## The detailed commentaries on the Recreation of the same Configuration (Attachment 1)

## I. General explanation of the Recreation of the same Configuration

1. Cycle Length: Number of moves from the first move to the last move which makes the same configuration.
2. Cycle Lengths of the Recreation of the same Configuration by Pattern
1) Triple Kos (The Korean Rules of Baduk, Diagram 13, 20 and 21)

Cycle Length: 6 ( 3 Kos X 2 times per Ko = 6)
2) Pair of Double Kos (Diagrams 16 and 18)

Cycle Length: 8 (4 Kos X 2 times per Ko =8); in case of variation Max. 16
3) Quintuple Kos (Diagram 17)

Cycle Length: 10 (5 Kos X 2 times per Ko =10); in case of variation 6~ Max.
4) Eternal Life (Diagram 14)

Cycle Length: 4 (2 stones X 3 times - 2/duplicated intersections =4)
5) Three-Stone Eternal Life (Diagram 19)

Cycle Length: 10 (2 times/Ko x 2 Ko +3 intersections X 2(black and white) =10)
6) Cyclic Ko (Diagram 15)

Cycle Length: 8 (4 intersections (two units of 2 stones) x 2 times =8), in case of variation Max. 16
3. Starting point of the Recreation of the same Configuration

The number of moves from the starting point to the last move that creates the same configuration is the cycle length.
II. The detailed commentaries of each diagram on the Recreation of the same Configuration (hereafter, RSC)

1. Recreation of the same Configuration by both players
1) Triple Ko (Diagram 13, The Korean Rules of Baduk (Go)



Dia． 2


Dia． 4

White 6 of Dia． 3 is the RSC of Diagram 13 and black 7 of Dia． 4 recreates the same configuration as the shape after black 1 of Dia． 1.

2）Eternal Life（The Korean Rules of Baduk（Go），Daigram 14）


Diagram 14


Dia． 1 prototype


Dia． 2

The Prototype of Diagram 14 is speculated to be Dia．1．（忘憂清樂集，玄玄碁經）

If Black plays at 1 as Dia．2，black 5 of Dia． 4 is the RSC of black 1．Therefore， the length of the cycle is 4.


Dia． 3


Dia． 4


Dia． 5

If White starts from 1 of Dia．5，white 5 leads to the RSC．

1）Diagram means the diagram of The korean Rules of Baduk（Go），Dia．means diagram for the explanation of variations under each Clause．


If Black starts from 1 of Dia. 9, black 5 of Dia. 11 leads to the RSC. And if White continues at 'a' of Dia. 11, it is the RSC of white 2 of Dia. 9.


Dia. 9


Dia. 10


Dia. 11

This variation possibly starts from the Dia. 1 (prototype), black 5 of Dia. 4 shall be considered as the RSC.
3) Cyclic Ko (The Korean Rules of Baduk (Go), Diagram 15)


Diagram 15


Dia. 1 Prototype


Dia. 2

Regardless which player starts first, the situation is the same. However, the player who makes the first move in this configuration has an option of leading to Dual/Seki/Tie. If Black takes out a white stone in Dia. 2, White has no choice but to take out the black stone. In this case, two groups of stones are in Dual Life. However, Black can lead to a draw as shown in this following Dias.


Dia. 3


Dia. 4


Dia. 5


Dia. 6


Dia. 7

White 8 of Dia. 6 is the RSC of Dia. 1 (prototype). If Black continuously places 9 of Dia. 7, it is the RSC of black 1 of Dia. 3.

But Black places at 9 of Dia. 8, the RSC does not happen yet. Following variation (sequence of moves) is expected.


After black 9 of Dia. 8 White can choose 'a' or 'b' with 10.

White 12 of Dia. 10 is the second RSC. There is an alternative for White of placing 12 instead of 10 , but at the time of capturing 2 stones it will be again the RSC of Dia. 4. Yet the RSC by Black not happened.

After Dia. 10 Black can place 13 or 15 of Dia. 11. But either case, at the time of capturing 2 stones as Dia. 12, becomes the RSC of black 7 of Dia. 6

Black can not avoid the RSC, the RSC will happen within Max. 16 moves (Cycle 8X2).
4) A pair of Double Kos (The Korean Rules of Baduk (Go), Diagram 16)


Diagram 16

Let's consider separately the two cases where Black or White plays first.

* When Black moves first


White 8 of Dia. 2 is the RSC Diagram 16.


Dia. 3

Black 9 of Dia. 3 is the RSC of black 1 of Dia. 1.


Dia. 4

If black does not want to draw the game, Black can connect at 9 as Dia. 4.

Then White will connect at 10, and the situation is over.
If White does not want to draw the game, White can concede the Ko. The game will be concluded as Dia. 6


Dia. 5


Dia. 6 (White 4 : pass)

* When White moves first


Dia. 1


Dia. 2

Dia. 3



Dia. 4

Black 8 of Dia. 3 is the RSC of Diagram 16 and white 9 is the RSC of white 1 of Dia. 2.


Dia. 6

If White wants to avoid a draw, White shall connect at 9 as Dia. 6. Then, Black will connect at 10 , and the situations is over.


Dia. 7 (Black 8 : pass)

If Black wants to avoid a draw, Black shall concede Ko as Dia. 7.
5) A pair of Double Kos 2 (Quintuple Ko) (The Korean Rules of Baduk (Go), Diagram 17)


Diagram 17


Dia. 1


Dia. 2


Dia. 3

Black 7 created the same configuration as the configuration after black 1 of Dia.1. In this case, the cycle of the RSC is a 6-move cycle.


Dia. 4


Dia. 5


Dia. 6

White 14 is the RSC of white 8 of Dia. 4. If Black does not want a draw, Black should connect one stone. Then, White connects one stone, and Black connects the last one stone. Then the game is ended.


Dia. 7 (White 2, 4, 6 pass)

If White does not want a draw, White should give up all Kos as Dia. 7. If White captures black 5 or 7 , it will lead to a draw.
6) A pair of Double Ko 3 (The Korean Rules of Baduk (Go), Diagram 18)


Diagram 18


Dia. 1


Dia. 2


Dia. 3

White 8 is the RSC of Diagram 18. And black 9 is also the RSC of black 1 of Dia. 1. If White does not want a draw, White shall give up left or right corner.
7) Three-Stone Eternal Life (The Korean Rules of Baduk (Go), Diagram 19)


Prototype


Dia. 1


Dia. 2


White 10 of Dia. 5 is the RSC of Prototype and black 11 of Dia. 6 is also the RSC of Dia. 1.
If Black wants to avoid a draw, Black shall connect at 11 of Dia. 7 and White places at 12 , then game is ended. If White wants to avoid a draw, White shall connect at 6 of Dia. 8 and Black places at 7, then the game is ended.
2. Recreation of the same Configuration by one player only

In case of Diagram 20 and 21 Black can choose either a draw or Dual life/Seki/Tie.

1) Diagram 20 of The Korean Rules of Baduk (Go)


Diagram 20


Dia. 1


White 6 of Dia. 3 is the RSC of Diagram 20. Black 7 of Dia. 4 is also the RSC of Dia. 4. Black shall choose either a draw or Dual Life/Seki/Tie before the second set of Passes.
2) Diagram 21 of the Korean Rules of Baduk (Go)

Black can choose 'a' or 'b' of Dia. 1, White can only choose 'c'.

* In case Black chooses 'a


Diagram 21


Dia. 1


Dia. 3

Dia. 2


Dia. 4


White 6 of Dia. 3 is the RSC of Diagram of 21 and black 7 of Dia. 4 is the RSC of black 1 of Dia. 2 .

* In case Black chooses 'b’


Diagram 21


Dia. 5


Dia. 6


Dia. 7

White 6 of Dia. 6 is the RSC of Diagram 21 and black 7 is the RSC of black 1 of Dia. 5.
Black shall choose either a draw or Dual Life/Seki/Tie before the second set of Passes.

* In case White chooses 'c'


Diagram 21


Dia. 8

White can choose 'c' only. After black 2 of Dia. 2, White can not continue to play.

