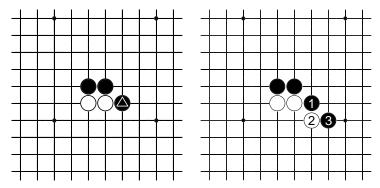
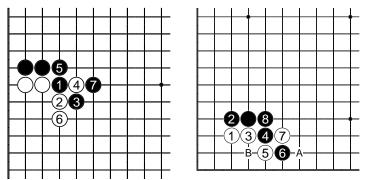
# Part Two Principles of Engagement

# Chapter Four Starting from hane

## 4.1 Play hane at the head of two stones

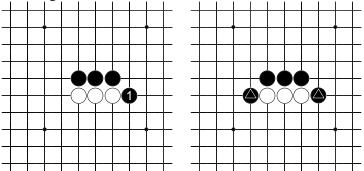


The Black stone marked with a triangle is an example of the *hane* ('hahnay') play, round the end of your opponent's stones, leaving a cutting point. (**Right**) Black 1 is *hane* at the head of two White stones, and Black 3 is a second *hane*. When it works, this double *hane* is a powerful way to play.

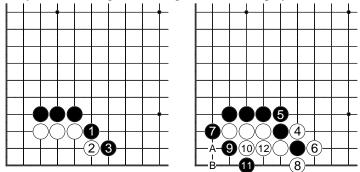


(**Left**) White must defend at 6, so Black succeeds, bending White back through 90 degrees. (**Right**) After a 3-3 invasion, Black may play double *hane* with 4 and 6, since Black B retakes the corner if White now plays A.

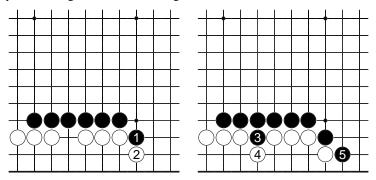
# 4.2 Play hane at the head of three stones



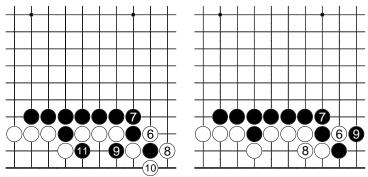
The *hane* play Black 1 also works to put the White stones into bad shape, especially if, as in the right-hand diagram, Black can play at both ends.



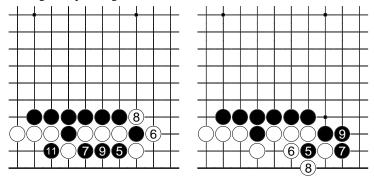
Let's look at the effect of the double *hane* play in the left-hand diagram. While less forceful than the example in 4.1, it still makes White experience some discomfort. (**Right**) White can capture with 4 and 6, but 7 infiltrates the corner. After 12, Black leaves this area for later. White A may be met with Black B for a *ko* fight, but normally Black would play *atari* the other way, sacrificing without serious regrets.



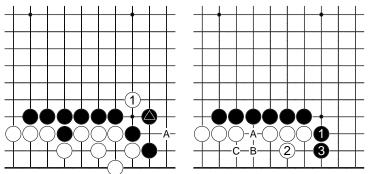
Here is a typical use of *hane* to seal off the lower edge. Up to 5 Black sets White a problem.



(**Left**) It will usually be out of the question for White to go down this road, losing three stones and being cut. (**Right**) White can choose this way of sacrificing 6, depending on the usefulness of a ladder-breaker.

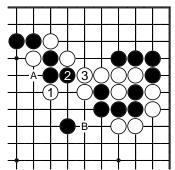


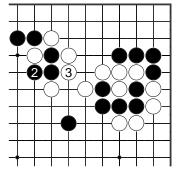
(**Left**) If the ladder is bad or awkward for Black, there is another play to try. Black 5 here is sharp: White 6 to resist (White 10 connects) will normally look poor after Black 11. (**Right**) Therefore Black may succeed in sealing off the edge with 7, at the cost of White's improved eye shape.



(**Left**) Black 9 in the previous diagram is generally preferred to a hanging connection, to minimise White's peeping plays such as 1 and A here. (**Right**) Sometimes White may play 2 this way, an empty triangle but not so bad, to take *sente* and guard against the cutting sequence Black A, White B, Black C on the other side.

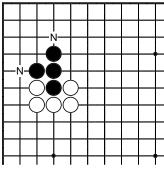
## 4.3 Nose plays and adding liberties



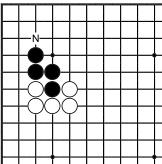


Here 1 is a key *nose* play in some wild fighting. If Black resists by playing 2 (**left**), White will capture at A or B. (**Right**) White connects out.

There is a good reason why beginners often try nose plays; but you have to be quite strong to employ them properly. There is a worthwhile general idea here.



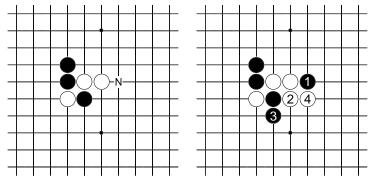
The two liberties marked N (for nose) of Black's chain have a special role. A black play at either of them increases the number of liberties to seven, from the current number five. If Black adds a stone on the other liberties, the chain will end up with six or only five liberties. The points N are the directions in which liberties grow fastest.



point N is the unique 'nose': only by playing there can Black build up seven liberties on this chain. Clearly enough it is a simple matter of counting to find the nose points. It is, however, a matter of considerable skill to attack successfully at them. The *hane* proverbs help here.

Another example, in which the

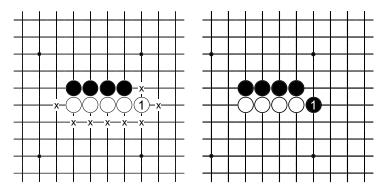
A computer would be able to identify nose plays much faster than a human could. Human go players have the advantages of looking further, at the overall fighting context, and of great selectivity in the kinds of patterns and heuristics they apply. This does seem to matter more.



Here in a cross-cut fight White's chain has a nose point at N. It is a novice's mistake, in general, for Black to attack there immediately. After Black 1 White 2 is a very good play. Now Black suddenly has an extra (third) group to handle. At 4 White may play as shown, if Black has no ladder to capture the single white stone. In any case White will get a good result.

'Be wise; generalise' they say, but there is no proverb 'play hane at the head of four stones'. One can see that this is related to the idea 'five liberties on a chain is enough for tactical viability', together with the nose play concept.

We may assess the power of *hane* at the head of four stones by simple counting.

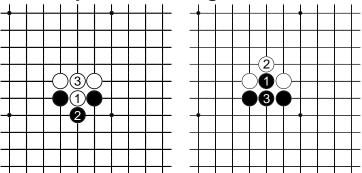


(**Left**) Note that White 1 makes eight liberties. The white chain will undoubtedly then be safe from shortage of liberties.

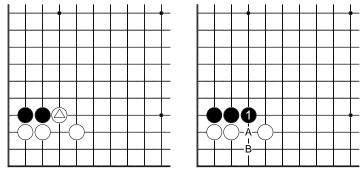
(**Right**) The black *hane* play here reduces White from six liberties to five.

Probably White will answer Black 1, but for the sake of territory and influence. Against chains with five liberties one doesn't expect sharp tactics; it is hard enough to find those against chains with four liberties, as the example at the top of the page illustrates. Reducing a chain from six liberties to five isn't always quick enough.

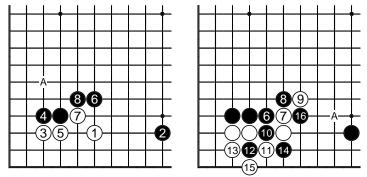
## 4.4 Don't permit the bulge



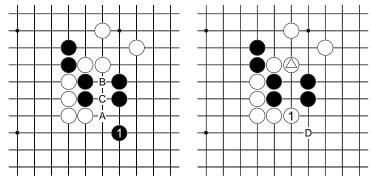
This formation, which may occur anywhere on the board, is explosive in shape terms. The plays 1 make a net difference of four cutting points.



The bulge of 3.5G, that is, the marked White stone, is a key point in many shapes. If Black 1 is played there, Black A, White B, will saddle White with two dangerous cutting points. Compare with the previous diagrams.

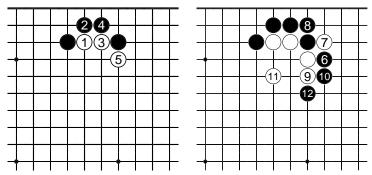


(**Left**) Black 4 should really be at 5 in this case, but Black 6 is a serious shape error. White 7 sets up a White play at A, to which Black has no very good reply. This is the sort of bulge one shouldn't permit to the opponent. (**Right**) Black 6 played at the bulge point guards Black's shape and attacks White's. If White plays 7 and 9, Black sets White a problem up to 16. Black's pincer would now be better at A, which is why Black 4 is wrong.

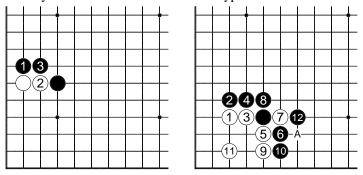


However in this position the bulge point A isn't important for either player. Black should play at 1 as shown; Black A, White B, Black C reveals an empty triangle. (**Right**) White 1 overlaps in effect with the triangle stone, and violates another proverb: *don't peep both sides of a bamboo joint*. It would be better placed at D, since Black has no interest in playing at 1.

#### 4.5 Don't butt towards the centre

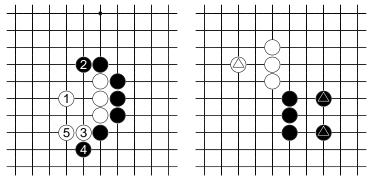


White 3 is a *butting* play, hitting a black stone head on. Up to 12, White's shape is very bad. White has made the same type of mistake twice.

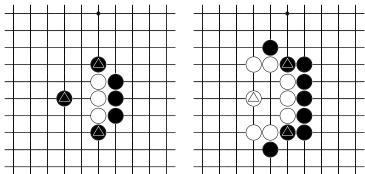


(**Left**) In general White 2, butting towards the centre, is a pattern of bad shape. (**Right**) White's shape here is poor. After Black's double *hane* with 6, White must defend, rather than play 9 at A.

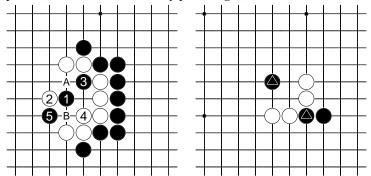
# 4.6 Play at the centre of three stones



These next sections are pivotal, and integrate ideas from all the first four chapters. White 1 is good shape for moving out. It anticipates the double *hane*, and prepares a table shape. This stone stone symmetrically placed at the centre of three stones defends a vital point. (**Right**) The single marked White stone is also more efficient than the two marked Black stones.

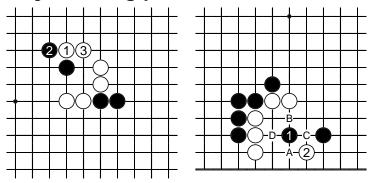


The triangles formed by these marked stones are ideal examples of attacking shape (**left**), and defence at the key point (**right**).

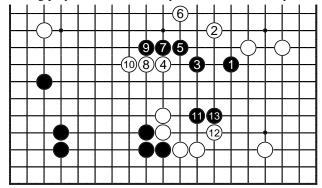


(**Left**) Black takes the key point, and White's eye shape is gone (White A, Black B leaves a false eye, Black 3 could be omitted). (**Right**) Compare with this basic eye-stealing pattern and the double table (1.1).

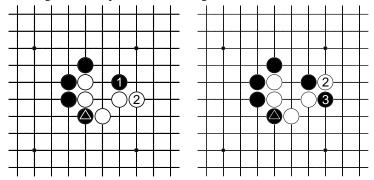
### 4.7 Eye-stealing patterns



After 4.6 we look again ideas brought up in 2.6. Here are two ways to resist an eye-stealing play. Black A is met by White B, Black C by White D.

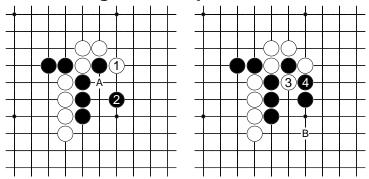


In this fight White should have played at 13 with 12. As soon as Black plays 13 for a high table shape, Black is strong and White is in trouble.

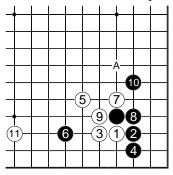


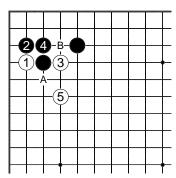
The simple play at White 2 (**left**), related to the nose plays of 4.3, is perhaps easy to miss in a game. It corrects White's bad shape based on the position of the marked Black stone. (**Right**) White 2 here runs into trouble, since Black can safely cut at 3 without losing the stone played as 1. The marked Black stone causes White a shortage of liberties.

# 4.8 Choosing the clamp

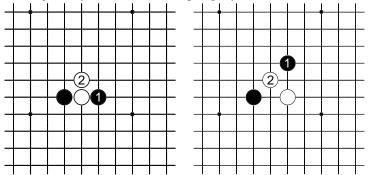


Black's connection at A, an empty triangle, is worse than 2, at the centre of three stones. After 3, the clamp at 4 is good shape, as would be a play at B.



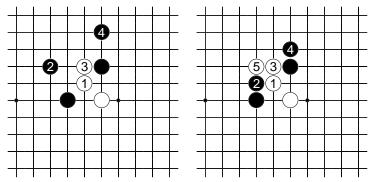


(**Left**) Here White 7, a table clamp as you could call it, is very good shape. White plays 11, anticipating a running fight in which White A will be useful. (**Right**) White 3 is a good clamp, aiming at both A and B. Black 4 is an answer in good style. White 5 develops lightly.

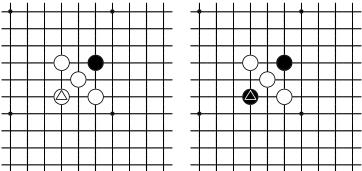


The more violent clamp compares unfavourably with the diagonal jump, when White cuts through. (**Left**) Black's stones are weakened by 2. Black must have a good reason to play this way. (**Right**) The Black stones are on key angle points of White's eye shape, and don't lose liberties after 2.

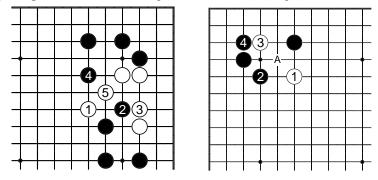
# 4.9 Diagonal jump: attacking perspectives



When White comes through the diagonal jump, the left-hand diagram is good play by Black. Black 4 is a light play, to sustain the attack. (**Right**) Black 2 here is a bad idea, since White will anyway play 3. Avoid forcing your opponent to play good moves!



To emphasise again: the marked stones are on vital angle points for White's eye shape. If Black is attacking White this makes a huge difference.



In both these practical cases Black lets White connect (at 5, A) but only with poor eye shape. People say the angle plays *compromise* the diagonal connection of the diagonal jump. More can be found on the diagonal jump in 11.2 and 14.3.