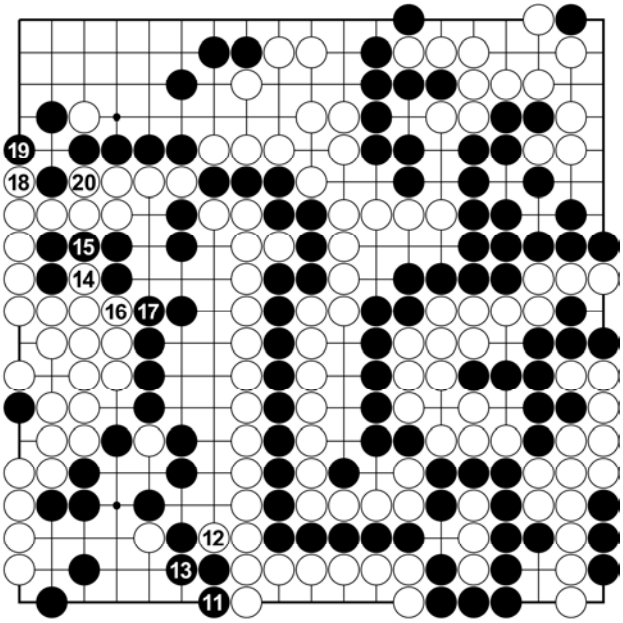
W 98: But White cannot afford to be so kind resolving the Ko, because Black will probably win the game, as shown hereafter.

[see variation on page 110]

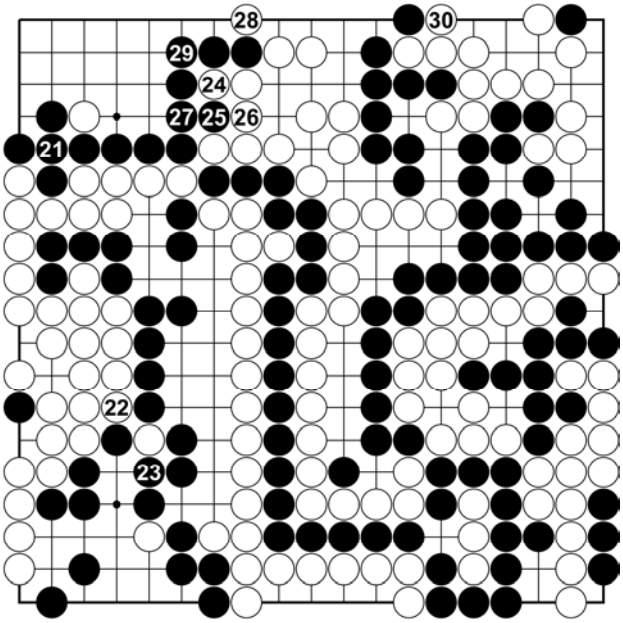
B 99: The biggest point on the board and Sente. This move threatens to reduce the white group in the centre to one eye, thus forcing White to capture the string of black stones, to resolve the Seki in the lower right and to lose the game.



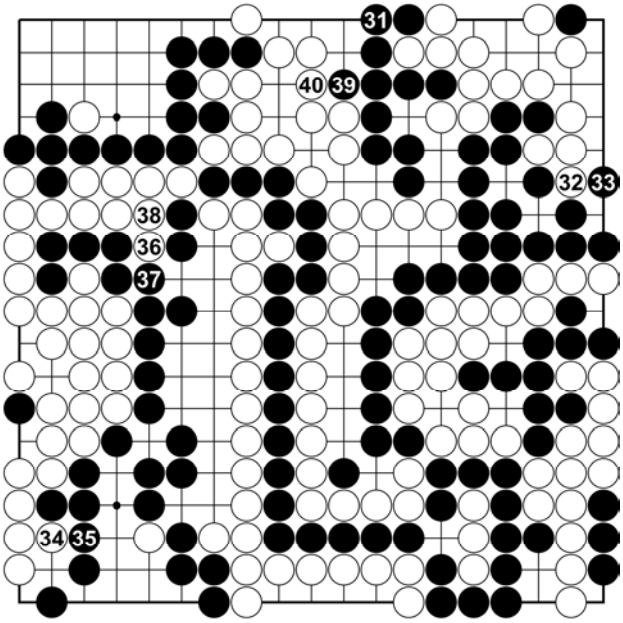
Dia. 93n094.2 (B 101 – W 110)



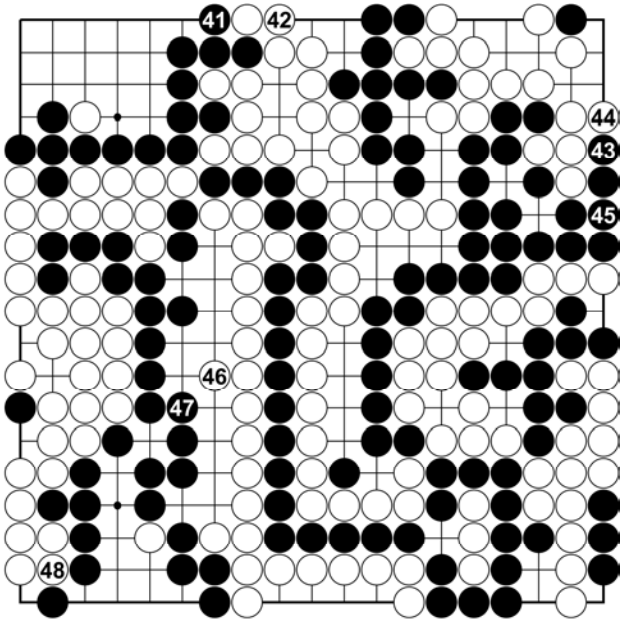
Dia. 93n094.3 (B 111 – W 120)



Dia. 93n094.4 (B 121 – W 130) *<13/2>*

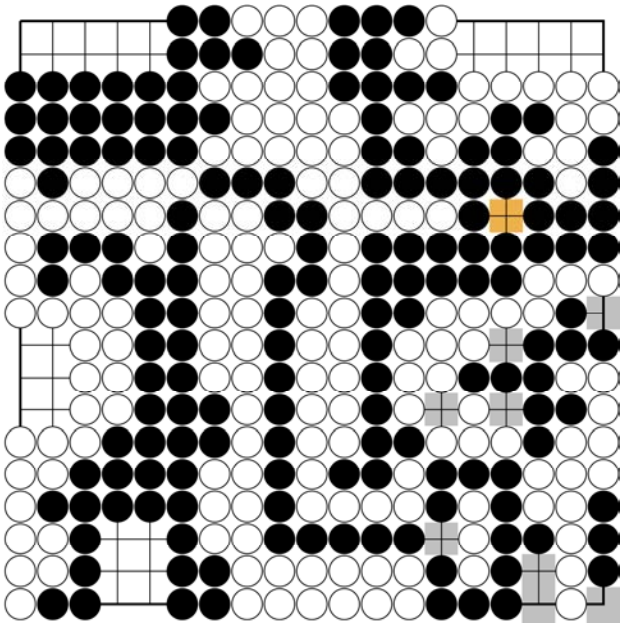


Dia. 93n094.5 (B 131 – W 140)



Dia. 93n094.6 (B 141 – W 148)

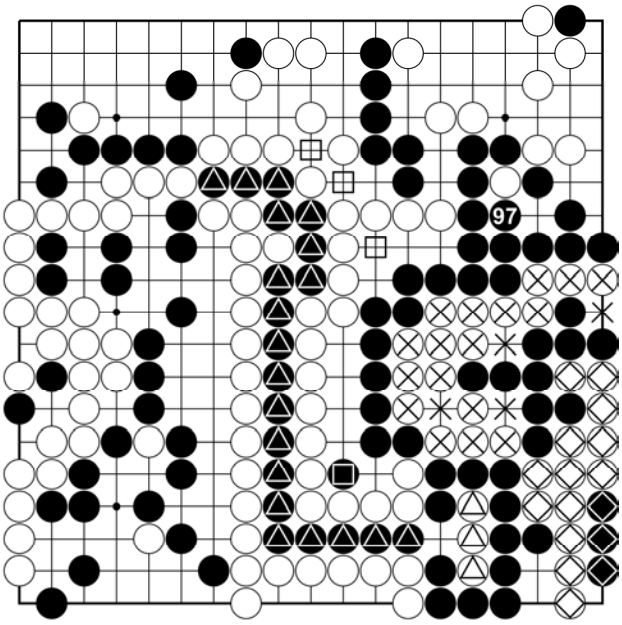
I apologize for the amateurish idea for the Endgame above, but I did not find any sequence that lost Black the game.



Dia. 93n094.7 "The Score"

Black wins by 1 point.

Now let us return to the beginning of this sub² variation.



Dia. 93n094.8 "Black lives in the upper right"

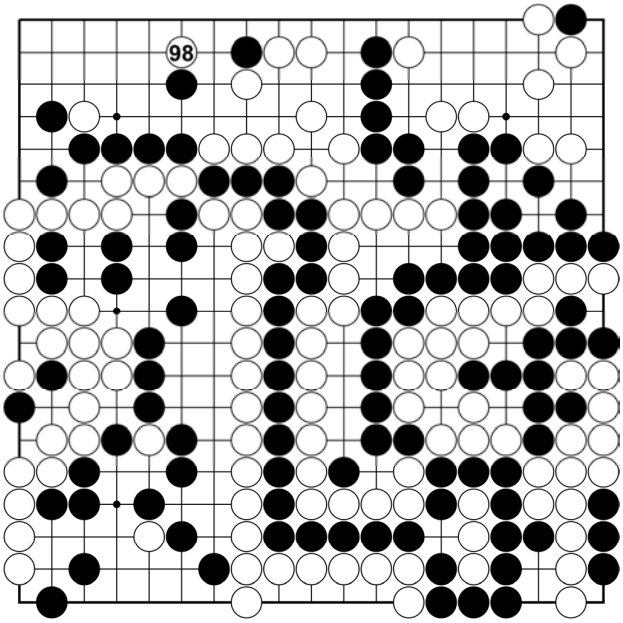
B 97: It is a very astonishing aspect of this problem that living with the group in the top right without having the Seki in the lover right quadrant of the board resolved does not profit Black. Compared to the Main Path:

1. Black will not play additional 2 + 4 + 1 = 7 stones into the Nakade on the left, which will be captured by White.
2. White will not capture the string of 20 black stones in the centre and not get 18 points of territory there (marked with triangles). Black will not capture 4 white stones in return and get 1 stone recaptured.
3. White will not capture 3 black stones in the lower right corner. Black will not capture 14 white stones there (marked with diamonds).
4. The 17 white stones in the middle right will not be black prisoners and 4 liberties of these stones will not be black territory (marked with crosses).
5. White will not be able to get some 5 points in the centre (marked with squares).

That results in 7 + 20 + 18 + 1 + 3 + 5 = 54 points not got by White and 4 + 14 + 14 + 17 + 17 + 4 = 70 points not got by Black.

So Black is approximately 25 points behind from the start here. The only place on the board, where Black could take compensation for this disadvantage, is the top left corner. It is a must for Black to prevent that white Endgame there.

If White would play there first, Black will not have any chance of winning.



Dia. 93n094.9 (W 98)

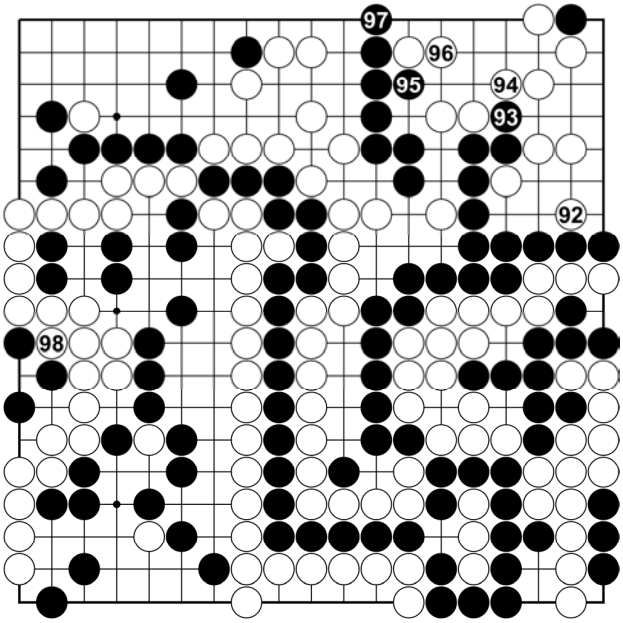
W 98: So White will not resolve the Ko in the left side, but play the Endgame in the upper left.

This Ko is a very asymmetrical one in my opinion. Black will have no chance of winning it.

Black will have to find Ko threats big enough to compensate for that 25-points-disadvantage, while White needs only about 5 additional points to win the game. That is because the best Black can get by connecting the Ko is a return to the sequence of the Main Path with White capturing the black string of stones in the centre.

White will win the game.

Sub² variation for W 92



Dia. 93n094.10 (W 92 – W 98)

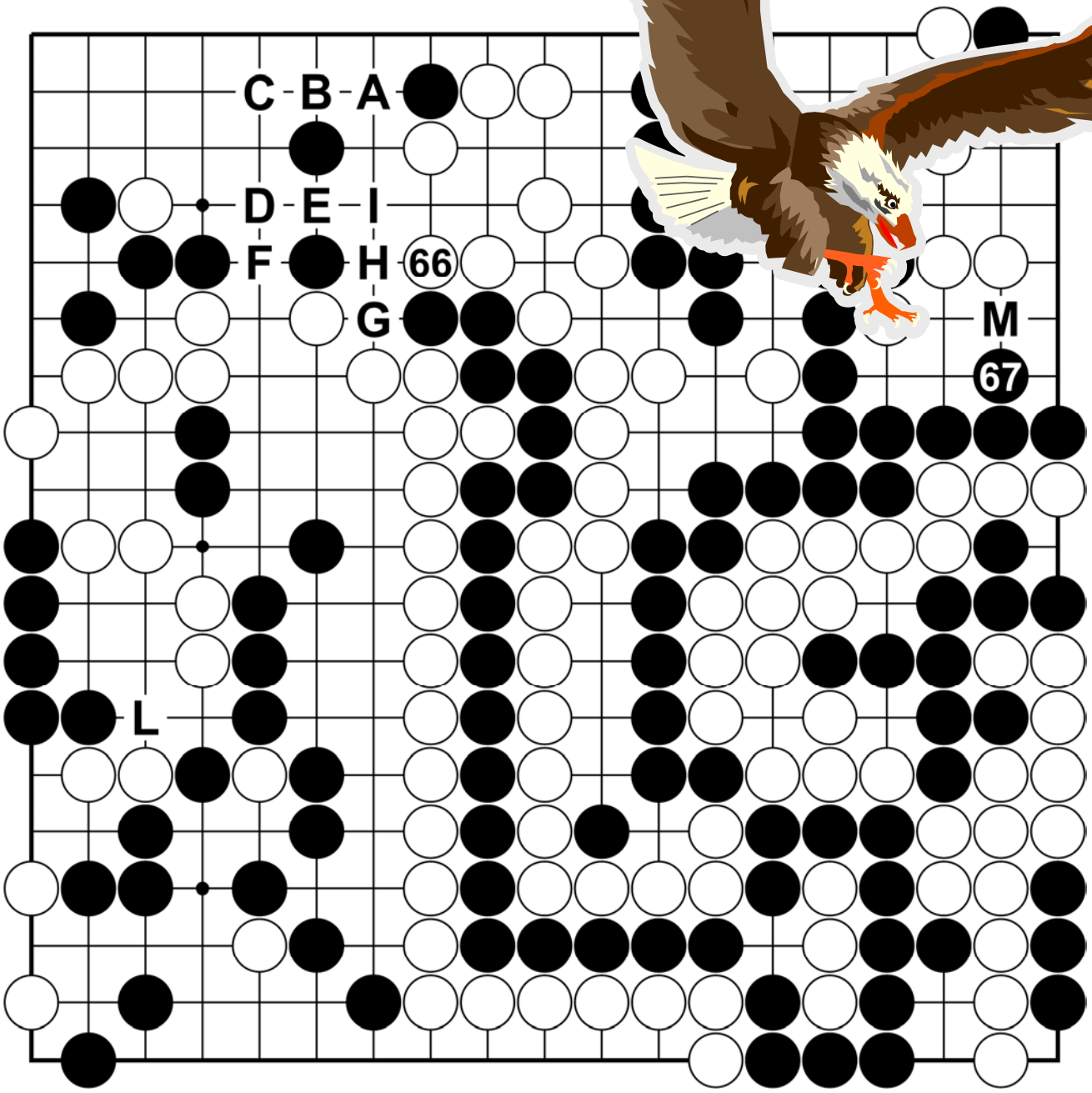
Above all, White could end all the discussion about that black "bad-shape"-move with **93** by changing the order of moves.

She simply plays on that point by her own with her move **92** and may return to the Atari on the left with **98**.

So the question arises whether it would be possible for Black to play that "bad-shape"-move earlier.

Igo Hatsuyoron, Problem 120

Leaving the Battlefield (II)



B 67 - what will White do now ?

Summary

		Sub Variation	Result		see Page
		Without the sacrifice of B 19 * ⇩			
B 73		Returning to the Main Path.	W + 5	W + 4	117
B 73		Saving the group on the left side.	W + R	W + R	119
W 76		Starting the Endgame in the upper left.	B + 1	B + 2	120
	W 86	Tenuki to play in the centre.	B is ≈ 6 better		123
	W 88	Tenuki to play in the centre.	B is 4 better		123
	W 90	Tenuki to play in the centre.	no difference		123
	W 92	Tenuki to play in the centre.	no difference		123
	W 94	Tenuki to play in the centre.	no difference		123
	B 121	Following the Main Path.	± 0	B + 1	124

Variation for the Main Path (White's follow-up move = "**L**")	B + 6	B + 7	115

*) At the end of the countable variations here the Seki in the lower right quadrant of the board will remain unresolved. In this case the second Throw-in of **B 19** may perhaps turn out as an unnecessary sacrifice of 1 point.

Research on the "Bad-Shape" Move B 67 (White's follow-up move = "**H**")	Black wins	126

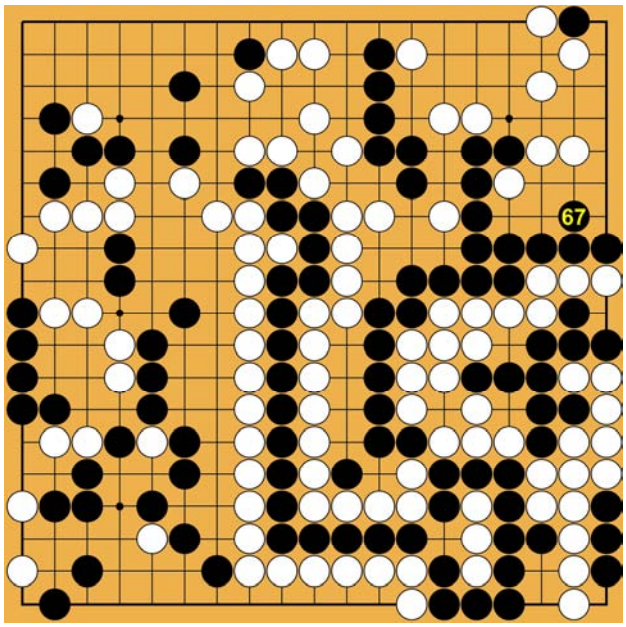
In previous chapters you can find:

Some variations after White's follow-up move "**F**"	Black wins	15
Explanations on White's follow-up move "**M**"	Black wins	14

I'm sorry, but variations for White's follow-up moves **A**, **B**, **C**, **D**, **E**, **G**, and **I** are not available yet.

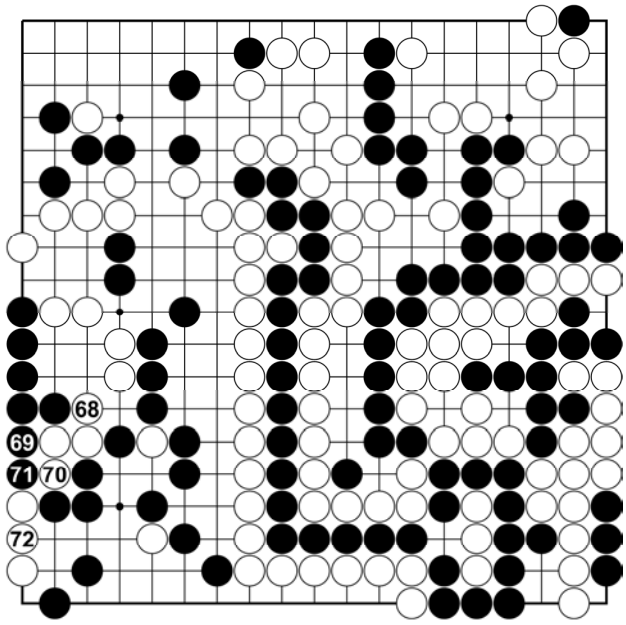
Please take notice that the content of this chapter but the "Sub² variation for W 76" is based on our understanding at Amateur Kyu level only.

Sub variation for B 67



Dia. 19e67.1 (W 68 – W 72)

B 67: This seems to be the last possible moment to play that "bad shape"-move in the upper right before action starts on the left side of the board.



Dia. 19e67.2 (W 68 – W 72)

W 68: White starts the "usual" sequence on the left side, because answering immediately in the top right will lose White the game, as we have seen already (please refer to page 101).

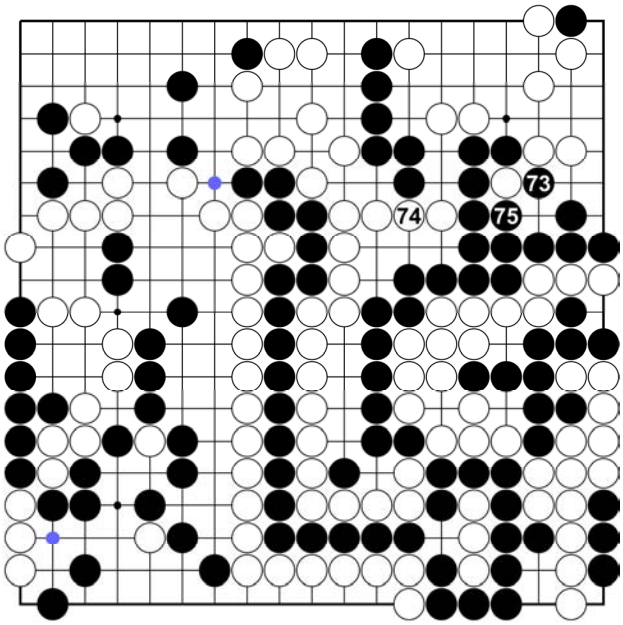
Update 2009:

To start attacking the black stones on the left with **68** is alternative "**L**" of the research on my "bad-shape" move.

[please refer to page 126]

In the meantime we found that a white answer in the top left corner would probably be much stronger.

[please refer to page 15]



Dia. 19e67.3 (B 73 – B 75) *<2/1>*

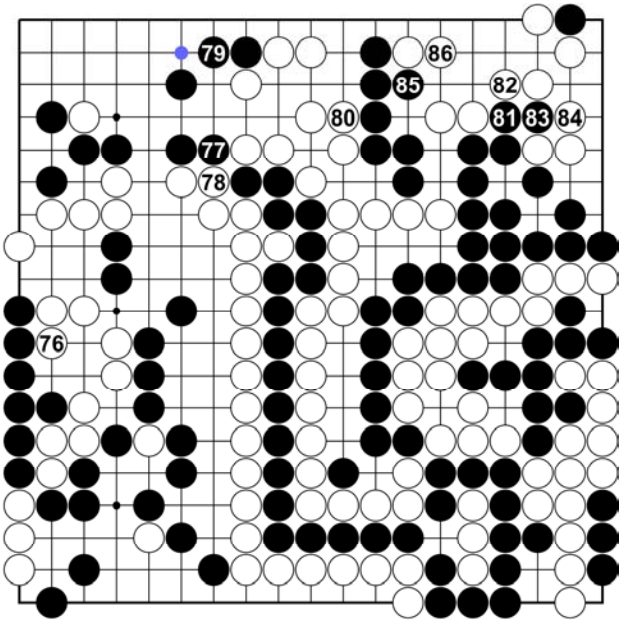
B 73: Black now takes the opportunity to live in the top right.

Black will not be successful if he returns to the Main Path here.

[see variation on page 117]

Saving the stones on the left may look big, but will lose the game for Black.

[see variation on page 119]



Dia. 19e67.4 (W 76 – W 86)

W 76: White captures the black group.

But it would be better to start the Endgame in the top left at **79** instead.

[see variation on page 120]

Yamada Shinji's Tsuke is not possible here, because the surroundings are far more open than in the Main Path.

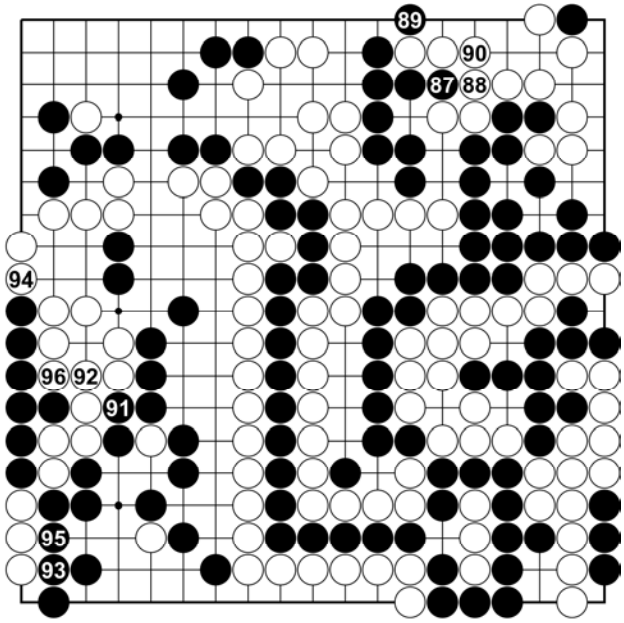
[see variation on page 122]

B 77, 79: Black answers in the top left, getting points while threatening the second eye of the white centre group.

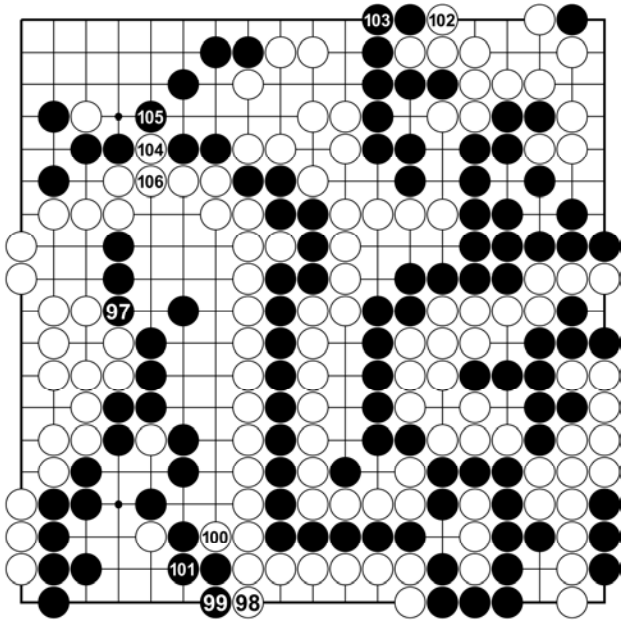
B 81: What follows is an amateurish idea of the Endgame. Black seems to be about five points ahead.

Update 2009:

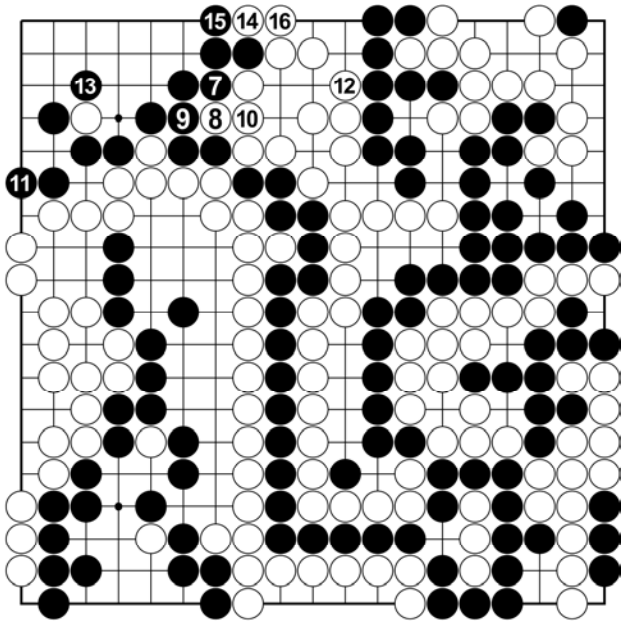
B 85: A Hasami-Tsuke at 86 will give Black an advantage of one point.



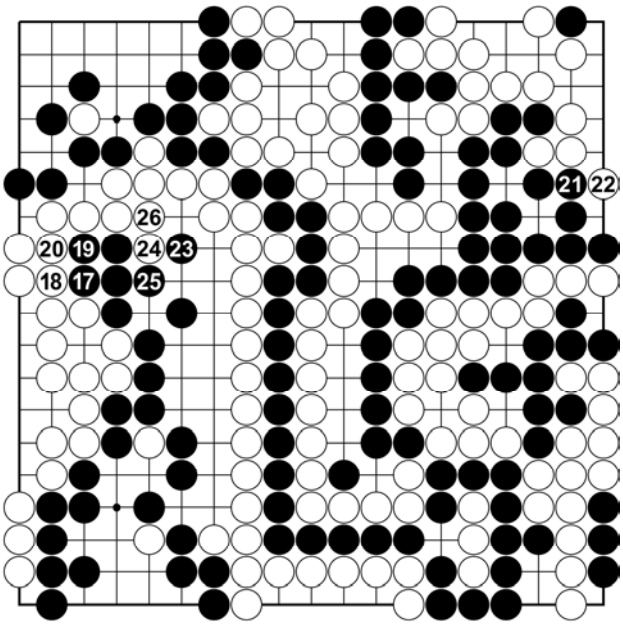
Dia. 19e67.5 (W 76 – W 96) <9/1>



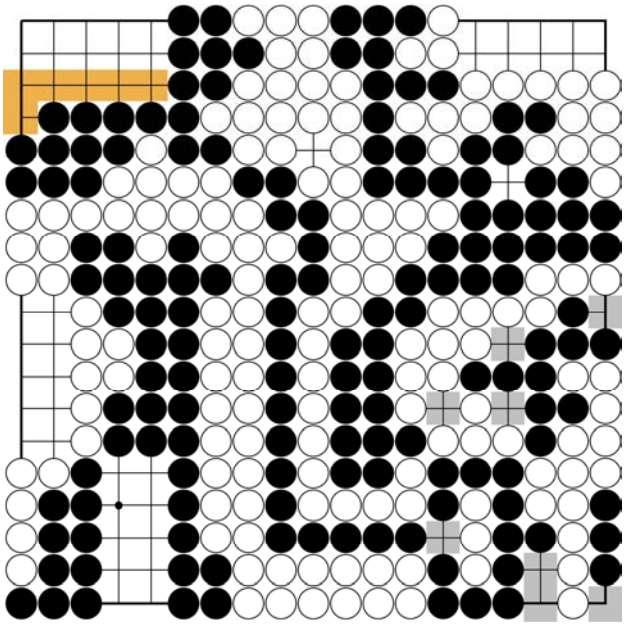
Dia. 19e67.6 (B 97 – W 106)



Dia. 19e67.7 (B 107 – W 116)



Dia. 19e67.8 (B 117 – W 126)

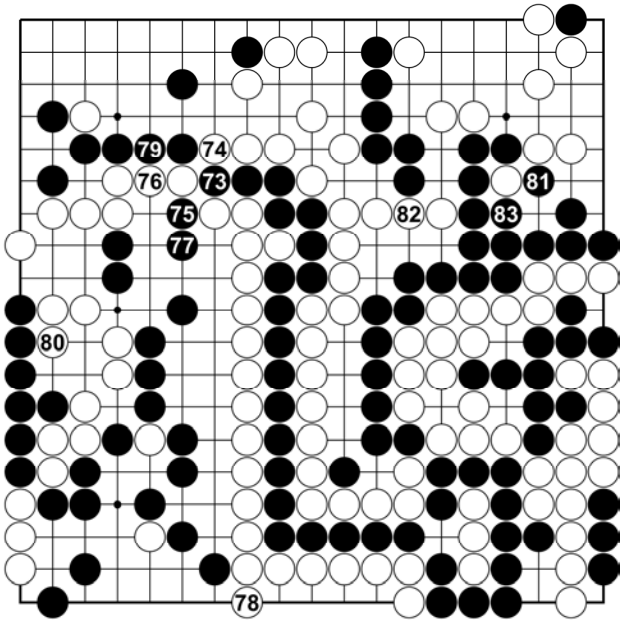


Dia. 19e67.9 "The Score"

Black wins by 6 points.

Black may perhaps be 1 point better if he does not play the second Throw-in with **B 19**. The Seki in the lower right is not resolved, so this proves as a lost move now.

Sub² variation #1 for B 73

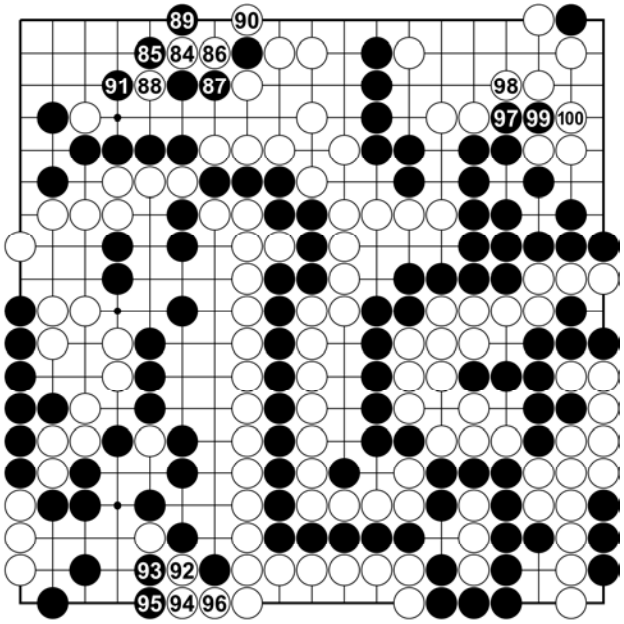


Dia. 67o73.1 (B 73 – B 83) *<2/0>*

B 73: Black follows the Main Path.

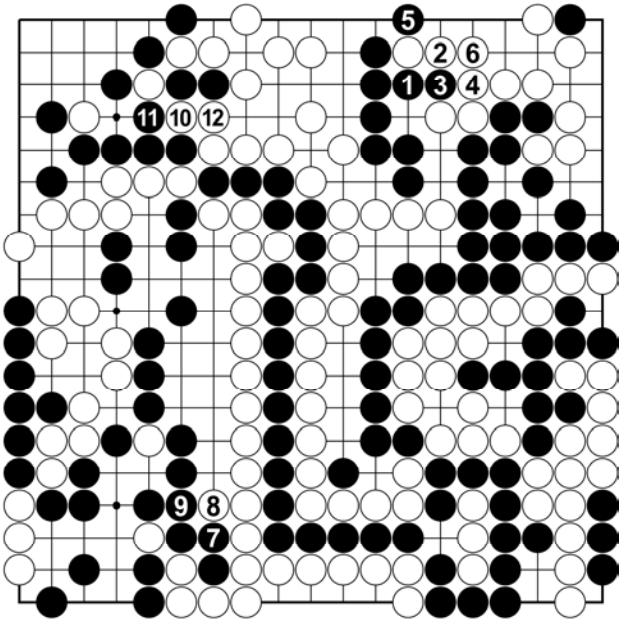
B 79: Now it is clear that Black has lost one move on the right side.

B 81: Black is forced to make two eyes for his upper right group because White lives on the left side.

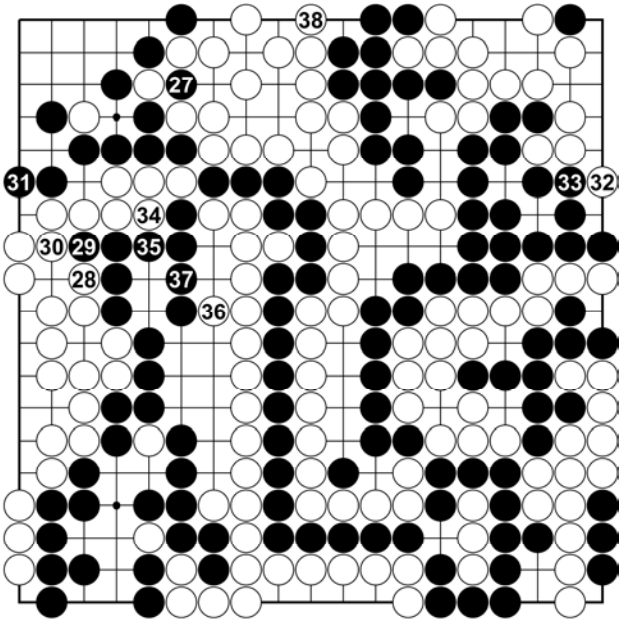


Dia. 67o73.2 (W 84 – W 100) *<3/1>*

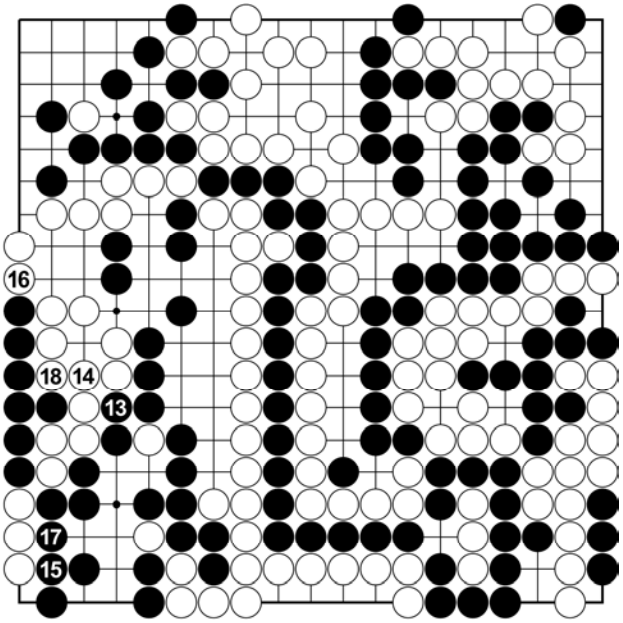
W 84: What follows is an amateurish idea for the Endgame again.



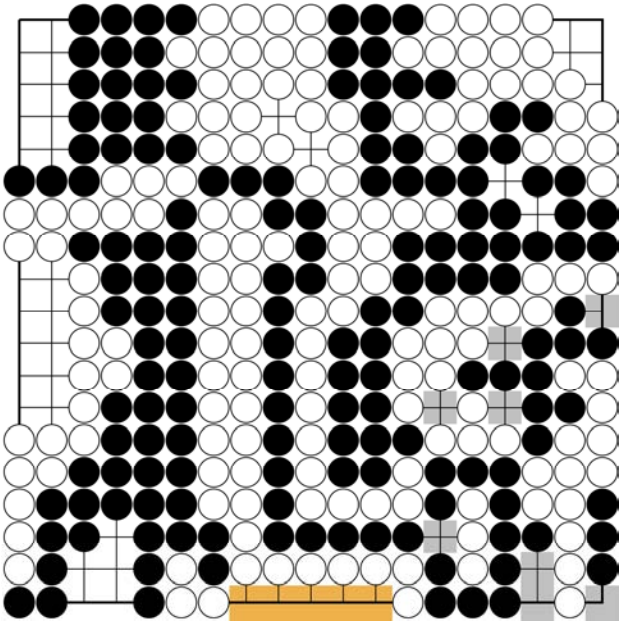
Dia. 67o73.3 (B 101 – W 112) *<3/2>*



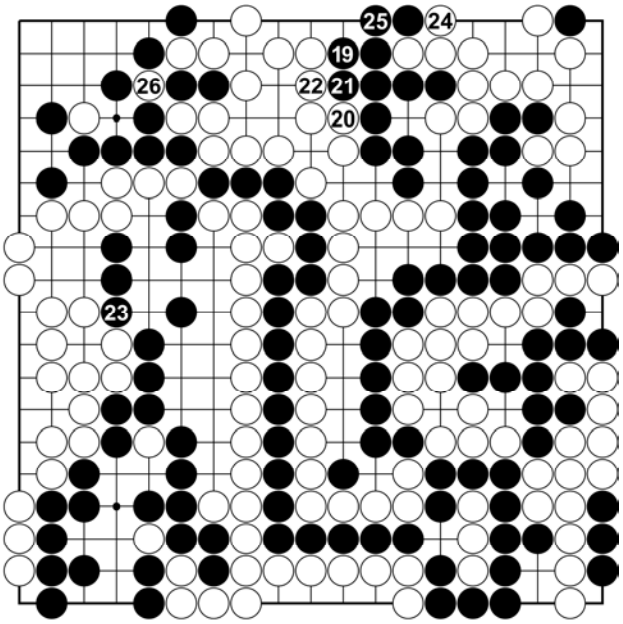
Dia. 67o73.6 (B 127 – W 138) *<12/3>*



Dia. 67o73.4 (B 113 – W 118) *<10/2>*



Dia. 67o73.7 "The Score"

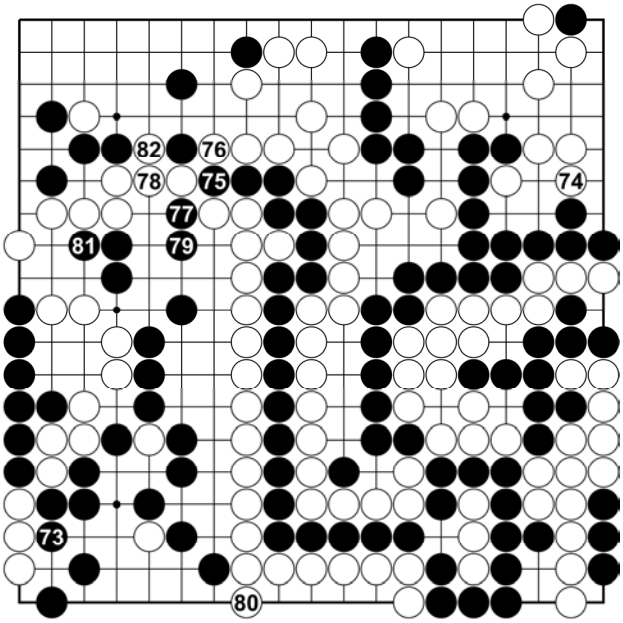


Dia. 67o73.5 (B 119 – W 126) *<12/2>*

White wins by 5 points.

Black may perhaps be 1 point better if he does not play the second Throw-in with **B 19**. The Seki in the lower right is not resolved, so this proves as a lost move now.

Sub² variation #2 for B 73



Dia. 67p73.1 (B 73 – B 97)

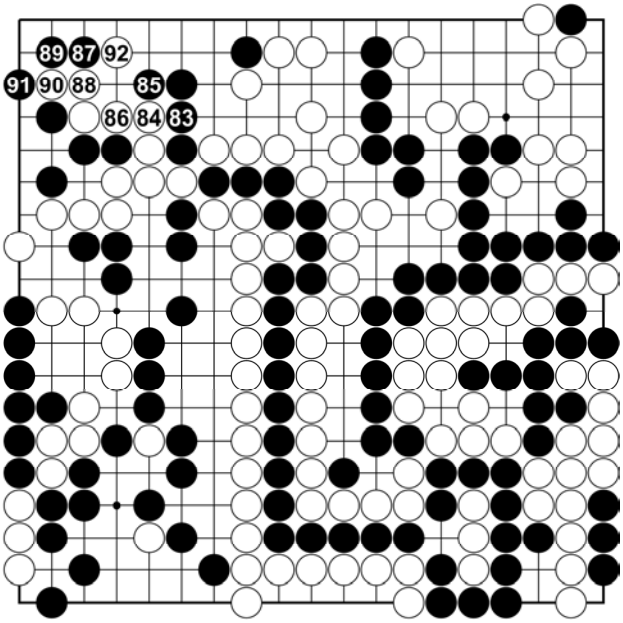
B 73: Black saves his stones on the left side.

W 74: White deprives Black of two eyes on the right side.

B 75: So Black has to return to the Main Path again.

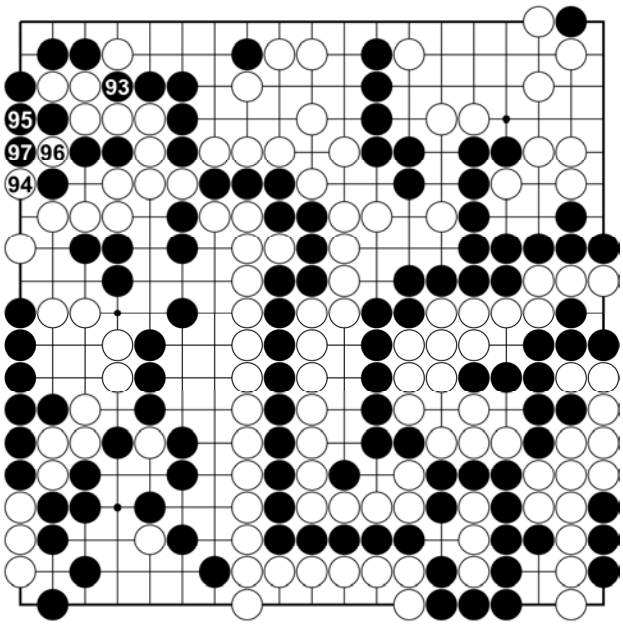
B 81: Necessary to prevent two eyes for White's left side group.

W 82: White can enter Black's weak top left corner now.

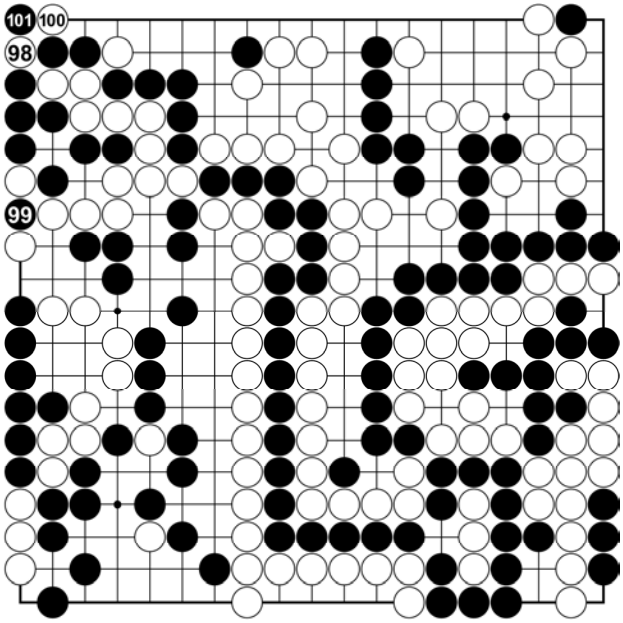


Dia. 67p73.2 (B 73 – B 97)

B 83: Black cannot give up his stone in Atari.

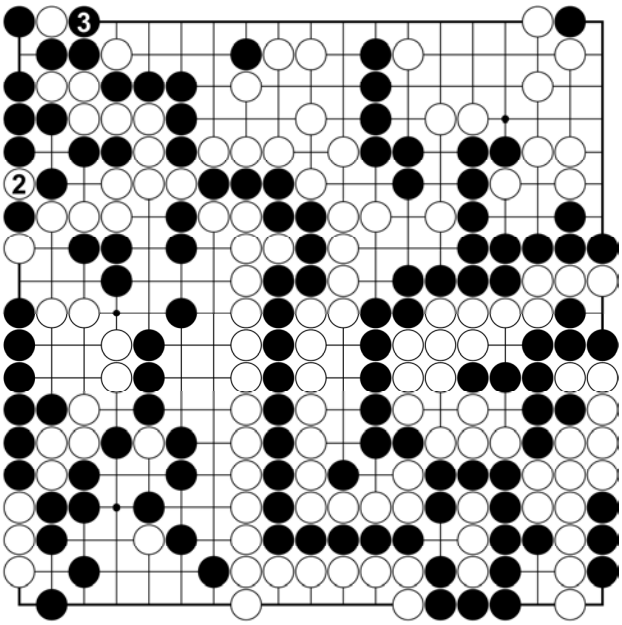


Dia. 67p73.3 (B 73 – B 97) <2/1>



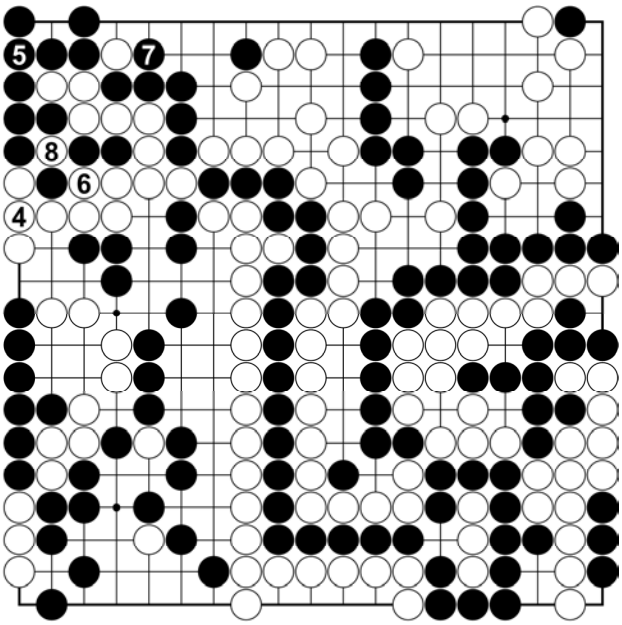
Dia. 67p73.4 (W 98 – B 101) <2/3>

W 98: White starts a Double Ko that Black cannot win.



Dia. 67p73.5 (W 102 – B 103) <3/4>

B 103: Sooner or later Black has to capture that white stone in the corner.

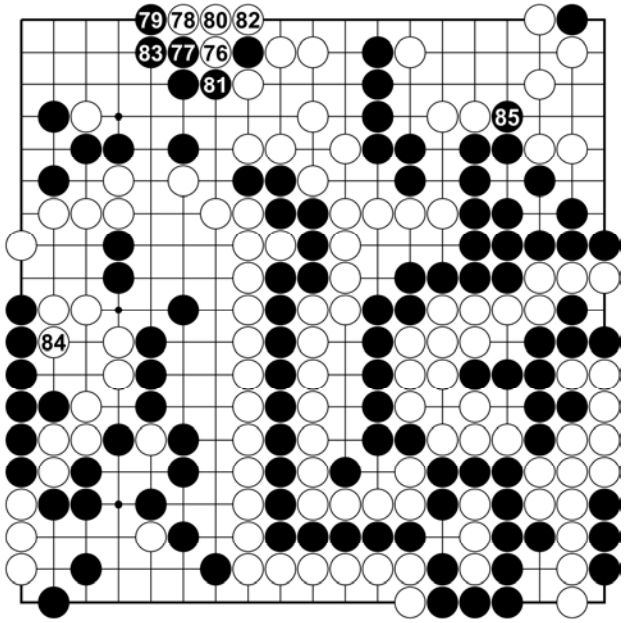


Dia. 67p73.6 (W 104 – B 109) <4/5>

W 108: White lives in the top left and therefore wins the game by a large margin.

White wins the game.

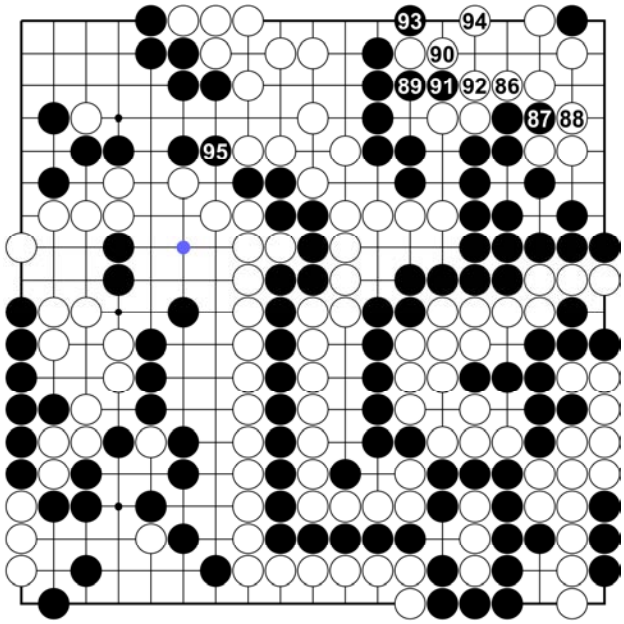
Sub² variation #1 for W 76



Dia. 67n76.1 (W 76 – B 85) <3/1>

W 76: White starts the endgame in the upper left before returning to the black group on the left with **84**.

B 85: The moves from here on follow the suggestion of Yoon Young-Sun 5p from Korea, now living in Hamburg, Germany. Special thanks to Yoon Sensei, who was so kind to help me with the correct Endgame here.



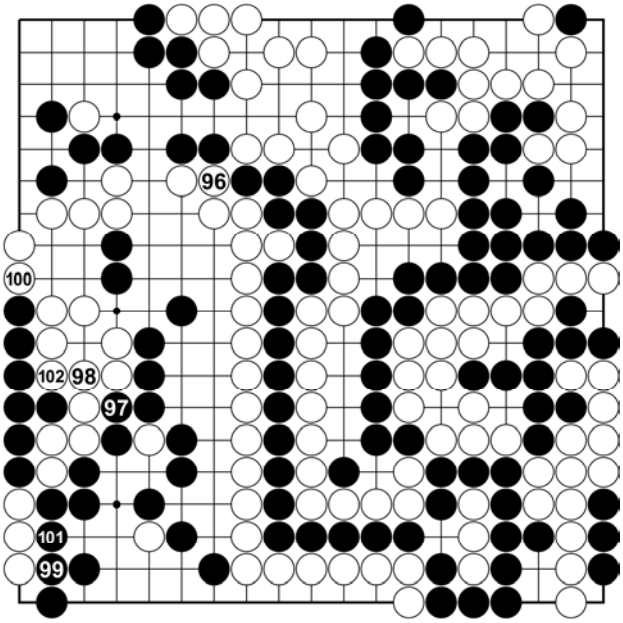
Dia. 67n76.2 (W 86 – B 95)

W 86 - 94: It does not profit White to Tenuki with one of these moves to play in the centre.

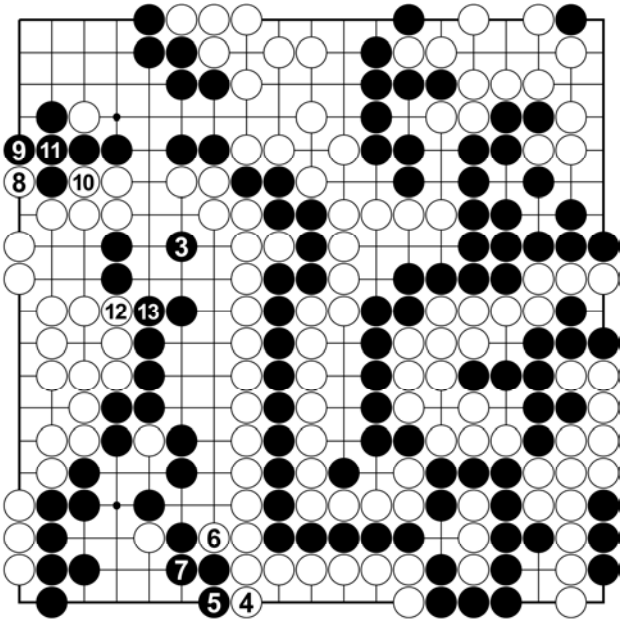
[see variations on page 123]

Update 2009:

B 89: A Hasami-Tsuke at **90** might be possible and give Black a further advantage of one point.



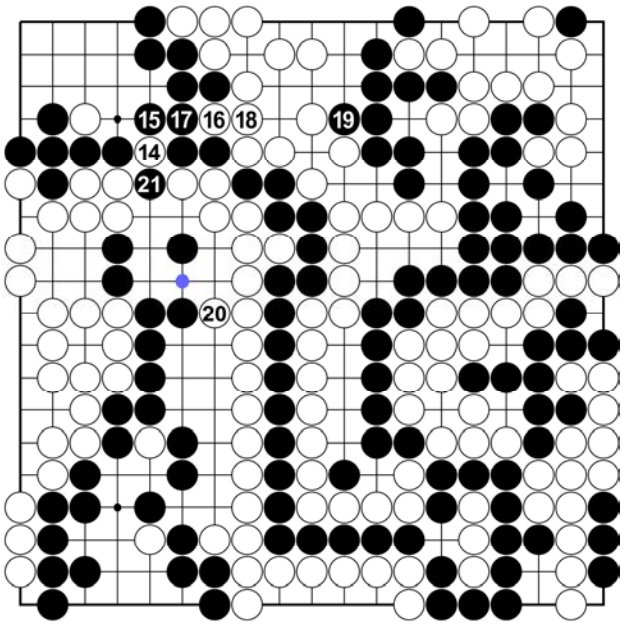
Dia. 67n76.3 (W 96 – W 102) <10/1>



Dia. 67n76.4 (B 103 – B 113)

B 103: The biggest point remaining on the board.

W 104: Sente. The follow-up move at **107** would be unbearable for Black.



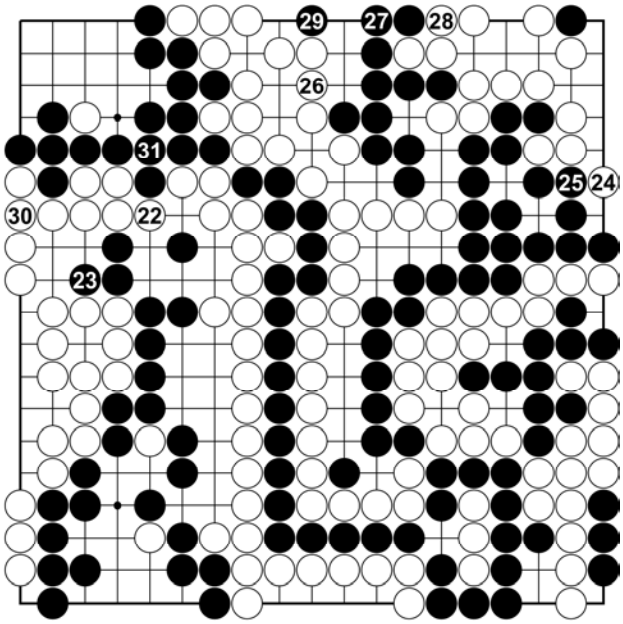
Dia. 67n76.5 (W 114 – B 121) <10/2>

W 114, 116: The correct order of moves.

B 119: Hereafter only 1-point Endgames are available.

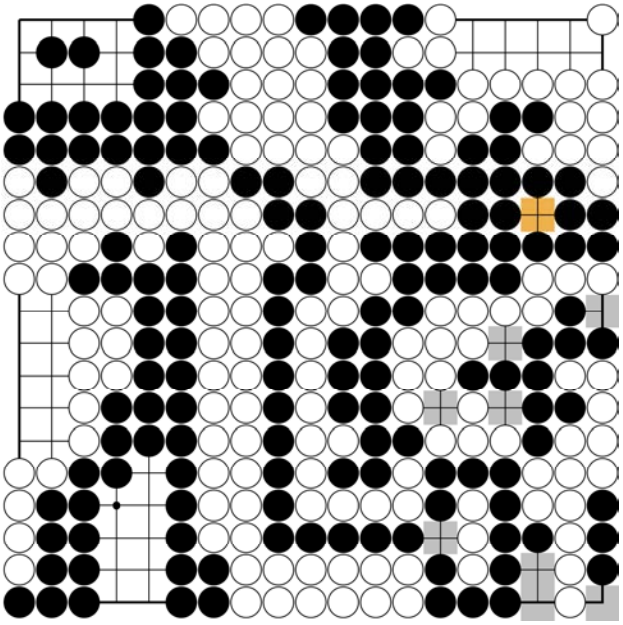
B 121: It would be a mistake to follow the Main Path instead. The captured white stone compensates for the point Black has lost below.

[see variation on page 124]



Dia. 67n76.6 (W 122 – B 131)

W 130, B 131: No Ko fight will start here, because two Ko of different colours are open.

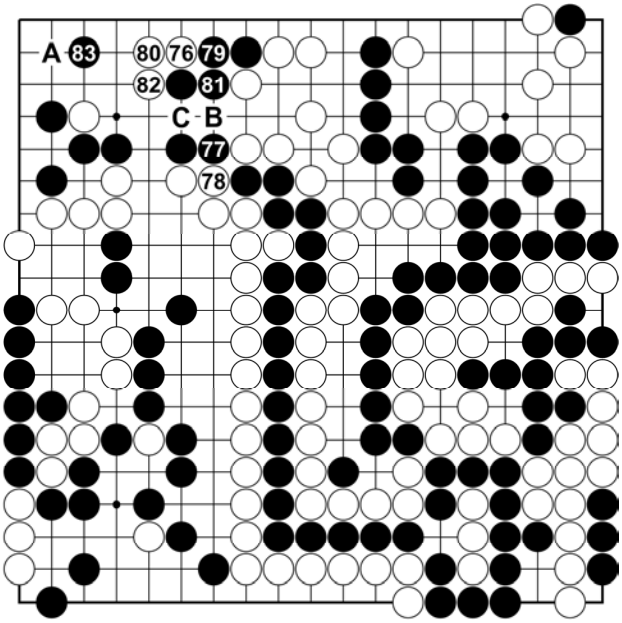


Dia. 67n76.7 "The Score"

Black wins by 1 point.

Black may perhaps be 1 point better if he does not play the second Throw-in with **B 19**. The Seki in the lower right is not resolved, so this proves as a lost move now.

Sub² variation #2 for W 76



Dia. 67n76.8 (W 76 – B 83)

W 76: Yamada Shinji's Tsuke is not possible here.

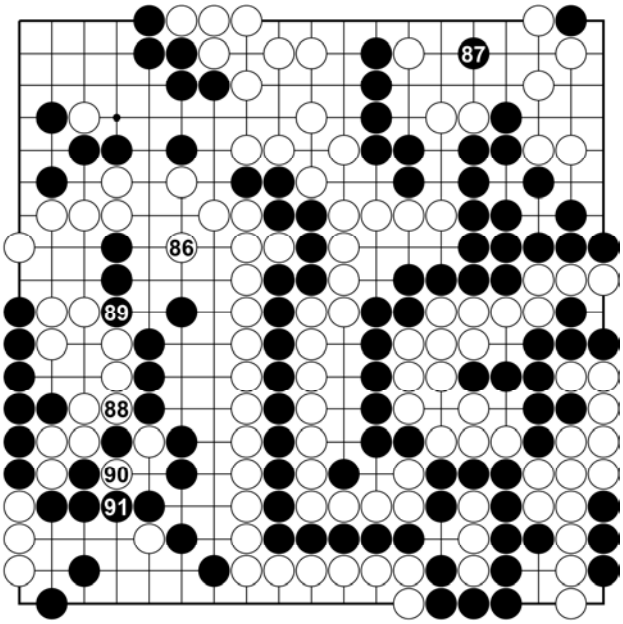
B 77: This black answer threatens to connect the string of black stones to the outside and is absolute Sente.

W 82: Is no threat any more against the right part of Black's stones, so Black can answer with **83** in the corner.

Should White play at **A** instead (what she did in the Seki-sequence on page 69 after Black **83**, White **B**, Black **C**), she will lose the Semeai by at least one move. White has lost the Sente move of **B** (**77** had been white, not black), which forced Black to take himself one liberty by connecting at **C** in the Seki-sequence.

Black wins the game.

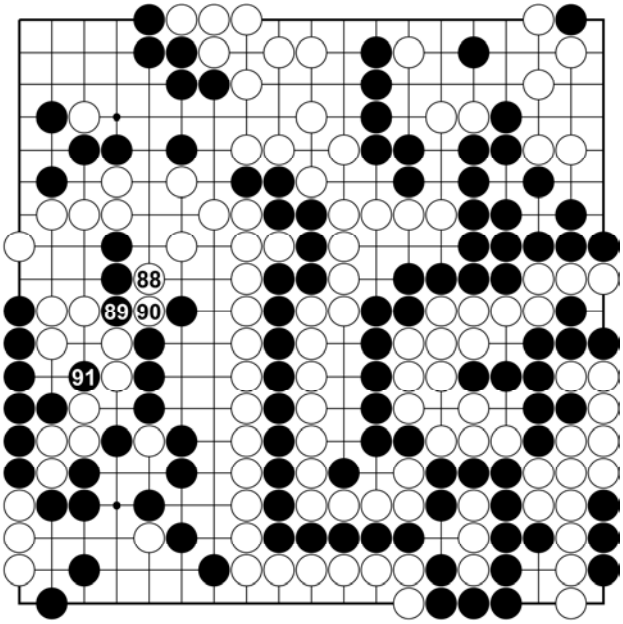
Sub³ variations for W 86, 88, 90, 92, 94



Dia. 67n86.1 (W 86 – B 91) <4/1>

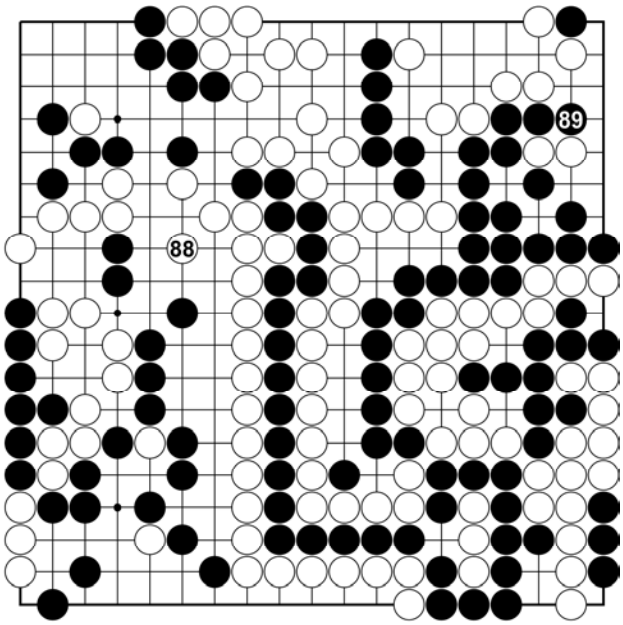
W 86: If White plays in the centre, she has this 8-point Endgame, according to Yoon Sensei.

B 87: But Black gets much more profit in the upper right corner.



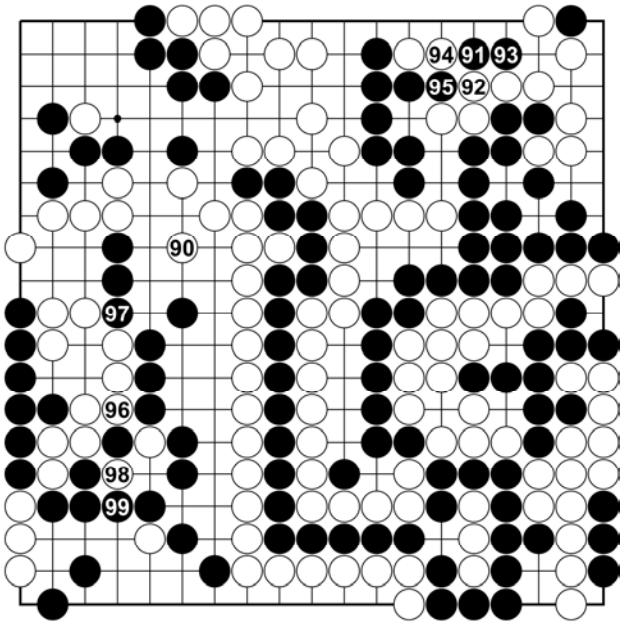
Dia. 67n86.2 (W 88 – B 91)

W 88: White is unable to capture some black stones in the centre.



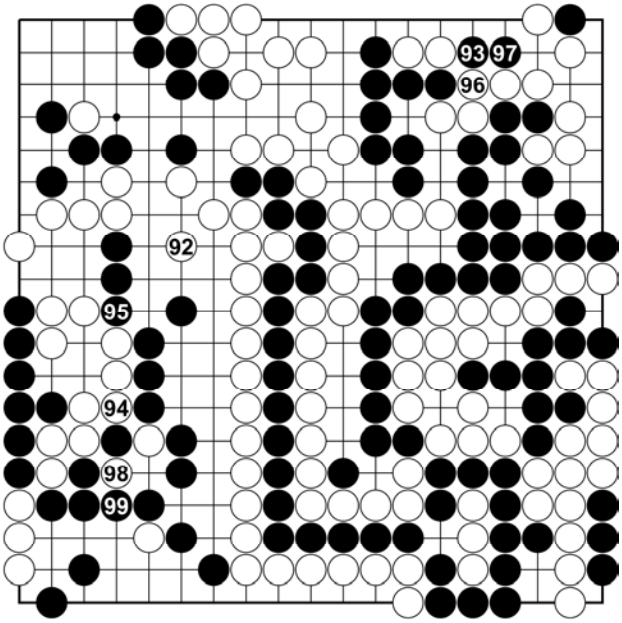
Dia. 67n88.1 (W 88 – B 89)

B 89: This Endgame in the top right corner is worth about 12 points for Black. So White is 4 points worse.



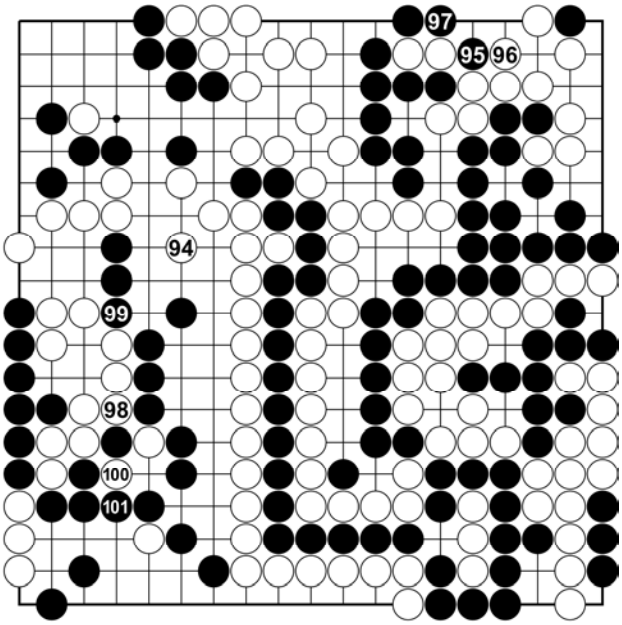
Dia. 67n90.1 (W 90 – B 99) <4/1>

B 91: This black Endgame in the top right corner has a value of 8 points, too. So the result remains unchanged.



Dia. 67n92.1 (W 92 – B 99) <4/1>

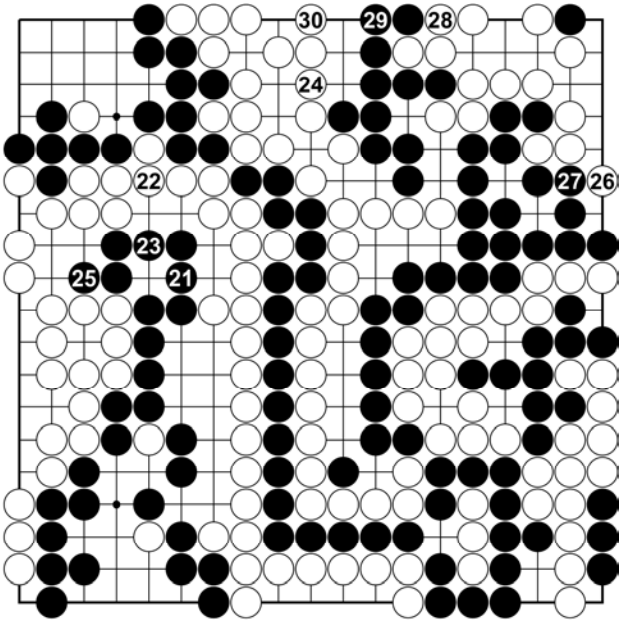
B 93: Again, the black Endgame in the top right corner has a value of 8 points. So the result remains unchanged.



Dia. 67n94.1 (W 94 – B 101) <4/3>

B 95: For the third time there is a black Endgame in the top right corner with a value of 8 points. So the result remains unchanged.

Sub³ variation for B 121

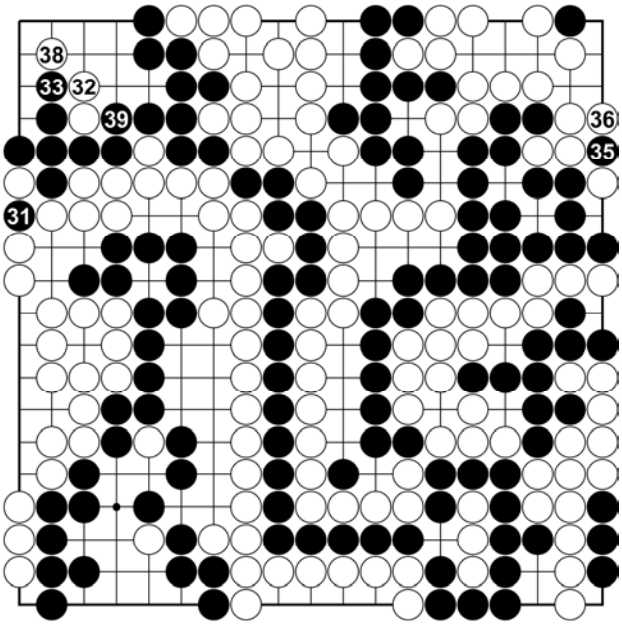


Dia. 67n121.1 (B 121 – W 130)

B 121: Black follows the Main Path.

W 122: White connects. This move endangers one point of black territory as well, but leaves no open Ko behind.

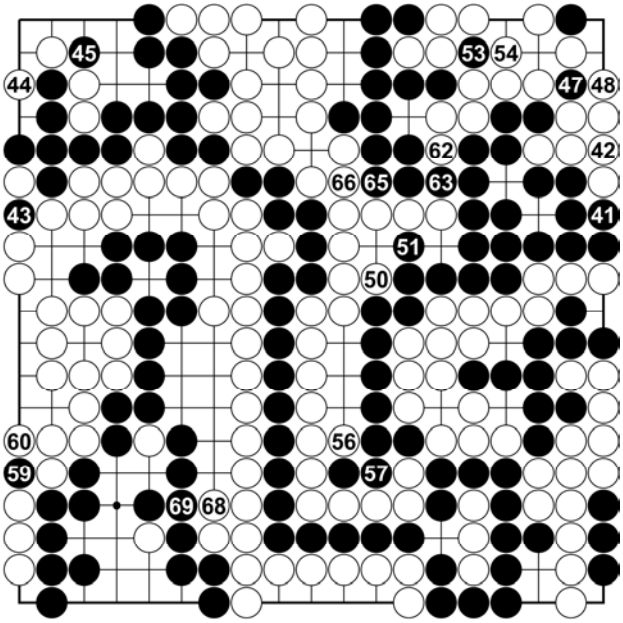
W 128: Sente. And takes one black Ko threat away, what will be very important later.



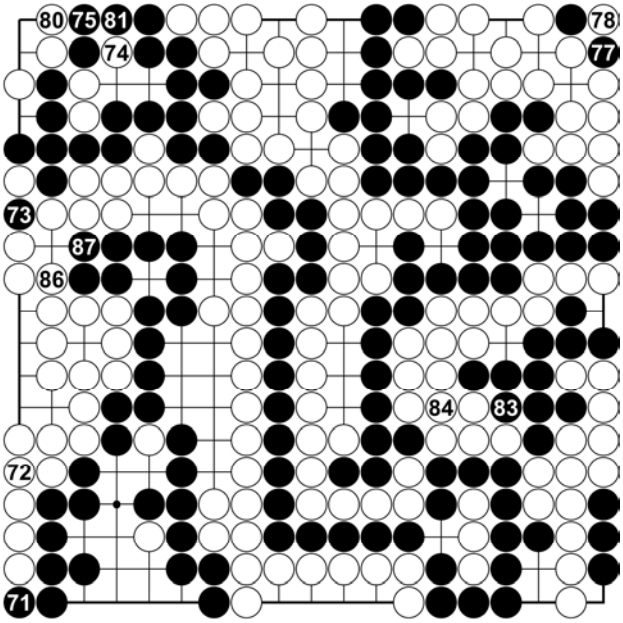
Dia. 67n121.2 (B 131 – W 140) <13/3>

B 131: Black captures a white stone, but will be unable to win the following Ko fight.

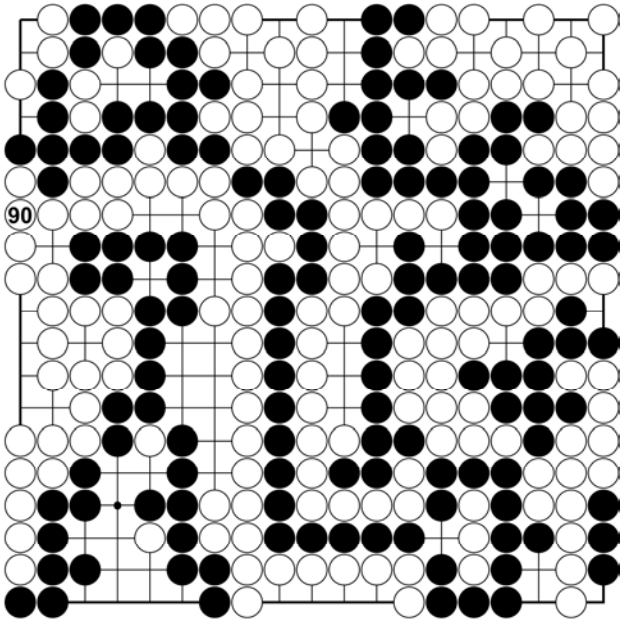
(Moves not shown in the diagrams here take Ko.)



Dia. 67n121.3 (B 141 – W 170) *<21/8>*

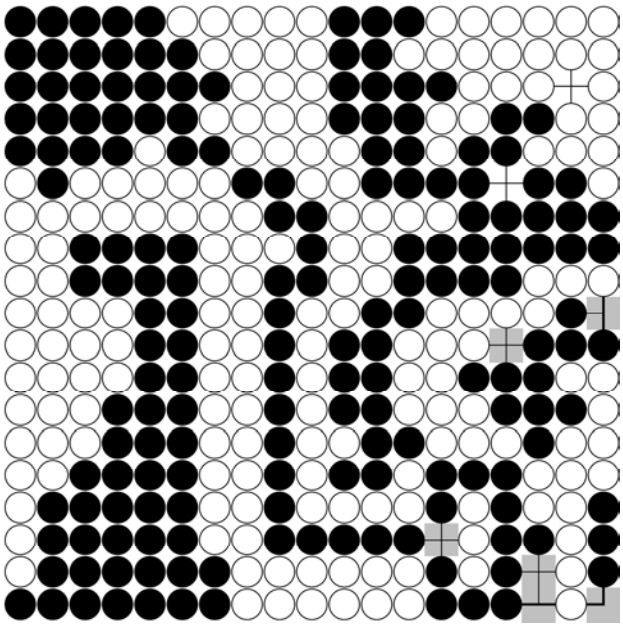


Dia. 67n121.4 (B 171 – W 188) *<26/11>*



Dia. 67n121.5 (B 189 - W 190)

B 189: Black passes. There is no Ko threat anywhere.



Dia. 67n121.6 "The Score

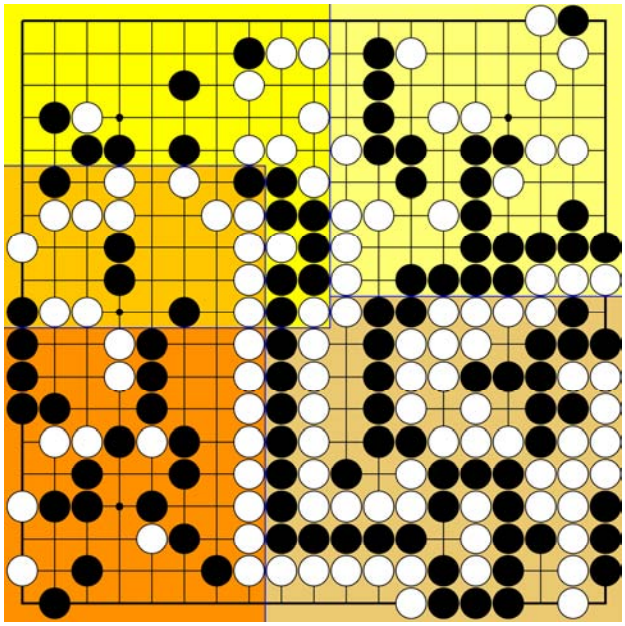
Jigo !

Black may perhaps be 1 point better if he does not play the second Throw-in with **B 19**. The Seki in the lower right is not resolved, so this proves as a lost move now.

Update 2009:

Black might be a further 1 point better if he had played Hasami-Tsuke in the top right corner with **89**.

Research on the "Bad-Shape" Move B 67



Dia. 67r.1 "4 Research-Areas"

For research purposes we can divide the board into four areas and look at these one after another.

Lower right (light brown):

If the big black group on the right gets two eyes, the temporary Seki will remain unresolved until the end of the game.

Upper right (light yellow):

White will not get additional points here.

[see explanations on page 127]

Lower left (orange):

It is possible for Black to save his five stones on the left edge. And the end of this procedure the two black stones on the fourth line perhaps might be in danger of being captured.

[see explanations on page 127]

Upper left (yellow):

This is the most interesting (and most difficult) area.

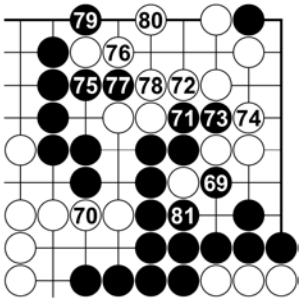
To win the game, White must destroy black points in the corner and get own points in such an amount that can compensate for the loss in the lower left quadrant.

[see explanations on page 129]

Precondition of this research is:

With **68** White plays a move that forces Black to make two eyes for his upper right group and at the same time threatens the upper left black corner.

Upper Right Quadrant



Dia. 67r.2 (B 69 - B 81)

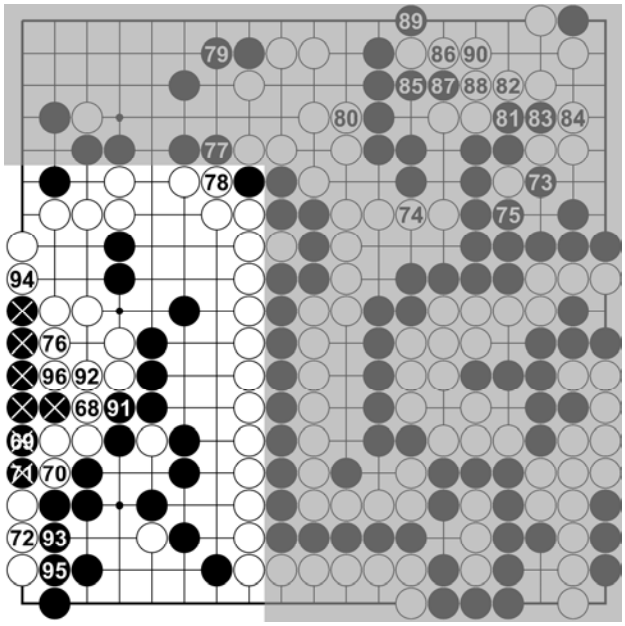
According to Yoon Young-Sun (please refer to her endgame suggestion), each of the black Sente moves in the top right corner (**71** to **79**) would threat to capture some white stones (with the side effect of providing Black with his second eye).

So they could be played - if necessary - before securing the second eye inside the black eye space with **81**.

Update 2009:

Perhaps Black can play **75** at **76**, what is one point better for him.

Lower Left Quadrant



Dia. 67r.3 (W 68 - W 96)

It takes White two moves (**68** and **76**) to capture the black stones on the left side.

White gets 6 points of territory and 7 prisoners here, 13 points in total.

White ends in Gote.

But White must have Sente to start the sequence beginning with **68**.

If Black gets to play at **68** himself, he will capture the white stones below outright (two liberties to four) and spare most of the Teire shown. That would be too much a burden for White.

But White cannot play **68** before forcing Black's top right group to make two eyes, as she loses Sente here with **72**. Black thereafter will prevent White's intrusion into the top left corner.

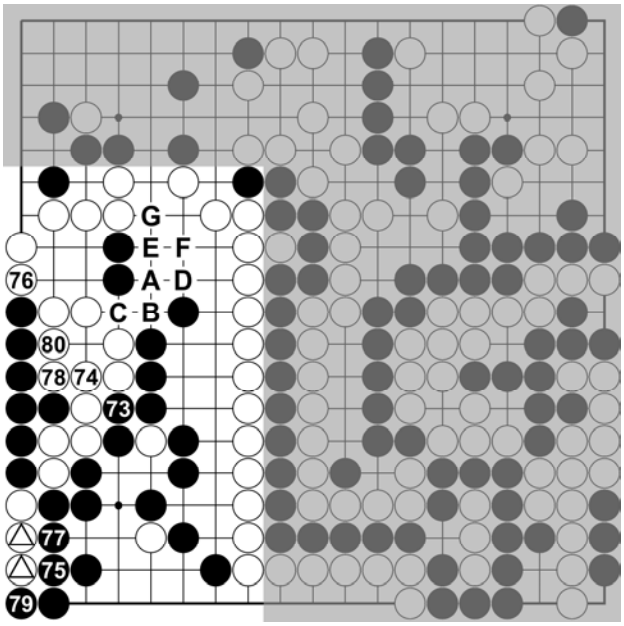
On the other side Black must follow White on the "usual" Main Path sequence for the time being. That means as long as his big group on the right does not have two eyes.

Question: Why does White not play Atari with **91** before connecting at **72** ?

In the Main Path sequence that may be disadvantageous because White takes herself a liberty. But here the connection of these stones to the

centre group would have been secured already. Black would lose one additional point by saving his single stone in Atari and White would get one additional point of territory at **92**.

But: Black could capture at **72** outright. This move contains the threat to cut off all of the white stones here. So perhaps White cannot Tenuki thereafter and Black will have the change to play some defensive move.



Dia. 67r.4 (B 73 - B 81 (connects))

Should Black ever be able to save his stones on the left side, he gets 2 points of territory and 3 prisoners.

This time Black ends in Gote.

So saving or capturing the black stones on the left side is worth 13 + 5 = 18 points in Gote.

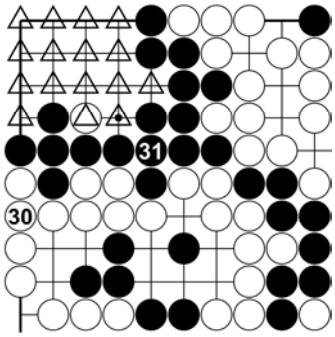
But really Black will lose some more points, if White will be able to play in the centre of the board first.

A white move there threatens to cut off the two black stones above the Hoshi on the left - and is worth about 2 or 3 points.

Perhaps Black **77** will have another consequence. Depending on the future development in the top left corner White may be able to separate and capture this two black stones with the sequence from **A** to **G** (suppose that a Geta with Black **D** at **F** will not work), because a black move at **C** is no threat against the white stones below any longer.

If the top is played out, the sequence here is a one way street, once started. Black ends in Gote, but it had been White's turn from the very beginning.

Upper Left Quadrant

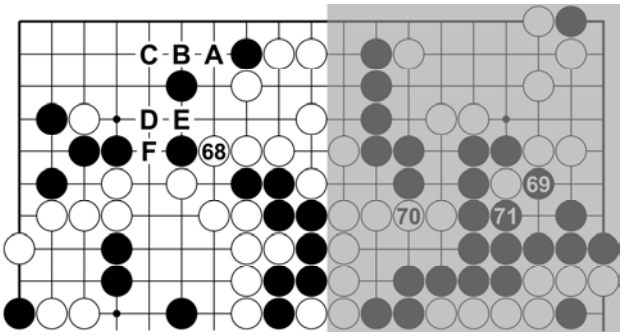


Dia. 67r.5 (W 130 - B 131)

This is the final position in the top left corner in the variation with Young-Sun's endgame suggestion.

Black has 16 points of territory and 1 prisoner, 17 points in total.

White must get more additional points here than Black can keep in this area to compensate for the abovementioned loss of 18 points in the lower left.



Dia. 67r.6 (W 68 - B 71)

This White **68** (= **H** as White follow-up move after Black **67**) was the move that looked the most straightforward to us. This move does not leave any threat in the centre for Black, so he must make two eyes for his group in the upper right.

Update 2009:

In the meantime we found, that playing **F** with **68** might be preferable for White.

Moves that now come into mind for White **72** are:

A - "Standard" Osae of the Main Path.

Seems to be too direct and too small.

B - Yamada Shinji's Tsuke.

C - Oki.

May perhaps run into **B** with a change in the order of moves.

D - Peep.

Looks like the most interesting alternative for White. And seems to be the vital point in this position.

E - Atari from the right.

Seems to be too direct and too small.

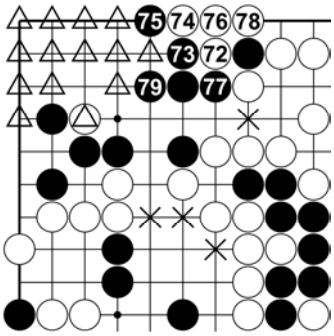
F - Atari from below.

Will run into **E** with a change in the order of moves.

We did not find any sequence for White that damages the black corner as much as would be necessary to change the tables. Black will win the game.

Surprisingly the strongest move for White seems to be that one on the right side, preventing the black eye there immediately and then following the known Main Path (resulting in a 1-point win for Black respectively 2-points-win without the second Throw-in).

Variation A:



Dia. 67r.7 (W 72 - B 79)

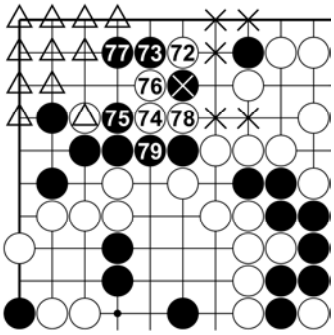
Black will keep about 15 points in the corner.

White will get some additional points in the centre.

The two black stones in the left centre cannot be cut by White.

Black gets about 10 points in this area and therefore will win the game.

Variation B:



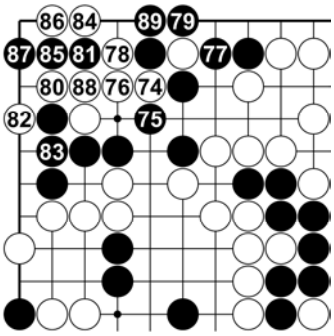
Dia. 67r.8 (W 72 - B 79)

Black will keep about 12 points in the corner.

White will get about 7 additional points.

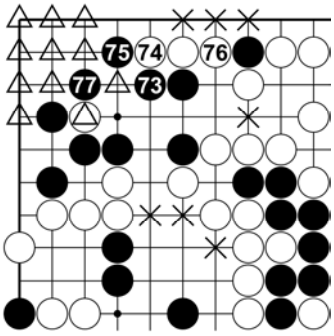
The two black stones in the left centre cannot be cut by White.

Black gets about 5 points in this area and therefore will win the game.



Dia. 67r.9 (W 74 - B 89)

White cannot cut with **74**. Black wins the Semeai in the corner.



Dia. 67r.10 (B 73 - B 77)

Pulling back with **73** is possible for Black, too, and might be the safer variation.

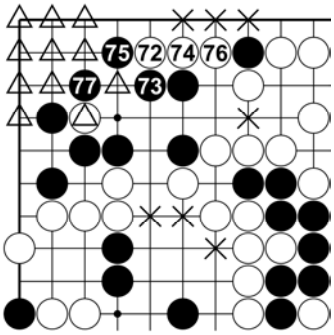
Black will keep about 12 points in the corner.

White will get about 7 additional points.

The two black stones in the left centre cannot be cut by White.

Black gets about 5 points in this area and therefore will win the game.

Variation C:

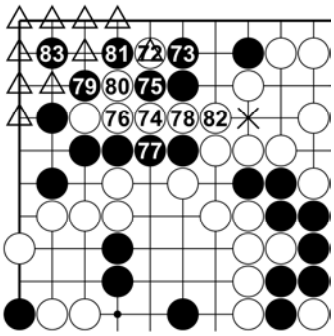


Dia. 67r.11 (W 72 - B 77)

If Black plays at **73** and let White connect to the outside (White **74** at **75** is not possible), it will result a change in the order of moves with the diagram before.

The two black stones in the left centre cannot be cut by White.

Black gets about 5 points in this area and therefore will win the game.



Dia. 67r.12 (W 72 - B 83)

Answering the Oki White **72** with **73** might be a bit dangerous for Black.

Black plays **77** from the lower side (and not at **78**) to prevent weakening his two centre stones.

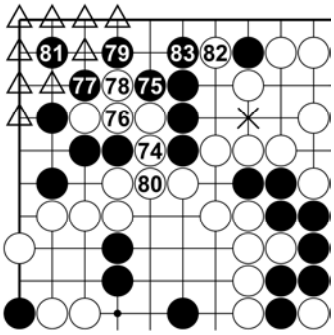
Black will keep about 11 points in the corner.

White will get about a few additional points.

The two black stones in the left centre cannot be cut by White.

Black gets about 10 points in this area and therefore will win the game.

Variation D:



Dia. 67r.13 (W 74 - B 83)

It seems to be best for Black to play a purely defensive move with **73**.

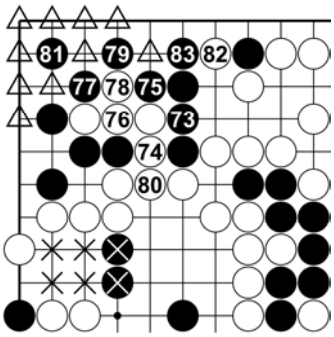
Black will keep about 9 points in the corner.

Perhaps White will not play at **82** at once.

White will get about a few additional points.

The two black stones in the left centre cannot be cut by White.

Black gets more than about 5 points in this area and therefore will win the game.



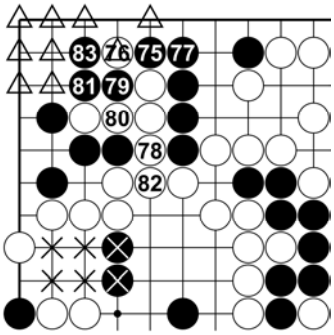
Dia. 67r.14 (W 74 - B 83)

White has the option to play at **74** at the outside immediately.

Black will keep about 9 points in the corner.

White will get 8 points later by separating the two black stones on the left (due to the connection with **80**).

But even this one remaining point in this area will Black enable to win the game.



Dia. 67r.15 (B 75 - B 83)

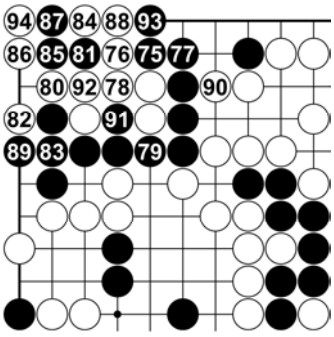
If White plays inside with **74**, it might be dangerous for Black to shut White in with **78**.

The safety-first measure for Black is to give way with **75** here.

Black will keep about 10 points in the corner.

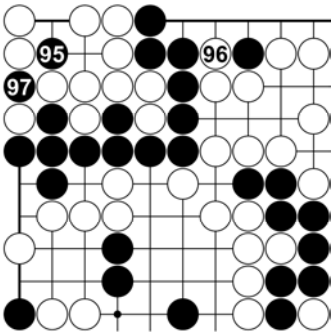
White will get 8 points later by separating the two black stones on the left (due to the connection with **82**).

But some remaining points in this area will Black enable to win the game.



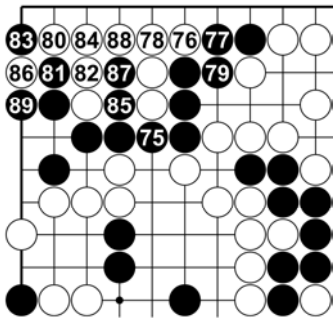
Dia. 67r.16 (B 75 - W 94)

Perhaps White will connect with **78**.



Dia. 67r.17 (B 95 - B 97)

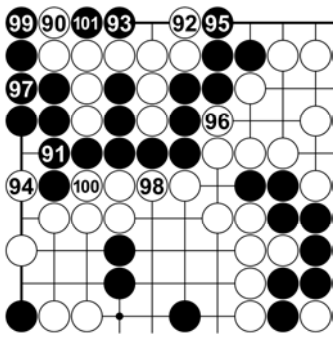
Black has 5 outside liberties left - and White cannot take two of them direct. So it cannot be said that the approach-move Ko around **97** is really a Ko for White.



Dia. 67r.18 (B 75 - B89)

At first sight, connecting for the second time on the outside with **75** looks to be extremely dangerous for Black.

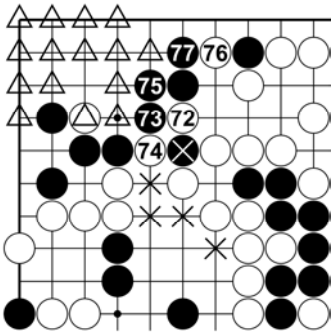
But it results a change in the order of moves to something we have already seen before.



Dia. 67r.19 (W 90 - B 101)

Black has three effective liberties against White's two, so there is no need to play at **101** immediately.

Variation E:



Dia. 67r.20 (W 72 - B 77)

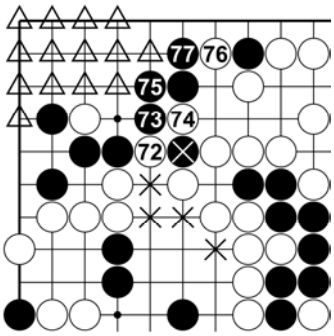
Black will keep about 16 points in the corner.

White will get about additional 6 points in the centre.

The two black stones in the left centre cannot be cut by White.

Black gets about 10 points in this area and therefore will win the game.

Variation F:



Dia. 67r.21 (W 72 - B 77)

Black will keep about 16 points in the corner.

White will get about additional 6 points in the centre.

The two black stones in the left centre cannot be cut by White.

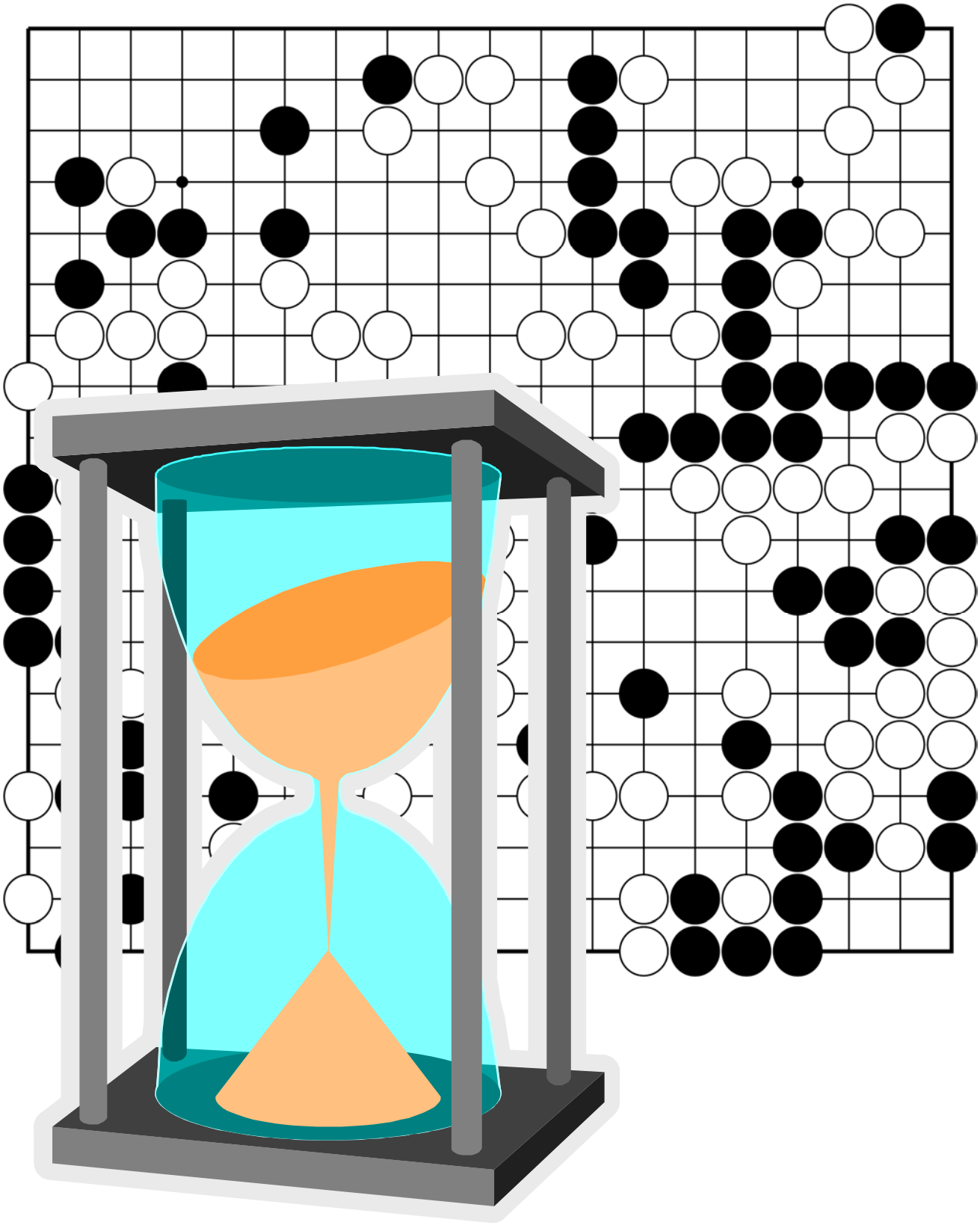
Black gets about 10 points in this area and therefore will win the game.

Update 2009:

This move at **72** opens much better continuations for White in the top left corner, if the area of the top right corner is not played out before.

Igo Hatsuyoron, Problem 120

Time



Time - What distinguishes between amateurs and professionals.

Or joins them together ?

To have enough (what means a lot of) time seems to be the most important prerequisite if you want to work on this very complex and very complicated problem.

The Go World said that Fujisawa Shuko 9p and his student's group needed more that 1.000 hours work to find the first solution.

Joachim Meinhardt was busy with the problem over years before he asked himself why not capturing the 20 black centre stones with White **132** and playing the Oki of White **134** afterwards. And that revealed a blind spot of professionals.

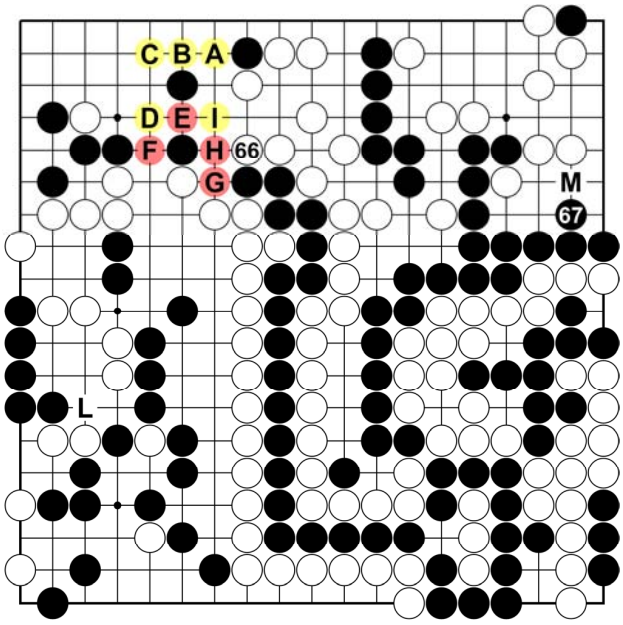
Since 2005 I am working on the problem.

Yamada Shinji 4p, Yoon Young-Sun 5p and Kurebayashi Meien 2p very kindly spent some amount of their valuable time to help us a lot with the problem.

It seems to me that time might perhaps be something being able to narrow the gap between amateur and professional strength a little bit. What seems to be very hard for professionals to accept.

I'll try to give some explanations below (based on my experiences with Yoon Sensei), combined with further insight into the problem.

Professionals "feel" the right move like greased lightning.

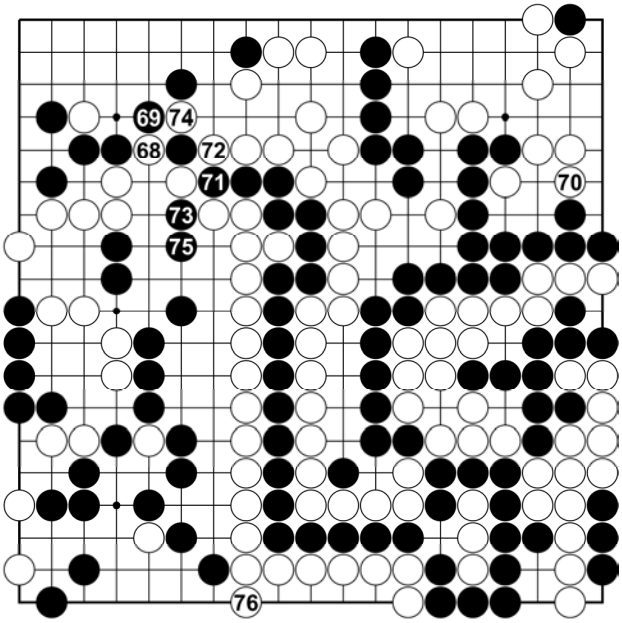


"White's follow-up moves in the top left"

There are two types of white follow-up moves in the top left corner after "my" bad shape move of Black **67**.

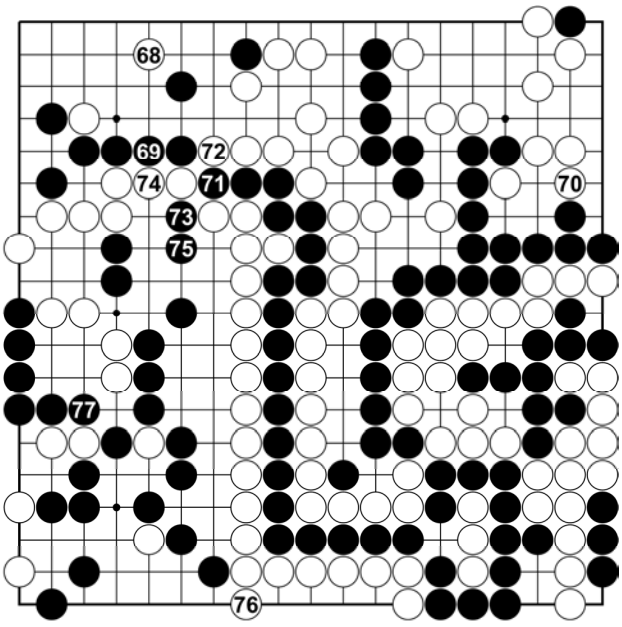
White **F**, for example, is of the type that forces Black immediately to make two eyes for his large group in the upper right.

The second type consists of moves like White **C**. Hereafter Black must be at his guard and remember all the time that White could prevent two eyes for his upper right group.



"Resistance in the top left is futile"

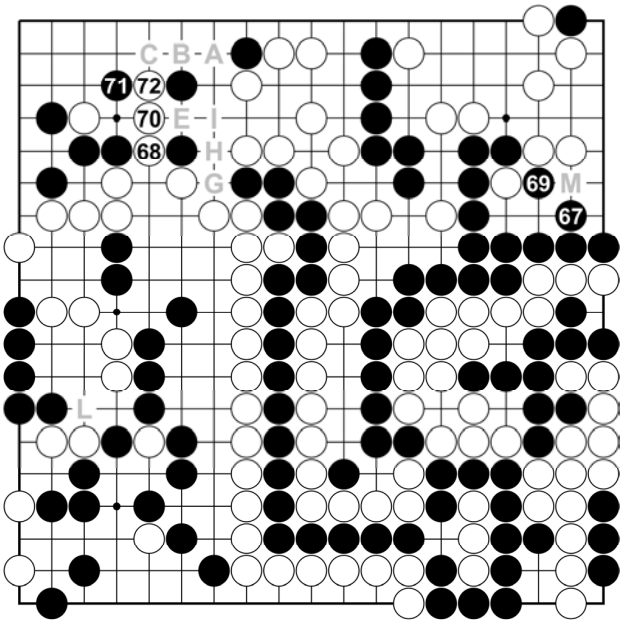
Black is unable to answer White **68** (= **F**) in the top left corner. White immediately will take Black's eyes in the upper right. You will recognize that the following "usual" cutting sequence in the centre does not work for Black any more.



"White will lose after B 69"

During our investigations on moves of the second type like White **C** (= **68**) we found out that it will be impossible for White to win if Black ever has got the chance to connect at **F** (= **69** - not necessarily at once, as shown here to simplify the diagram). If White thereafter prevents Black's eyes in the upper right, it will soon be revealed that Black has won one tempo in the "usual" cutting sequence in the centre and the white stones on the left will die much faster than before. So White will be forced to capture Black's 20 centre stones, therewith losing the game.

This result was a very strong hint for us that it would be best for White to follow the proverb and take Black's most important point by herself.



"What a professional feels within seconds"

When I asked Yoon Sensei what in her opinion would be the strongest move for White among **A** - **I** in the top left corner, she needed only seconds to answer "**F**" (= **68** here). We poor amateurs had spent several months work before to find this answer - and were not sure in the end about this.

"And how would White continue in the upper left after Black **69** on the right ?"

"White **70** - Black **71** - White **72**."

Three fast shots by Yoon Sensei, several weeks of thinking by poor amateurs.

Dosetsu's masterpiece forgives amateur's mistakes.

It seems to me that this problem is fault-tolerant to a certain extent.

Perhaps you remember that Yoon Sensei was so kind to help us with some Endgame sequences.

We amateurs had a lot of Endgame variations, which all had the same result of Black winning by a very small margin.

Yoon Sensei's Endgame suggestion is far more accurate than ours, takes into consideration aspects, I would never have dreamt of, and ended with the same result as our amateurish efforts.

So every of our mistakes must have been compensated by another one.

Change log

[-09-05-16-]
Added chapters "What this problem really is about", "Highlights", and "Time".
Research on the "Bad-Shape" Move B 67 added.

[-08-06-08-]
Endgame added after W 84 in the B 67 chapter, following the suggestions of Yoon Young-sun 5p.

[-08-01-23-]
Variations added for B 93 and B 67 after the second Throw-in.

[-07-12-03-]
Variations added for the second Throw-in with B 19.

[-07-11-27-]
Variations added for W 24 and W 60 for the Main Path.
Variations added for the upper right corner after the second Throw-in.
New questions referring to that corner.

[-07-10-27-]
Two-digit-numbers for moves > 100.

[-07-10-24-]
Correction of typing errors.

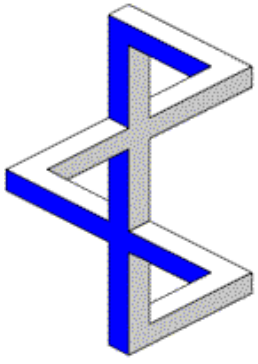
[-07-10-22-]
Basic version.

You can find most of the contents of this booklet in the web at

www.dgob.de/dgoz/trmdpe/index.htm

If you have any comments or suggestions, or want to join our team, please send an e-mail to

problemecke@dgob.de



C · I · D · S

Compiled by
Thomas Redecker

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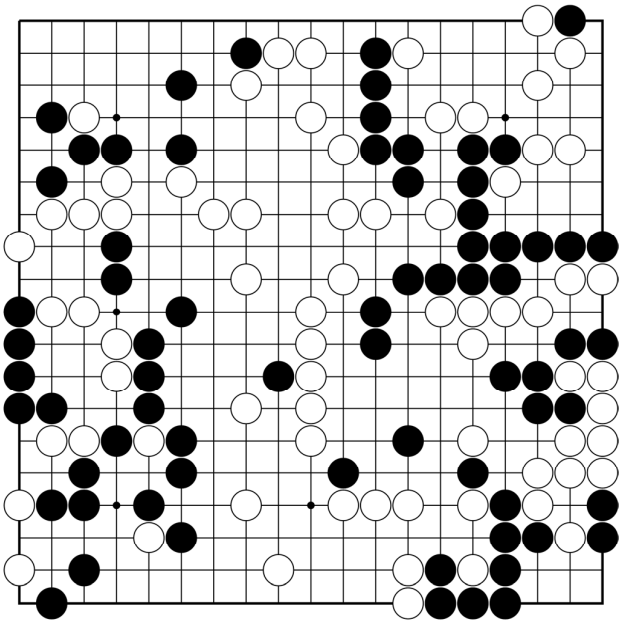
[-09-05-16-]

The really most difficult Go problem ever



Black to play and win

Under this heading the problem 120 from the Igo Hatsuyoron, a historic Japanese problem collection, was explained in detail in the copies 4/2005, 6/2005, 5/2007 and current 2/2009 of the Deutsche Go-Zeitung (= German Go Journal).

The western world received knowledge of this problem by the copy 29 of the Go-World magazine, in which was described the solution path found by Fujisawa Shuko 9p and his group of professional students, spending approximately 1.000 hours work.

Nowadays comments are also found in the Chinese (Weiqi FaYangLun) and Korean (Wiki Balyangron) counterpart of the Igo Hatsuyoron as well as at some places in the web. The so called "correct" solutions differ from each other in some details.

However, common to all is: At a very essential moment they do not consider the strongest white resistance which was uncovered interestingly enough by Joachim Meinhardt, a German Kyu player. Therefore the objective "Black to play and win" being inherent to the problem is not reached, because **at the end White lies in front**.

A collection of what is known so far can be found in the first half of this booklet.

I have added some questions of mine, which arose during the discussions with Joachim while writing and editing this booklet. The last chapters contain explanations – at amateur Kyu level – on some moves not found so far in the sources. **Probably a "bad shape" move**, suggested by me, **might open the door to a win by Black**.

We would be very pleased to get some feedback on this booklet, especially to these "New Variations".

It is our hope to give thereby an assistance to supply this problem, nevertheless, still to a solution in accordance with its objective.