

# WEI-CH'I.

BY Z. VOLPICELLI.

---

About three years ago I wrote a short sketch on Chinese Chess. While gathering materials and making enquiries on that subject, my attention was drawn to the other great game of China, which she invented and which she considers far superior to Chess. This alone would be sufficient to awaken curiosity. We are so accustomed to consider Chess as unquestionably the *royal game*, that the simple statement that a country possesses Chess and another game, and considers the latter superior, is startling. We naturally feel drawn on to examine this unknown rival and find out for ourselves whether it deserves its claimed superiority. Before we know it, *Wei-ch'i* has therefore the merit of rousing our curiosity by its great reputation. *Wei-ch'i* is considered *par excellence* the game of the literary class, while Chess is the favourite diversion of military men. This fact establishes its precedence in China and has also value in our eyes, because, if the flower of the nation, which is always to be found in the civilian class, prefers *Wei-ch'i*, it must possess, at least for the Chinese mind, great attractions.

Even at first sight *Wei-ch'i* presents several striking peculiarities. The board on which it is played is very large, containing 361 places; the men are very numerous, as nearly 200 may be required on each side, and its nature is different from that of the games we are already familiar with. The

pieces cannot be moved,—once placed on a spot they remain there until the end of the game, unless surrounded and destroyed by the enemy, when they may be removed from the field of battle. The game does not consist of a series of skilful evolutions by which each player tries to manœuvre its men to the best advantage and to secure its object in the least number of moves; it is a game of position, each side tries to place the pieces in the most favourable way so as to secure by their combination a winning position. This last peculiarity lends it all its charm. We find a game totally different from those we have been accustomed to. The difference is not in detail, but in the essence of the game. It belongs to quite a different order from Chess and Draughts. Moreover, though a game of extreme difficulty, it is of the greatest simplicity. There is not a number of different pieces, each with its own peculiar move; all the men are similar, they can be placed anywhere, and they cannot move. Perhaps it is owing to this that it has altered so little in passing to other countries; while Japanese Chess is as different from Chinese as the latter is from European Chess, *Wei-ch'i* is played, one may say, identically in China and Japan. In the latter country it is called "Go-bang" and is in high repute. In the old feudal days the nobles vied with each other in having attached to their courts celebrated Go-bang players, just as they were proud of their bulky wrestlers; even now there are professionals who play with such care and reflection that a match-game may often take up several days. The true Japanese Go-bang, which is identical with *Wei-ch'i*, is quite different from the game which goes under that name among foreigners. The latter is a much easier game, which consists in getting five men in a line, no matter whether horizontal, vertical or diagonal, and is called "Go-mutcho" by the Japanese.

The object of the game of *Wei-ch'i* may be stated very simply, though it will be found sufficiently difficult to carry it

out in practice. It is to occupy as much space as possible on the board and to prevent the adversary from doing the same. This can be done both by occupying places with one's men and forming enclosed spaces called territories, as well as by surrounding and taking the adversary's men, in which case, the space, formerly occupied by the enemies one has destroyed, becomes part of one's territory or conquered space on the board. To show how this simple principle acts in play producing a very interesting game will be the object of what follows.

*Wei-ch'i* is played by two players, on a board special to the game and with two sets of men of different colour. I shall begin by describing the board, and then pass on to the men and to the game in general.

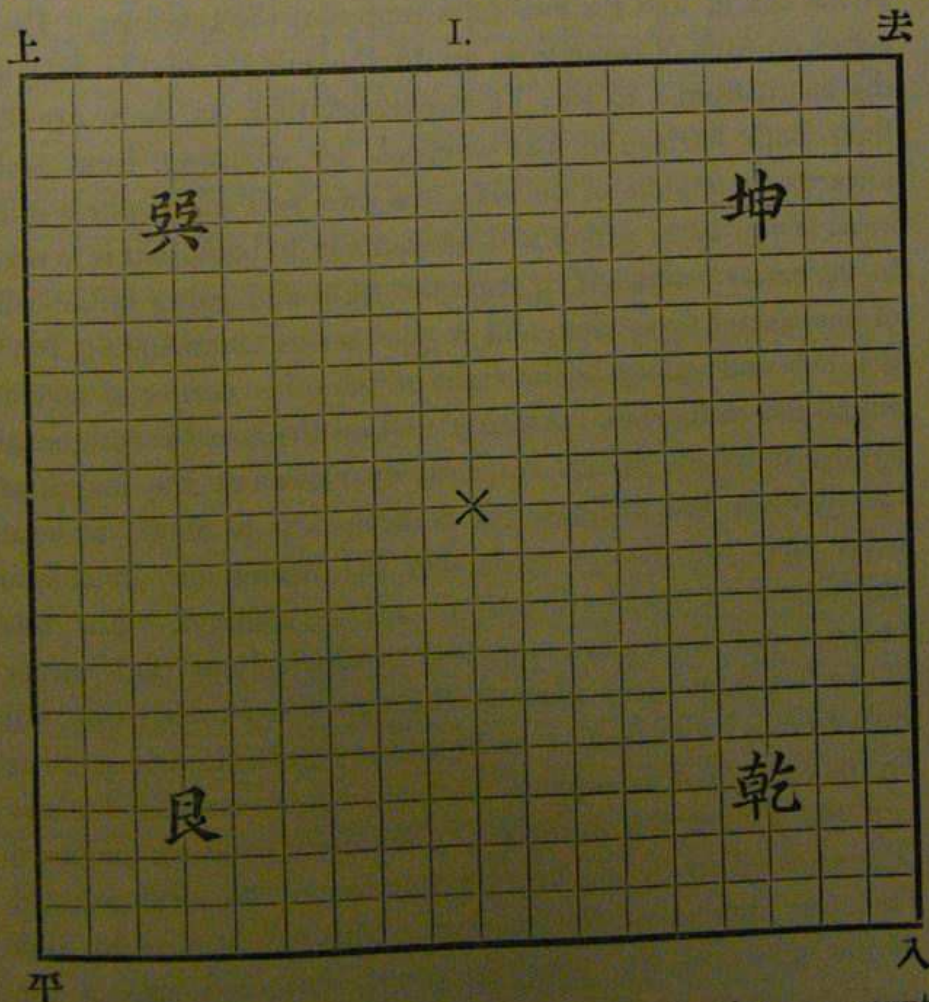
#### THE WEI-CH'I BOARD.

This is divided into squares like a chess-board, but into a much greater number, and without any alternation of colour, their total number on the *Wei-ch'i* board being 324,  $18 \times 18$ . Even this large number does not fully represent the scale of the game, because, as in Chinese Chess, the pieces are played on the intersections of the horizontal and vertical lines and not on their intervals; thus, as there are 19 lines in either direction, the total number of places on which the men can be played is  $19 \times 19$  or 361. This is a very large number, and at first the game appears quite bewildering from the size of the board and the number of men employed.

The Chinese, in the books which treat of the game, divide the board into four equal parts, which they call "corners" (角 *chiao*<sup>3</sup> or 隅 *yu*<sup>2</sup>) and which are called by the names of the four Chinese tones:—

平	for the lower left corner.
上	" upper " "
去	" " right "
入	" lower " "

In each of these four sections a place is generally marked out at a distance of four steps along the principal diagonal counted from the outer angle. Each spot is therefore equidistant from the two external sides of the section. These four points are called 艮 (*ken*<sup>4</sup>), 巽 (*hsün*<sup>4</sup>), 坤 (*k'un*<sup>1</sup>) and 乾 (*ch'ien*<sup>1</sup>), and the players generally begin the game by alternately covering them, each player occupying two at opposite angles. Sometimes the centre of the board is also marked. Diagram I. will serve to show what the *Wei-ch'i* board is like and how it is divided.

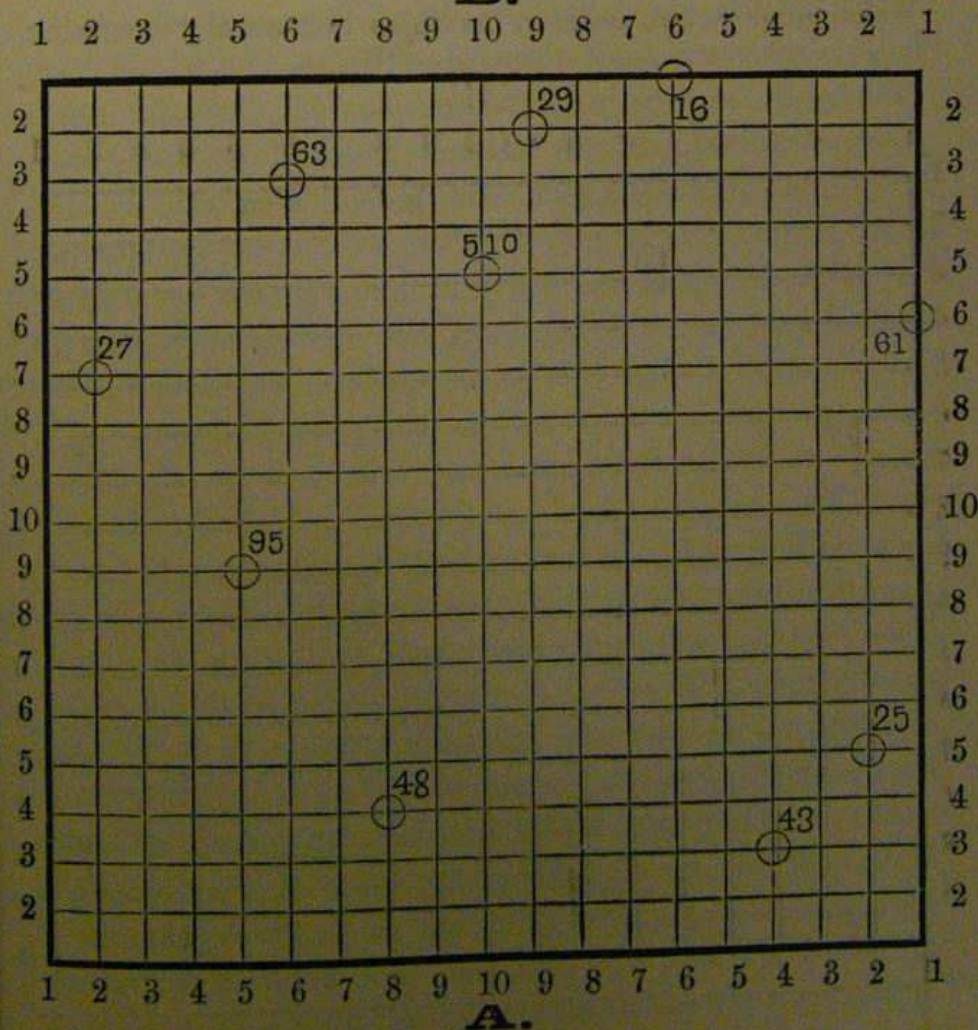


I think this place is the most appropriate to give an account of the notation employed by the Chinese to indicate the

different spots on the board where the men are played. As the board is so large, for convenience the notation is adapted to the division in four sections, which we have seen to exist, and there is a separate notation for each of the 平上去 and 入 corners. The Chinese have adopted a system which is similar to that used in analytic geometry of two dimensions. Every point is determined by giving its perpendicular distances from two axes at right angles, that is to say, by two co-ordinates. They fix the origin of the axis of the abscissas as well as of that of the ordinates at the corner of the board, and the two sides represent the two axes. They count on each of these lines up to the middle of the side of the board from 1 to 10. It is evident that, as there are 19 lines both horizontal and vertical, by counting from each towards the middle of the side, the two sets of numbers will meet at the 10th, which will be common to both, that is to say, to the series commencing from the right and going to the left of one corner or section, and to the series commencing from the left and going to the right of the other corner or section which lies at its side. As each spot on the board is designated by two numbers, which respectively represent the length of the abscissa and ordinate, it is necessary to show in what order they are always used, that the reader may be able to understand in which direction each is counted. For this purpose, one must place one's self successively at each corner of the board and look towards the opposite corner; one will then have a series from 1 to 10 on the right side and another on the left. Let us suppose the first to represent the abscissas and the second the ordinates, then every point on the board is designated by giving first the number of the ordinate and then the number of the abscissa. This rule applied to each corner produces the puzzling result that each side of the board serves for counting the abscissas of one corner or section and the ordinates of the next corner or section.

Diagram II will facilitate the understanding of the above explanations. Let *A* and *B* represent the two players. [As will be seen later on, the position of the players is quite immaterial in this game; both could play from the same side of the board, the only important distinction being the colour

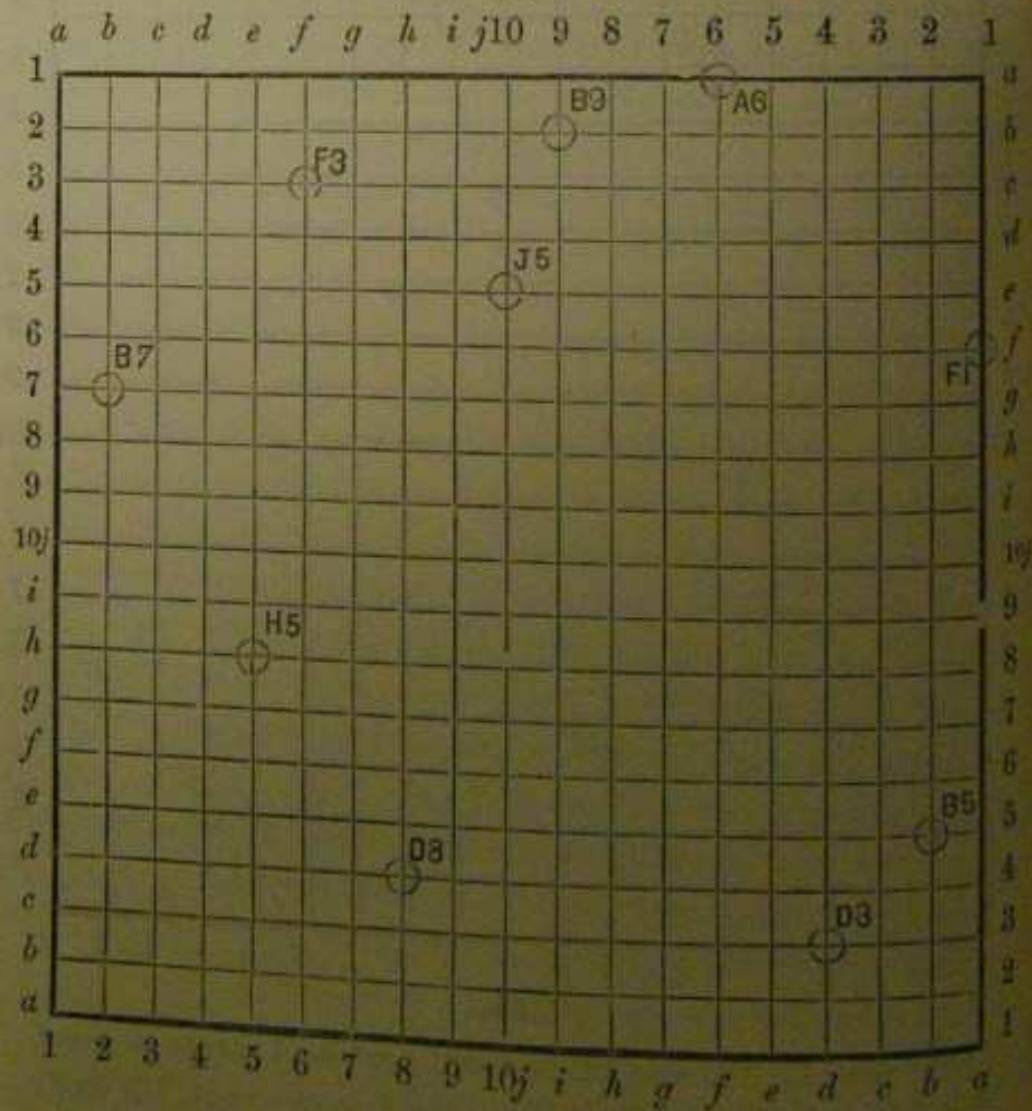
II.

**B.**

of the men.] The side of the board next to *A* serves to count the ordinates in its right half and the abscissas in its left half; the side running up on the left serves to count the ordinates in its lower half and the abscissas in the upper half; the side

of the board next to *B* serves for the ordinates on *B*'s right (*A*'s or the reader's left) and for the abscissas on *B*'s left (*A*'s and the reader's right). The side running down on the right serves for the ordinates in its upper half and for the abscissas in its lower half. To familiarise the reader still more with the Chinese notation, a few spots have been marked with the numbers used to designate their position. A notation which employs two series of numbers is naturally confusing,

## III.



and therefore, in future, when I shall have to indicate any place on the board, I shall employ letters instead of numbers

to indicate the ordinates and keep the numbers only for the abscissas. We shall have thus two series at our disposal, one from  $a$  to  $j$  and the other from 1 to 10 ; this slight variation will render the notation clearer, and we shall adhere to the spirit of the Chinese notation. Diagram III shows how this modified notation is applied to the board and how the examples given in the preceding Diagram will be designated.

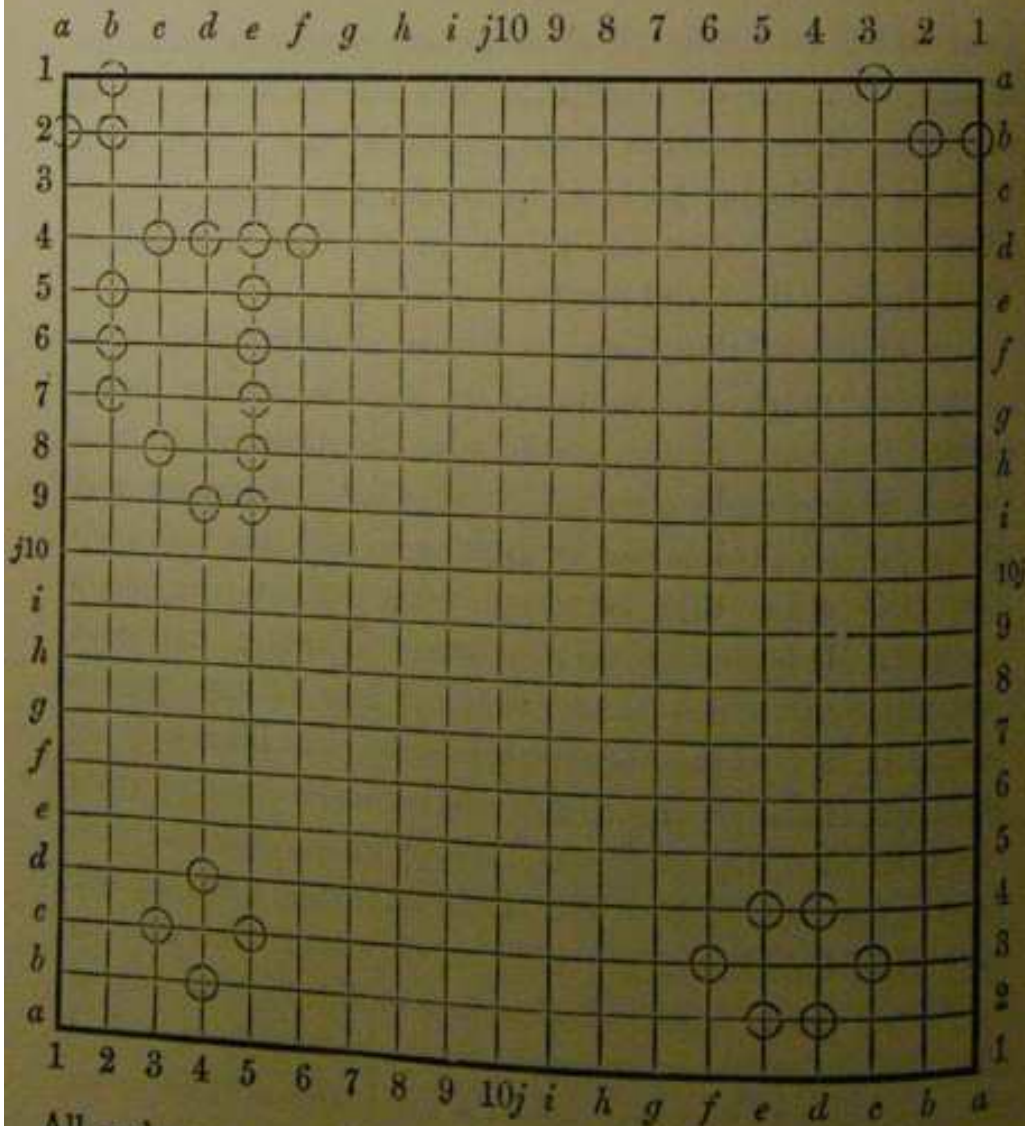
The men employed in *Wei-ch'i* are round and flat, very much like buttons, and of two colours—black and white. Each player has a bag or small basket full of men of one colour, from which he draws all those he may require in the course of play. The players place their men alternately on any of the points of intersection of the horizontal and vertical lines which is not already occupied by another man of the same or adverse colour ; even the points on the four margin-lines which enclose the board can be so filled up.

The object of the game, as I have already stated, is to occupy as much of the board as possible, victory being decided in favour of the player who has command of most spots. Space can be occupied in two ways—by placing men on the different points and by forming an enclosure with one's men, the space thus contained being reckoned as one's territory. It is evident that the latter way is more important than the first, which alone could not lead to any decisive result ; in fact, as the players place their men alternately on the board, if they confined their efforts simply to occupy spots with their men, the game would end by giving only one spot more to the first player, who would have possession of 181 spots while his adversary would have only 180. This may be considered the *reductio ad absurdum* of the first method of play. We must then turn our attention to the second method of play, which is the right one—the occupation of space by an enclosure of men—it is this which gives the name to the game, *Wei* (to surround) being its principal object.



The simplest possible enclosure that can be formed anywhere on the board, is that of four men enclosing one spot which is called an *eye* and can be seen in the lower left-hand corner of Diagram IV. The next in simplicity is that formed by six men enclosing two spots,—an example is given in the lower right-hand corner of the same diagram. In the same way larger enclosures can be formed with a greater number of men, as will be seen in the upper left-hand corner of Diagram IV.

## IV.



All enclosures require a smaller number of men to form them when they are situated round a corner or angle of the board,

as then only two sides need be formed, the other two being the limits of the board itself. Thus an eye can be formed with three men only, as is seen in Diagram IV in the upper left-hand angle with the three men *a* 2, *b* 2, and *b* 1. Even *two* empty spots can be surrounded by three men in such a favourable case, as is shown in the upper right-hand corner of the same diagram. All enclosures may be formed not only round unoccupied spots, but also round unprotected men of the adversary, who forthwith are taken and their empty places become the conqueror's territory.

From what has been explained, the game might seem very tame and uninteresting, but it must be remembered that the enclosures, which are formed for occupying as much space as possible on the board, are made by both players, each of whom, while he tries to enlarge the area of his own territory, tries at the same time to diminish that of his adversary, as also to destroy in certain cases his enclosures and appropriate their territory. The element of strife now comes in and lends interest to the game. Every part of the extensive board becomes the field of numerous engagements, as the adversaries pursue their offensive and defensive tactics. The interest of the game is not concentrated in one spot as at Chess, around the king, but is diffused all over the board, as every single spot is equally important in effecting the result of the game and counts in the grand total which represents the position of each side at the end of the struggle.

I have just mentioned that enclosures may be destroyed in certain cases. It is necessary that I should explain this important and interesting feature of the game. In the course of play, while one is forming enclosures and extending one's territory, it often happens that one can surround completely some of the adversary's men. These, under certain circumstances, are then considered as dead, removed from the board, and their places become part of one's territory.



sides by white pieces, still they are not dead, because they contain themselves one empty space. To destroy them, it will be necessary to play another white man at *d* 4, then the black men being blocked on all sides both externally and internally will be considered as dead. We see thus, that though not actually dead, they are in imminent danger,—they will be captured at next “move,” as we should say in Chess; in such a case one may adopt a term with which Chess has made us familiar, and say they are “under check.”

In the upper right-hand corner of Diagram V we have another group of black men surrounded by white ones; they are not however dead, nor can they be possibly destroyed by any manner of play. In fact, we can see that the black pieces contain within themselves two separate empty spots, *c* 4 and *d* 5, forming two complete eyes, which would have to be filled up to accomplish their destruction. Now this is impossible, because, as the players play alternately, as soon as White has filled up one eye, Black at his turn will take the man that White has played, because it will be situated in the midst of his men, and therefore may be considered as dead. This might go on for ever, White filling up one eye and Black taking the piece, as White to win the whole group of men would require to be able to play twice in succession.

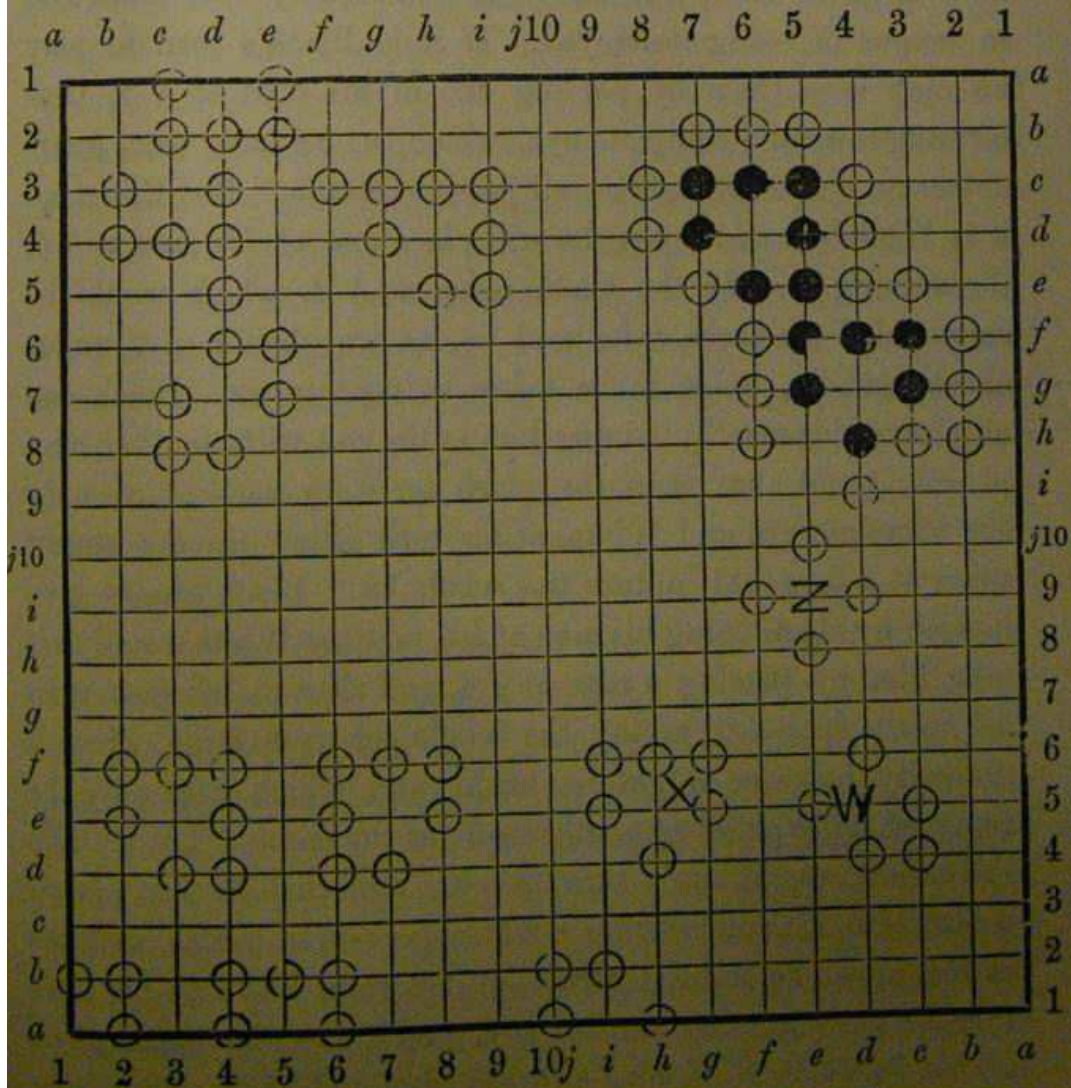
We can now establish a fundamental rule of great importance, that, whatever group of men contains within itself two or more empty spots forming complete eyes is secure against any attack. Though surrounded it cannot be destroyed; it forms an intangible territory. It does not matter where and how far from each other these eyes are situated, provided they form part of one unbroken group of men joined together. The upper left-hand corner of Diagram V exhibits a territory which cannot be conquered by the adversary, because it contains three complete eyes at, *a* 1, *c* 4

and  $g$  9, any two of which alone would be sufficient to secure its independence.

It is necessary now to explain what constitutes a complete eye and how several of these can be joined together to form one whole unconquerable territory. A complete eye is one formed by men all of which are joined together and none of which can be destroyed, as, naturally, if any could be, the eye losing a part of its components would no longer exist. In the lower left-hand corner of Diagram VI we have four examples of different kinds of complete eyes, while in the lower right-hand corner we have four examples of incomplete ones. In the eye formed by  $j$  1,  $j$  2,  $i$  2 and  $h$  1, the white man situated at  $h$  1 is not joined on to the others, and can be surrounded by Black successively playing three men at  $g$  1,  $h$  2 and  $i$  1. In the eye marked X, the piece at  $h$  4 can be taken by Black playing successively four men at  $g$  4,  $h$  3,  $i$  4, and  $h$  5, thus surrounding it. In the eye marked W, the two men at  $e$  5 and  $d$  6 can both be taken, the first by Black playing four pieces at  $e$  4,  $f$  5,  $e$  6 and  $d$  5, the second by Black playing four pieces to  $e$  6,  $d$  7,  $e$  6 and  $d$  5. In the eye marked Z, each of the four men can be captured by Black if he surrounds it. From all the above examples we see that the men only protect each other along straight lines and not along the diagonals: this is very important for the connection of several eyes, so as to form a single indestructible enclosure. We had already found that it was necessary to have at least two complete eyes to secure a territory; we have now examined what constitutes a complete eye, and in doing so have found how different men protect each other, *i.e.* along the horizontal and vertical lines of the board. Along these same lines must the men be placed that serve to join different eyes forming a territory. In the upper left-hand corner of Diagram VI we have an instance of how different groups of men are to be joined so as to mutually protect each other. We have, in the first place,

a territory containing two complete eyes, and therefore secure against attack, extending from the top of the board to *d* 6 and *e* 7; in its vicinity there are two other groups which can be destroyed if not joined with it. We have the three men at *c* 7, *c* 8 and *d* 8, which may be joined either at *e* 8 or *c* 6, and the eight men at *f* 3, *g* 3, *h* 3, *i* 3, *g* 4, *i* 4, *h* 5 and *i* 5, which can also be joined either at *f* 2 or *e* 3. White can, by playing

VI.



only two men, form an extensive territory comprehending four complete eyes, and Black cannot prevent him doing so, because in each case White has the option of two ways of joining his

men, and if Black prevents one by occupying the spot himself White can occupy the other.

The joining of men along the horizontal and vertical lines is most important, and every effort is to be made to effect it for one's self and to prevent the adversary from doing so. The position in the upper right-hand corner of Diagram VI shows how on the placing of one man may depend the question whether a territory shall belong to Black or White. Here we have a lot of black men almost surrounded by white ones and in danger of being destroyed. If it is Black's turn to play he may save them by placing one of his men at *h 5*, thus forming a second complete eye, which, as we have seen, guarantees an enclosure against all possible attack. But if instead it is White's turn to play, he will place one of *his* men at *h 5*, threatening to take the black piece at *h 4*, which would be surrounded on three sides and be, as we should say, under check, namely, liable to be taken at next move. Black can only save this man by joining him to the rest with another man placed at *g 4*, but then the black territory would have only one complete eye and White, at his turn filling up the empty space at *d 6*, would capture the whole lot. Black cannot save himself by abandoning his man at *h 4*, because White would first take him by placing a man at *g 4*, and then at his next turn fill up the spot *d 6*, taking the whole lot as before. Here a difficulty however might be made, and which can only be removed by explaining another rule of the game. Let us take the case it was White's turn to play and that he has placed a man at *h 5*, thus securing a winning position, which is shown in the upper right-hand corner of Diagram VII; on his next turn he plays another man at *g 4*, and takes the black piece at *h 4*: now it is Black's turn to play and he has three men at *g 3*, *f 4* and *g 5* surrounding the white man just played at *g 4*, which we may say is under check; if he can play a black man at *h 4* he can take this white man, and we should thus

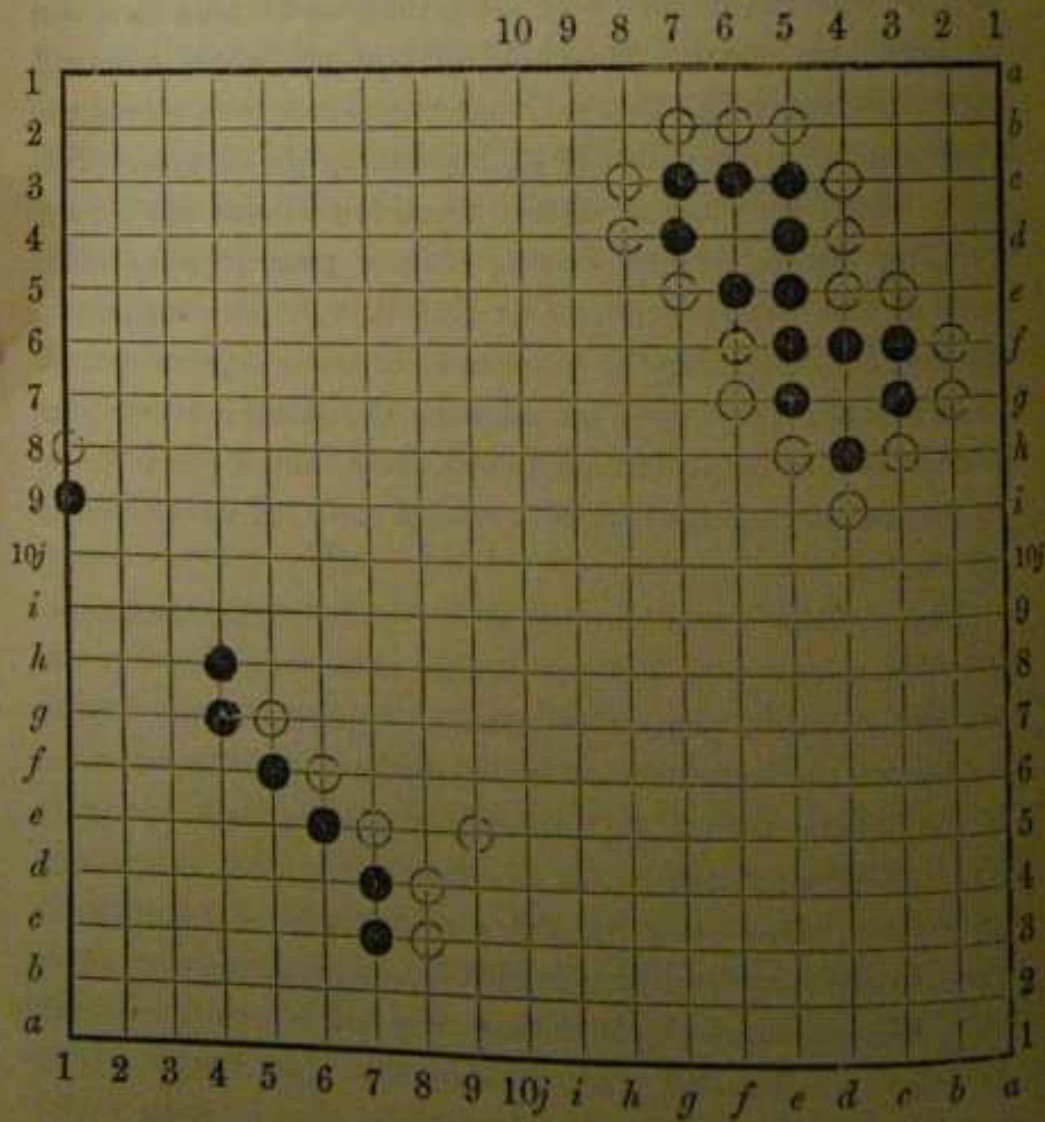
return to the original position from which we started, and White again could take the black man at *h* 4, and Black again repeat his play and so on *ad infinitum*, now White taking the black man at *h* 4, and now Black taking the white man at *g* 4. As this would put an end to the game, there is a rule that prevents a player from immediately taking a piece under these circumstances, *i.e.* when by taking it he returns to the original position, where the piece he has just played can be taken again: he must first play another piece in some other part of the board, and only after that, on his next turn, can he take that piece. This kind of position, where the rival pieces are dovetailed into each other and can each attack one piece alternately is called 打結 *Ta chieh* by the Chinese. This rule, which prevents a useless repetition of the same play, obliging the adversary first to place a piece in some other part of the board, reminds us that though for convenience sake we are dissecting the game and examining separate groups of men, the play goes on all over the board; everywhere territories are being formed and attacked, and if one is losing in one corner one may hope to recoup one's self in some other corner.

This renders the beginning of the game almost incomprehensible to one who has not studied it thoroughly. The two players seem to place their men at haphazard, now in one corner of the board and now in another; it looks rather as if they were trying to form pretty figures than trying to circumvent each other. It is only after a good many men have been placed that the object of the game begins to show itself in the play, and then gradually one perceives that those men which seemed played without any offensive or defensive purpose are all useful, and that they were placed originally to act as outposts for the territories which it was foreseen would be formed around them, or as posts of observation to annoy the enemy. In fact, as the object of the game is to occupy



as much of the board as possible and to prevent the adversary from doing the same, it is necessary to have men strewn about everywhere, which may be, in the course of play, joined together in one large territory, and which may prevent the adversary from joining his men. To show the advantage which may be obtained from one of these detached men placed at the beginning of the game, it is sufficient to examine a position which may often occur when one of

VII.



the players is trying to surround his adversary on one side and the latter tries to escape by prolonging his men in a

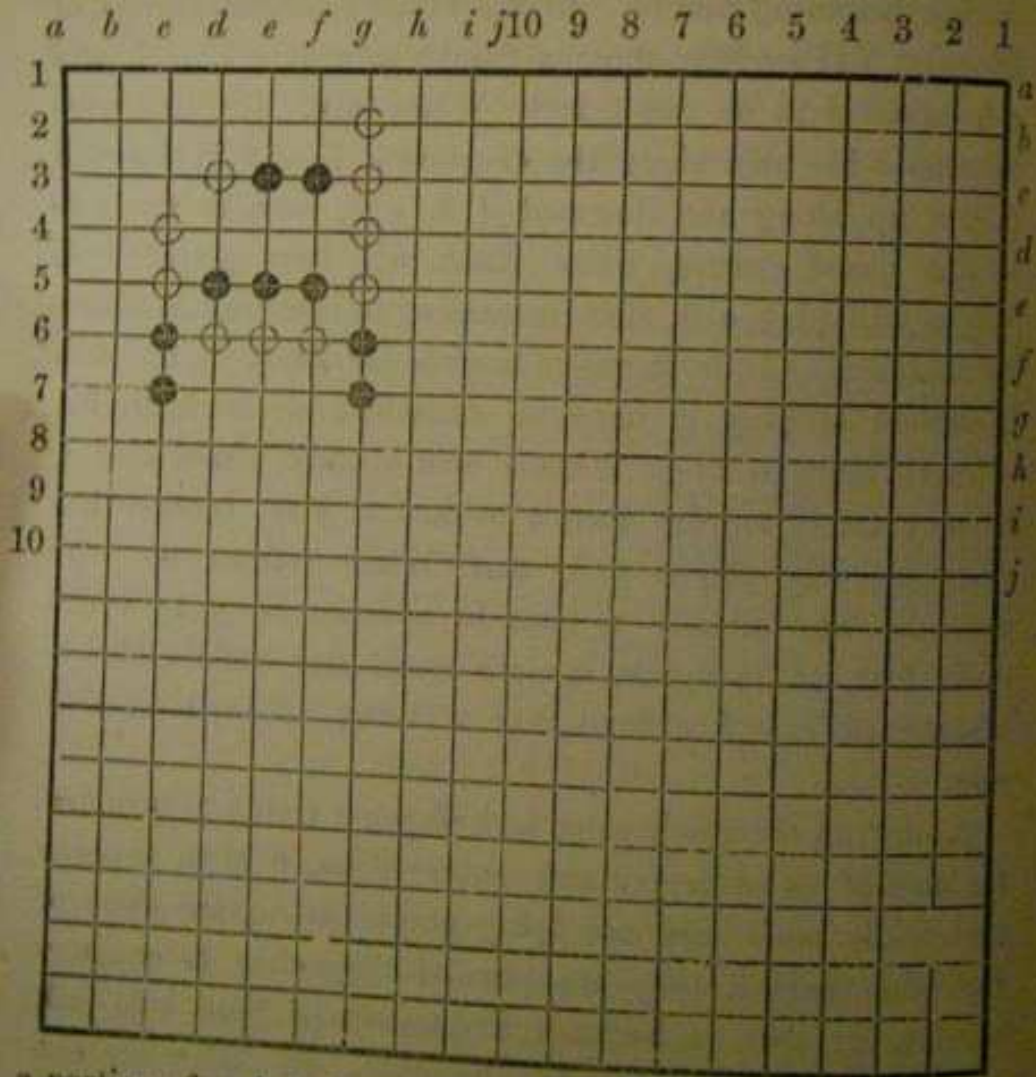
diagonal. If both persist in prolonging their men in *échelon*, the attacking party must win, because as soon as the defender reaches the side of the board (which he must reach if he prolongs enough) his adversary will do the same at next turn of play, hemming him in. In the lower left-hand corner of Diagram VII we have three of Black's men at *c 7*, *d 7* and *e 6* hemmed in on one side by White men. If Black tries to extend his men along the diagonal *d 7*, *e 6* White will follow up along the diagonal *d 8*, *e 7*, even to the side of the board, where, when Black will have played *j 1*, White will play *a 9*, thus succeeding in hemming in Black on that side. It is therefore useless for Black to try such a method of play in hopes of extending his territory, but if there happens to be a black man already placed at *g 4*, he may safely employ such a method of play, because then when he has played *f 5*, and White follows up with *g 5*, he has already a man in advance at *g 4*, which gives him, so to speak, a move ahead and enables him to prolong in safety without fear of being enclosed on that side.

As during the whole game each player is trying to surround the men of his adversary and capture them, it often happens that while one's men are being played to capture those of the other colour, they are exposed themselves to counter-attacks, so that it becomes a question of time who will succeed first and thus forestall the other. In such cases one must calculate very carefully the number of moves<sup>1</sup> required by each side to secure victory, just as in an end-game at Chess where each player has a passed pawn that can queen, and all depends on a move.

<sup>1</sup> I here use the term "move" because it is so familiar to us through our game of Chess; but it must be understood that there is no such thing as a move in the game of Wei-ch'i, where the pieces always remain where they are placed, and that the word "move" is used instead of the cumbrous phrase "turn to play."

The upper left-hand corner of Diagram VIII will give a simple instance of the above kind of play. Here we have two sets of white and black men which are so situated that

VIII.



a portion of each is dovetailed into the other and threatened with capture unless it can forestall its fate by dealing destruction on the other. The white men are in three groups: first four at *g* 2, *g* 3, *g* 4 and *g* 5, another three at *d* 3, *c* 4 and *c* 5, and then the three men at *d* 6, *e* 6 and *f* 6, which are already surrounded by Black on three sides and will be inevitably taken unless White succeeds in destroying betimes a portion of the attacking forces. This

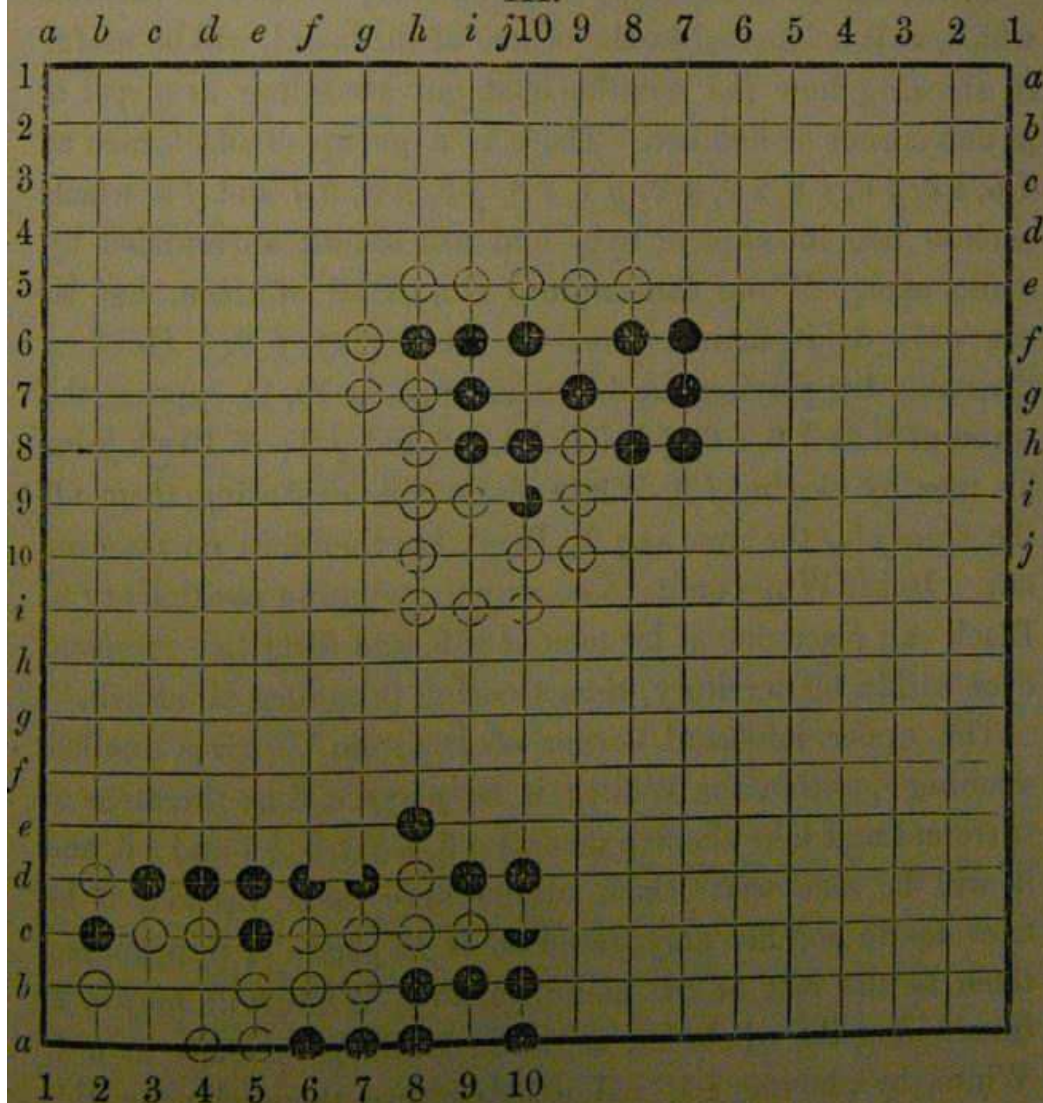
is his only resource, because he cannot hope to escape by prolonging his line of men in any direction, as Black has already overlapped him with his two men at *c* 7 and *g* 7. In fact, if he plays a man at either *d* 7 or *f* 7 Black promptly plays a man either at *d* 8 or *f* 8, thus closing all exit. Escape being impossible, let us see how White will fare if he adopts a bolder policy and attacks his adversary. Black's men are distributed in four groups: there are two men at *e* 3 and *f* 3, two at *g* 6 and *g* 7, two at *c* 6 and *c* 7, and three at *d* 5, *e* 5 and *f* 5, which are already surrounded by White on three sides and may be destroyed before Black can compass the destruction of White's men. This would be easy enough if there were not the two men at *e* 3 and *f* 3, because then White, having to play, would succeed in achieving the capture of the three men *d* 5, *e* 5 and *f* 5 before Black could capture the white men *d* 6, *e* 6 and *f* 6. But the position being as it is the thing is more difficult, and White can win only by accurate play. His first move must be to *f* 4, and Black must at once join his men by placing a man at *e* 4; if he does not do so, White at his next turn will play one of *his* men at *e* 4, thus rendering impossible any connexion of Black's men, which will be irretrievably lost. If Black plays *e* 4, the position is again difficult for White, because the now connected group of six black men again requires the placing of three white men at *e* 2, *f* 2 and *d* 4 to be entirely surrounded: under another form we are in the same position as before. Each player can capture a group of men, and requires three moves to do it. White has only the advantage of first move, an advantage which may be lost if he does not play correctly; as before, his only resource is in pursuing a constant attack. He must play *f* 2, threatening again Black's men: Black can try to escape capture by extending his men, but, as was pointed out before, the prolongation of an attacked line, unless it be

towards another friendly piece, leads to no result. In fact, if Black plays *e* 2, White plays *d* 2, always threatening Black's men with capture in two moves. It is necessary that he should always preserve such an attack, because Black in three moves can always capture the three men at *d* 6, *e* 6 and *f* 6, which form part of White's attacking force and which if once destroyed would break up all White's attack and secure Black's men completely. If Black extends again to *e* 1, White plays *d* 1, preserving his position of a winning attack in two moves: thus we see that Black's men are irremediably lost and White has saved his pieces, which, after the capture of the enemy, can be connected with the rest forming an impregnable enclosure. This simple elementary position is instructive, because it shows how, in play, the men of both sides can get mixed up in such a way that while an attack is being made, a portion of the attacking force may be subjected to a counter-attack which if successful destroys the whole of the original attack. In such cases it is necessary to play with great care and to calculate accurately how many moves are required for the successful completion of the attack and counter-attack.

The following position will be instructive in showing not only how important a single move may be, but also how important is the order in which some moves have to be played. In the lower left-hand corner of Diagram IX we have a group of white men situated at, *c* 6, *c* 7, *c* 8, *c* 9, *d* 8, *b* 5, *b* 6, *b* 7, *a* 4 and *a* 5 which are almost entirely surrounded by black pieces and in imminent danger of being captured: it only requires two black men to be placed at *b* 4 and *a* 3 to accomplish this, but the order of these two moves is very important. If Black plays *a* 3 first he wins, because if White joins his men at *b* 4 Black plays *b* 3, taking not only the men that were under check, but also the other two men at *c* 3 and *c* 4, and if he plays something else, Black plays *b* 4, taking all the men

under check. But if Black, by mistake, plays first *b* 4, he loses: then White plays *b* 3, capturing the black man just placed at *b* 4, forms one complete eye, and whatever Black may do, he will form a second eye rendering his territory intangible. In fact, White can form a second complete eye by placing a man at *a* 2, and if Black, to prevent this, does what must be

IX.



done in such circumstances, places *himself* a man at *a* 2, White plays *a* 3, threatening to take *a* 2 by the next move at *a* 1; if Black extends by playing himself *a* 1, White plays *b* 1, capturing both men and still forms a second complete eye. If Black, having played *a* 2, plays *b* 1, trying again to

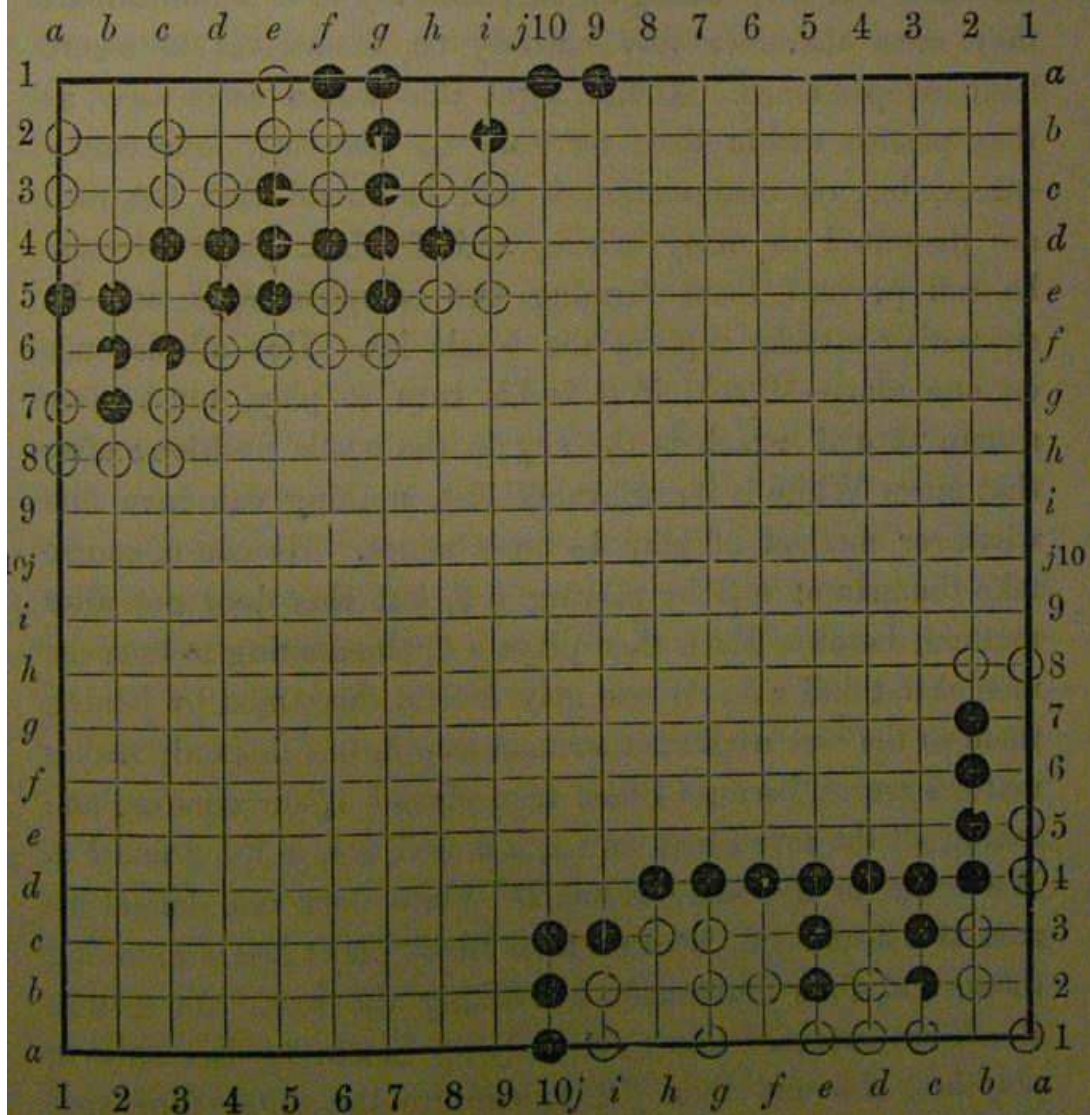
prevent the formation of a second complete eye; White can play *c* 1, capturing the black man at *c* 2, and then afterwards at his next turn by playing *a* 1 will capture both the black men at *a* 2 and *b* 1, and with three incomplete eyes at *a* 2, *b* 1 and *c* 2 it will be very easy to form one complete one either by filling up *c* 2 or *b* 1.

In the centre of the same diagram (IX) we have a position which, as it is situated in the centre of the board, will be useful in showing how the notation changes according as a spot is in one corner or another. There is a group of black men at *h* 6, *i* 6, *j* 6, *f* 8, *i* 7, *g* 9, *g* 7, *i* 8, *j* 8, *h* 8, *h* 7 and *j* 9 which enclose two incomplete eyes and are almost surrounded by white men. White can capture almost all of them, but he can only do it in one way—he must play *f* 9. He then threatens by playing, at his next turn, *g* 10, to capture the seven men at *h* 6, *i* 6, *j* 6, *i* 7, *i* 8, *j* 8 and *j* 9; if Black joins his men by playing *j* 9, White plays *g* 8, capturing them all the same *plus* the man at *g* 9; Black has therefore no resource left. But if White omits to occupy the winning position at *f* 9, Black can place one of his men at *f* 9, and form two complete eyes within his territory, thus securing it against all attack.

The upper left-hand corner of Diagram X gives another winning position for White: if he plays *a* 6 he threatens to surround and take the five men at *a* 5, *b* 5, *b* 6, *b* 7 and *c* 6, and it will be seen that Black cannot save them, because if he tries to do so, his only resource is to play *c* 5, thus joining them to the rest of his men; but then White will play *h* 2, threatening the whole lot, and even if Black extends to *h* 1, White, by playing *i* 1, will still capture them all; by this method of play, Black not only will not save five men but will lose fifteen or sixteen more. It will be better therefore for Black, after White has played *a* 6, to abandon the five men under check and look after the safety of the rest by playing *h* 2, thus joining the men that are already almost surrounded

to the three men at *i* 2, *a* 10 and *a* 9, which are not surrounded. He thus forms a small enclosure of two open spaces at *h* 1 and *i* 1 and may hope to form another by extending from the three men which are free. The fate of this manœuvre will depend on the position his other men occupy on the

## X.



board; it will succeed if he can lead up to men that are placed near and with whom it may be easy to form an eye or enclosure.

The position in the lower right-hand corner of Diagram X shows how by placing a single man in the right position one



may prevent the adversary from strengthening his position and keeping possession of an extensive territory. Here we have a large number of white men almost completely surrounded: they cannot be extended so as to join their companions at *a 8* and *b 8*, and so *prendre la clef des champs*, as the French say, because Black can always play a man at *a 6* or *a 7*, cutting off all possibility of communication: they must therefore rely entirely on themselves to secure their independence. At first sight this would seem easy, as they possess within their territory no less than four empty spaces, but on examination it will be found that the men are disunited in many places, and if Black plays correctly he can prevent them forming two complete eyes and by successive attacks capture the whole lot. This all depends on one move—Black, if it is his turn to play, must place a man at *a 3*, which is the key to the whole position; after that move White is irretrievably lost, nothing can save him whatever method of play he may adopt. He can of course take the man at *a 3* by playing *a 2*, but this does not alter matters, because Black then plays *a 6*, threatening to take the men at *a 4* and *a 5*; White may defend these men by joining them to the rest with another man at *a 3*, but this only makes matters worse, because Black then plays *b 1*, surrounding and taking all the seven men at *a 1*, *a 2*, *a 3*, *a 4*, *a 5*, *b 2* and *b 3*. We come to the same result if White does not defend his men at *a 4* and *a 5*, because then Black plays first *a 3*, taking them, and then afterwards *b 1* taking the rest. As soon as Black has captured this first outlying batch, he has only to play first *d 3* and then *f 1* to capture the other four men at *c 1*, *d 1*, *e 1* and *d 2*, after which he has only to play *f 3* and then *h 1* and *h 2* to take the remaining white men. The same conclusion would have been reached if White had adopted a different method of play, and when Black had played his first move *a 3*, had given up his men at *a 4*, *a 5*,

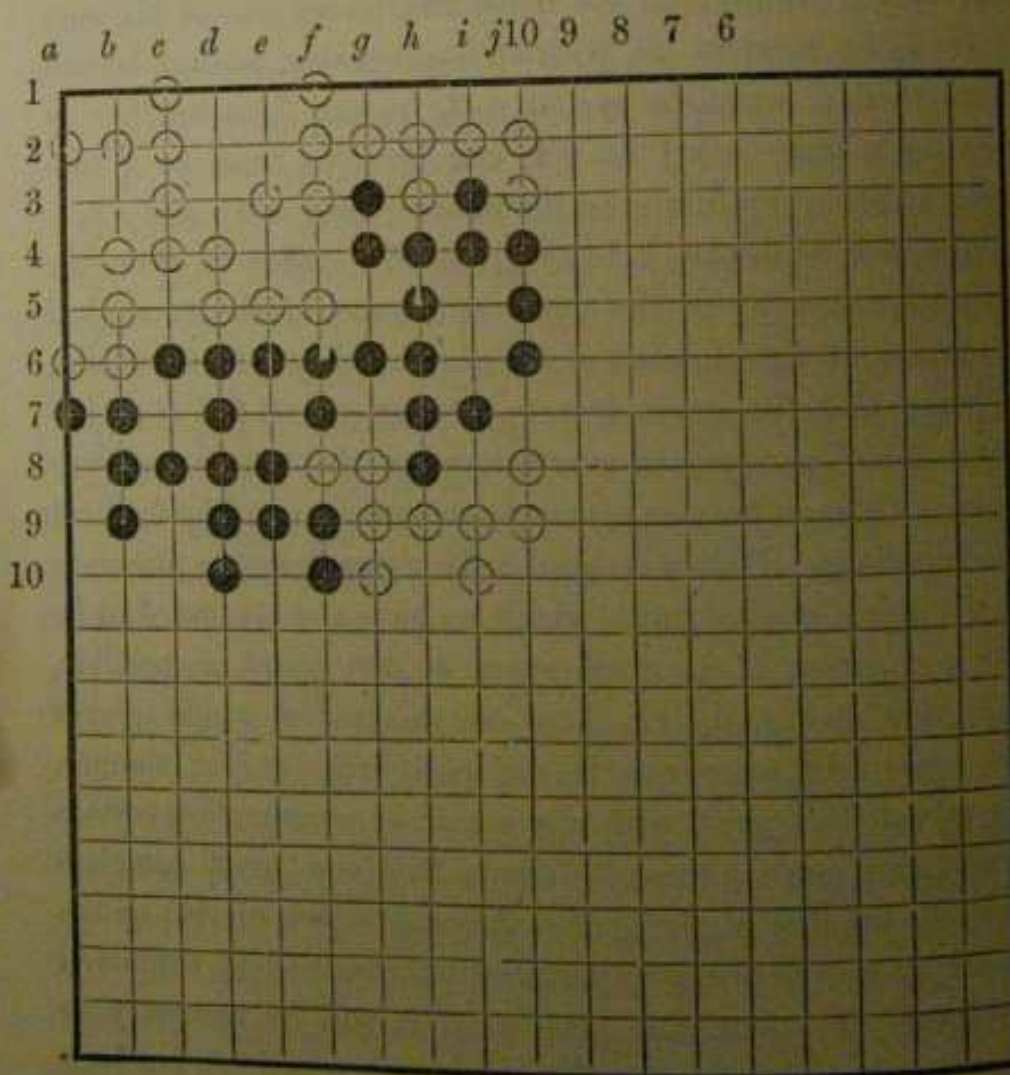
and tried to join his men by playing *b* 1; Black would then, after taking the men at *a* 4 and *a* 5, have played *a* 2 and *d* 3, threatening to take the whole lot *a* 1, *b* 1, *b* 2, *b* 3, *c* 1, *d* 1, *d* 2, *e* 1, and if White had joined again, playing *f* 1, Black would have played *f* 3, and then filled up *h* 1 and *h* 2, taking the whole group as before. To show of what importance is the spot at *a* 3, it will be sufficient to point out that if White has the move and places one of his men at *a* 3, he renders his position impregnable, because he will have then a complete eye at *a* 2, he can form another by placing a man at *h* 1 or *h* 2, and he joins them in a continuous group by filling up the interruptions at *b* 1 and *f* 1.

The few examples I have given will suffice to show the general character of the game and some of the strategical resources at the disposal of the player; they will show also, I hope, that the game is very interesting and full of excitement at all periods and everywhere on the board; positions apparently most desperate may be sometimes saved by brilliant combinations. It now remains to be shown how one discovers if the object of the game, which we have already stated to be the occupation of as much space on the board as possible, has been achieved, *i.e.* how one ascertains which player has won. As space can be occupied in a twofold manner, by actual occupation with pieces and by surrounding certain areas with one's pieces, it follows that one must calculate both the number of pieces of each colour which survive on the board, as well as the empty places surrounded and contained by them. To show this practically, it will be necessary to give an example of an ending, and as it would be too long to give it on the full board, I will give it on a quarter of the board, where the positions will be more simple and the calculations more easy.

In the upper left-hand corner of Diagram XI, there is the ending of a game on a quarter of the board, 10 lines each

side. Both Black and White have secured territories and have strengthened them against any possible attack. The strife is over, and we have only to estimate its results. Before doing so, however, it will be necessary to point out that there are several empty spots about the board, which belong to neither side and which may be considered as no man's land.

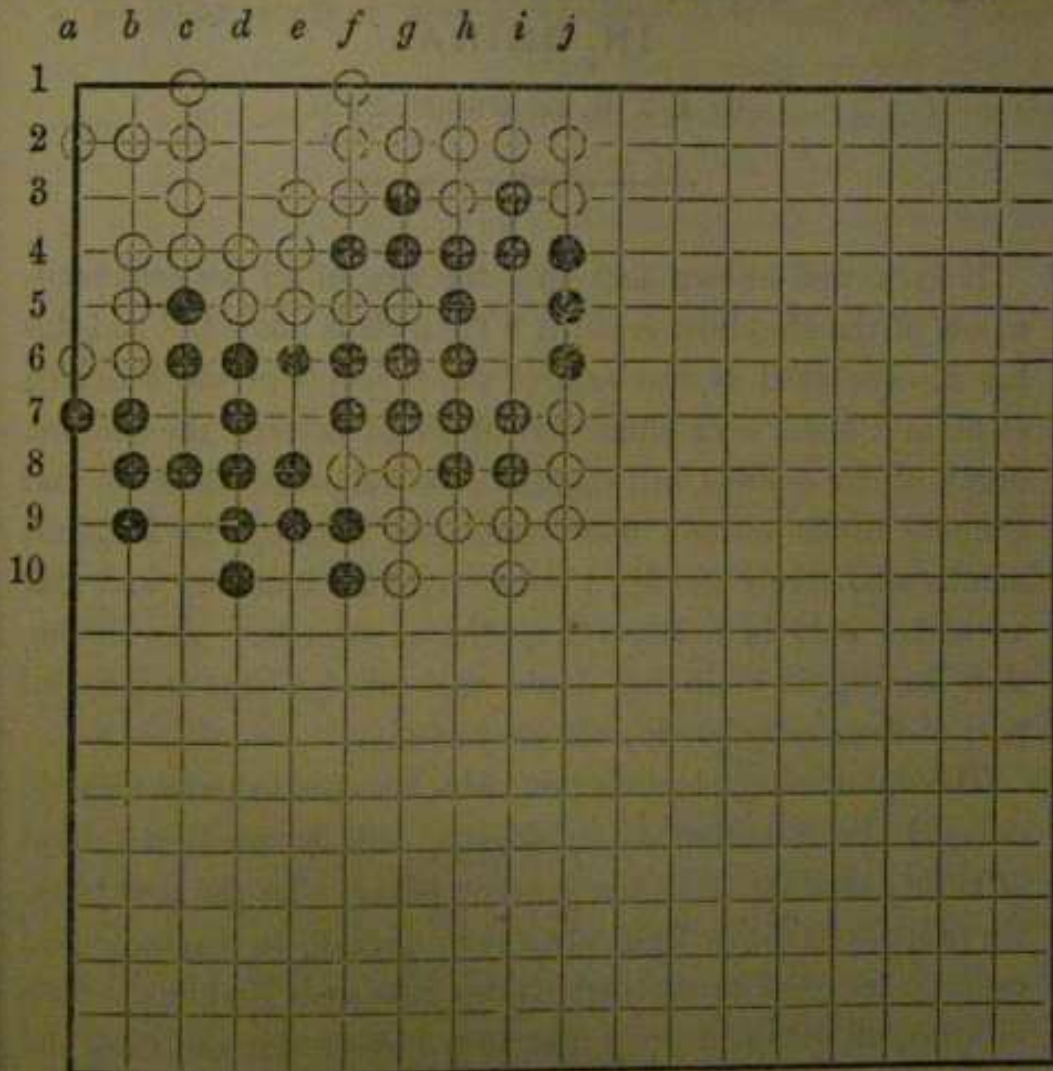
## XI.



Such are the spots *c 5*, *e 4*, *f 4*, *g 5*, *g 7*, *i 8* and *j 7*. They are now unoccupied and as they are surrounded partly by black and partly by white pieces neither side can claim them. In such cases they are alternately filled up by the two players before the counting begins. We will suppose then

that Black fills up *i* 8, and White *j* 7, and so consecutively Black, *c* 5, *f* 4 and *g* 7, and White *e* 4 and *g* 5, we shall arrive at the position shown in Diagram XII. Here all is filled up which is not surrounded and defended by pieces

## XII.



and constitutes a territory. We can therefore commence our reckoning. We shall find that Black has 36 pieces which contain 11 empty spots, he has therefore won 47 places; White has also 36 pieces on the board, but they surround 17 empty spots, so that White commands 53 places, 6 more than Black, and he has won the game.