## Kodrek

A Ludological Vector Representation of Socioeconomic Force in the Kotaht Archipelago

## The rules of Kodrek

## Each player has:

» One craft
" Two speakers
» Nine toleks or a local standardized trading good of meaningful value that fits easily in the hand and has two distinct sides, called "heads" and "tails" according to local custom.

## Shared space

The game's board is triangular, consisting of a triangle of 18 vertices, surrounded by an additional area of 6 vertices to each side. At each corner of the board lies a triangular area colored each of the players' colors; most commonly, green, blue, and red.
The players contend to retain their craft within the yellow, triangular internal boundary of the board. Any player who finds their craft outside that boundary at the end of a turn has lost.

## Object

Pull one or both of your opponents' craft past the outer edge of the yellow internal boundary, taking all coins they have played so far.

## Starting the Game

Each player chooses a color with the most experienced player taking gree. They each place their Craft on the corner of their color. They then place both Speakers two junctures toward the center.

## Plotting trajectories

Each player takes two toleks
in their hand and secretly arranges them to determine their move this turn. Toleks played heads up will thrust the speakers, changing the speed and direction of the craft. Toleks played tails up will "pull" other players' craft, similarly altering their trajectory.
When a player has decided on a move, they slap their hand palm down, covering their toleks with their hand. When all three players have slapped their hands down, they reveal their moves.

## Thrust

Starting with the player with the most heads and moving clockwise from the green player, players move their speakers the same number of spaces as they have heads showing. They may move their Speakers to any juncture on the board, including under their own craft, under another player's craft. They may even wind up with their speakers back where they started.

## Pull

Now, starting with the player with the most tails showing and moving clockwise from the green player, players optionally move one or both opponents' speakers directly toward or past one's own speakers by the number of tails being used. A player does not need to pull with each tail; they can opt to pull less or not at all.

## If two craft are within

 three junctures of each other, they pull on each play.other twice for each tail they


Blue pulls Red 3.
If it were Green's turn, Green could pull Red's Speaker a double distance because the Green and Red Craft are within 3 vertices of each other.

## Move

Players then count the spaces between their craft and their speakers - "one over, three forward" for instance - and then move their top speaker so that its relationship to the bottom speaker is the same as that between the bottom speaker and the craft. The player then moves the craft to the location of the bottom speaker and moves the bottom speaker to the top of the top speaker.
Any player whose speakers now lie outside the outer boundary of the game has lost.
Players now pick up all their heads and take one additional coin from their pile and add it to their hand. They choose this move the same way as the first. All tails remain on the table and may be used to pull in addition to new tails played this turn.
When one or two craft have left the inner boundary, the game is over. If one player has lost, the winners split all coins played by that player between them, giving the odd remainder to the waiter or host if there is one. If two players lose at once, they both give
their losses to the winner, who customarily gives one to the waiter or host. All losers concede their seats to other players waiting to play.

## Tiebreaker

When all three craft end a turn outside of the inner boundary the players place their craft and speakers back in their starting positions and play from there, continuing normally.
If no craft has left the inner boundary by the time the players have used all nine toleks, all three players have lost and concede their seats to players waiting to play. Custom dictates that they buy each other drinks with the money they had been playing with.

Move one speaker the same distance and direction.



Put your craft where the speakers were at first, then put your remaining speaker on top of the forward one.

## Variants

When a new player is losing but has not yet lost their craft beyond the inner boundary, the more experienced older players will often allow a player whose speakers have been thrown past the outer boundary to stay in the game if they have enough thrust next turn to return, playing all available heads and placing the speakers on the edge of the outer boundary; the player may not pull until their speakers have returned to the inner boundary.
Some variants use a board constructed with an internal boundary of as few as eleven junctures. The clans that use such a Kodrek board tend to favor faster, more violent tactics in actual combat. See Rn-Grhtshe's paper, "Kodrek: a form of surrogate violence to enhance group bonding" for a full description of this correlation.

When a player (or Kodrek house) prefers higher player turnover, they will limit the number of toleks played to six. Keltet Jun writes about the economic impetus for this rule in his debut paper "The House Always Wins: socioeconomic incentives in cultural forms of the Kotaht Archipelago from a Kotahtka perspective". He notes that this form results in more ties, resulting in more trade of toleks for drinks.

## The History and Cultural Context of Kodrek

When the Contactor Rn-Zjafe arrived in The Kotaht Archipelago, it found a collection of asteroids orbiting . 8 Mm from its sun. The Archipelago governed itself with a wide variety of systems with divisions between clans. An overarching system of radio-connected and digitally-enhanced Speakers enacted the instructions of a distributed economic simulator called the Higher Machines. Their connection to the Higher Machines gave the Speakers a visceral understanding of mathematics, making them both valued for their calculation and resented for their arbitrary instruction. Archipelago-wide custom mandated that individuals house and feed Speakers, though their presence was not often welcome.

On the other hand, their hosts invariably appreciated their presence on clan trade/combat vessels. Without any other computational machinery, Speakers provided fleets with the rapid vector arithmetic required to win the frequent and formal battles such vessels would suffer. Such battles took place in designated volumes of space, designed to minimize the danger to individual clan habitats. In the past, violations of the volumetric
limitation have induced massive clan retaliation on the perpetrators on claims of democide. The Higher Machines seem to see such violation as economically nonoptimal as well; in the historic record, such behaviors have resulted in the society-wide economic destruction of the perpetrator - presumably not so much as punishment, but to redistribute the wealth in a way that encouraged the flow, rather than accumulation, of resources.

After a battle, the victors would gain the prizes of not only cargo - typically agricultural or industrial goods - but the valuable craft themselves, as well as the crew. Because crews consisted of a mix of both male and female (all nominally heterosexual men for the purposes of military service), they provided a valuable influx of new genetic material for a clan.

In this broad culture of economic warfare, kept in nearstasis by the Higher Machines for thousands of years - grew the game Kodrek. It uses a two-dimensional representation of the battlespace, a single stone of each of three colors to represent the craft, and two small, flat pieces of the same colors to represent the predictions of the Speakers.

By tradition only men (by the society's definition) may play the game, and so its enthusiasts play in Kodrek halls and bars frequented by clan marines. Such a bar will have several tables devoted to Kodrek, designed to fit a local clan's variant rules, each typically surrounded
by a small crowd of individuals giving advice to active players, cheering, making side bets, and misleading the active players until their turn arises. When a new individual arrives at the table, the last to arrive says "Last." The player then knows that their turn will come when that player's first game ends. When on active player is out, the next in line takes their place at the table and the game begins.

While most boards follow the $18+6$ size included in the object file attached to this paper, some clans use a larger board, resulting in more draws and the necessity of cooperation while others use a smaller board, encouraging in a shorter battle with a single victor. Others involve a Pirate piece that always rests outside the outer border who can be hired for the largest bid in a turn, with the Pirate's total investment going to the winner(s).

In general, clans consider Kodrek a representation of their clan's core philosophy; it both reinforces the style of conflict favored by that clan and limits thinking to the patterns inherent to the game. Because of its use as a pedagogical tool, experienced players give new players a warning if their move will cost themEvery clan we interviewed considered their own variation of the game superior to the others'.

For information about the "Women's Game" in Kotahtka society, see "The Women's Game as a Method of Reinforcement and Alteration of Sociosexual Roles
in the Kotahtka Archipelago" by Kozja-Rn. While the women of the society considered it impolite to discuss the game in public, only by studying both of these games can one gain a complete metaphorical picture of the society.

## Summary

## Each player gets:

## 1 Craft

2 Speakers
9 coins

## Starting

The most experienced player takes Green.
Place your craft on the corner designated by your color.
Place both your speakers in a stack two junctures away on the corner where white meets yellow.
Take two coins in hand. Turn them each heads or tails-up. For each head on your coins, you must move your Speakers that many junctures.
For each tail on your coins, you may move another player's speaker that may junctures toward your own. You may use tails from previous turns.
Slap your coins on the table, leaving them covered, to show that you are ready. When all players have slapped down their hands, everyone reveals their move this turn.
Leave tails in your corner for later.
Move your Speakers.
Pull your opponents using tails from your hand and from previous turns.

Count the junctures from your craft to your speakers. Then count the same way forward from your speakers. Pick up one of your speakers and put it forward in the new position. Now pick up your craft and put it where your back speaker is. Now take the back speaker from under your craft and put it on top of the front speaker.

## Following turns

Pick up any heads from your previous move and put them in your hand.
Take a new coin from your stack and add it to your hand.

## Ending the game

When one or two players end a turn with their craft outside of the inner boundary, those players have lost.
If any player ends a turn with their Speakers outside the edge of the board, that player has lost.
If one player has lost, they give all coins they have played to the other two players. If they have played an odd number of coins, the remaining coin goes to the server or host.
If all three players wind up outside the inner boundary, the players put their pieces in starting position and play with their remaining coins.
If the game ends with all nine coins spent and no loser, the players buy each other drinks with the money they were playing with.

