Gothello

The main differences are that Gothello has the first four checkers (figures) in the middle set as the opening and is played on a 10 x 10 grid; with two players 2 each and with 4 one each.

In Gothello Variant II, two players each have exactly 32 stones (four players each have exactly 16), which corresponds to an 8x8 grid like in Chess. On a 10x10 grid with 4 players, 9 more checkers (figures) are added.

Conventional variants with 2 Players can be played with two-sided QuantumToken (Jetons are black and white token). With 4 Players you use a so-called QuantumCube, but without conventional color divisions - different motifs (black) on a white background are completely sufficient. That's why Gothello is designed for up to 6 players; there is no longer a distinction between black and white, but different figures – single and double clubs, spades, shamrock, single and fourfold diamonds – or dots (1 to 6) for value are shown on a dice.

With 4 Players, just one stone for each is placed in the middle as an opening (line-up). Alternatively, an additional stone is placed in each of the corners. With 6 players there is no starting position in the middle, here the beginner who should set first has to be drawn by lot.

The Go squares and connecting lines (their number and arrangement varies depending on the size of the grid), where no hitting is allowed, become of particular interest. In all variants, in addition to the square fields (Variant 1: Othello mode), the connecting lines (variant 3: Go mode) can also be included. In Gothello you can turn around (Variant 2: reverse mode, opening game), – block (caught), conquer form the middle game – and push (jump) (Variant 4: checker mode, endgame).

The larger the choosen QuantumGrid (see: figure 1), the more scope for the development and application of all variants.

Do not expect all variants at the same time, but experiment. Perhaps introducing a tandem mode on a single Grid so that you can compete in double teams; the partner passes his stones on to his team partner, with whom he discusses his strategies – not all team members have to master the same variants. Alternatively and according to the tournament rules, the variants can be divided into levels (Best of Four) or other variant rules can be used so that they only apply after equal time intervals have elapsed.

LEARNING TO PLAY AND BECOME FAIR

The typical Go-Player try to conquer territories by alternately placing the QuantumTokens on the intersections of the playable connecting lines, to secure them and, if possible, to "capture" the opponent's token. By laying suitable formations, secure positions can be gradually created.

Figure 1: QuantumGrid with largest Gothello Layer (19x19 squares) and fixed Gobans. Gothello shown without help of alpha-numeric notation.

Alternatively, depending on the end of the game, the size of the conquered territories is compared and the number of caught tokens is added. But the goal, then, is not to completely destroy the opponent, but to get more points (scores) from conquered territories and prisoners. The individual variants and levels of difficulty serve to deepen (routine), refine the strategy (combination) and even increase gaming experience.

The number of playable variants even exceeds that of Chess variants and Checker variants. On the other hand, the basic rules of Go have been expanded with those of Othello and Reverse Checkers in order to make it easier for others to get started, learn the game and improve the game skills. But also to make it more attractive for the community at the same time.

The appeal of Gothello variants lies in the fact that Players (Teams) should keep both local situations and the big picture in mind at all times. A locally lost situation can still play an important
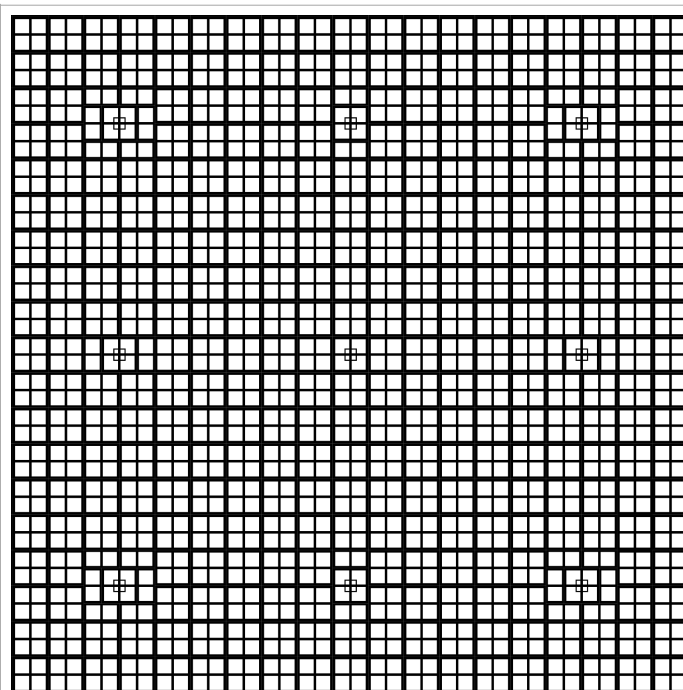
role at a later point in time. Each placed tokens (move) often has multiple functions, from strengthening one's own group of tokens (or territories), to creating a connection with a second group of tokens (or territories), to attacking oppenent's territory (or token). Depending on their disposition, players (teams) can therefore concentrate more on creating the largest possible territories, or on preventing the opponent from doing exactly that.

Divide the dispositions into different levels, which increase the pressure on all players (teams) through the passage of time intervals, so that the game does not drag on indefinitely (tournament variant). Weaker players often strive for safe territories and strategies early on, while strong players often only turn their territory into safe territory later in the game.

To be fair, strong and experienced players should be considerate of weaker players in a training session, hence the distribution of different starting positions and strategy variants.

Alternative, depending on the regulations and size of the grid: Different playing strengths of several participants can be compensated with up to nine leveling stones (bonus tokens). This gives a weaker player a chance to win and a sense of achievement, while the stronger player remains challenged to win despite of that kind of handicap (disadvantage).

Strategy is an important aspect of the Gothello variants, but not the only one: Gothello is intended to provide basic insights into personal gaming behavior and help to identify strategy scenarios (recognition of one's personality and one's own behavioral patterns). In addition, a game played well by both players or a filled game board can be perceived as a art work (bird's eye view).

FINE-TUNING USING THE SIMPLE RULES

The finer the rules, the higher the level of difficulty (beginners, advanced to master) or the experience value (club training, tournament mode). The Reverse mode is often played in a way that only one row is turned over at a time. Originally, however, in Reverse mode, as in Othello, every enclosed row was conquered.

On an 8×8 board, two Players alternately place a QuantumCube whose sides show different motifs (black motif on a white background). One Player ("Clubs") always places his cube with his glyph face up, the other with his glyph ("Spades") accordingly. At the beginning of the game there are four cubes in a predetermined arrangement on the grid. A player must place their cube on an empty space (or connecting line) that is horizontally, vertically, or diagonally adjacent to an already occupied space. When a cube is placed, all opponent's cubes that are between the new cube and an already placed cube of your own glyph are flipped over. Moves that don't flip opponent's cube are not allowed unless you choose Go mode. The aim of the game is to have the largest possible number of cubes of your own glyph on the board at the end.

THE REFINEMENT OF THE MORE COMPLEX GAME RULES

Briefly summarized: The players alternately place their own die on the intersections of the lines (half steps) or square fields (full steps) of the board. You can beat opposing pieces and groups by enclosing them all around (Go mode) or turning them over (Othello). In the end, the player who controls the larger part of the board wins.

The playing field consists of up to 19 horizontal and 19 vertical lines that form a grid of 19×19 = 361 intersections (18 x 18 square fields). The cubes are placed on these points (fields). All players have a limited supply of cubes of the same type (max. 361 ÷ number of players) in the respective motif color (clubs, spades, shamrock, diamonds etc.). With two players, it should traditionally be 361 cubes, which is always sufficient for a game played exclusively in Go mode. For shorter games and especially (but not only) for beginners, smaller game boards are suitable, mostly in the size 13×13 or 9×9. The rules of the game are the same for all board and grid sizes.

The board is initially blank unless the weaker player is allowed to make an allegation (e.g. first move or compensation move). The players take turns, the less experienced player begins, otherwise a lot is drawn. The player whose turn it is may place a cube from his supply on any empty point – square field or connecting line. In contrast to Chess or Checkers, however, there is no obligation to move, i.e. a player may also forego his move (pass) or have to sit out (check) because he cannot make a conforming move (turn, hit).

The game usually ends when both players pass (check) one after the other. They do this when they realize that further betting would not represent a point gain or even a point loss. Here, too, the „fairplay-win-win-gentle" philosophy of the game is expressed in that no player is forced to make a move that is unfavorable to him.

Set cubes are no longer moved (set) in the rest of the game (Go mode); however, we can optionally change this move rule to pushing and jumping (Checkers mode). However, cubes can be beated under certain conditions and be removed from the board – depending on the size of

the grid, a different number of markings are given. It is conceivable for the largest grid 20 x 20 (squares) and 21 x 21 connecting lines to equip an inner field (e.g. 8 x 8 = exclusively with active move rules) and on the environments (levels) arranged around it – from the square fields 9 to 20 or the connecting lines 10 to 21 – to apply passive setting rules that we known from Go and Mill.

BE BEATEN AND BE CAPTURED
A single cube is hit (sometimes said to be caught) and taken off the board when its last free space has been occupied by an opponent's cube. Freedoms are the unoccupied points (lines or squares) adjacent to a cube. Neighbors are points if they are right next to each other and connected by a line on the board and the point on the line itself. Neighbors are points that are horizontally and vertically adjacent opposite. Diagonally opposite are reserved for Othello mode only. A point in the middle has four neighboring points, one on the edge three and one in the corner only two.

The same applies to chains (rows) of cube (upside down cube that only belong to one player). Several identical cubes that are connected by being adjacent to one another form a chain (row). A cube in a chain (row) does not have to have a free neighboring point, but only the entire chain (row) is considered. The liberties of a chain (row) are the unoccupied points (squares or lines) adjacent to one of its cubes. The opponent's chain (row) no longer has any freedom (square), if the opponent occupies the last freedom of a chain (row), he beats all the cubes in the chain (turning is not necessary). Turning is reserved for Othello mode only. You can only beat a chain (row) as a whole, and not just a part of a chain (row).
A single cube can also be understood as a chain (row) consisting of only one cube. From now on, "chain" should also refer to a single cube. A move can take the last liberty of several chains (rows) at the same time. In any case, all opposing chains (rows) that have no more freedom are beaten; this rule can also be changed for vertical chains; previously limited to Othello mode.
If a chain (row) has only one freedom (square) left, then it is said to be in Gothello (cf. to be set in Chess). The opponent threatens to capture her next turn. To prevent this, it can make sense to give her (chain along the lines/row along the squares) additional liberties by adding a cube to prevent Gothello (cf. to be Checkmate).
Hit cubes are removed from the grid and kept as "prisoners". Each prisoner counts one point and is added to your own area points (terretories) in the final calculation. Prisoners cannot be freed, but in the Chess variants they can.
It is not allowed to place a cube in such a way that the chain (row) to which it belongs has no freedom after the move. Complete execution of a move also includes removing cubes that have been hit. Therefore, it is not a sacrifice when a move simultaneously takes the last liberty of its own row (chain) and an opponent's row (chain). Because your own chain (row) is given freedom again by removing (or turning) the opponent's chain (row).

SPECIAL COUNTER–RULE VARIANTS IN GO MODE AND THEIR TACTICS
There are also rule variations that allow pawn sacrifice. Then, if a move doesn't beat any opponent's dice and the chain (row) with the placed die has no freedom, then that chain (row) itself is beaten, and its dice count as prisoners for the opponent (however, in these rule systems, the Prisoners are usually not included in the result, only the territory counts). In practical play, however, there is hardly any difference, because it rarely makes sense to capture your own stones. Immediate return of a single stone that has just captured a single stone is forbidden. In other words, a checker may not be captured if it would result in the same arrangement of checkers as the previous move.
The purpose of such a rule is to prevent the position from being repeated endlessly. We also know this from the Chess endgame, when both players would have to make mistakes on purpose to decide the game. What happens when there is a forced or unwanted replay, so a player had no choice but to make that move:
At the same time, an interesting tactical element comes into play in the form of replay combat. If player A has hit in the repeat, player B plays a threat as an intermediary move, to which A must respond. This prevents A from occupying and securing the repeat point. After that, B may hit in the repeat again.
This can be repeated any number of times until a player runs out of a repeat threat or a threat is too small for the opponent to answer. Players must balance the value of the threat against the value of the repeat/threat gain. In addition, even before beginning a valuable repeat, the totality of threats available to both players must be considered in order to decide whether to engage in

repeat combat.

AVOIDANCE OF RARE EVENTS
However, this „simple" repeat-threat-response rule does not prevent all possible repetitions of the position. For example, if there are three different repeat situations on the board, a player can always hit back in at least one of them. If in such a situation no player wants to deviate from the replay, the game ends according to the Go rules without a result and is replayed. However, such a case is extremely rare.
As an alternative, some rule systems use a global repeat rule, also called super repeat rule. There are slightly different variants. For example, a super repeat rule forbids placing a cube (checker) in such a way that the resulting arrangement of the cubes (checkers) on the grid (board) agrees with any previous arrangement and the move is the same player and the discrepancy in captured cubes (checkers) is equal (that is, with the moves made between them). Two players have captured the same number of cubes or checkersstones. An endless cycle, from which no player should deviate in their own interest, can no longer occur. avoid such situations, because the point of learning how to play is to make the game attractive and this only works if there are free territories left.

DISADVANTAGE COMPENSATION
At the beginning of the game there is a slight disadvantage for the players, since one player always has the advantage of the first move (turn). This disadvantage is usually offset by a "compensation" in the form of additional points to the other players. These points vary depending on the rules or agreement between players. In order to avoid a tie (draw), a half point is usually chosen for two players and a quarter point for four players (each as a fraction of the number of players). Compensation can also be used to replace or supplement stones, particularly to balance different player strengths; to ensure fair play.

I want to do without further rules of the Go game and the Checkers variants about strategy and tactics, ethics and philosophy (territory and influence, attack and defense, forehand and afterhand) - you would first have to master all the games. I also want to postpone the exact tournament rules, rankings as well as key figures and game theory (game databases and solution approaches) to later; they are more reserved for professionals, programmers and associations.

Figure 2a: Line-up to the mid in 2-Player variants. Modus played along squared fields with QuantumTokens.

RECOMMENDED LINE-UP
It is played on an Othello board with 10×10 square fields (11x11 connecting lines = 121 intersection points). Players start in Reverse mode, so each player starts with a supply of 32 cubes. If necessary, the first point count takes place. As soon as Reverse mode ends, Othello mode begins. In Othello mode, 18 stones are added each player. Depending on the size of the grid, the maximum number of cubes is limited to the number of playable fields (Reverse mode: 64, then a further 36 in Othello mode and finally a further 121 in Go mode). If an 8x8 grid is selected, the maximum number of cubes is reduced accordingly, because Reverse mode and Othello mode merge and the other Go cubes are limited to a maximum of 81 cubes.

If the number of players increases to 4 Players, the Players can choose between the starting positions: either the middle fields are alternately pre-occupied or in the first four moves a cube is placed on each of the four middle fields or the corners are also each occupied with a glyph. The first player can choose the midfield and the corners de facto.

The opening of a game is roughly the first 30 to 40 moves (not similar to Chess). Even if the board (grid) is not completely empty at the beginning, there are endless playable variants for the first moves in Go mode. Still, certain moves have proven particularly good. So almost every Go mode starts with a move near a corner. Only after all four corners have been occupied with one or two stones each, the sides are occupied. After that, the expansion of the positions towards the center begins.
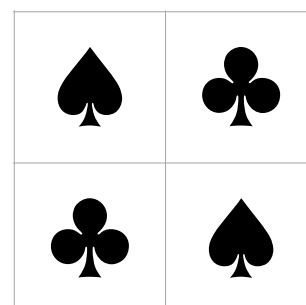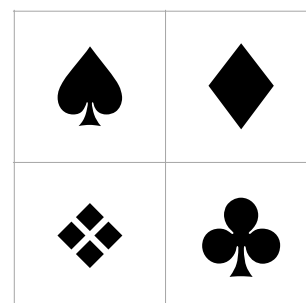

Figure 2b: Line-up to the mid in 4-Player variants. Modus played along squared fields with QuantumCubes.

With the first cubes that are placed on the board (grid), each Player try to create as perfect a balance as possible. This means that the cubes should neither be too close together nor too far apart and neither too high nor too low, and also that each Player can react flexibly to the opponent's actions with the cubes placed. This shows again that Go mode is in many ways a game of balance.

Working with fixed strategies from the Playbook: The opening game is characterized by the use of full-board patterns and fixed corner game sequences for advanced players. They are the most variable elements of the game of Go mode and are constantly evolving. The number of different openings in Go mode exceeds that of openings in Chess many times over. Very experimental openings are also occasionally played.

SIMPLE RULE IN GOTHELLO
Players take it in turns to move a cube onto an empty space with their own glyph facing up, or the Player pass. However, passing is only allowed if the Player have no possibility of placing a cube in accordance with the rules.
A Player can only place in such a way that, starting from the placed glyphs, one or more opposing glyphs connect in any direction (vertically, horizontally or diagonally) and then the own glyph again. So at least one enemy glyph must be surrounded by the set glyph and another own glyph in a straight line. All fields between the two own glyphs must be occupied by opposing glyphs. Any enemy glyphs trapped in this way will switch glyphs by flipping them. This happens as part of the same turn (move), before the opponent's turn (move). A turn (move) can include multiple rows (set) of opposing glyphs at once, which are then all flipped.
However, if a glyph that has just been flipped encloses other opposing glyphs, cubes will not be flipped - glyphs being flipped will not trigger a domino effect themselves, even if it reveals visible enclosing.
If the players pass immediately one after the other, i.e. if no one can place a cube anymore, the game is over if no other playable mode can be opened (Reverse-Othello-Go then possible extensions: Checker).
Reverse mode ends when two (four) players either run out of 32 cubes (16 cubes) or can no longer turn opposing glyphs (cubes). Othello mode kicks in (10x10 grid) then Go mode.

Counting the points: The player with the most cubes of their glyph on the grid at the end wins. If two(four) have the same number, the game is a draw. The intermediate results of the Othello mode are added to the intermediate results of the Reverse mode. At the end of the Go mode, the territories are added in addition to the glyphs. Each mode can also be scored simply: Reverse mode with 1, Othello mode with 1 and Go mode with 1. A game can result in up to 3 points, but it can also be scored with goals conceded (terretories).
There are different tournament rules for determining the amount of points gained (degree of experience). Usually, the fields and lines (terretories) that are still empty at the end of the game are credited to the winner, i.e. added to the difference in the number of cubes. An additional rule that is often used in two-player Go tournaments can be used to avoid a tie: A player (e.g. who is drawn) determines whether an equal number of glyphs at the end of the game is counted as a win for a glyph. The other player then chooses a glyph.

Pragmatic rules for games without playbook support: Once a cube has been placed, it may no longer be removed from the board (grid). If a player turned over a checker (cube) incorrectly or forgot to turn over one, either player can correct this until the opponent has made his next move. After that, checkers (cubes)that are wrong or not turned over remain on the board (grid).

END THE GAME
The game is over when both (all) players pass in succession. Passing is in each player's interest at the end of the game. Otherwise they would reduce their own territory or unnecessarily give the opponent prisoner cubes, sacrifice territories and lose points gained.
A player's score is the sum of free points (territory) and captured cubes (opponent's glyphs) enclosed by cubes of their own glyph. The player with the higher score wins the game.
If there are still glyphs on the board (grid) that can be captured, i.e. are dead, then they are considered prisoners. They are removed from the board (grid) before the territory count and

counted together with the captured glyphs. Player agrees on the status of these cubes with his opponent after the game has stopped.

This agreement is unproblematic among experienced players, because it is usually obvious which glyphs are dead and therefore captured (trapped). If there is disagreement, then the situation must be played out: the game continues in this case, and whoever claimed that opponent's glyphs are dead must prove it by hitting them. If player fails, they are considered alive.

However, the glyphs placed during play must not influence the count. The player either have to restore the situation before the game was played, or appropriately balance the glyphs placed in player's own or opponent's territory when the game was played. If both (all) players have the same score, the game is a draw.

Both (all) players also have the option of abandoning the game if the situation on the board (grid) seems hopeless. The opponent has then "won by submission".

It is sometimes difficult for beginners to tell when the game is over. This can then be prescribed by the club statutes and tournament rules. As a rule, there can no longer be any free intersections between cubes with different glyphs. This is a good indication that the game is over. In principle, the rules allow the game to continue "one-sidedly", namely if one player still bets because he believes he can make worthwhile moves, while the other player does not share this assessment and therefore refrains from making response moves. Since player end up giving the opponent captured glyphs through hopeless attacking moves, it would not be good for him to react in every case. He would give up this score gain again by countermoving to already safe own territory.