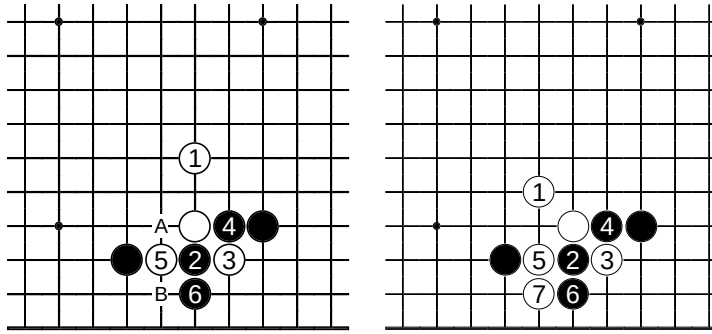
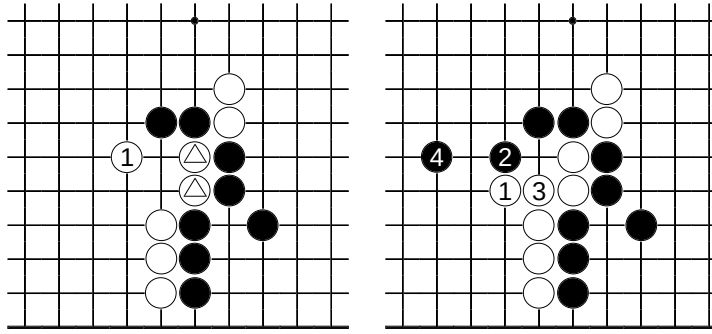
Chapter Two
Shape Basics

2.1 Introduction: functions and comparisons

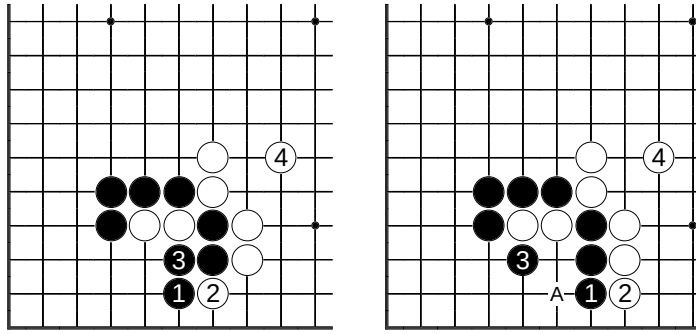
Chapter 1 showed some strong and useful shapes, but you need principles as well. The first steps in understanding shape come not with looking at specific patterns, but with the idea that certain plays work well, where others disappoint.



The one-point jump White 1 in the left-hand diagram doesn't allow White to keep the two Black stones separate: after Black 6 Black will be able to play at A or B. But the diagonal play 1 **(right)** works perfectly.

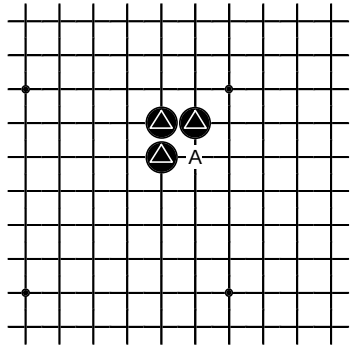


The one-point jump **(left)** is the way to defend the two marked stones, since the diagonal play **(right)** allows Black the snapback threat at 2.



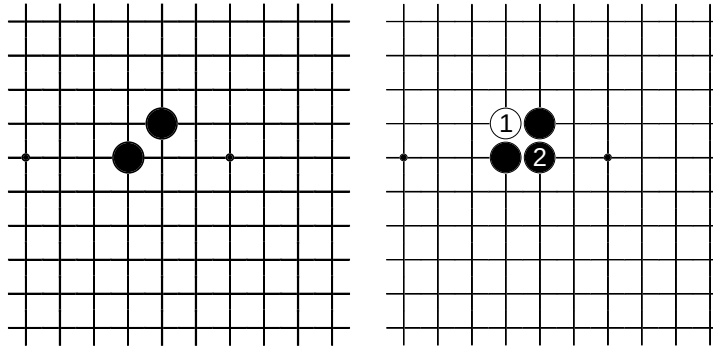
Black should use the diagonal play 1 **(left)** to capture the two White stones. Playing down towards the edge **(right)** is clumsy: Black 3 is needed because of the threat of White A. Now Black cannot capture a white stone on the edge, a big endgame play that also creates a cutting point.

2.2 Empty triangles – every dog has its day

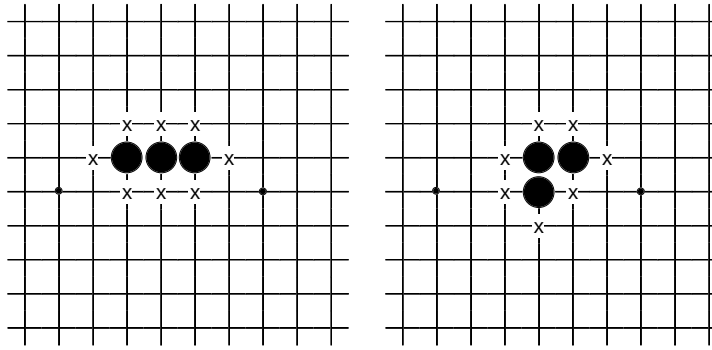


Those who have learned as axiomatic that the *empty triangle* – this marked Black shape, in which the point A isn't occupied by a White stone – is a bad shape, may be surprised later to find that it has some possible advantages. From the point of view of 2.1, that's a matter of seeing how it matches the needs of the position.

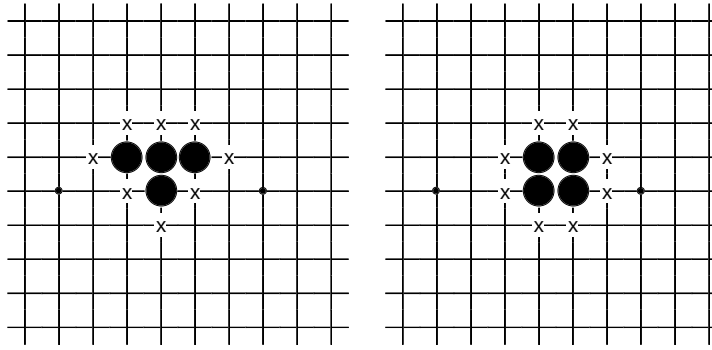
To start with, two reasons that the empty triangle is considered a bad shape.



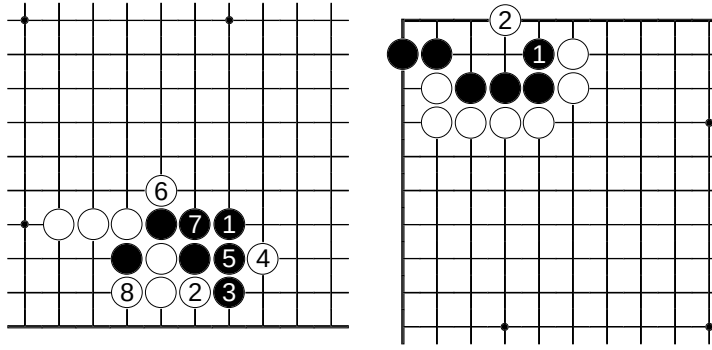
Firstly, it is inefficient. If Black makes the diagonal shape in the left-hand diagram, the two stones are already connected. If White plays 1 in the right-hand diagram Black can connect with 2; and *vice versa*.



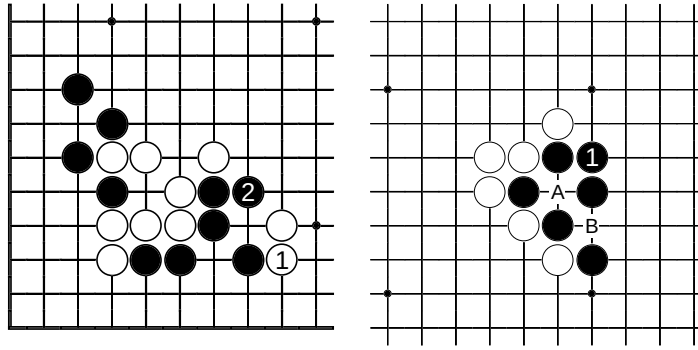
Secondly the shape formed is short of liberties. Three stones in a line **(left)** have an initial eight liberties. In the empty triangle **(right)** they have only seven. This difference may appear to be quite small, but soon makes itself felt in any close fighting.



(Left) This shape has two empty triangles in it, and has no extra liberties to show for the fourth stone. **(Right)** The 2x2 block is just as short of liberties, but is also very clearly an inefficient shape that uses stones badly.



Some practical cases. **(Left)** Gross inefficiency: Black should just play 1 at 7. **(Right)** Black 1 is wrong and White 2 kills the corner; Black could live by playing the key point 2 (cf. 4.6).



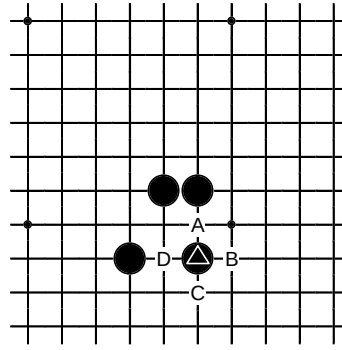
For contrast, two examples of empty triangles as fine shape. **(Left)** Black 2 avoids being shut in. **(Right)** If Black cannot fight the *ko*, this play 1 starts to looks good after White A, Black B.

While an empty triangle is bad shape more often than not, it seems impossible to give an exhaustive list of cases where it may qualify as good shape. There are examples on pp. 12, 26, 49, 55, 105, 117, 171, 188, 192 and 195.

2.3 Around the table shape

The table shape from 1.1 was given without much explanation. That is typical of unadorned comments 'it's good shape'. This section looks at two ways forward from there.

Adjusting a single stone



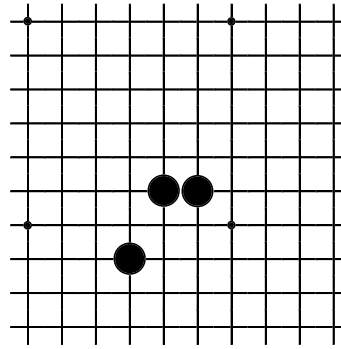
The marked Black stone is most often better placed where it is, rather than at any of A, B, C, D. Why is that? For example A makes an empty triangle shape, not intrinsically a good idea.

The shape made with D is comparable with the bamboo joint. You could say that A and D are too close to the other black stones, so they may be less efficient than the other three plays. On the other hand B and C may turn out to be too far away. If that's the case then the marked stone achieves a kind of balance.

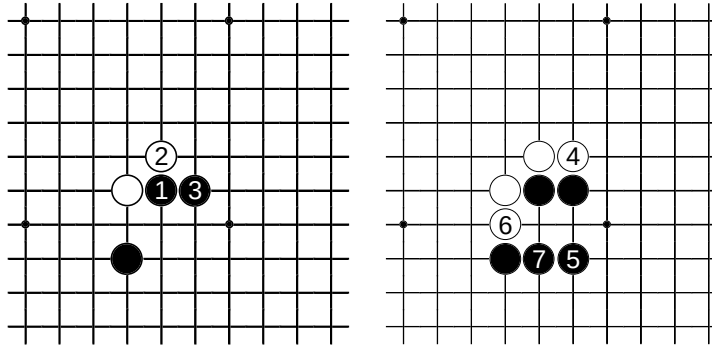
However that's not the whole story. The shape made with C turned out to be good shape when seen in 1.4 and 1.5. It occurs also in the problems, later. The shape made with A is in 3.5L, in a very particular pattern. The shape made with D is very important (for example in Chapter 8). Perhaps only the shape after B is really unusual, and relatively rare as a good shape; when it occurs on the next page it is too loose.

Development and foresight

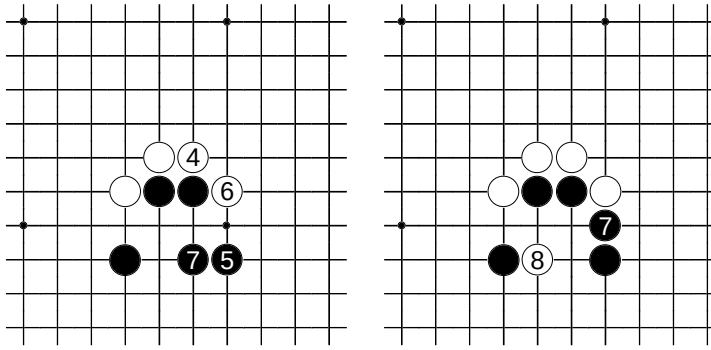
Stones are placed one by one on the board. Any shape more complex than the diagonal or jumps must be put together in full realisation that the opponent may intervene. The first ideas about shape may come from static patterns; but there is the underlying process to worry about, too.



We study this portion of the table shape. It contains three stones, but feels incomplete as it stands. It is expected to occur with some White stones, which might be distributed round it in a number of ways. The discussion of whether the Black stones are properly placed and connected becomes interesting and not too simple-minded.



Now add some White stones, to reduce the level of abstraction, and bring in possible tactical variations. The development in the left-hand diagram is quite normal (more on this in Chapter 5). Black 5 makes a very solid shape **(right)**, which is only confirmed when White plays 6 and Black answers at 7 for a bamboo joint.

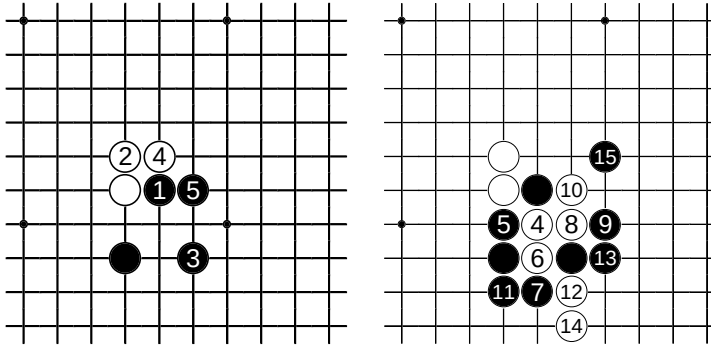


The looser choice of Black 5 here can bring some redundancy or leave future trouble. **(Left)** Here 5 and 7 are too close to each other, and Black's shape is somewhat inefficient. **(Right)** The placement play 8 leaps to the eye. It is a skilful way later for White to cut Black.

Let's ask why, though, this play White 8 is visibly on a vital point. It could be one of two reasons:

- This is the point to complete the double table shape of 1.1.
- This is the way to make an eye-stealing relationship with the white stone played as 6.

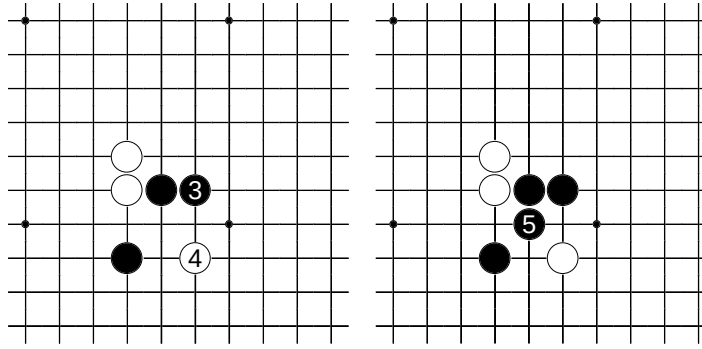
If you think about it, the first reason is related to eye shape too. So here is one way in which shape study isn't so simple: eye shape may be involved in what at first sight is mainly a question of keeping connected.



If White had reacted more passively with 2 here, Black could jump to 3. **(Left)** An efficient result for Black. How dangerous is 3?

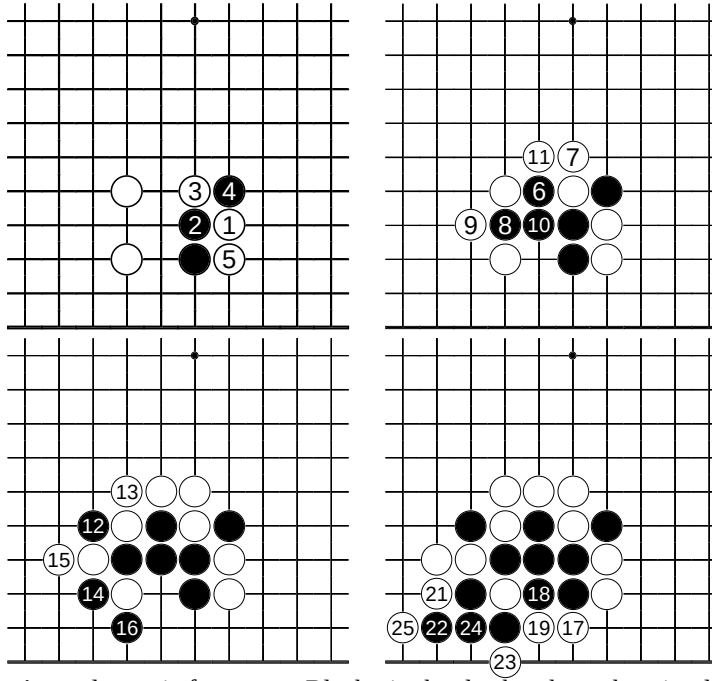
Perhaps White might resist with 4 **(right)**. The meaning of the plays up to 14 isn't hard to understand. Who has the advantage in this fight? After Black 15 it seems that the two black groups will be better developed; it isn't so important that Black has sacrificed one stone.

When there are a number of weak groups in the centre of the board, the balance of dynamic factors in the fighting is the most important thing. One of those factors is the good shape of groups, for running away or eyes.

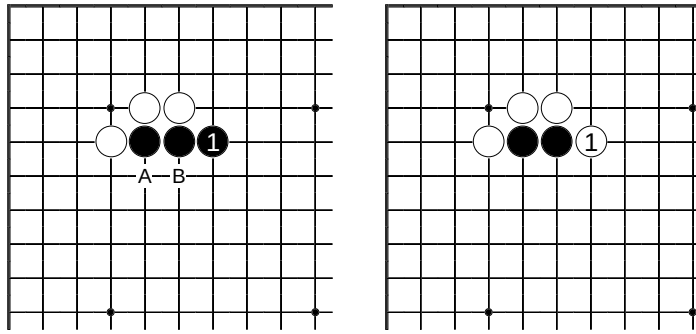


Here 3 is odd: White will take the key point 4. **(Right)** A horrible result. Although Black remains connected, this shape has an empty triangle signalling inefficiency, and also a white stone sitting on a key eye shape point, generally called an *angle* point in relation to Black 5 (4.8, 4.9).

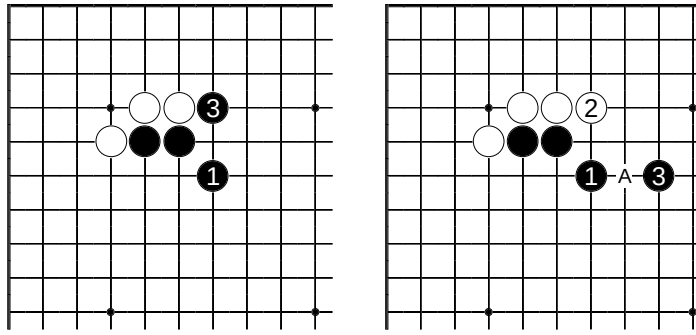
2.4 Fighting: the liberty problem



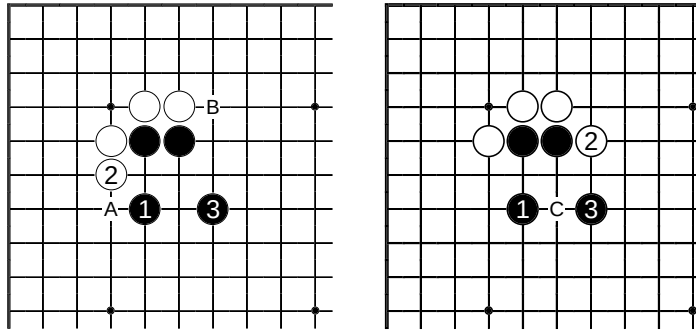
Here's a sad story in four parts. Black tries hard to break out, but simply has too few liberties. As soon as White plays 5, Black's shape is deficient in liberties. The end comes after Black 20 connects, leaving only three liberties. Capturing a single stone with 16 cannot be relied upon to gain liberties, if it only makes a false eye. In fighting even a single liberty matters.



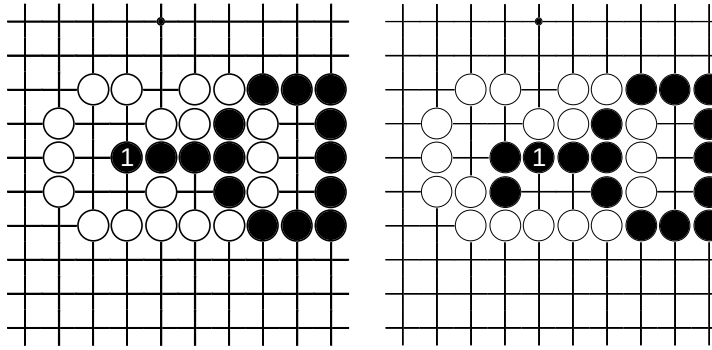
Considering liberties alone, Black 1 is the key point; it gives Black five liberties, while both Black A and Black B make empty triangles, and only four liberties. For that reason White 1 is a good way to attack.



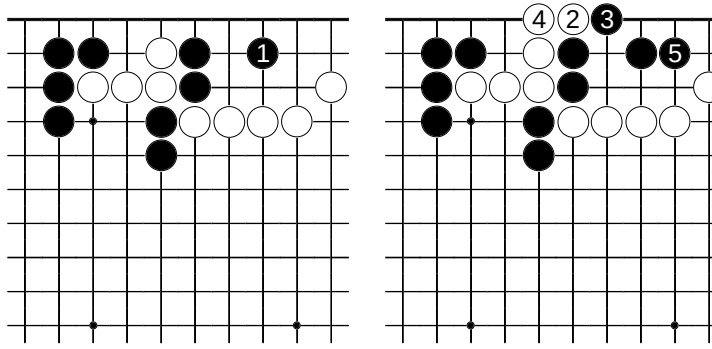
You sometimes give greater priority to adding a second dimension to a group. Black 1 here aims at playing 3 **(left)**. But if White answers at 2 **(right)**, Black's shape is slack, with a weak point at A. So Black 1 is poor shape.



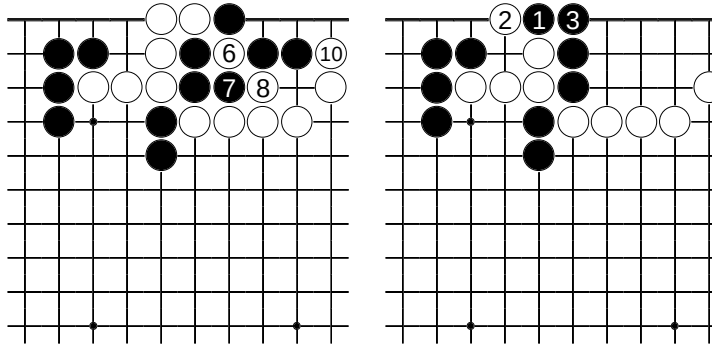
It would be better to jump at 1. If White plays the one of the key points, 2 in the left-hand diagram, Black's table shape with 3 becomes very good, leaving a choice of A or B next. **(Right)** Black 3 is still usually good, but Black will have to watch for the possible weakness at C as the game continues, because White 2 has caused a shortage of liberties. In this case Black might sometimes instead wish to play 3 at C, a bamboo joint. (Cf. 1.3).



The plays shown here are the unique ways for Black to win the capturing races. On the left Black gains two liberties by extending from a chain. (This is a nose play in the sense of 4.3). **(Right)** Black links two chains: other connecting plays, for example the bamboo joint, yield fewer liberties. Empty triangles are *what-you-see-is-what-you-get*, for counting liberties.



In this case Black is behind on a count of liberties. What about Black 1? Can Black gain enough liberties along the edge after 5?



After the throw-in 6 it becomes clear that Black is behind in the race (9 connects at 6). In fact Black should concentrate on reducing White's liberties **(right)**. There Black wins because White must connect. Black 1 or 3 is the key point in this capturing race.

Summary on fighting shape

The study of shape isn't about how to avoid fights, but how to enter them only on your own, well-positioned terms.

The key factors in close fighting are liberties, eye shape, and connections. The quickest way to lose a local fight is to reduce your own liberties by clumsy play. The common patterns of liberty shortage are fairly easy to pick up. On the other hand detailed discussion of connections takes up much time in an introduction to shape.

Some principles on liberties in close fighting:

- adding a stone to a chain normally adds one or two liberties, of which your opponent can fill one next turn;
- it may hard to recover from losing a liberty; so avoid all unmotivated pushing into the opponent;
- false eyes and hanging connections can cause loss of apparent liberties, as in the last example; the same is true of bamboo joints.

At various times in games you will have to worry about:

- whether you can connect (many difficult aspects);
- whether you should connect, and how then to do it;
- whether you can cut, and how best to cut;
- cuts leading to weak groups and running fights;
- peeps, i.e. threats to cut, and how to answer them.

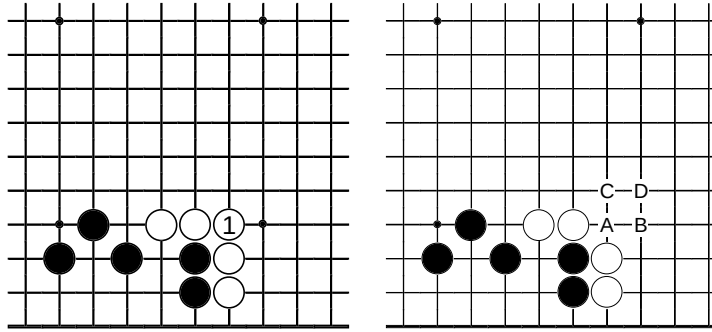
These all may involve shape reasoning. Ambition always stretches out, for extra efficiency; the usual reason for holding back is that you may be cut. (There is also fear of invasion.)

Shape that is capable of making eyes attracts the attention of all experienced players. Some reserve eye shape in groups increases the range of possibilities for fighting in a given part of the board; while taking care of a group that is only just alive may be quite constraining on your other projects.

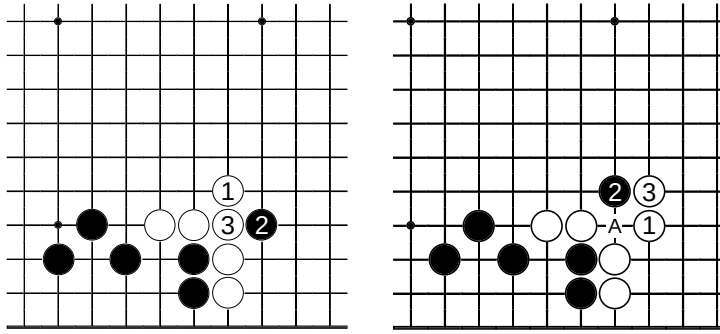
The subject of eye shape is complicated. There are good reasons why whole books are devoted to life-and-death, especially on the sides and in the corners – and in the centre context becomes crucial.

Always pay close attention to context in fights (neighbouring stones, influence, the side of the board); theoretical good shape is a big help, but isn't enough on its own.

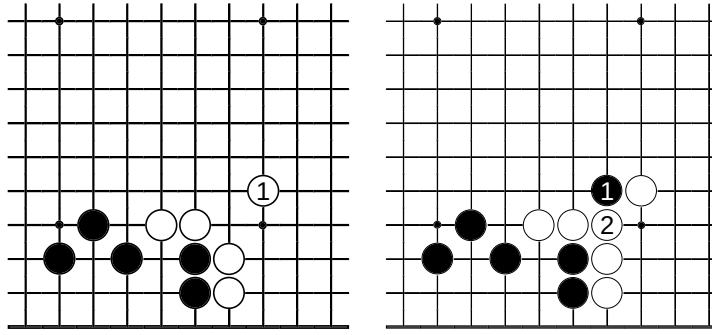
2.5 How to connect



What if anything is wrong with White 1 here? A fundamental question is: how to connect, given a range of possible plays such as A to D. White certainly ought not to get cut round here, but which is the right play? The solid connection A demonstrates no ambition to be efficient, but allows Black nothing at all in the way of later forcing moves.



The hanging connections C **(left)** and B **(right)** both allow Black a peep 2. If White is strong to the right, B may be better; the peep is a waste if it gets swallowed up. After C White has no reason to connect with 3.

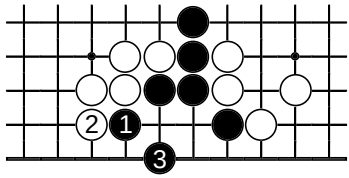


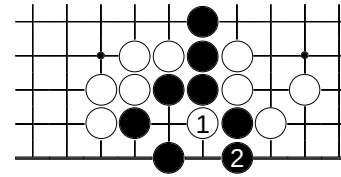
The choice D **(left)** is the normal good shape. This indirect connection is supported by two ladders (and here a net, too). The Black forcing move **(right)** is not worth very much: there isn't a good way to follow it up.

2.6 Fighting: eye shape

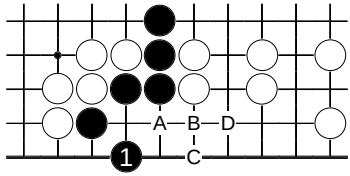
There are examples such as these ones on individual eyes.

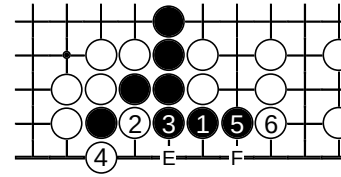
Single eyes on the edge





The recognition of half eyes is not as easy as you might think. Black 3 completes an eye. **(Right)** White fails.

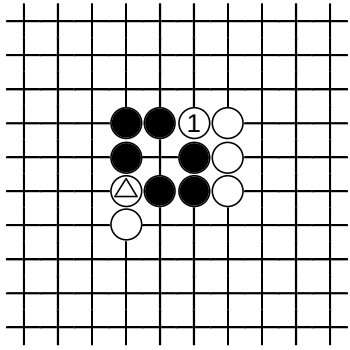


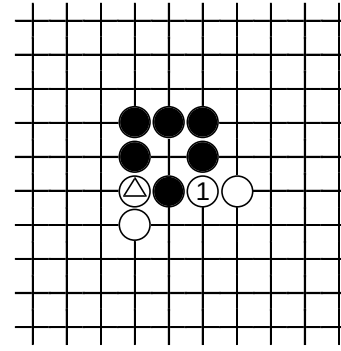


(Left) Black 1 makes the eye: now White A is met by Black B, and after White C next, Black D is good enough. **(Right)** Black 1 here fails; Black needs both E and F to make the eye.

Life-and-death illustrates the old principle *hard cases make bad law*.

Attacking eye shape



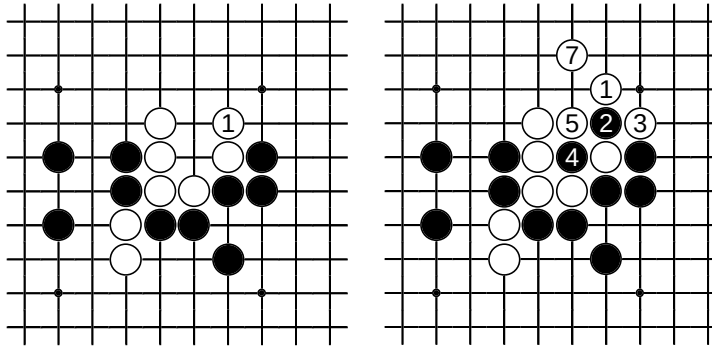


Only in the centre of the board does eye shape follow relatively simple rules. Fundamental shapes for the attacker are the *eye-stealing play* **(left)** and *clamp* **(right)**, in relation with the marked White stones.

> Enthusiasm for destroying eyes or making them can go too far, as we shall see. These plays are one kind of *suji* (style of playing, basic tactic or technique). The play in the left-hand diagram is often described as the eye-stealing *tesuji*, when played in sparser positions in which the potential eye is as yet unformed.

Defending eye shape, versus running out

It is wrong to assume that the first task in defending a weak group is to build eye shape. If stones are worth saving, one's duty may be first to run out with them, making it easier to connect to another group, and also adding liberties in case of an ultimate capturing race.

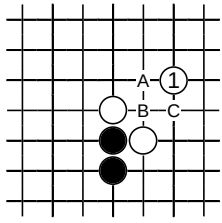


The defender has to decide how much relative weight should be given to constructing eyes, and how much to running out. **(Left)** White makes a definite eye. This play might look heavy on some occasions (see box below). **(Right)** White can develop more rapidly by allowing the eye to be destroyed. If Black plays 2, White sacrifices one stone (Black 6 connects). This is generally better play.

Light and heavy

Two of the most important ways in which shape may be qualified are as *light* or *heavy*.

To make light shape is to consider future convenience and flexibility over short-term solidity and the safety of each stone.



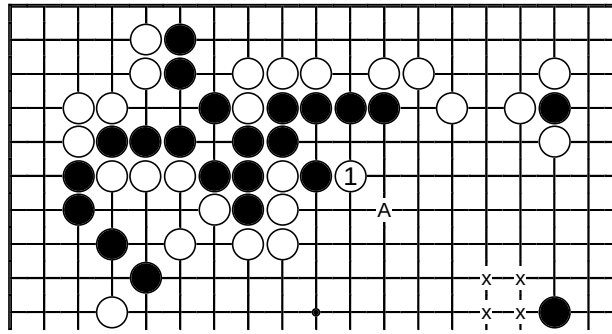
Light shape is usually to be recognised by its mobility and avoidance of solid connections. Flexibility is gained by the willingness to sacrifice stones. White 1 here "solves" the connection problem, by being prepared to sacrifice one stone if Black cuts at B, forcing with A or C.

Heavy shape on the other hand emphasises current profit and connection, over longer-term worries about defence and the possible requirement to sacrifice some of one's stones later. White's connections at A, B or C are relatively heavy plays.

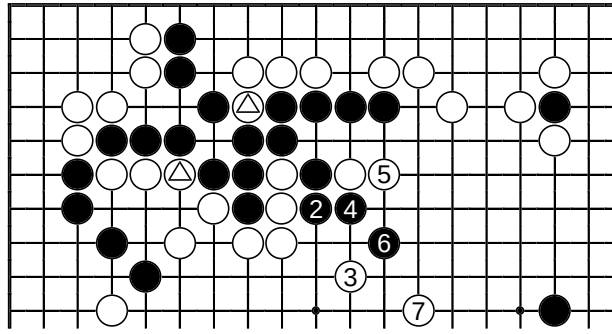
Heavy play is perhaps the mistake all *kyu* players share.

Attacks that are too ambitious, or commit a player to killing large groups, often involve the need to save every single attacking stone, in order to deny the defender eye shape. This in turn may lead to lack of liberties and too many cutting points in the attacker's shape. Two Japanese technical terms that are very important from a professional point of view, but are less well-known than they should be, are *amarigatachi* and *amashi*. *Amarigatachi* is the kind of weakened or over-extended shape that the attacker is left with, after an attack pushed too hard. *Amashi* is a high-level defensive strategy, of leaving a group weak enough to tempt the opponent to attack; if then *amarigatachi* results, the plan succeeds.

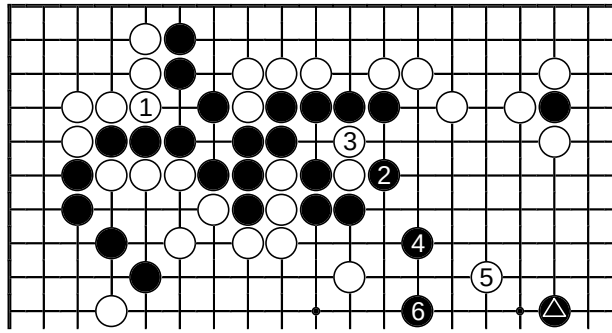
Fixation on eye shape



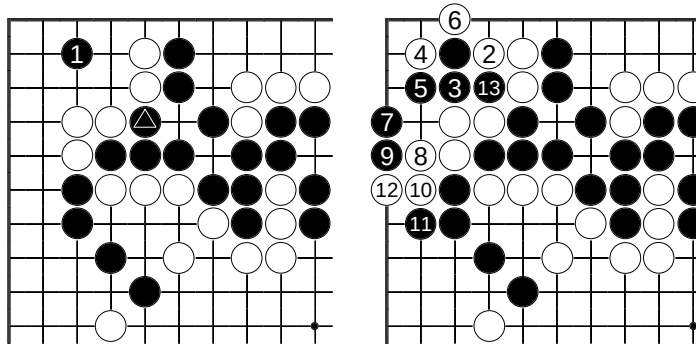
The clamp play in action. If White attacks with a more distant play such as A, Black may gain an eye in the centre with ease. That doesn't mean that White 1 is necessarily good. White really should play one of the 'x' points first, for a less direct plan of roundabout attack.



The marked stones steal an eye, so that the Black group seems to be under pressure. However when White plays 5, required for consistency, that is a heavy play: it commits White to saving these two stones. This is typical of where the natural wish to attack decisively may lead.



Now replace White 5 of the previous diagram by 1 here. Next White 3 loses points. Unless White kills Black this will be an obviously bad play. White's conception of how to fight is too direct. More advanced and appropriate thinking is to attack the marked Black stone first, in some roundabout way.



A Black play at the marked point is *sente*, against the corner, because Black 1 (another eye-stealing play) is strong. For example **(right)** White dies. But still White shouldn't rush to take away this half eye.

For flexibility attacker and defender should stay light

On the previous page and this one are shown heavy or wasteful plays used to keep up an attack.

Light shape is very important to both defender and attacker:

- the defender benefits from being able to give up a few stones while saving most of a group;
- the attacker should attack in a way that doesn't assume the target weak group will die, while retaining good shape from the point of view of building territory or influence.

Perhaps these conclusions run against the intuitions of beginners.