

# My Games

Tuomas Korppi

# Contents

<b>1</b>	<b>Introduction</b>	<b>7</b>
----------	---------------------	----------

## **Trick Taking Games** **11**

<b>2</b>	<b>Introduction to trick taking games</b>	<b>12</b>
----------	---	-----------

### **I Trick taking without bidding** **13**

<b>3</b>	<b>Android Whist</b>	<b>14</b>
----------	----------------------	-----------

*2 players, standard deck of playing cards, two card holders, pen and paper or poker chips*

<b>4</b>	<b>Narnian Whist</b>	<b>17</b>
----------	----------------------	-----------

*3 players, Top Trumps deck, pen and paper or poker chips*

<b>5</b>	<b>Multimulta</b>	<b>19</b>
----------	-------------------	-----------

*4 players, playing cards, card sleeves, pen and paper or poker chips*

### **II Trick taking with bidding** **30**

<b>6</b>	<b>Tuppi</b>	<b>31</b>
----------	--------------	-----------

*4 players, standard deck of playing cards, pen and paper*

<b>7</b>	<b>Bridge Meets Guess Who</b>	<b>33</b>
----------	-------------------------------	-----------

*2 players, standard deck of playing cards, two card holders, poker chips*

<b>8</b>	<b>Tuomas's Minibridge</b>	<b>37</b>
----------	----------------------------	-----------

	<i>3 players, standard deck of playing cards, pen and paper</i>	
<b>9</b>	<b>Math students' Huutopussi</b>	<b>40</b>
	<i>4 players, standard deck of playing cards, pen and paper</i>	
<b>10</b>	<b>Huutopussi strategy</b>	<b>43</b>
<b>III</b>	<b>Skruuvi</b>	<b>47</b>
<b>11</b>	<b>Warning about Skruuvi</b>	<b>48</b>
<b>12</b>	<b>Modern Skruuvi</b>	<b>49</b>
	<i>4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher</i>	
<b>13</b>	<b>Klubiskruuvi</b>	<b>53</b>
	<i>4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher</i>	
<b>14</b>	<b>Historical Skruuvi</b>	<b>56</b>
	<i>4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher</i>	
<b>15</b>	<b>Vint</b>	<b>60</b>
	<i>4 players, standard deck of playing cards, pen and paper</i>	
<b>16</b>	<b>Screw Misere</b>	<b>63</b>
	<i>4 players, standard deck of playing cards, pen and paper</i>	
	<b>Other Card and Board Games</b>	<b>65</b>
<b>IV</b>	<b>Poker-influenced games</b>	<b>66</b>
<b>17</b>	<b>Poker hands</b>	<b>67</b>
<b>18</b>	<b>Fireplace Poker</b>	<b>69</b>
	<i>2 or 4 players, 5 standard decks of playing cards, poker chips</i>	
<b>19</b>	<b>Kiertopokeri</b>	<b>73</b>
	<i>4 or more players, standard deck of playing cards</i>	

<b>20 Chinese Poker</b>	<b>75</b>
<i>3 - 5 players, standard deck of playing cards</i>	
<b>21 Indian Poker</b>	<b>77</b>
<i>3 - 10 players, standard deck of playing cards, poker chips, pen and paper</i>	
<b>22 Strip Poker</b>	<b>79</b>
<i>2 - 6 players, standard deck of playing cards, poker chips</i>	
<b>V Canasta</b>	<b>82</b>
<b>23 Canasta</b>	<b>83</b>
<i>4 players, 2 standard decks of playing cards, pen and paper</i>	
<b>24 Canasta strategy</b>	<b>87</b>
<b>25 Samba</b>	<b>98</b>
<i>4 players, 3 standard decks of playing cards, pen and paper</i>	
<b>26 Contract Samba</b>	<b>101</b>
<i>4 players, 3 standard decks of playing cards, pen and paper</i>	
<b>27 Hand and Foot</b>	<b>106</b>
<i>4 players, 5 standard decks of playing cards, pen and paper</i>	
<b>VI Miscellaneous games</b>	<b>108</b>
<b>28 Sakaali</b>	<b>109</b>
<i>4 players, standard deck of playing cards, pen and paper</i>	
<b>29 Valepaska</b>	<b>113</b>
<i>2 - 6 players, standard deck of playing cards</i>	
<b>30 Musta Maija</b>	<b>116</b>
<i>3 - 6 players, standard deck of playing cards</i>	
<b>31 Believe or Doubt</b>	<b>118</b>
<i>3 - 6 players, Trivial Pursuit set or other trivia game set, poker chips</i>	

<b>The Science of Games</b>	<b>121</b>
<b>VII Mathematical</b>	<b>122</b>
<b>32 Hex</b>	<b>123</b>
<i>2 players, Hex set</i>	
<b>33 Beginners' Go</b>	<b>126</b>
<i>2 players, <math>8 \times 8</math> square board, 40 black pieces, 40 white pieces</i>	
<b>34 Go and topology</b>	<b>129</b>
<b>35 Mathematical problems on games</b>	<b>131</b>
<i>1 player, pen and paper</i>	
<b>36 Solutions to mathematical problems</b>	<b>133</b>
<b>VIII The Metaphysics of Games</b>	<b>136</b>
<b>37 Introduction</b>	<b>137</b>
<b>38 The Limits of Applying the Theory</b>	<b>140</b>
<b>39 Ethics</b>	<b>142</b>
<b>40 Examples from Card Games</b>	<b>144</b>
<b>41 Conventions</b>	<b>150</b>
<b>42 Time in Board Games</b>	<b>154</b>
<b>43 Two-subject theory</b>	<b>157</b>
<b>Physical Games</b>	<b>158</b>
<b>IX Dart games</b>	<b>159</b>
<b>44 Introduction to Dart Games</b>	<b>160</b>

<b>45 Tuomas's Round the Clock</b>	<b>162</b>
<i>1 or more players, dartboard, 3 darts</i>	
<b>46 Kangaroo</b>	<b>163</b>
<i>2 or more players, dartboard, 3 darts</i>	
<b>47 Merirosvo</b>	<b>164</b>
<i>2 players, dartboard, 3 darts, 20 thumbtacks, pen and paper</i>	
<b>48 Killeri</b>	<b>165</b>
<i>3 or more players, dartboard, 3 darts</i>	
<b>X Outdoor games for small groups</b>	<b>167</b>
<b>49 Tuomas's Petanque</b>	<b>168</b>
<i>2, 4 or 6 players, Petanque set, yard covered with gravel</i>	
<b>50 Contract Petanque</b>	<b>171</b>
<i>3 players, Petanque set of 3 × 2 balls and the target ball, yard covered with gravel</i>	
<b>51 Swing Dodgeball</b>	<b>174</b>
<i>3 - 5 players, two swings, ball</i>	
<b>52 Seinis</b>	<b>177</b>
<i>2 or more players, piece of wall, soccer ball</i>	
<b>53 Totem Tennis</b>	<b>178</b>
<i>2 players, 2 rackets, ball, piece of string, pole</i>	
<b>XI Outdoor games for large groups</b>	<b>180</b>
<b>54 Purkkis</b>	<b>181</b>
<i>around 10 players, large yard, soccer ball</i>	
<b>55 Kymmenen tikkua laudalla</b>	<b>183</b>
<i>around 10 players, large yard, two pieces of wood, ten sticks</i>	
<b>56 Tuikkunen</b>	<b>184</b>
<i>10 or more players, large yard, flashlight for each player</i>	

<b>57 Poliisi ja Rosvo</b>	<b>185</b>
<i>10 or more players, yard</i>	
<b>58 Rymypallo</b>	<b>186</b>
<i>around 10-20 players, ball, field covered with snow</i>	
<b>59 Breakthrough</b>	<b>188</b>
<i>15 or more players, forest, campfire, flashlight for each player</i>	

# Chapter 1

## Introduction

Where English has only one word, game, Finnish has two words, leikki and peli. Leikki is free-form, and peli has both the rules and an objective for the players, such as winning. I have always liked peli's, I liked them as a kid and I like them as an adult. I like playing them, and I have even designed a couple of them.

In this booklet, there are peli's that have been significant to me, either as a kid, or as an adult. The games in this booklet are such that I know something special about them: I have designed some, I have tweaked the rules of the others, and in some cases I am just recording Finnish game folklore. This booklet contains the rules of the games, and the games can be played using standard gaming equipment, such as standard playing cards.

All the texts were written by me. I have published most of the texts earlier elsewhere, including a couple of texts that I have earlier published in Wikipedia.

### 1.1 Card games in teams

Many card games in this booklet are played by two teams of two players. In such games, the team-mates are not allowed to discuss the strategies of the game while playing the game. Also secret gestures and such are forbidden. The intentions of the team-mate must be inferred only from the cards he plays.

In such games, the four players must be divided into teams. The following procedure is the best way to do it: The players can agree on teams, but this requires that every player is satisfied with the agreed-on teams. Any player has the right to demand random teams. If such a demand is made, two red



cards and two black cards are shuffled, and everyone draws one of them. The players who drew red cards play against those who drew black cards.

## 1.2 Money stakes

Card games with scoring are traditionally played for small stakes of money. After the game, the losers pay the winners the difference of scores in money. When there are no money stakes, the players tend to mind only whether they win or lose. When the difference of scores is paid in money, the players also mind how much they win or lose. This makes the outcomes of the games more varied.

When playing for money, the monetary value of a point is decided before the game. After the game, if there are only two players or teams, the losers pay the winners the difference of scores  $\times$  the value of a point.

If there are more than two players who play individually, after the game the average of the scores is calculated. Those whose score is less than the average, pay the difference of their score and the average to the pot. Those whose score is more than the average, take the difference of their score and the average from the pot. With this method, as much is paid to the pot as is taken from there. Also, with this method, the sums won/lost are approximately half of that what they are with the two player/team method. This should be kept in mind while deciding the value of a point.

When playing cards for money, you do not need to play until a certain point limit is reached or a certain number of deals is played. You can just play as long as you like and settle the scores in money after that. (Canasta games are an exception to that: Since the opening meld requirement depends on score, they should be played until the point limit stipulated in rules is reached. Also Minibridge is meant to be played for a certain number of deals, since the scoring changes for the latter half the game.)

I recommend small stakes in particular for card games with bidding. Without money stakes, some players tend to overbid their hands, but the possibility of losing money keeps their bids realistic.

While small stakes often improve the game, high stakes have the opposite effect. Card games should be intellectual entertainment, and losing is not fun if you lose more than you can conveniently afford.

All games in this booklet can also be played without money stakes. Huuto-pussi, as I learned it, was not played for money, and I consider it an essential characteristic of the game that it is played for win/loss only; the winning margin makes no difference. Also, competitive Go is played for win/loss only.

## 1.3 Card games in Finland

During the latter part of the 20th century, the card games played in Finland got simpler. Historically, we had challenging trick taking games such as Marjapussi (whose variant Huutopussi can be found in this booklet) and Skruuvi (featured in this booklet). Nowadays people tend to know only simple games such as Crazy Sevens, Paskahousu (featured in this booklet) and Musta Maija (featured in this booklet).

More challenging card games are played only as a niche hobby. During the last ten years, there have been club level play at least in Canasta and variants (featured in this booklet), Bridge, Tuppi (featured in this booklet, Tuppi is limited to Northern Finland) and Skruuvi (featured in this booklet.)

## 1.4 Direction of play

In Finland, all games are played in the clockwise direction so that after a player has played his turn, it is the turn of the player in his left. Also, all the rules in this book presume clockwise play.

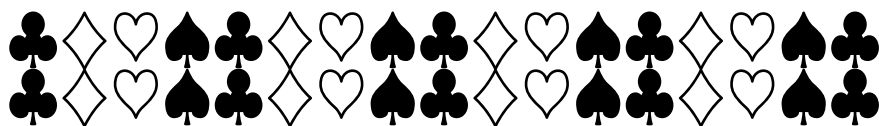
## 1.5 Substitutes for poker chips

Many games in this booklet use poker chips for scorekeeping. If you do not have poker chips, it is possible to use substitutes. Matches are the classical substitute, you may need matches from a couple of boxes. Especially if you are at a summer cottage, you might not have all your gaming equipment with you, but you usually have several boxes of matches.

Monopoly money, or money from some other game using fake money is another alternative. If 'who wins the pot' type of a game is played for money, it is possible to use real cash instead of poker chips - provided that you have enough small change. People usually do not have enough small change, so even if the game is played for money, usually poker chips are preferred, and the scores are settled in cash after the game.

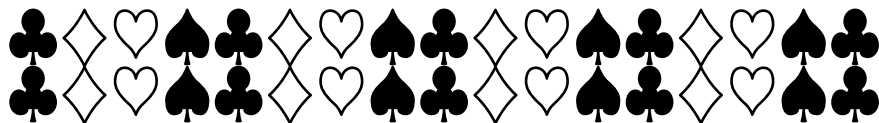
When a game specifies poker chips, scorekeeping with pen and paper is usually clumsy. Scoring happens so often that writing the scores down and summing them up at the end is not convenient. Also, when a game specifies poker chips, the players often give chips in the game for each other. If one tried to use pen and paper in this kind of a game, one would mark the same score as a plus for one player and as a minus for another player, and the things would get clumsy.

If all the payments are made from the bank to a player - i.e. the players do not pay for each other, it is possible to use a cribbage board for scorekeeping. A cribbage board is limited to two players/ teams, and Fireplace Poker was originally designed for a cribbage board. Many modern board games have a score track that can be used in a similar fashion to a cribbage board, even by more than two players/teams. Carcassonne, for example, has a handy score track, and you can also draw a score track by yourself.



# Superpart A

## Trick Taking Games



## Chapter 2

# Introduction to trick taking games

Trick taking games were historically the first games that were played with playing cards, and although they are nowadays rare in Finland, most of the card games in the world are trick taking games. In a typical card game book, something like 70 - 80% of the games are trick taking games.

In a trick taking game the gameplay consists of consecutive tricks. Each player plays one card from his hand to each trick. One of the players plays the first card of the trick, i.e. leads to the trick. The suit of that card is the *lead suit*. Subsequent players, starting from the left of the player who lead, play their cards to the trick, and if they have cards of the lead suit, they must play a card of the lead suit. If they do not have such a card, they can play any card.

The trick is won by the highest card of the lead suit. The winner of the trick puts the cards of the trick face down in front of him and leads to the next trick. After all the cards have been played into tricks, the number of tricks won or high cards in the tricks won determines the winner, depending on the game.

Often one of the suits is often designated as a trump suit. If there are cards of the trump suit, i.e. *trumps*, in a trick, the trick is won by the highest trump in the trick, even if it were lower than the highest card of the lead suit. However, the rule that players must play lead suit applies, and a player who has cards of the lead suit is not allowed to play a trump. When leading to a trick, a trump can be lead, and then trump suit is also the lead suit.

## Part I

# Trick taking without bidding

# Chapter 3

## Android Whist

*2 players, standard deck of playing cards, two card holders, pen and paper or poker chips*

Android Whist is my adaptation of the classic four-player card game Whist for two players. Good two-player card games are rare, and most good card games are played by four players in two teams. My solution is to replace two of the players by robot players so that both teams have a human player and a robot player, for which the human can give commands

### 3.1 Story

Mad Scientist has sent androids back in time to the 19th century. The androids have infiltrated a British gentlemen's club and threaten to alter the timeline. You are sent back in time to hunt the androids.

You arrive at the club, and to fit in, you decide to play a game of whist. However, during the game you find out that two of the players are androids, but you must finish the game so that the members of the club do not get suspicious. Fortunately, you can use your brain link and see the cards of the opponent android and control your partner android to some extent...

### 3.2 Setup

The game is for two players, and it utilizes one deck of 52 cards and two card holders capable of holding 13 cards each. Quick and dirty card holders are extremely easy to make out of pizza boxes and duct tape - see <https://boardgamegeek.com/image/535001/miscellaneous-card-game-accessory>

### 3.3 The game for four players

The game is actually for four players, two humans and two androids represented by the card holders. In this section we explain how the game is played by four players. How to take into the account the fact that some of the players are androids is explained in subsequent sections.

The four players are divided into two teams and seated so that everyone sits between two opponents. All 52 cards are dealt so that everyone gets 13 hand cards.

The game is a basic trick-taking game as explained in Chapter 2. Spades are permanent trumps, and the player left to the dealer leads to the first trick.

The deal is won by the team that got more tricks, when you consider the tricks won by both members of the team. The winning team subtracts 6 from the number of tricks they won, and that's the number of points the winning team gets. The game is won by collecting 5 points, usually over several deals.

### 3.4 Androids

Each team has a human player and an android player. In each deal, the dealer is a human, and turns to deal alternate between the humans. Android hands are placed in the card holders. There is one android to the dealer's left and another to the non-dealer's right.

The human players see the opposing partnership's android's hand (and perform actions on behalf of this android). The humans do not see the cards of the friendly android, but they can command the friendly android.

### 3.5 Commands

Commands the androids accept:

#### 3.5.1 When playing a card to a trick other than leading

**Command: Duck** Action: The android plays the lowest card of the lead suit. If it does not have cards of the lead suit, it returns Error Message via the brain link.

**Command: Beat** Action: The android plays the lowest possible card that beats the highest card in the trick so far. This may involve playing a trump, if the android has run out of the original suit. If the android cannot play such a card, it plays the lowest card of the lead suit. If also that is impossible, the android returns Error Message via brain link.



**Command: High** Action: If the android can beat the highest card in the trick so far, the android does so with the highest possible card. This may involve playing its highest trump, if the android has run out of the original suit and can beat any trumps previously played to the trick. If the android cannot beat the high card, it plays the lowest card of the lead suit. If also that is impossible, the android returns Error Message via brain link.

For the 'Beat' and 'High' commands, trumps are considered higher than non-trump cards.

### 3.5.2 When leading to a trick or immediately after an error message

**Command: (name a suit)** Action: The android plays the lowest card of the named suit. If void, the android returns Error Message via brain link.

**Command: Shortest** Action: The android plays the lowest card of its shortest non-trump suit. If there are two or more equally short shortest non-trump suits, the android returns Error Message.

**Command: Longest** Action: The android plays the lowest card of its longest suit (which may be the trump suit). If it has two or more equally long longest suits, the android returns Error Message.

Any of the three previous commands can be prefixed with the word "high", which causes the android play the highest card instead of the lowest.

# Chapter 4

## Narnian Whist

*3 players, Top Trumps deck, pen and paper or poker chips*

Narnian Whist is my attempt to invent reasonable uses for Top Trumps cards. The game turned out to be an interesting take on trick taking games, since every card belongs to every "suit", but is ranked differently in different "suits". The game was playtested with the Narnia Top Trumps deck, hence the name.

### 4.1 Setup

The game is for three players, and it uses a Top Trumps deck. (Any Top Trumps deck will do).

In each deal, one of the players is an attacker, and the other two are defenders.

All the cards are dealt evenly to four hands. If the deal is not even, the extra cards are put to the attacker's hand. Each player is given one hand, and the fourth hand is placed face up on the table as a dummy player. The defenders are regarded as a team, and the dummy hand is regarded as the attacker's team-mate. In the gameplay, the dummy hand is regarded as the fourth player. The attacker makes decisions on behalf of that dummy player, and it plays its turns as if it were seated between the defenders.

If the deal was not even, the attacker, after seeing his cards, discards cards face up so that he has as many cards as the others.

### 4.2 Gameplay

The game is a trick taking game as explained in Chapter 2. The player to the attacker's left leads to the first trick. Unlike in ordinary Top Trumps, the

players can choose the cards they play from all of their hand cards.

When leading to a trick, the player leading plays a card and says which stat category is the lead category. (Some cards may not have stats in all categories. The lead card must have a stat in the lead category.) When other players play subsequent cards to the trick, they must play a card that has the stat of the lead category higher than or equal to the highest stat of the lead category in the previous cards in the trick. If the player does not have such a card, he may play any card. Since there are no suits, there is no obligation to play a card of the lead suit.

After everyone has played one card to the trick, the trick is won by the highest stat of the lead category. If there are several equal highest stats, the last-played of those wins.

### 4.3 Scoring

The attacker gets one point for each trick won by himself, and one point for each trick won by the dummy. The defenders get no points.

The game lasts for six deals so that everyone is the attacker twice. After three deals have been played and everyone has been the attacker once, two of the players exchange seats.

After six deals the player wins who collected most points as the attacker.

### 4.4 Strategy tips

Tactical play is possible once the player memorizes the top third of the deck.

Tactics include:

- Proper timing of cashing in high cards.
- Leading a medium-high card in some category in the hope that the second player must play the second-highest or third-highest card in that category, which is beaten by further cards.
- Trying to make the opponents play top cards of some category as cards of a wrong category.
- When there are several equal cards that are winners in some category, give a trick to the opponents' sure winner in some other category in the hope that they will lead the category where there are several equal winners, and you get to play the last of them.

# Chapter 5

## Multimulta

*4 players, playing cards, card sleeves, pen and paper or poker chips*

Multimulta is a card game I developed after Narnian Whist. It uses a dedicated deck better suited for the game. There are only three stats or suits, and their 'scale' is familiar from normal playing cards. Multimulta is played by two teams of two players, and it was named after the fact that each card is a multi-suit card.

### 5.1 Making the cards

**You need:**

Photocopier

Scissors

36 playing-cards (any)

36 card sleeves with opaque backs

Put the playing-cards into the card sleeves. Take photocopies of the card faces in the next nine pages. Cut the card faces apart. Put the card faces into the card sleeves in front of the playing-cards.

### 5.2 The game

The game is for four players, in two teams of two players. Players are seated so that every player sits between two opponents.

Everyone is dealt 9 cards. Every player selects three cards from his hand and places them face down on the table in front of him. After that every player gives the selected three cards to his team-mate, who adds the cards to his hand.

Then the tricks are played, as explained in the next section.

After all the cards have been played, the team that won more tricks gets points, one point for each trick in excess of four. (That is, five tricks give one point, six tricks two and so on.)

A game consists of several deals, and the game is won the team that first collects five points. If a longer game is desired, play a rubber of such games.

### 5.3 How to play the tricks

The tricks are played as explained in Chapter 2, with the following exceptions.

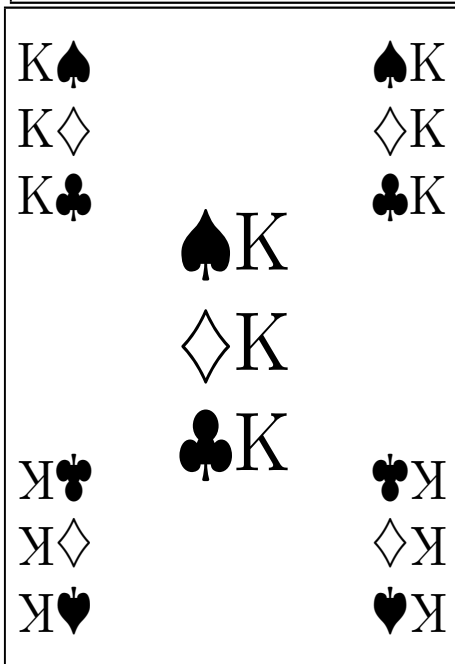
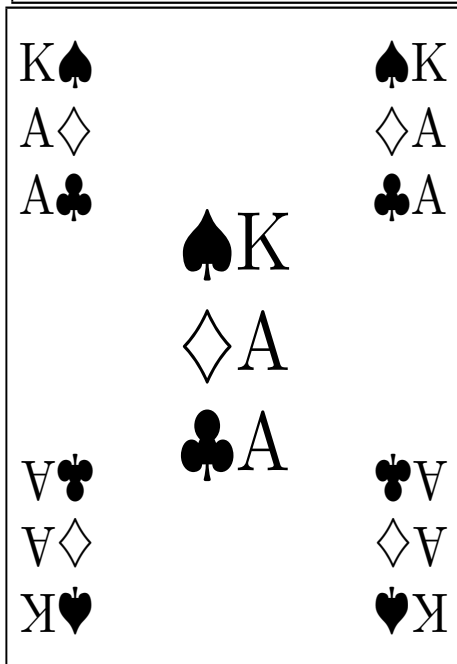
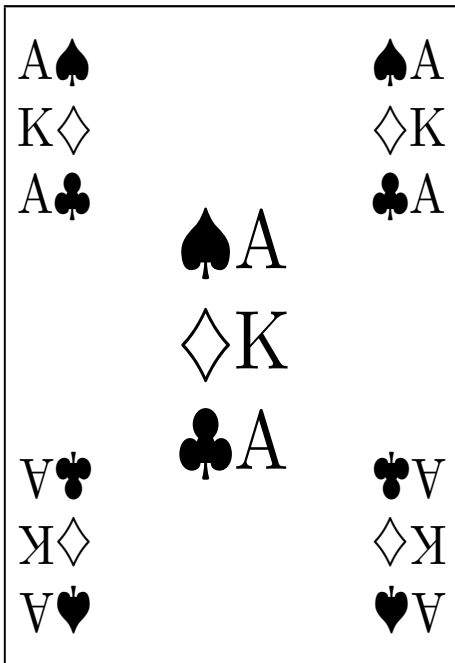
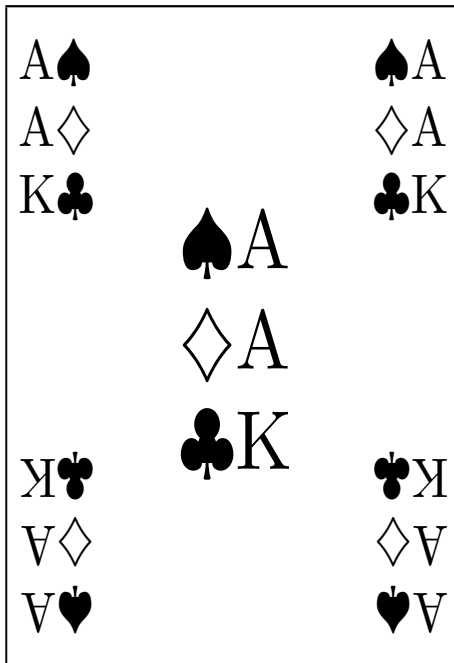
When a player leads to a trick, he plays a card and says what is the lead suit. The card must have a rank in the lead suit.

Subsequent players are subject to the following restrictions: The highest rank in the lead suit in the cards played to the trick so far is called *the best so far*.

- If the player has a card that has a rank in the lead suit that is equal or higher than *the best so far*, the player must play such a card.
- Otherwise, if the player has a card that has a rank in the lead suit, the player must play such card.
- Otherwise, the player may play any card.

In the cards, T signifies a ten.

The trick is won by the highest rank in the lead suit. In case of a tie, the last-played of those equal highest ranks wins.



K♠		♠K
J♦		♦J
9♣	♠K	♣9
	♦J	
	♣9	
6♣		♣6
f♦		♦f
♣		♥♣

K♠		♠K
9♦		♦9
J♣	♠K	♣J
	♦9	
	♣J	
f♣		♣f
6♦		♦6
♣		♥♣

J♠		♠J
K♦		♦K
9♣	♠J	♣9
	♦K	
	♣9	
6♣		♣6
♣		♦♣
f♥		♥f

9♠		♠9
K♦		♦K
J♣	♠9	♣J
	♦K	
	♣J	
f♣		♣f
♣		♦♣
6♥		♥6

J♠		♠J
9♦		♦9
K♣		♣K
	♠J	
	♦9	
	♣K	
♣K		♣K
6♦		♦6
f♥		♥f

9♠		♠9
J♦		♦J
K♣		♣K
	♠9	
	♦J	
	♣K	
♣K		♣K
f♦		♦f
6♥		♥6

Q♠		♠Q
Q♦		♦Q
Q♣		♣Q
	♠Q	
	♦Q	
	♣Q	
♠Q		♠Q
♠Q		♠Q
♠Q		♠Q

J♠		♠J
9♦		♦9
7♣		♣7
	♠J	
	♦9	
	♣7	
♣7		♣7
♠7		♠7
♠7		♠7
♠7		♠7



J♠		♠J
7♦		♦7
9♣	♠J	♣9
	♦7	
	♣9	
6♣		♣6
2♦		♦2
f♥		♥f

9♠		♠9
J♦		♦J
7♣	♠9	♣7
	♦J	
	♣7	
2♣		♣2
f♦		♦f
6♥		♥6

7♠		♠7
J♦		♦J
9♣	♠7	♣9
	♦J	
	♣9	
6♣		♣6
f♦		♦f
2♥		♥2

9♠		♠9
7♦		♦7
J♣	♠9	♣J
	♦7	
	♣J	
f♣		♣f
2♦		♦2
6♥		♥6

7♠		♠7
9♦		♦9
J♣		♣J
	♠7	
	♦9	
	♣J	
♠7		♣7
6♦		♦6
2♥		♥2

T♠		♠T
T♦		♦T
T♣		♣T
	♠T	
	♦T	
	♣T	
♣7		♣7
♠7		♦7
♠7		♥7

9♠		♠9
7♦		♦7
7♣		♣7
	♠9	
	♦7	
	♣7	
♠7		♣7
♠7		♦7
♠7		♥7

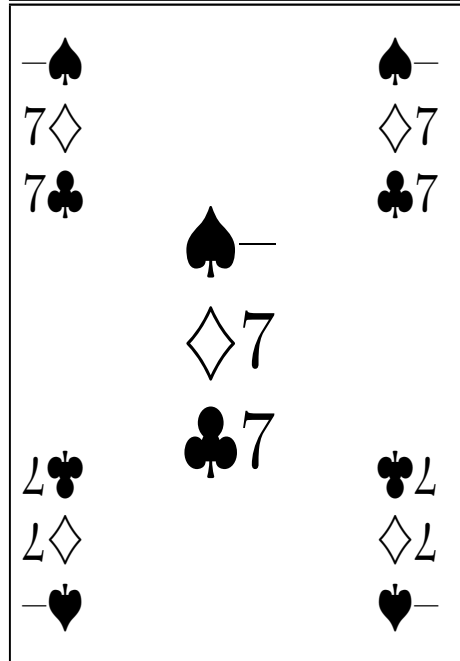
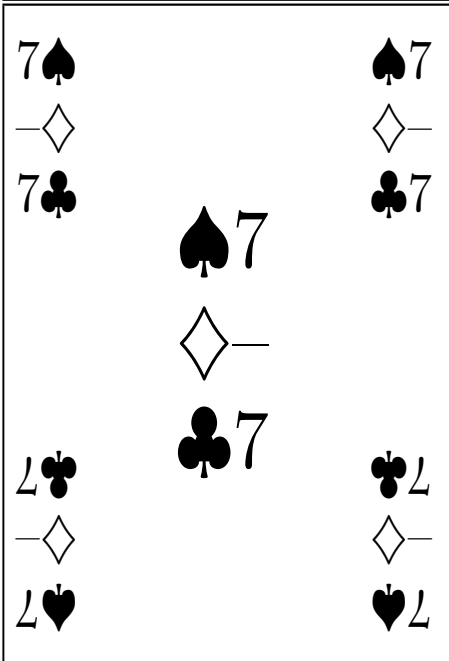
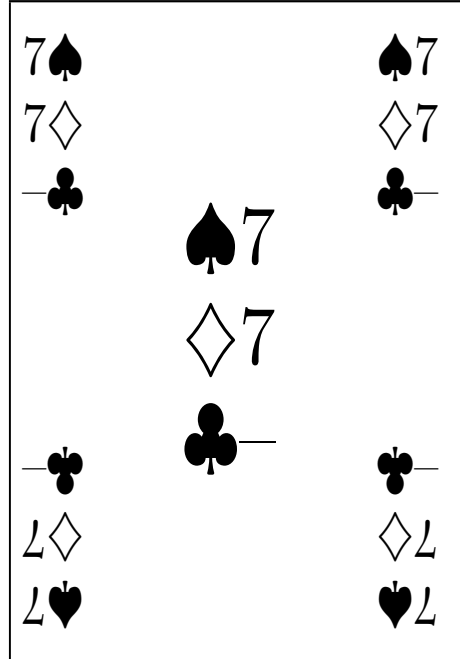
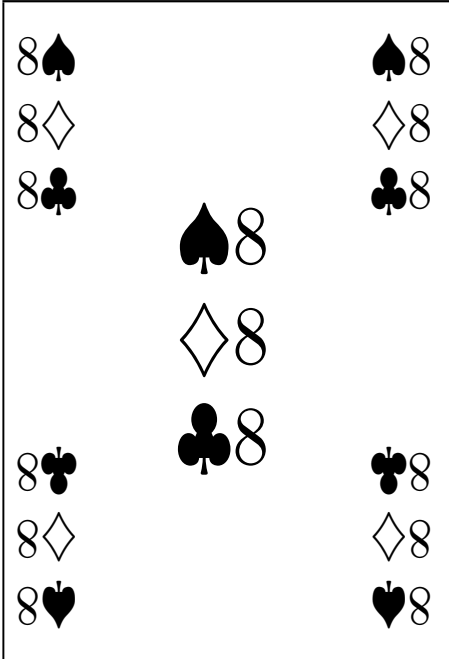
9♠		♠9
7♦		♦7
7♣		♣7
	♠9	
	♦7	
	♣7	
♠7		♣7
♠7		♦7
♠7		♥7

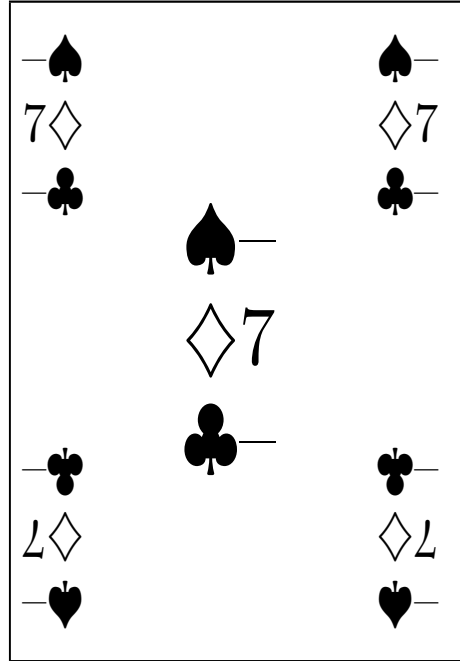
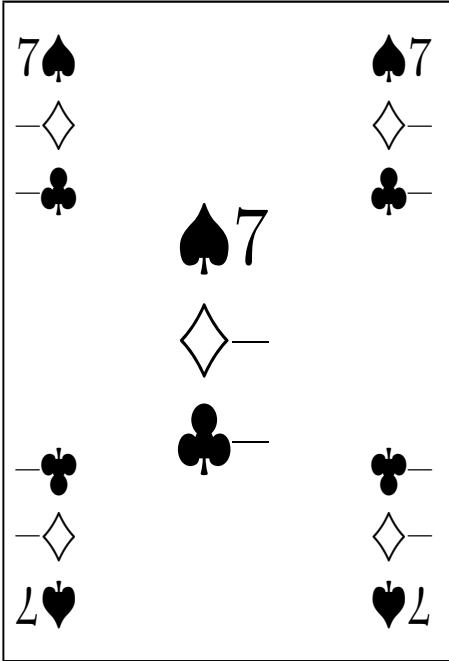
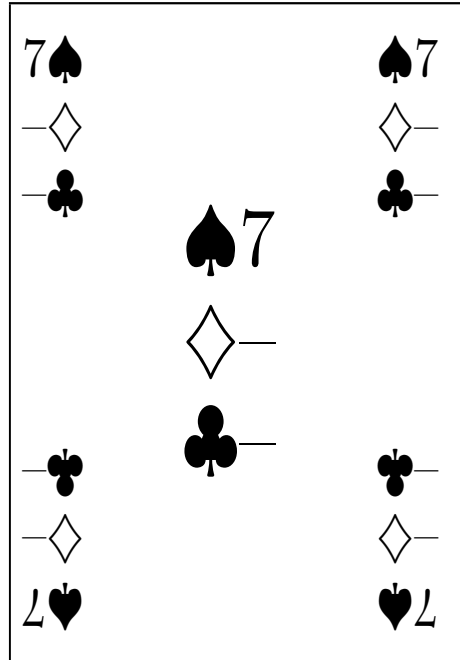
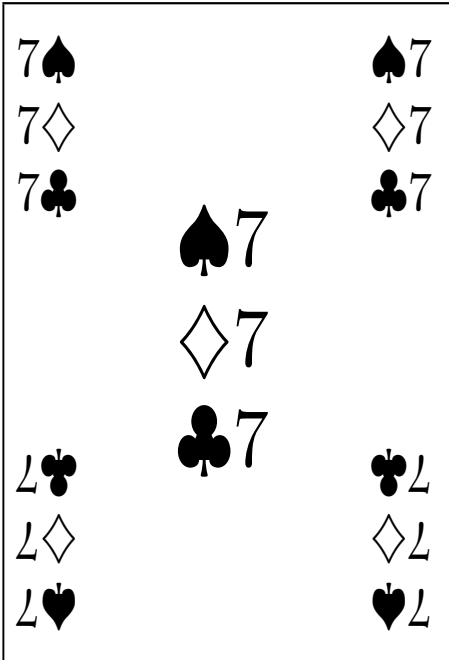
7♠		♠7
9♦		♦9
7♣		♣7
	♠7	
	♦9	
	♣7	
2♣		♣2
6♦		♦6
2♥		♥2

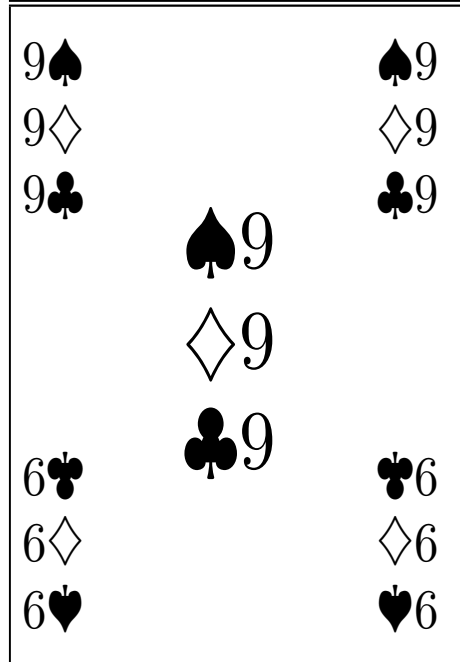
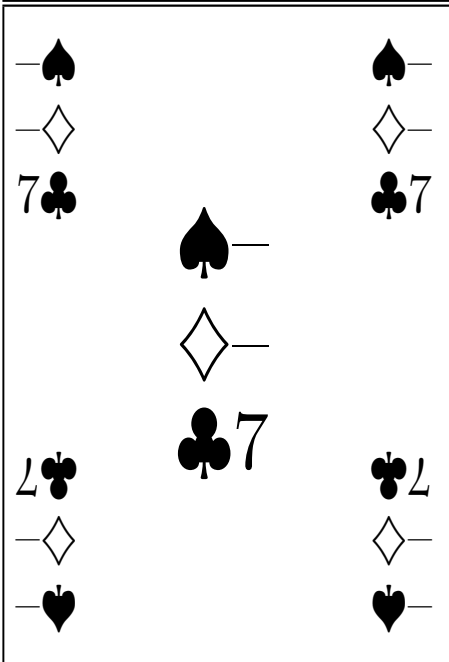
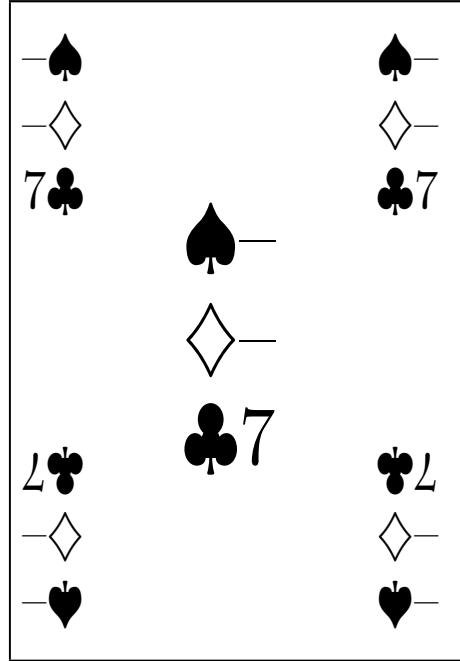
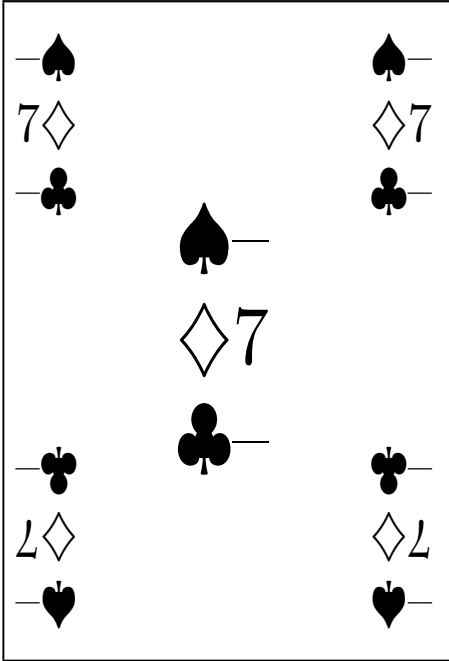
7♠		♠7
9♦		♦9
7♣		♣7
	♠7	
	♦9	
	♣7	
2♣		♣2
6♦		♦6
2♥		♥2

7♠		♠7
7♦		♦7
9♣		♣9
	♠7	
	♦7	
	♣9	
6♣		♣6
2♦		♦2
2♥		♥2

7♠		♠7
7♦		♦7
9♣		♣9
	♠7	
	♦7	
	♣9	
6♣		♣6
2♦		♦2
2♥		♥2







## Part II

# Trick taking with bidding

# Chapter 6

## Tuppi

*4 players, standard deck of playing cards, pen and paper*

Tuppi is a trick-taking game played in northern Finland. The speciality of Tuppi is the scoring. In Tuppi, only one team can have points at a time, and consequently the points required to win a game must be collected in consecutive hands, without opponents scoring in between. I have not designed this game.

### 6.1 Setup

The game is played by four players in two teams of two players. The players are seated so that everyone sits between two opponents. A normal 52 card deck is used. The ranking of cards is normal, the ace being highest. Deal all the cards to the players so that everyone has 13 cards.

### 6.2 Auction

Each player bids by placing one card face down on the table. Red card signifies rami, and a black card signifies nolo. The player is not allowed to use a two or a face card as the bidding card. The cards are exposed one at a time, and the first player to bid rami becomes the declarer. The bidding ends when someone bids rami, and the further cards are not exposed. If someone bid rami, the game is rami. If no-one bid rami, the game is nolo.

If the someone bid rami, either of the members of the opposing team is allowed to bid sooli, and play alone against the opponents, as the purpose to avoid getting tricks. The player who bid sooli puts one card away from his hand and gets one card from his partner.



In rare cases it may happen that a player does not have a suitable card to make the intended bid. In these cases, the player is allowed to make the bid verbally.

## 6.3 Play

In the beginning of the play, the bidding cards are returned to the players' hands.

In rami, the player right to the declarer starts the first trick. In nolo, the player left to the dealer starts the first trick. The game is an ordinary trick-taking game as described in Chapter 2. There are no trumps.

In sooli, the ace is the lowest card, and the player who bid sooli, always plays a card into the trick last. The team-mate of the player who bid sooli does not participate in the game.

## 6.4 Scoring

- In rami, the declarer team gets four points for each trick in excess of 6. That is, seven won tricks (won by the team) gives four points, eight tricks gives eight points, nine tricks gives twelve points and so on.
- In rami, the opponent team of the declarer team gets eight points for each trick in excess of 6.
- In nolo, the team that got fewer tricks, gets four points for each trick missing from 7 tricks. That is, six won tricks (won by the team) gives four points, five won tricks gives eight points and so on.
- In sooli, if the sole player gets no tricks, his team gets 24 points.
- In sooli, if the sole player takes at least one trick, the opponents get 24 points.

Only one partnership can have points at a time, and the partnership that has points is said to be nousussa (rising). If the opponents of the partnership that are nousussa get points in a hand, the game is returned to a 0–0 situation. When it is obvious that the nousussa partnership is losing a hand, the hand can be ended, since the exact point count has no significance.

The game is won by getting at least 52 points. Note that these points must be got in consecutive hands, without the opponents scoring any points in between. Thus, winning a game is very difficult, and losing a game is considered to be a particularly shameful event.

# Chapter 7

## Bridge Meets Guess Who

*2 players, standard deck of playing cards, two card holders, poker chips*

Whereas Android Whist was an adaptation of Whist for two players, Bridge Meets Guess Who is my adaptation of Bridge for two players, based on the same idea of robot players. As the games are similar, but this one is more complicated, I recommend that before trying this one you learn to play Android Whist. To extract information from the partner android's hand, Bridge Meets Guess Who uses a question system similar to the children's game Guess Who.

### 7.1 Setup

- 2 human players
- 52-card standard deck of playing-cards.
- 110 units worth poker chips.
- 20 debt tokens. (Poker chips of another color will do.)
- Two card holders, each capable of holding 13 cards.

Both human players are given 55 units in poker chips.

The role of the dealer alternates between human players.

### 7.2 Game

In the beginning of a deal, both human players pay a 5 unit rake to the bank. (This is to ensure that the game will eventually end.)

The dealer shuffles all the cards and deals four hands of 13 cards. Each human player takes one hand. In addition, there are two android players represented by the card holders. One card holder is in the dealer's left, and another in the other player's right. The additional two hands are put in the card holders.

Each human player sees the hand of the android next to him, but does not see the hand of the another android. Each human plays as the partner (in other words: team-mate) of the android whose hand he does not see. Consequently, every player sits in between two opponents.

### 7.2.1 Auction

First there is an auction where human players bid. Each bid consists of a integer that is at least seven and a trump designation, which is one of the following (in an ascending order): Clubs, diamonds, hearts, spades, no trump. Each bid must have a higher number than the previous one, or an equal number and a higher trump designation. If a player does not wish to bid, he may pass. If a player thinks that the opponent has bid too high, he may double. A double requires that the opponent has made a bid.

The bidding ends when either of the players passes or doubles. Exception: If the first player passes on his first turn, the opponent still has a possibility to bid.

The highest bid becomes the contract, and the human who bid it is the declarer. (If the contract was doubled, declarer is the original high bidder, not the doubler.) The trump designation of the highest bid becomes the trump suit, and the integer part tells how many tricks the declarer team promises to win. If the designation was no trump, there are no trumps. If no bid was made, the game is played as no trump.

### 7.2.2 Card play

The card play is similar to Android Whist, except that the commands are different. The player in the declarer's left leads to the first trick. If no bid was made, the dealer leads to the first trick.

In androids' turns to play cards, the partner of the android gives a command that determines which card the android plays. The command consists of three parts:

1. Suit
2. Rank range (from *low card* to *high card*)
3. Preference ("lowest" or "highest").

The android plays a card of the named suit that is in the range. If the android has several such cards, the android chooses either the lowest or highest of them according to the "preference" part of the command. If the android cannot play a card that satisfies the command it returns an Error Message. (The error message contains no other information except that it is an error message.)

Note that in the rank range, the low card may be the same as the high card. In that case, the range contains just that one card.

There are two cases where the android cannot play the card determined by the command, and it gives an error message. The first case is that the android does not have such a card. The second case is when the android has cards of the lead suit and is commanded to play some other card.

If the android returns an error message, the partner of the android pays one unit in poker chips to his human opponent and gives a new command. Repeat until the android plays a card.

The partner of the android can also give the command "anything goes". Then the human opponent of the android chooses freely (but subject to the follow suit rule) the card the android plays.

### 7.2.3 Scoring

If the declarer team got at least as many tricks as the declarer promised in the integer part of the contract, the declarer's opponent pays the declarer poker chips for tricks the declarer promised: Five units for seven tricks, ten units for eight tricks, fifteen units for nine tricks and so on. Furthermore, if the declarer team got at least as many tricks as the declarer promised, the opponent pays the declarer poker chips for tricks the declarer team won: One unit for seven tricks, two units for eight tricks, three units for nine tricks and so on.

If the declarer team did not win at least as many tricks as the declarer promised, the declarer pays five units in poker chips to the opponent for each trick missing from the contract. (Example: If the contract was nine and the declarer team won seven tricks, the declarer pays  $(9 - 7) \times 5$  units.)

If the contract was doubled, simply double the sums paid.

If both players passed and there was no contract, the scoring is done as if the side who won more tricks had bid seven no trump.

The game ends when one of the human players cannot afford to make a required payment and thus loses the game. If a player is running out of poker chips and wants to ask questions (questions are explained in the next section) or must pay for a failed command in the middle of a deal, the bank lends him poker chips so that these actions can be performed. The player must,

however, pay back the debt at the end of the deal.

### 7.3 Questions

Whenever it is a human player's or his partner android's turn (either to bid or to play a card), the human player can ask a question about the partner android's hand. The opponent human answers the question truthfully. When the player asks, he pays one unit in poker chips to his human opponent. The question must be such that the answer is "yes" or "no". The question must also be such that its answer depends only on the cards the android has in his hand at the moment.

In each turn, the player can ask as many such questions as he likes (or none), as long as he pays one unit per question.

### 7.4 Strategy tips

When trying to determine what to bid, forking the partner androids hcp count is useful. Each ace is worth 4 hcp, each king 3 hcp, each queen 2 hcp and each jack 1 hcp. It is an old Bridge players' wisdom that to successfully play a contract of ten, the team needs 26 hcp and eight trump cards.

# Chapter 8

## Tuomas's Minibridge

*3 players, standard deck of playing cards, pen and paper*

Minibridge is a simplified form of the complex card game Bridge, used as a teaching aid of Bridge. This is my adaptation of Minibridge into a complete game.

### 8.1 Setup

The game is for three players. A deck of 52 playing cards is shuffled and dealt into four hands of 13 cards. Each player takes one hand, and the fourth hand is left face down in the middle of the table. The fourth hand is called the dummy.

Each player counts the sum of hcp of his hand. Each ace is 4 hcp, each king is 3 hcp, each queen is 2 hcp and each jack is 1 hcp. The players do not say their hcp counts aloud.

### 8.2 Declarer

First the declarer of the round is determined by announcements. The announcements end immediately when someone announces that he is the declarer.

First the dealer announces if is the declarer. After that, if the dealer did not announce himself the declarer, the player left to the dealer makes the announcement, and after that, if neither of the previous players announced themselves the declarer, the last player makes the announcement. A player must announce himself the declarer he has at least 17 hcp, and a player cannot announce himself the declarer if he has fewer than 17 hcp.

If no-one became the declarer, the same is repeated with 15 hcp instead of 17.

If still no-one became the declarer, the same is repeated with 13 hcp.

If still no-one became the declarer, there is a fourth round, where the player can choose whether he becomes the declarer.

If there is still no declarer after the fourth round, the cards are redealt.

## 8.3 Contract

The right-hand opponent of the declarer looks at the dummy and announces how many hcp the dummy has, and how many cards in each suit the dummy has. (If the declarer has problems remembering what is said, write the announcement on a piece of paper.)

Then the declarer determines the contract. Possible contracts are:

7 tricks with no trump

7 tricks with hearts as trumps

7 tricks with spades as trumps

7 tricks with clubs as trumps

7 tricks with diamonds as trumps

—

9 tricks with no trump

10 tricks with hearts as trumps

10 tricks with spades as trumps

11 tricks with clubs as trumps

11 tricks with diamonds as trumps

—

12 tricks with no trump

12 tricks with hearts as trumps

12 tricks with spades as trumps

12 tricks with clubs as trumps

12 tricks with diamonds as trumps

The number part of the contract tells how many tricks the declarer promises to win, and the last part tells the trump suit used in the game, or that there are no trumps.

## 8.4 The game

The game is a trick-taking game as explained in Chapter 2. The left-hand opponent of the declarer starts the first trick. After the first card has been

played into the first trick, the dummy is turned face up(, and it is the dummy's turn to play.)

The dummy plays as if it were the fourth player sitting between the opponents of the declarer. The declarer makes the decisions on behalf of the dummy.

The dummy is regarded as the team-mate of the declarer. The other two players are regarded as the team-mates of each other.

## 8.5 Scoring

The outcome of the deal is the the number of tricks won by declarer team, when you consider both the tricks won by the declarer and the tricks won by the dummy.

If the outcome is at least the number of tricks promised in the contract, the declarer gets points according to the following table:

<b>Contract</b>	<b>In the beginning</b>	<b>In the end</b>
7 tricks	10	10
9, 10 or 11 tricks	40	60
12 tricks	100	150

In the first five deals, the points are read from the "In the beginning" column, and in subsequent deals from the "In the end" column.

If the outcome is more than promised in the contract, the declarer gets additional 3 points for each won but not promised trick.

If the outcome is smaller than the number of promised tricks, the declarer loses, in the first five deals, 5 points for each trick missing from the contract. (Example: If the promise was 9 and the outcome was 7, the declarer loses  $(9 - 7) \times 5$  points.) In the subsequent deals, the declarer loses 10 points for each trick missing from the contract.

The declarer is the only player who gets or loses points.

The winner of the game is the player who has most points after ten deals.

## 8.6 Strategy tips

It is an old Bridge players' wisdom that to successfully play a contract of ten, the team needs 26 hcp and eight trump cards.



# Chapter 9

## Math students' Huutopussi

*4 players, standard deck of playing cards, pen and paper*

Huutopussi is a Finnish classic. There are many rulesets to Huutopussi, and most of them are three-player games. The variant in this booklet is for four players in two-player teams. This variant was extensively played by math students at the University of Helsinki in the late 90s and early 2000s and I learned the game from them. I have not designed this game.

### 9.1 Setup

The game is for four players, and they are divided into two teams of two players. The players are seated so that everyone sits between two opponents. Huutopussi is played with a deck of 36 cards, remove the cards 2-5 from the standard deck. The order of cards is Ace (highest), ten, king, queen, jack, nine, eight, seven, six (lowest). That is, the order is otherwise normal except that a ten beats a king, a queen and a jack. All cards are dealt so that everyone gets 9 cards.

### 9.2 Auction

Each hand starts with an auction where the players bid the number of points their partnership will get in the hand. The dealer starts bids by bidding at least 50. Later, players may either make a bid that is higher than the previous one or pass. The turn to bid goes clockwise around the table. A player who has passed is not allowed to bid again. The bids must be multiples of five and the highest possible bid is 440. The auction ends when all the players except for one have passed.

If a player holds three sixes in his hand or has no cards higher than jack, in his first opportunity to bid, the player may demand a new deal.

### 9.3 Card exchange

When everyone except for the highest bidder has passed, the auction ends and the highest bidder becomes the declarer. The partner of the declarer gives the declarer three cards from his hand, and the declarer adds the cards into his hand. Now, the declarer may raise his final bid if he wants to. The raised bid is called the contract, and if the final bid is not raised, the final bid is called the contract. The declarer gives three cards (which may contain cards he received from his partner) to his partner so that everyone has nine cards.

### 9.4 The actual game

A hand always starts as a trick taking game with no trump suit, suits can be announced trumps during a hand. The declarer leads to the first trick.

Tricks are played as explained in Chapter 2 with the following additional rules. If a player who is not leading to a new trick has no cards of the lead suit and trumps have been announced, the player must play a trump. If the player has no cards of the lead suit and no trumps, the player can play any card. If no trumps have been played into the trick, the player must play, if possible, a higher card of the lead suit than any cards of the lead suit in the trick so far. If trumps have been played to the trick and the player has run out of the lead suit, the player must play, if possible, a higher trump than any of the trumps in the trick so far.

After a player leads to a trick and wins the trick himself, he may try to announce trumps with a king and a queen of a same suit. He has three options:

- If the player has a king and a queen of a same suit in his hand, he may announce that suit to be trumps. Then the announced suit becomes trumps.
- The player can ask his partner if he has in his hand "a whole", a king and a queen of a same suit. If yes, that suit becomes trumps. The asker does not nominate a suit when asking.
- If the player has a king or a queen in his hand, he may ask his partner, if he has "a half" of that suit, that is the other one of king or queen

of that suit in his hand. If yes, that suit becomes trumps. The asker specifies the suit, but not whether he asks for a king or a queen.

Only one self-announcement or question per turn is allowed.

The announced trump suit remains trumps until a new suit is announced trumps. Each suit can be announced trumps only once during a hand.

## 9.5 Scoring

Announcing trumps:

Spades	40 card points
Clubs	60 card points
Diamonds	80 card points
Hearts	100 card points

Ten card points for each ace and each ten in the tricks won and five card points for each king, each queen, and each jack in the tricks won. Winning the last trick gives an additional 20 card points.

If the declarer team collected card points at least the number of their contract, they get the the number of game points indicated by their contract, otherwise, they lose the number of game points indicated by their contract. The opponents get as many game points as they got card points.

If either side got no tricks, the original final bid (the bid before raising after exchanging cards) is subtracted from their game points. Getting all the tricks is called *läpäri*.

If the contract is over 160, it is possible for the declarer side to play läpäri and still not make the contract. In such a case, the declarer side gets negative game points for not making the contract and the opponents get negative game points for not taking any tricks.

The team that first gets at least 500 game points wins the game. This takes several deals. If both teams break the 500 limit in the same deal, the team that has more game points wins the game.

If a team has -500 game points or less, they are not allowed to bid except that the dealer is allowed to make the initial bid of 50 points.

# Chapter 10

## Huutopussi strategy

### 10.1 Bidding conventions

- If a player makes a jumping bid to 80 or above in his first opportunity, he promises at least one ace. Sure winners are needed to declare the first trumps, and making any contract without an ace is usually hopeless.
- On later rounds, or after the partner has promised an ace, jumping bids under 160 signal a good hand. Aces are the best cards, queens and kings the second best, and tens the third best. A marriage is better than two single queens/kings. An average hand contains one ace, two queens/kings and one ten. A player can raise ten points with a hand that contains three cards that are queens, kings, tens or aces. He can raise even more with a hand that is above average.
- Jumping to exactly 160 only means the willingness to be the declarer. 160 is the score a player can get by taking all the point cards and the last trick, without declaring any trumps.
- The value of a lost trick is usually 25 points, and this is used in jumping bids above 160 to signify strong suits. Add 160 to the trump value of your strong suit and subtract 0, 25, 50, or 75, and the player ends up with a bid that promises a strong suit. A strong suit should have at least four or five cards, and it should contain at least three of the four top cards, including an ace or a marriage.
- A raise of five does not mean anything more than unwillingness to pass, if the bid is below 160. Above 160, a raise of 5 means that being the declarer would not be a disaster.

- How high you keep on bidding in the auction (even with raises of five) until you pass tells your partner how good cards you have. Hence, pass early in the auction with bad cards and pass late (or don't pass at all) with good cards.

## 10.2 General guidelines for bidding

- After your partner has passed, there is no danger from your partner to raise your bid, and your overbids confuse only the opponents.
- Bid boldly. It is not uncommon for 1/4 - 1/3 of the contracts to fail. Furthermore, the exchange of cards will usually allow the declarer to build a hand based on a strong suit with singletons/voids in other suits.
- A usual contract is around 160 and 200 points. Bids over 250 points are rare, and bids over 340 points are virtually non-existent. A contract of 340 can be made if you announce hearts and diamonds as trumps and play läpäri.
- If the opponents are close to the 500 points winning limit, you can make an unrealistically high bid and try to get all the tricks to reduce the opponents' score.
- The auction is simply a competition for the privilege of being a declarer. Since you can raise the bid after the card exchange, there is no need to try to find the exact contract during the auction.

## 10.3 Card exchange

### 10.3.1 Partner to the declarer

Giving cards to the declarer is considered to be the most difficult part of the game.

- Give aces, ace-ten combinations, marriages, and kings and queens. If the declarer is going to play läpäri, give aces and tens (even a single ten will do), otherwise aces, kings and queens.
- Giving a complete marriage is often advantageous, and if you give a single queen or a single king, it signifies that you do not have the other half of that suit. Thus, if you have a marriage, either give both cards or keep both cards, but do not break the marriage.

- You can give a ten if you simultaneously give other high cards of the same suit.
- Giving single tens is better than giving jacks or lower.
- If your partner has signified a suit when bidding, give that suit regardless of the rank of the cards.
- If you have a strong suit yourself, you can ask for cards of that suit by giving one card of every other suit, one of which is a jack or lower.

### 10.3.2 Declarer back to the partner

- When the declarer gives cards back to his partner, he can concentrate the good cards in his own hand and play virtually alone.
- Alternatively, the declarer can give his partner high cards in some suit in the hope of making a long suit in the partner's hand. In this case the declarer should arrange an entry to the partner's hand by leaving one card of that suit or by giving the partner a side-suit ace. An entry is not needed if you manage to declare a marriage in the partner's strong suit.

## 10.4 Trick play

### 10.4.1 Declarer side

- In trick play, the declarer side's advantage is huge due to the card exchange and the privilege to start the first trick. The declarer side should try to use this advantage to control the game.
- When playing, the declarer should avoid giving an opportunity to the opponents to win a trick started by themselves, since it may allow them to change trumps to their advantage. If you have to give tricks to the defenders, give the tricks when you have controls in all suits. In particular, take care that the trump suit is advantageous to you when you give tricks to the opponents.
- The declarer can also play high cards in the suits where the defenders might have a marriage in the hope that the defenders must play a king or a queen in order to follow suit.

- Assume you are the partner of the declarer. If he gives you sure winners and lets you win a trick, play whatever sure winners you have and, if possible, make trumps in the suits of the winners. After that, ask for a whole. When you are the declarer and you give sure winners to your partner, assume the above-mentioned scenario to happen. This strategy is usually used so that the partner can take in his winners before the declarer starts playing his strong suit with a marriage.
- The partner of the declarer often should discard tens to tricks that the declarer is going to win. First, this is because of the point value of tens. Second, the declarer might have kings below the tens, and this way he gets to know that they are winners.
- If your partner has an ace of some suit, lead a king of that suit. If your left-hand opponent has the ten of that suit he is required to play it.

### 10.4.2 Defenders

- The defenders should naturally try to change the trumps. That is, after winning a trick, lead a sure winner, and then try to find a marriage.
- If the opponents end up with a contract without aces, use your aces to ensure that they do not win a trick started by themselves, so that they will not be able to declare trumps.

## Part III

# Skruuvi



# Chapter 11

## Warning about Skruuvi

Skruuvi is a very complicated card game that was very popular in Finland in the beginning of the 20th century. Nowadays it is only played in a couple of gentlemens' clubs, for example at Helsingin Suomalainen Klubi. Skruuvi is a trick taking game for two teams of two players, and the game involves bidding.

Skruuvi is one of those games that employ bidding conventions. That is, each bid has a specific meaning that tells the team-mate that the bidder has such and such cards in his hand. In effect, the bidding conventions form a language. Since the bidding conventions are a part of the strategy of Skruuvi rather than a part of the rules, we omit the bidding conventions here. However, Skruuvi really cannot be played successfully without knowing them. The strategies of Skruuvi are complicated, and Skruuvi is best learnt from a human teacher rather than books. Hence, the rules are given here for theoretical interest only.

At the end of this part, there are the rules of Screw Misere, my adaptation of one of the rounds in Skruuvi into an independent game, which can be played knowing the rules only.

# Chapter 12

## Modern Skruuvi

*4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher*

Here are the rules of modern Skruuvi. I have not designed this game.

### 12.1 Setup

Skruuvi is a trick taking game for four players. The players are divided into two teams of two players and seated so that everyone sits between two opponents. Skruuvi uses one deck of 52 cards.

A game of Skruuvi consists of eight deals. The first four deals are basic deals, and the last four deals are kotkas. We give first the rules of basic deals and tell later how a kotka differs from a basic deal.

In basic deals, everyone is dealt 12 cards, and the remaining four cards are placed face down on the table.

### 12.2 Bidding

The players bid for the privilege of being the declarer. Each bid consists of a number 1-7 and a type. Types are in an ascending order misere, spades, clubs, diamonds, hearts, no trump. Each bid must have a higher number than the previous one, or the same number and a higher type. If a player does not want to bid, he may pass. A player is allowed to bid on subsequent turns even if he has passed before.

If everyone passes at his first opportunity to bid, the deal is played as a pass misere, which is explained later. In the continuation we assume that someone made a bid on the first round.

Bidding ends after eight consecutive passes, and the team of the highest bidder becomes the declarer team.

## 12.3 Card exchange

The highest bidder turns the four cards on the table face up, and after everyone has seen them adds them to his hand. Then he chooses four cards from his hand and gives them to his partner, who adds them to his hand. Then the partner gives one card for everyone else.

## 12.4 Continuation bidding

Bidding continues, but only the members of the declarer team participate in the continuation bidding. The highest bidder from the initial round bids first, and the bidding ends after four consecutive passes. (Two passes from both members of the declarer team.)

After the four passes, the highest bidder becomes the declarer, and the highest bid is the contract. The number part of the contract must be at least five, and if it is less, it is automatically raised to five.

Then the opponents of the declarer exchange cards as follows: The left-hand opponent of the declarer gives one card to his partner, who adds it to his hand. Then the right-hand opponent of the declarer gives one card to his partner, who adds it to his hand. If the number part of the first bid of the declarer side in the initial bidding round (or the first bid of one member of the declarer side after the team-mate had passed) was six or seven, then the opponents do not exchange cards.

## 12.5 Contract

If the type of the contract is misere, the purpose of the game is to avoid tricks. In other types the purpose is to get tricks. A suit as a type is the trump suit, and in misere and no trump there are no trumps.

The number part of the contract means how many tricks the declarer team promises to get or avoid. Five means 11 tricks, six means 12 tricks and seven means 13 tricks.

For example, if the contract is five misere, the declarer side promises to take at most  $13 - 11 = 2$  tricks.

## 12.6 Knocking

Knocking means doubling the scores for the hand. The left-hand opponent of the declarer knocks or passes. If he passed, the right-hand opponent of the declarer knocks or passes.

If the opponents knocked, the declarer team has a possibility to kontra-knock, which means that the deal is played with quadruple scores. The left-hand opponent of the knocker has the first opportunity to kontra-knock.

## 12.7 Game

The game is a basic trick-taking game as described in Chapter 2. The left-hand opponent of the declarer leads to the first trick.

## 12.8 Scoring

If the declarer team got (or, in *misere*, avoided) at least as many tricks as they promised, they made the contract. Then they get 25 points for a contract of five, 36 points for a contract of six and 49 points for a contract of seven. If the contract was *misere*, 12 points are subtracted from the sum, and if the type was no trump, 12 points are added to this sum.

If the contract was not made, tricks missing from the contract give minus to the declarer team. The first trick missing is more expensive than the subsequent tricks missing.

Number in contract	First missing trick	Subsequent missing tricks
5	11	5
6	11	6
7	17	7

All the sums above are doubled, if the contract was knocked, and quadrupled, if the contract was knocked and kontra-knocked.

If the type was *misere* and the declarer team made the contract, both sides get points for aces in the opponents' tricks. A ace in the first trick of the deal is one point, in the second trick two points and so on. Knocks and kontra-knocks do not affect these points.

## 12.9 Pass *misere*

If every player passed in his first opportunity to bid, a pass *misere* is played.

Each player takes one card from the center of the table and adds it to his hand. Then every player, starting from the left-hand opponent of the dealer, gives one card to his partner, who adds the card to his hand.

Then there is a round where the players knock or pass. If there is a knock, the opponents of the knocker can kontra-knock. Only one knock and kontra-knock are allowed in the deal.

The game is a basic trick-taking game. There are no trumps. The left-hand opponent of the dealer starts the first trick.

Each team gets one point for each trick taken by the opponents, and the score for aces is counted like in bid misere where the contract was made.

Knock and kontra-knock double and quadruple both of these scores.

## 12.10 Kotka

The last four deals of a game are kotkas. The rules in kotkas differ from basic deals as follows:

Each player is dealt 13 cards.

The types of the bids are ranked in ascending order: Spades, clubs, diamonds, hearts, misere, no trump. The number part of each bid must be at least six.

In the card exchange, the highest bidder gives his partner four cards, who adds them to his hand. Then the partner gives four cards from his hand to the highest bidder. The opponents do not exchange cards.

# Chapter 13

## Klubiskruuvi

*4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher*

This is another variant of Skruuvi. This variant has also bolsu contracts, where one player plays against everyone else. This is a modern variant, and I have not designed this game.

This is how the rules differ from Modern Skruuvi.

### 13.1 Structure of the game

A game consists of twelve deals: Four deals of basic deals, four deals of kotkas and four bolsus. In the start of each deal the players have an opportunity to bid bolsu. If someone does so, the deal is played as bolsu; otherwise as a basic deal or a kotka. The basic deals are played before the kotkas. Each player must be the declarer in bolsu exactly once during a game.

A match consists of three games so that everyone plays as a team-mate of everyone else.

### 13.2 Deal and initial bidding

In each deal, each player is dealt twelve cards and the remaining four cards are placed face down on the table.

Each player bids either bolsu or passes. If someone bids bolsu, the deal is played as bolsu, and the bolsu bidder is the declarer. If there are several bolsu bidders, the first players in succession may decide whether he is the declarer himself or if he lets the later bidders be the declarer.

If no-one bid bolsu, the game is played as basic hand or kotka, and further bidding takes place as in Modern Skruuvi. In kotkas, each player takes one of the cards on the table after the bolsu bidding round.

If four basic deals and four kotkas have already been played, the players who have not yet bid bolsu in the game must bid it. Such a player may, however, pass, if there are remaining players who have neither yet bid bolsu in the game nor passed in this deal.

### 13.3 Bolsu

In bolsu, the declarer plays alone against the three other players. He turns the four cards on the table face up, and after everyone has seen them, adds them to his hand. After that, he gives one card to everyone else.

Then the declarer bids 7 misere, 7 spades, 7 clubs, 7 diamonds, 7 hearts or 7 no trump. 7 misere is the easiest, and it is called bolsu (bolshevik). Other contracts are called Mussolini. Even if Mussolini is not called bolsu, it counts as the one obligatory bolsu that the player must play during the game.

After the contract has been decided, the opportunities to knock and kontra-knock take place. Each opponent of the declarer may knock independently of the others, and the player right to the declarer has the first opportunity to knock.

The game is a basic trick-taking game, and the player left to the declarer starts the first trick.

### 13.4 Bolsu scoring

If the declarer got no tricks (or, in Mussolini, all the tricks), each of the opponents get minus 21 points. Each of the opponents get plus 17 points for the first trick of the declarer (or, in Mussolini, the first trick of the opponents of the declarer) and plus seven points for each subsequent trick.

In bolsu, the score for aces is counted like in Modern Skruuvi, and give each opponent of the declarer plus for the aces taken by the declarer, and minus for all aces taken by all the opponents of the declarer. Aces score even if the declarer did not make the contract. In Mussolini, the aces do not give points.

For each opponent of the declarer who knocked, double (quadruple in case of kontra-knock) his score. However, if the declarer did not make the contract, aces do not score double even if someone knocked.

Take the sum of the scores of the opponents of the declarer and change its sign (that is,  $\pm$ ). That's what the declarer gets.

Since the scoring in bolsu is by player rather than by team, it is kept separately from the main book.

## 13.5 Scoring in basic deals and kotkas

In misere, the declarer team gets for a made contract only 10 points at the level of five, 20 points at the level of six and 30 points at the level of seven. The rule about subtracting 12 points in misere and adding 12 points in no trump does not apply.

If the contract is five, the penalty for the first missing trick is only five points.

If the contract is five and the declarer team won (in misere: avoided) 12 tricks, they get extra 5 points bonus. Further extra 5 points bonus is awarded for taking (in misere: avoiding) 13 tricks.

If the contract is six and the declarer team won (in misere: avoided) 13 tricks, they get extra 6 points bonus.

Aces count in misere even if the contract failed, and knocks and kontra-knocks affect them. However, in case of a knocked or kontra-knocked contract, the declarer team gets double or quadruple points for the opponents' aces only if the contract was made.

## 13.6 Final scores

After three games have been played, each player gets an individual score. First, each player gets into his individual score all the points he got in bolsus. Second, from the basic deals and kotkas of each game, every player gets his team's score multiplied by two.



# Chapter 14

## Historical Skruuvi

*4 players, standard deck of playing cards, pen and paper, personal Skruuvi teacher*

These are the rules of historical Skruuvi from the 1940s. Scoring is more complicated than nowadays, and there is a game-rubber mechanic similar to Rubber Bridge. Other than that, the rules are almost the same as nowadays. I have not designed this game.

Bolsu was invented already in the 1920s, but I have not been able to find old sources that feature bolsu, so this is a variant without bolsu.

This is how the game differs from Modern Skruuvi.

### 14.1 Trick points

In each deal where there is a contract, both teams get trick points from the tricks they won (in misere: avoided) whether or not the contract was made.

After the deal has been played, each team gets *the number of tricks won*  $\times$  *the number part of the contract* trick points. In misere, substitute won tricks by avoided tricks.

Trick points are not awarded in pass misere.

### 14.2 Match structure

A match consists of a rubber of basic deals, and four deals of kotkas. In the basic deals, both teams earn trick points, and when one team has collected 60 trick points, they have won a game. After that, both teams start collecting trick points from zero. If both teams reach 60 trick points in the same deal, the game is won by the team that was the first to win the tricks that made them reach 60 trick points.

After one of the teams has won two games, the subsequent deals are kotkas. Trick points are counted also in kotkas, but in kotkas a team wins a game only if they get at least 60 trick points in one deal.

A classic Skruuvi night consists of three matches so that everyone plays as a team-mate of everyone else.

## 14.3 Contract of four

If the number part of the contract is four or less, it is raised to four, not to five as nowadays. A contract of four means a promise to win (in misere: avoid) at least 10 tricks.

However, an unknocked contract of four is not played out. It is judged made without actual card play and scored as if the declarer team first won ten tricks and the opponents won after that three tricks. An unknocked four misere contract, however, is played out, since the aces score similar to modern Skruuvi.

## 14.4 Scoring

### 14.4.1 Basic scoring

For made contracts and missing tricks in non-made contracts:

Number part of contract	Made	1st missing	Subsequent
7	4500	1700	700
6	3000	1100	600
5	2000	500	500
4	1000	400	400

The declarer team gets for each taken but not promised trick (in misere: each avoided but not promised trick): 200 points. This bonus is not counted in a contract of four.

### 14.4.2 Cards in hand

If a team or a player has certain cards in hand after the card exchange, they get points. These points are counted after the deal, so they must be memorized during the card play.

#### **In trump contracts:**

The team that has more value cards, gets *the number part of the contract*  $\times$  *the number of value cards the team has*  $\times 10$  points. Aces are value cards, and trumps 10-A. The ace of trumps counts as two value cards. If the declarer

side got fewer tricks than the opponent, this score goes automatically to the opponents.

Four aces in one hand is 400 points and three aces in one hand is 200 points.

Sequence AKQ of trumps in one hand is 200 points, and each subsequent card in the series is 200 points.

**In no trump:**

The team that has more value cards, gets *the number part of the contract*  $\times (2 \times \text{the number of value cards the team has} + 1) \times 10$  points. Aces are the only value cards. If both teams have two aces, only the declarer team gets points. In any case, if the declarer side got fewer tricks than the opponents, this score goes automatically to the opponents.

Four aces in one hand is 800 points and three aces in one hand is 400 points.

Sequences score in every suit. The sums are the same as in trump contracts.

### 14.4.3 Aces in misere

The score for aces is counted as in modern Skruuvi. It is counted whether or not the contract was made. The modern Skruuvi's ace score is multiplied by 100.

### 14.4.4 Knocking

All the above scores are doubled in a knocked game and quadrupled in a kontra-knocked game.

### 14.4.5 Games

The first won game of each team is worth 200 points, the second won game is worth 400 points, the third 600 points and so on.

All collected trick points count also as ordinary points.

### 14.4.6 Pass misere

Pass misere is scored like in modern Skruuvi. The modern Skruuvi's score is multiplied by 100.

## 14.5 End of match

When a match ends, the difference of the scores calculated. If it is less than 10, the match is replayed with double the scores.

The difference is divided by 100 (50 rounds upwards) and marked to the main book.

# Chapter 15

## Vint

*4 players, standard deck of playing cards, pen and paper*

Vint is a Russian ancestor of Skruuvi from the late 19th century. It is a much simpler game than Historical Skruuvi. This is how the rules differ from Historical Skruuvi.

### 15.1 Game

In Vint, there is

- No table cards. All the cards are dealt.
- No card exchange.
- No misere contracts.
- No continuation bidding. The contract is the highest bid of the initial bidding.
- No automatic raising of the contract to a level of four. A contract of one is a promise to win 7 tricks, a contract of two is a promise to win 8 tricks, and a contract of three is a promise to win 9 tricks.
- No kotkas. A match is just a rubber of basic deals.
- No knocking or kontra-knocking.
- No pass misere. If all the players pass on the first round, the cards are redealt.

## 15.2 Trick points

The trick points of Historical Skruuvi are multiplied by 10. (For example, if the contract is at the level of two, each trick is worth 20 points.) A game is won by collecting 500 trick points.

## 15.3 Scoring

### 15.3.1 Basic scoring

For each trick missing from contract:  $1000 \times$  *the number part of the contract*. (Note: The penalty is really that high. I checked two independent sources.)

No bonus for making a contract under six. Making a contract of six is worth 5000 and making a contract seven is worth 10000.

Taking 12 tricks (whether or not they were promised) gives a 1000 point bonus and taking 13 tricks (whether or not they were promised) gives a further 1000 point bonus.

Example: The team made a contract of seven. They get  $10000 + 1000 + 1000$  points from the previous two paragraphs.

### 15.3.2 Cards in hands

Sequences AKQ count in every suit, trump sequences give double score. AKQ is 500 points and AKQJ is 1000 points. Also three (500pt) or four (1000pt) aces in the same hand is a sequence.

In trump contracts, the side that has more of the cards 10-A in trumps, gets points the following amount:  $100 \times$  *the number part of the contract*  $\times$  *the number of those cards the team has*

In trump contracts, the side that has more aces, gets points the following amount:  $100 \times$  *the number part of the contract*  $\times$  *the number of aces the team has*

In no trump contracts, the side that has more aces, gets points the following amount:  $250 \times$  *the number part of the contract*  $\times$  *the number of aces the team has*

If both sides have two aces, the ace bonus goes for the team that won more tricks.

### 15.3.3 Game

Winning one game is worth 1000 points, and winning two games is worth  $1000 + 2000 = 3000$  points.

All the collected trick points count also as ordinary points.

The side that wins the rubber (two games) gets 500 points for each deal where all the players passed on the first round.

# Chapter 16

## Screw Misere

*4 players, standard deck of playing cards, pen and paper*

There are different kinds of rounds in Skruuvi, and Screw Misere is my adaptation of one of the rounds in Skruuvi into an independent game.

### 16.1 Setup

The game is for four players, and it utilizes one deck of 52 cards. The players are divided into two teams of two players and seated so that everyone sits between two opponents. All the cards are dealt to the players so that everyone gets 13 cards.

### 16.2 Gameplay

The first two players left to the dealer give one card each to their team-mates, who add the cards in their hands. Then the other two players give one card each to their team-mates, who add the cards in their hands. These cards are not shown to the opponents.

Then the actual game is played. It is an ordinary trick taking game, as explained in Chapter 2. There are no trumps.

### 16.3 Scoring

Each team gets one minus point for each trick won. Each ace in the tricks won gives minus points so that an ace in the first trick of the deal is worth one minus point, in the second trick worth two minus points, in the third trick worth three minus points and so on.



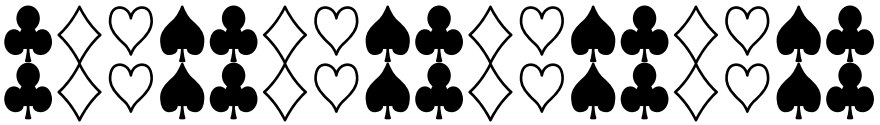
The team loses the game that first collects 100 minus points. This takes several deals.

A team cannot lose the game in a deal where they get fewer minus points than the opponents (or an equal number). If the team would end up with at least 100 minus points in such a deal, they get zero minus points for the deal. Instead of the usual sum, the opponents get then minus points as follows: Take first the point sums each team would normally get in the deal. Their difference is what the opponents get.

If both teams would end up with at least 100 minus points in the same deal with normal scoring, the team that got fewer minus points in the deal may choose which scoring method is used. If normal scoring is used in such a case, the team wins the game that gets a smaller total score.

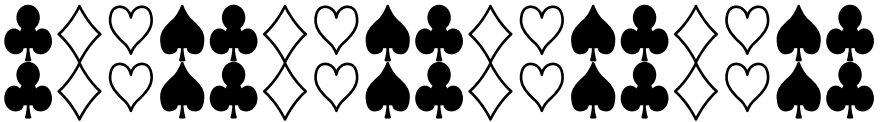
## 16.4 Marking played tricks

When a trick has been played, each player puts the card he played into the trick face down in front of him. The player places the cards in the tricks won by their team in the 'portrait' orientation, and cards in lost tricks are placed in the 'landscape' orientation. Aces are put face up, and each player puts the cards in a row so that it can be easily seen what is the number of the trick each card belongs to.



## Superpart B

# Other Card and Board Games



## Part IV

# Poker-influenced games

# Chapter 17

## Poker hands

Each poker hand consists of five cards. Here they are from the highest to the lowest. Any hand of a higher category is higher than any hand of a lower category. How to rank hands of the same category is explained in the entries for categories. In these comparisons, ace is the highest card, then king, then queen and so on. Suits are not ranked.

### 17.1 Straight flush

Five consecutive cards of the same suit. To compare two straight flush hands, compare the highest card of each hand. An ace can be either 14 or 1 in a straight flush. However, when it is 1, it is the lowest card when comparing two straight flush hands.

### 17.2 Four of a kind

Four cards of the same rank and one additional card. To compare two four of a kind hands, compare the quadruplet of each hand. If the quadruplets are equal, then compare the additional cards.

### 17.3 Full house

Three cards of one rank and two cards of another rank. To compare two full house hands, compare the triplet of each hand. If the triplets are equal, compare the pairs.

## 17.4 Flush

All the cards are of the same suit. To compare two flush-hands, compare the highest card of each hand. If the highest cards are equal, compare the second highest cards and so on.

## 17.5 Straight

Five consecutive cards regardless of suits. To compare two straight-hands, compare the highest card of each hand. An ace can be either 14 or 1 in a straight. However, when it is 1, it is the lowest card when comparing two straight hands.

## 17.6 Three of a kind

Three cards of the same rank and two additional cards. To compare two three of a kind hands, compare the triplet of each hand. If the triplets are equal, compare the highest additional cards. If they are also equal, compare the remaining cards.

## 17.7 Two pair

Two cards of one rank, two cards of another rank, and an additional card. To compare two two-pair-hands, compare the highest pair of each hand. If the highest pairs are equal, compare the low pairs. If also they are equal, compare the remaining cards.

## 17.8 Pair

Two cards of the same rank plus three additional cards. To compare two pair hands, compare the pair of each hand. If the pairs are equal, compare the highest additional cards. If also they are equal, compare the second-highest additional cards, and if also they are equal, compare the remaining cards.

## 17.9 High card

No combination mentioned above. To compare two high card hands, compare the highest card of each hand. If they are equal, compare the second-highest cards and so on.

# Chapter 18

## Fireplace Poker

*2 or 4 players, 5 standard decks of playing cards, poker chips*

Fireplace Poker is a mix between Rummy and Poker. It is my opinion that good rummy games utilize many cards, two decks or more. In Fireplace Poker there are five of them. Again, this is my attempt to develop a good two-player card game, since they are rare. The speciality of this game is that the playtesting was done in a mental hospital.

### 18.1 Requirements

2 players  
5 decks of 52 playing cards  
62 poker chips

### 18.2 Object of the game

To form poker hands that are good enough to score for several rounds and destroy the opponent's poker hands.

### 18.3 Setup

Five decks (no jokers) are shuffled together to form a huge deck. Each player is dealt a hand of 13 cards. The rest of the cards are placed face down to form a draw deck. Each player is given 31 poker chips. The poker chips are stacked so that they can be counted easily.

## 18.4 Turn

Each turn consists of the following phases

1. Steal
2. Meld
3. Discard
4. Score
5. Draw

The player whose turn it is, is referred to as "you" in the descriptions of the phases.

### 18.4.1 Steal

You steal 0-5 cards from the opponent's melds. Only one card can be stolen from each meld.

Note that in order to steal, you must be able to use the stolen cards in a meld that is higher than the melds from which cards were stolen. See the next phase.

### 18.4.2 Meld

You meld one poker hand, in which you use all the stolen cards plus possibly some of your hand cards so that the meld consists of five cards. If you did not steal any cards, then you form the meld using your hand cards only. The meld has to satisfy all of the following conditions:

1. There cannot be two or more identical cards in the meld. (For example no two eights of hearts)
2. The melded poker hand must be a pair of jacks or higher. If any cards were stolen, the melded poker hand must higher (as a poker hand) than those melds from which cards were stolen.
3. The meld is placed face up on the table. The meld is placed so that it can be easily seen which player has made the meld.

### 18.4.3 Discard

The remaining cards of any melds from which cards were stolen are discarded. Discarded cards are collected face down in a trash pile.

#### **18.4.4 Score**

If you have more melds than your opponent, you get one point for each meld you have more than the opponent.

Note that only the player whose turn it is may get points.

The poker chips represent "minus" points. Whenever a player earns points, he removes one of his poker chips for each point he earns.

#### **18.4.5 Draw**

You draw cards from the draw deck so that you have 13 hand cards.

### **18.5 End of game**

The game ends immediately when a player gets rid of all of his poker chips. That player wins the game.

### **18.6 Special situations**

These situations are rare in practice, but since they are theoretically possible, we give rules for them.

#### **18.6.1 A player is unable to do phases 18.4.1 and 18.4.2 so that a legal meld is formed**

The player shows his hand cards to his opponent, and the opponent decides how the player plays phases 18.4.1 and 18.4.2. The opponent is not bound by the "no two or more identical cards in a meld" and "at least a pair of jacks"-rules.

#### **18.6.2 The draw deck runs out of cards**

The game continues, but new cards are not drawn. If a player has fewer than 13 hand cards, he may pass instead of playing phases 18.4.1 and 18.4.2. The game ends when both players pass on consecutive turns. (However, scoring takes place as usual at the end of the last turn.)

Then the player with fewer poker chips wins. If both have the same number of chips, the player with more melds wins.



## 18.7 Four-player variant

Although Fireplace Poker is intended to be a two-player game, the following variant can be played by four. The players are divided into two teams of two, and they are seated so that everyone sits between two opponents. Team members are not allowed to communicate with each other in any way.

The game proceeds like the two-player game, with following exceptions. The melds of each team are common, so it does not make a difference which member of a team made a meld. Each team also has poker chips in common. (Each team is given 31 poker chips in the beginning of the game.)

If a player cannot make a legal meld, he shows his hand to the left-hand opponent, who decides how the player makes the meld. If the draw deck runs out, the game ends after four consecutive passes.

## 18.8 Strategy tips

The cornerstone of strategy is hand management. You want to save cards that can be used in high poker hands and get rid of cards that are useless. In particular, it is a great idea to get rid of duplicate cards, which do not offer new possibilities to form poker hands.

To get rid of cards, you can meld a high pair and with it three unwanted cards. Also, a three of a kind lets you get rid of two additional cards, and two pair lets you get rid of one additional card. Also, four of a kind lets you get rid of an additional card.

Cards cannot be stolen from the highest poker hand, royal flush (that is, a straight flush AKQJ10). Hence, it is a good idea to always be collecting cards for one royal flush.

The full house is the most important meld of the game. It is relatively easy to collect, and high full houses tend to score many rounds before they are destroyed. Hence, a three of a kind is often better used to form a full house than as a three of a kind. It is a good idea to save pairs in your hand so that they may later be turned into three of a kinds to be used in a full house.

When you get lucky, you get to form a four of a kind, but it is often better to meld a full house than wait for cards to form a four of a kind. Four of a kinds, however, have the advantage that you can steal the fifth (unmatching) card from any of the opponent's full houses or lower four of a kinds.

Stealing cards from the opponent's melds is in general advisable. It is the only way to prevent the opponent from getting points. Sometimes, however, the opponent's melds contain a card that matches a high poker hand you're collecting. Then it might be a good idea to wait until you can use the card in your high poker hand rather than steal it to use in some lower meld.

# Chapter 19

## Kiertopokeri

*4 or more players, standard deck of playing cards*

Kiertopokeri is also a game from my childhood. The rules we used back then were a mess, and I have streamlined the rules for this booklet. So, although the game is not my invention, I have modified the rules.

The game is for four or more players, and it utilizes one deck of 52 cards.

### 19.1 Gameplay

One of the players is dealt a hand of five cards. He announces which poker hand it is (he needs not be truthful) and puts the hand face down on the table.

When announcing, the player announces

**For a pair, three of a kind and four of a kind** the player announces the main combination plus one extra card. (For example, "a pair of queens and a jack".)

**For a two pair and full house** the player announces all cards. (For example, "A pair of queens, a pair of tens and a five".)

**For a high card hand and flush** the player announces the type of the hand and two cards. (For example, "A flush, with a queen and a ten".)

**For a straight and straight flush** the player announces the type of the hand and one card.

The next player has two options: He can either say "I doubt it" or pick up the hand.

If the player says "I doubt it" the hand is turned face up. If it was announced truthfully, the doubter drops out of the game, and the next player starts the game over with one less player. If it was not announced truthfully, the announcer drops out of the game, and the doubter starts the game over with one less player.

If the player picks up the hand, he can, after seeing the cards, discard as many cards as he wants to. Then he gets new cards from the stock to replace the discarded cards so that he has five cards.

Then he announces a hand that is higher than the previous announcement. Again, the announcement needs not be truthful. The player puts the hand face down on the table. The next player has the options to either say "I doubt it" or pick up the hand and so on.

## **19.2 End of game**

After all the players except for one have dropped out of game, the last player in the game wins the game.

## **19.3 Shuffling**

The deck is shuffled in the beginning of the game, and when the stock runs out of cards, the discards are shuffled into a new stock. Otherwise, the deck is not shuffled; when someone drops out of game and the game starts over with one less player, the new cards are just taken from the stock.

# Chapter 20

## Chinese Poker

*3 - 5 players, standard deck of playing cards*

Chinese Poker is my favourite game for informal settings. It is easy to teach, yet offers strategical challenge. I have adopted the rules for informal play by ditching the scoring so that each hand is a complete game, played for win/loss only. The game with scoring is known as Big Two.

The game is for 3 - 5 players, and it uses one deck of 52 cards. Two is the highest card, then ace, then king, then queen and so on. All the cards are dealt to the players, it does not matter if the deal is not even. If the deal is not even, the player who starts the game is chosen so that those who got one card more play first.

### 20.1 Gameplay

One of the players starts the first round by playing a legal combination. There are four types of combinations:

- Single card.
- Pair.
- Three of a kind.
- A five-card poker hand that is a straight or higher.

Note that all five-card poker hands that are a straight or higher are considered to be of the same type. Note also that a pair and a three of a kind are only two and three cards, respectively, not five card poker hands.

On subsequent turns the players may either pass or play a combination that is higher than the previous one and of the same type. A player who has passed may play on subsequent turns.

**For a single card,** a card is higher, if it is of the same rank and a higher suit, or if it is of a higher rank. Suits rank from highest to lowest: Spades, hearts, diamonds, clubs.

**For a pair and three of a kind,** a combination is higher, if it is of a higher rank.

**For a poker hand,** a hand is higher, if it is higher as a poker hand. E.g. a full house is higher than a straight. A flush queen high is higher than a flush ten high.

The game goes on like this until all players, except for one, have passed on consecutive turns. Then the player who played the last combination wins the round and starts a new round with any legal combination.

## 20.2 End of game

When a player gets rid of all of his cards, he is out and does not participate in the game any more. The first player to go out is the winner. The loser is the player who has cards left when everyone else has gone out.

If a player wins a round and gets rid of all his cards at the same time, the next round is started by the player left to him.

# Chapter 21

## Indian Poker

*3 - 10 players, standard deck of playing cards, poker chips, pen and paper*

Indian poker is another game from my childhood. It does not use poker hands, but it is called poker, since it uses the betting system of poker. Poker betting suits best for play for money stakes, but Indian Poker can also be played informally, using poker chips that represent no money. I have not invented this game, but I made an Indian Poker computer game when I was a teenager.

One hand of Indian Poker is very short, so it is best to play several hands and declare the overall winner after that. There is no formal match structure, just play until all the players are bored. After that, either settle the scores in money, or just declare the player with most chips the winner.

The game is for 3-10 players, and it uses one standard 52 card deck.

In the beginning of the playing session, each player is given 100 units in poker chips. If a player runs out of poker chips during the session, he can borrow chips from the player with most chips and write him an IOU. At the end of the session, IOU's count plus for the player having them, and minus for the player who has written the IOU.

### 21.1 Beginning of a hand

Each player puts one unit in poker chips to the pot. Then every player is dealt one card. The players do not look at their cards. Instead, everyone puts their card against their forehead and keeps it there for the entire hand. The idea is that no-one sees their own card, but everyone sees everyone else's card.

## 21.2 Betting

Betting turns go around the table many times. Betting ends as specified later.

In his turn to bet, the player has three options:

**Fold** The player forfeits playing the hand. After folding, the player has no chance to win the pot, and the player no longer participates in betting. The player takes his card off his forehead and loses the chips he already has paid to the pot.

**Call** The player puts poker chips to the pot so that he has, during the entire hand, paid to the pot as many chips as the player who has paid most chips to the pot. In other words, the sum paid equals to all raises that were made after the player's last turn (or the beginning of the hand, if it is the player's first turn.).

**Raise** The player pays like in the call option, plus 1-5 units extra.

If no raises have been made in the hand, calling is called checking. In that case, the player pays zero units to the pot. The first raise in a hand is called betting, and the betting player just pays 1-5 units to the pot.

## 21.3 End of betting

If would be a player's turn, he has had a turn before, and no-one has made a bet or a raise after the player's previous turn, the betting ends and the player has no turn.

This rule have two consequences: (1) No-one can make two raises consecutively, without someone else raising in between. (2) When the betting ends, all the players who have not folded have paid an equal amount to the pot.

When the betting ends, everyone looks at their own card. Those players who have not folded are eligible to win. The pot is won by the eligible player who has the highest rank in his card. If there are several equal highest ranks, suits are used as a tie-breaker. Suits rank, from the highest to the lowest: Spades, hearts, diamonds, clubs.

# Chapter 22

## Strip Poker

*2 - 6 players, standard deck of playing cards, poker chips*

This is a variant of poker where the players use clothes they are wearing as stakes. The point is to see the opponents naked, so the clothes do not change the owners permanently. The game is usually played in groups of mixed genders.

Strip poker has several rulesets, but this is my adaptation of computer strip poker games into real life.

The game is for 2-6 players, and it uses a standard deck of cards, optionally with 1-4 jokers. If there are six players, use at least two jokers. The game uses 100-250 units worth of poker chips, depending on the number of players.

At the beginning of a match, each player is given 20 units in poker chips.

### 22.1 Clothes

Everyone has four items of clothing that count: The top overgarment, the top undergarment, the bottom overgarment and the bottom undergarment. Socks, scarves etc do not count, and if someone has for example two top overgarments, they count as one item of clothing.

If someone, by the definition above, has only three garments (a dress covering both the top and the bottom, a tee shirt with nothing under...), he/she can add a scarf, sunglasses or something like that, that exceptionally counts as an item of clothing.

### 22.2 Deal

In the beginning of a deal, every player pays four units in poker chips to the bank (this is to ensure that the game progresses as chips are removed from



the play) and puts one unit to the pot.

Everyone is dealt five cards, and everyone sees (only) their own cards.

Then there is betting like in Indian poker. (The betting goes on until it ends as specified in the Indian Poker entry. However, no-one wins the pot at this stage.)

After that, every player who did not fold, discards 0-4 cards and gets new cards from the deck so that he/she has five cards again.

Then there is a second betting that is like the betting in Indian Poker. Only those players participate who did not fold in the first betting.

After the second betting those players who did not fold during the two bettings show their hands, and the best poker hand of them wins the pot. Note that these remaining players are the only players who need to show their hands, and if everyone except for one player folded, the remaining player can collect the pot without showing his/her hand.

## 22.3 Jokers

Jokers are wild, so a player having a joker may freely choose which suit and rank it counts to have. *Example: If a player has Joker-KK42, the player of course chooses that the joker is a king. So the player has three kings.* With a joker it is possible to have a five of a kind hand, five cards of the same rank, and this hand is the highest hand, even higher than a straight flush.

## 22.4 Stripping

If a player runs out of chips, he/she strips one of the four items of clothing and gets 20 units of new chips from the bank. The chips can be obtained in the middle of a deal, but stripping takes place at the end of the deal. So, if that player wins the pot, he/she can pay back the 20 units of chips instead of stripping. Other than that, the players cannot buy stripped clothes back.

## 22.5 End of match

When a player is completely naked (i.e. has stripped the four items of clothing), he/she drops of the game. If someone trades his/her last item of clothing for chips during a hand, such raises are forbidden in that hand that the player cannot call with his/her 20 new chips.

If a player drops and all the remaining players have more than 20 units of chips, all the remaining players remove an equal number of units from

themselves so that the player with least units has 20 units of chips.

The match ends when the remaining players agree to end playing. At that stage, at least one of the players should have dropped out of the game.

Part V

Canasta

# Chapter 23

## Canasta

*4 players, 2 standard decks of playing cards, pen and paper*

Canasta is a classic rummy game for four players in two-player teams. In this booklet there are the rules, plus a strategy guide written by me. I have not designed this game.

### 23.1 Cards

Canasta uses two 54 card decks (52 card deck plus two jokers) shuffled together. Cards 4-A are called natural cards, twos and jokers are wild cards, and threes are special. The point values of cards are as follows:

Black 3	5
Red 3	100
4-7	5
8-K	10
A	20
2	20
Joker	50

### 23.2 Melds

Each meld consists of natural cards of a same rank plus possibly wild cards. Each meld consists of at least three cards. Each meld must have at least two natural cards and can have at most three wild cards.

Each team has melds in common so that it does not make a difference which member of a team has made the meld. Melds are places face up on the table so that it can be easily seen which team has made the meld.

A meld of at least seven cards is called a canasta. A canasta with only natural cards is called a natural canasta, and a canasta with both natural and wild cards is called a mixed canasta. A canasta is stacked on the table, and top card of the stack marks the type of the canasta. A black card denotes a mixed canasta, and a red card denotes a natural canasta.

Each team can have only one meld of each rank.

## 23.3 The beginning of the game

The game is for four players. The players are divided into two teams and seated so that everyone sits between two opponents. Each player is dealt eleven cards. One card is turned into the start of the discard pile, and the rest of the cards form the face-down stock. If the card in the discard pile is a red three or a wild card, it is turned 90 degrees, and a new card is drawn on the top of it. Repeat until the top card is not a red three or a wild card.

## 23.4 Turn

Turn consists of three phases:

1. Draw
2. Meld
3. Discard

**1.** In the beginning of a turn the player takes either the top card of the stock or the entire discard pile. The player can take the discard pile only if he at the same time melds the top card of the discard pile using his hand cards and pre-existing melds of their team. (That is, he must have a pre-existing meld of the rank of the top card, or a pair in his hand of that rank. One of the cards of the pair can be a wild card.) If the top card of the pile is a wild card or a black three, the pile cannot be taken. In any case, the taken cards become the player's hand cards.

**2.** After that the player can make melds and add cards to existing melds of their team. Cards can be added also to complete canastas.

**3.** The player ends his turn by discarding one card from his hand to the discard pile.

## 23.5 End of a deal

When a player gets rid of his hand cards, he *goes out* and the deal ends. To go out, the player's team must have at least one canasta, and if they do not have a canasta, a player is not allowed to get rid of all his cards.

When going out, the player is allowed to meld three or four black threes.

The deal ends also if the stock runs out of cards, and some of the players tries to take a card from an empty stock.

When the deal ends, scores are calculated. The cards in players' hands give negative points according to their values, and cards in melds give positive points according to their values. Each mixed canasta gives 300 extra points and each natural canasta gives 500 extra points. Going out gives 100 extra points.

The game is won by collecting 5000 points, usually over several deals.

## 23.6 Special rules

### 23.6.1 Freezing the discard pile

If there is a wild card (or a red three) in the discard pile, the pile is frozen. The first such card of the pile is turned 90 degrees to indicate that the pile is frozen also on the subsequent turns.

To take a frozen discard pile, the player whose turn it is, must have two natural cards in his hand that are of the same rank as the top card of the pile, and he must meld these three cards. If their team already has a meld of that rank, the player adds the three cards to the existing meld.

### 23.6.2 Opening meld

The first meld of each team in each deal is an opening meld. It may consist of one or several legal combinations, but it must have at least a certain number of points. The number of points depends of the score of the team from previous deals.

Team has	Opening meld
- -5	15
0 - 1495	50
1500 - 2995	90
3000 -	120

A team who has no opening meld is not allowed to take a discard pile. A player is allowed to take the discard pile and make the opening meld simulta-

neously, but he must take the pile as if it were frozen, and only the top card of the pile and hand cards can be used to fulfill the point requirement.

If a player makes the opening meld and goes out at the same turn, he gets extra 100 points.

### **23.6.3 Red threes**

If a player draws a red three from the discard pile or the stock, he melds it immediately and draws a replacement card from the stock. If the player got red threes in the initial deal, he starts his first turn by melding them and taking replacement cards.

Melding red threes does not count as an opening meld.

When calculating the scores, the team gets positive points for red threes if they have an opening meld, and negative points if they do not have the opening meld. If the same team has four red threes, they are worth 800 points instead of 400. (In modern Finnish club rules, however, four red threes is just 400 points.)

### **23.6.4 May I go out?**

In the beginning of a turn, when the player has done nothing except for possibly drawing a card from the stock, he may ask his team-mate "May I go out?". The team-mate answers "Yes" or "No", and the answer is binding for that turn.

### **23.6.5 Penalties**

If a player accidentally shows a hand card for his team-mate, that card becomes a penalty card. The penalty card is placed face up on the table, and the player who showed it must play it at the first opportunity.

If a player tries to make an opening meld, but accidentally with insufficient points, he takes the cards back to his hand, and the opening meld requirement increases by ten points for their team.

Accidentally asking "May I go out?" when the player cannot go out gives 300 point penalty. If the player accidentally asks "May I go out?" after he has melded on that turn, he is required to go out.

# Chapter 24

## Canasta strategy

### 24.1 The Nature of the Game

In each hand, usually one partnership is dominant and the other one is submissive. The dominant partnership has many cards, and thus many chances to take the discard pile, and many chances to make canastas. The submissive partnership has few cards, and few chances to do anything.

The partnership that takes one big or a couple of small discard piles becomes dominant. Thus, in the beginning of a hand, you should aim at taking many cards from the discard pile. (Since Canasta is a team game, the aim is getting as many cards as possible from the pile for your team. Whether you or your partner gets the cards is quite irrelevant. However, in the ideal position both you and your partner have many cards in your hands. This is discussed in depth later.) After deciding the dominance, the submissive team tries to go out and the dominant team tries to make the game last as long as possible.

This setting occurs almost certainly when the score required for opening meld is high (that is, at least 90). When the opening meld is 50 for both teams, there may appear also equal hands. In equal hands a continuous battle over the discard pile is going on. You must continuously consider which team wins more by continuing the game, and quickly go out if you think your opponents have better chances to complete canastas. I think there are no special "equal hand" strategies, but you must apply all strategies when they are suitable.



## 24.2 The Opening Meld

In the beginning, it is important that your partnership becomes the dominant one. This goal is achieved by taking one big or several small discard piles. Thus, the main reason for making the opening meld early is to improve your partnership's chances to get the discard pile. In some ways the opening meld makes it easier to get the pile, in other ways it makes it more difficult.

The ways making the opening meld makes it easier to get the pile are: (1) After the opening meld you and your partner can get the pile with one natural card and a wild card. (2) Your partner doesn't have to make the opening meld. The ways making the opening meld makes it more difficult to get the pile are: (3) The opponents see some of your cards. (4) You usually lose wild cards. (5) If the pile is frozen, your opponents will have safe discards.

When the score needed for the opening meld is low (that is: 50), the point 1 is the most important reason for making the opening meld. It's very probable that your partner has a decent opening meld in his hand, and he does not need your help for that. If you lose all your wild cards by making the opening meld, it's often not worthwhile. Because you don't then have any wild cards, half the advantages of the opening meld are lost. You'd better wait a couple of rounds and see if your partner can make the opening. Do not waste too many cards on the opening meld of 50 points. The opening meld of 50 points is easy, and after a couple of rounds either you or your partner will certainly have a nice 4-card opening.

The previous paragraph, of course, applies only to an unfrozen pile. If the pile is frozen and the score required for opening meld is low, you will probably gain nothing by making the opening meld.

When the score for the opening meld is high, it may happen that your partner cannot make the opening meld and he consequently has no chances to get the pile, unless you make the opening meld. In such cases, you should open if possible. In your first turn, make only an opening meld with a small number of cards, e.g. 90-point meld Joker-A-A. Otherwise you should wait and see if your partner can make an opening meld with a small number of cards. In your second turn, if your partner has not opened, you can make an opening meld with a little bigger number of cards, in your third turn with a still bigger number of cards etc...

To minimize the effect of points (3) and (5) you should make the opening meld with as little number of different combinations as possible, and with as little number of cards as possible. However, melding natural cards is often better than melding wild cards even if you have to use one or two cards more (especially if you meld longer - not more - combinations), because wild cards are much more valuable when they are in your hand than when they are on

the table.

Your goal is to get the discard pile. If you can take a fairly big (e.g. 8 cards) discard pile by making the opening meld, you should do so. If the battle over dominance is lost (opponents have taken one big or a couple of small piles), you should open when it suits your submissive strategy.

## 24.3 Fighting over the Discard Pile

Small piles may not be worth taking. Taking a pile consisting of one or two cards makes your hand weaker because (1) you may have to meld cards in order to take a pile (2) you miss a chance to take a possibly good card from the draw deck (3) opponents know - and usually also remember later - which cards are in the discard pile, whereas they don't know which cards you get from the draw deck.

However, larger piles are almost always worth taking. The more cards you have in your hand, the stronger you are. Even though you may not need the cards in the pile, your opponents probably would need them, and taking them out of their reach is good strategy. The only case where you might not take a big pile is when you're planning to go out. Even then, the cards in the pile could possibly alter the situation so that continuing the game with those cards is better than going out with your current hand.

After this rather lengthy introduction, we finally turn to the subject of this chapter: How to take the discard pile.

There are two completely different cases of fighting over the discard pile: The frozen pile and the non-frozen pile. The principles of the fight are the same in both cases, but the way those principles are applied is different. The fight where one or both teams has not made the opening meld differs from the case where both teams have made the opening meld.

When you try to prevent the opponents from taking the pile, the main thing is to decide which cards are safe to discard: Black threes are always safe, and thus they are extremely valuable cards (this fact is very often neglected by novice players). Wild cards are also safe, but they freeze the pile. Otherwise, such cards that are improbable to exist in your left-hand opponent's hand are relatively safe. If the pile is frozen, the cards that fit your opponents' melds are relatively safe - the longer the meld the safer the card. In all cases, such cards that your team has many of (either melded or in your hand) are relatively safe, and such cards that your left-hand opponent has discarded are relatively safe (you mostly discard single cards.) Also such cards that you've discarded earlier and your left-hand-opponent has neglected are relatively safe. If your opponents have not opened, small cards are safer than large cards. (You

try to get the opening meld by collecting large cards and discarding small ones.) That neglected cards are safe does not apply to a situation where your opponents are required a big opening meld that they have not yet made. It's possible that your left-hand opponent has not taken the pile because he could not open then, not because of the lack of the pair.

When the pile is small, you should discard unsafe cards and save the safe ones for big piles. This is because not much harm is done if your opponents get a small pile, whereas it's catastrophic if they get a big pile. Also, if your left-hand opponent does not take the pile with the unsafe cards you offered, you can consider those cards relatively safe later.

When you're defending the pile, the most important thing is to remember the cards you have discarded and the cards that your left-hand opponent has discarded.

The best way to get a discard pile is to have a pair of cards (if the pile is unfrozen, only single card with a wild card is enough) that your right-hand opponent assumes safe. You can - and you should - arrange yourself such pairs with cunning play: Do not meld everything you can. For instance, from five cards of same rank meld only three and leave a pair in your hand. If you have three cards of same rank, discard one and leave a pair in your hand. (This has also an additional advantage: If your left-hand opponent does not take the card you offered, you have two additional safe cards yourself). Do not take a small pile even though you could etc...

Remember also that the more pairs you have, the easier it is to get the pile and the more different cards you have (plus a wild card) the easier it is to get an unfrozen pile. However, it's not reasonable to discard from pairs in order to get more different cards: If your team loses the pile or the pile gets frozen, a hand that consists of single cards becomes totally worthless.

The discard pile is an essential part of the game, but it is not the entire game. If you eventually lose the battle over the pile, you should be able to go out as fast as possible. Many of the tricks advised above cause your hand to become such that it works well in the battle over the pile, but it does not work in meld-and-go-out play at all. Consider for example discarding from a combination of three or four cards of same rank. This will destroy a combination that you may need for making a canasta. You can not meld mere pairs.

So, you must find a balance between fighting over the pile and keeping your hand vital. The bigger the pile, the more you must fight over it, even though it makes your hand crippled for the normal game. Sometimes a frozen pile can become so big that the only goal for everyone is to get it, or at least prevent the opponents from getting it; skilled players can often defend it until the draw deck ends and neither side gets the pile.

Remember also that the more cards you have in your hand, the stronger you are when you fight over the pile. Thus, stop melding when the battle over the pile gets fierce.

## 24.4 Submissive play

When your opponents have most of the cards, their chances of getting the discard pile again become bigger and their position probably becomes better and better. In such cases, your main goal is completing one canasta and then going out as fast as you can, before the opponents complete too many canastas. You'll probably lose the hand, but your goal now is minimizing the loss.

The other strategy you may use is freezing the pile and thus trying to break the submissive - dominant setting. For this strategy there is another chapter later.

The major decision you have to make is which cards you meld and which ones you keep concealed. The advantage to melding is that your partner can then use the cards: It's easier to build a canasta together with your partner than alone in your hand. If you already have a canasta, your melds can help the partner to get rid of single cards and go out.

Often your partner could go out if you had a canasta, but he can't both make the canasta and go out. Thus, often you should make a canasta in order to make it possible for your partner to go out. Usually both making canasta and melding pairs in order to get rid of cards in hand require wild cards. It's fastest to go out if one of you uses his wild cards to make canastas and the other uses his wild cards for melding pairs.

On the other hand, your opponents probably have many meldable combinations in their hands, and maybe they have some natural 5-6 card combinations (i.e. no wild cards) melded which they try to turn into natural canastas. They try to guess when you will go out and meld their hands empty before that and make mixed canastas of those natural 5-6 card combinations. If you always meld everything you can, it'll become very easy for them to estimate how much time they have before you'll go out. If possible, you should try to go out surprisingly, and this requires hidden resources in your hand.

If you have to go submissive before you make the opening meld, then what is said in the previous two paragraphs about the melds in general applies also to the opening meld. Just remember that your partner may not be able to make the opening meld and you may have to make it in order to help him. When your opening meld has been postponed very late, it's probable that after the opening you'll be able to complete one canasta and go out very

quickly. In such a case, you've seen which cards the opponents get and you can infer quite precisely which cards your partner has. Thus, your hands match probably very well in such a situation.

Opening and going out in the same turn gives you a 100 point bonus. Sometimes it's good strategy to try to do that - not because of the ridiculous 100 point bonus but because of the surprise effect.

Your main goal is going out. To achieve this goal, you may have to discard such cards that fit opponents' melds. Even though your opponents will get a few more points by taking them, you should give them, if it helps your own team go out. If you don't go out, you'll certainly lose much more.

A book I've read says that you might freeze the pile in order to safely get rid of cards that fit opponents' melds (or let your partner get rid of such cards) and then go out. Personally, I tend to disagree. When you are planning to go out, you need your wild cards to make a canasta or get rid of pairs. Usually you cannot afford a wild card for freezing the pile. Furthermore you don't know which cards you will get from the deck. Because you'll have to meld or discard all cards (except for one) in order to go out, you may have to give up even the frozen pile to the opponents in order to get rid of something you got from the deck after freezing the pile. (I really would like to hear other players' comments on this.)

## 24.5 Freezing the Pile

The main effect of freezing the pile is that after freezing you cannot take the pile with your melds. Because taking the pile becomes more difficult, frozen piles tend to become bigger and more valuable.

This means that if your opponents have a lot of melds that help them take discard piles, you can neutralize the effect of those melds by freezing the pile. Because a frozen pile grows big and valuable, your opponents can't ignore the frozen pile and keep on building canastas: If you freeze the pile, they must either go out quickly or start fighting over the pile. If either partnership eventually gets the frozen pile, that partnership becomes very dominant. Freezing the pile is a strategy that shakes the prevailing dominant-submissive setting; if you are yourselves dominant, you do not want the prevailing setting to shake.

When you fight over the pile, you mostly try to prevent your opponents from taking the pile: You take the pile when your opponents fail in defending it. The more cards you have, and especially the more safe discards you have, the better chances you have in fighting. Remember also that if your partner has only a few cards, he has little choice of discardable cards and he will

eventually have to give the pile to opponents. Because one screw-up is enough to lose the battle, you should turn the game into a battle over the frozen pile only when both you and your partner are able to defend the pile.

So, the ideal situation for freezing the pile in order to start a battle is the following: You are submissive, and your opponents have a lot of melds, but no 6 card melds or canastas (if they have a canasta, they may go out and not fight). Also, they have less cards in their hands than you and your partner. You have both safe cards and pairs, preferably one surprising pair, and your partner has a many cards in his hand, but it seems that it's unlikely to get canastas and go out. In a really ideal situation your right-hand opponent has only a few cards (This means that it's not dangerous if your partner runs out of safe discards, because the right-hand opponent is unlikely to have pairs.) Also, the right-hand opponent is likely to run out of safe discards and you will have uses for your pairs.

Starting a battle over a frozen pile is a strategy I personally dislike. It stops strategical decisions and makes counting cards the most important skill. Often the pile grows and grows and the stakes grow and grow. If either side gets the pile, they often score several thousands of points (I've once got a huge discard pile worth over 5000 points). Furthermore, you must know that your partner is also counting cards; you can not defend the pile alone. If you can't choose your partner, you'd better try some less risky strategy.

Sometimes, however, an unfrozen pile grows so big that the team that takes it gets the dominance. In such situations the status quo is already broken and you may have to freeze the pile just because it increases your team's chances to defend and finally get it.

## 24.6 Dominant Play

If your partnership has many cards, it's probably easy to get even more by taking discard piles and make a lot of canastas - maybe even a couple of natural canastas. You try to make the hand last as long as possible so that you'll complete as many canastas as possible. It's not you but your opponents that try to go out. You should go on strong until they're able to go out, and just before that go out yourselves or at least meld everything valuable.

Sometimes both members of your partnership have a lot of cards, and the game is easy. Sometimes the cards keep on accumulating to one player, and the other player loses his cards by melding. If you have only one or two cards, you're extremely vulnerable because the choice of discards is very limited; you may have to give the discard pile to opponents. Thus, when your partner has a lot of cards but you do not, you must think really carefully before each

melding; it's your partner's game. You just stand back and support him by having a hand that's strong enough. On the other hand, it'll be quite easy for you to go out. If you're running out of cards, it is sometimes a good idea to go out even though your partnership is dominant.

Sometimes, you may have completed some canastas and you have no (or little) promising 5 or 6 card melds left. Despite the submissive position, the opponents may have got a couple of 5-6 card melds. In such situations, consider carefully which team will get more points if the game goes on and go out if you think that your opponents will get more.

In general, the hand does not last as long as the dominant side thinks. The submissive side goes out sooner or later and it's then really embarrassing to find out that you are having cards in your hand that would have made a canasta if they were melded.

## 24.7 To Meld or not to Meld?

The main reason for melding is that you try to build a canasta from that meld. Thus, it's more efficient to make fewer but longer melds than to make very many 3 card melds. (When either team is very likely to go out, you may have to meld everything you can to maximize your score.)

The main reason for not melding is that it's easier to defend the discard pile if you have a lot of cards in your hand. If you have only a few cards in your hand, you cannot play if the opponents freeze the pile. You'll have no choice of discards and no pairs to take the pile. So, keep cards in your hand and meld only such combinations that can probably turn into canastas. On the other hand, it's generally advantageous to meld combinations that have a good chance to evolve into canastas: After the combination is melded, your partner knows that he must not discard the cards that fit the meld (unless he desperately needs a safe discard.)

In particular, avoid melding the same cards as your opponents. Such melds have little chance to evolve into canastas, because your opponents have quite a lot of the cards needed for the canasta. Also, if you meld them, the opponents will see that their meld has little chance to evolve into a canasta, and thus they have more information that they can use when they plan their strategies.

If you want to meld a new combination, meld just three cards even though you have more in your hand. This tactic has three advantages: (1) If the opponents freeze the pile, you may have a surprising extra pair in your hand (if it was originally a 5 card combination.) When the pile is frozen, people often discard cards that fit their opponents' melds. (2) The opponents may

have to discard a card that fits your meld. Then they usually choose the card that fits the shortest meld. Because your 3 card meld is very short, they may give you the 5th or 6th card of that rank (count also those cards that you have in your hand.) When the discard pile is small, people sometimes discard cards that fit opponents' 3 card melds just because they want to save their good discards for bigger piles. (3) You're stronger when you have more cards in your hand.

Finally, of course, you probably will also meld the extra cards in your hand, but you should postpone it until the meld is close to a canasta (that is, until your partner continues the meld or you get more cards for that meld yourself) or someone is likely to go out.

If your partner usually melds only 3 cards from a 4 or 5 card combination, you usually should continue his melds if possible with natural cards. This way he gets to know how close to a canasta the meld is and it's easier to him to decide how to use the hidden resources. I've sometimes used such strategy that players add one card at a time in turns into a meld. This way the your partnership has quite a lot of information about the meld but the opponents do not. The strategy works fairly well if you're ready to deviate from it when needed; however, it's not The Golden Rule of effective melding.

Melding a wild card must be considered more carefully than melding a natural card: a natural card fits in only one meld. As long as a wild card is in your hand, it's very flexible: You can meld it almost anywhere. When you meld it, it loses its flexibility. Thus, apart from the opening meld and taking discard piles, do not meld wild cards in the beginning or in the middle of the game, unless you really need to make a canasta quickly. (And even then, make sure that melding the wild card really helps making the canasta.) Later you will see which natural cards your team has got and you can use the wild cards more efficiently.

It's very rare that you should meld a pair with a wild card. (The opening meld, taking the discard pile and going out are exceptions to this rule.) Almost always you just waste the wild card into a combination that has no chances to turn into a canasta, and you waste a pair that's useful if you have to fight over a frozen pile. One exception could be a case when you know that your partner also has a pair of the same rank. (He has, for example, taken a discard pile that contains the pair.) If you think that the partner is likely to discard the pair, you could save your common 4-card combination by melding your pair with a wild card.

In general, you should add natural cards to 4-6 card combinations if possible; your goal is making canastas. Adding wild cards must be considered more carefully, even though you could make a canasta by adding a wild card. If you make the canasta, the wild card will lose its flexibility, but there's also



another point that you must take into account: When the opponents must discard cards that fit to your melds, it's best for them to discard such a card that fits to a complete canasta. This way they do not help you to get more canastas. Thus, each complete mixed canasta gives your opponents more good discardable cards, which is a bad thing for you. Furthermore, you'll get an extra 200 point bonus for each natural canasta. Eventually, before the hand ends, you must make canastas with your wild cards, but this should be postponed as late as possible. (On the other hand, postponing it too late has disastrous effects.)

## **24.8 Miscellaneous Advice**

### **24.8.1 Team play**

You play together with your partner. When you are making a decision of which strategy to use, you must take into account also your partner's strength. When it's obvious that your partner tries to do something (e.g. go out), you should in general help him do that. In the other hand, you should be helped by your partner when you try to do something (e.g. try to get a lot of canastas by making the game last longer.) When neither of you is egotistic and both players are helping each other, the results are good.

With clear and consistent play, it's usually possible to make your partner understand what you want to do. E.g. If you think the hand is over, and you should meld everything you can and then go out, tell it to your partner by making a couple of melds that do not help you get more canastas. (Add a wild card to a natural 3-4 card combination or make a meld of such cards that your opponents also have melded etc...) Remember that you are not allowed to convey information by speaking, expressing anger or joy, using secret signals (e.g. "foot signals" under the table), etc... In fact, even hesitating too long when you have a difficult decision to make is regarded as unethical information.

### **24.8.2 Opening Zones**

Try always to calculate the scores of you and your opponents. This is because you should know if you or your opponents are going over an opening zone border. If you would end up with a score a little under 1500 or 3000, consider going out. If you go out, you'll have a better chance to get a good score in the next hand with a small opening. Correspondingly, if your opponents are ending up with a little under 1500 or 3000 points (and you're not), consider not going out. If you, by continuing, get more points, you gain. Your opponents

will only lose if they get one more canasta; a lower requirement for the opening meld is certainly worth more than 300 points. If you have to break an opening zone border, do it with a good margin!!! When you calculate scores the teams will end up with, take into the account the 100 point bonus for going out.

### 24.8.3 Red threes

When your opponents have 3 red threes and you have none, they have a better chance to get more points with red threes. Both have equal chances to get the last red three, but it'll be worth 100 for you, and worth 500 points for your opponents. When the situation is otherwise even, this may be a good reason for you to go out.

Sometimes the opponents have not made the opening meld and they have some red 3's. In such situations, they'll get something like -500 - -300 points if you go out, but +300 - +500 points if they open. It can be a good idea to go out and take that 600-1000 point advantage rather than continue the hand and try to get a bigger but more uncertain victory.

### 24.8.4 "May I go out?"

You're allowed to ask your partner "may I go out". It's possible to use it as a signal: When you're able to go out and your partner has a lot of cards in his hand, you can tell him to get rid of his cards by asking "may I go out". He answers "No" and when it's his turn he melds everything he can. When it's your turn again, you go out. Note: When you use this strategy, you should not break your going-out -hand after the first negative answer. (Remember, that the rules require you to be able to go out when you ask "May I go out".)

Ask "may I go out" only when you want your partner to make the decision (the exception to this is when you're using the strategy described above). This way, when you ask, your partner knows that he's the only person having some important information, and this knowing-that-he-knows helps him to make a better decision. If you can make the decision by yourself, without consulting your partner, do not ask just because you want to be polite.

(Example: You have one canasta, one mixed five or six card combination melded and no other important melds. It's clear that the only reason for not going out is trying to make a mixed canasta out of that meld. If you can go out and make that canasta, do so and ask nothing. This way, if you ask "May I go out?", your partner can be sure that it's impossible for you to complete that canasta, and he can decide if it's possible for him to make the canasta.)

# Chapter 25

## Samba

*4 players, 3 standard decks of playing cards, pen and paper*

Samba is a variant of Canasta. Samba has many minor rule variations, but this is Samba as it is played in Finnish Canasta clubs. I have not designed this game.

The game is played with the rules of Canasta, except for the following.

### 25.1 Setup

The game uses three 54 card decks (standard 52 card deck plus two jokers) that are shuffled together.

Each player is dealt 15 cards.

### 25.2 Melds

There are two kinds of melds: Canasta melds and Samba melds.

Canasta melds are like the melds in ordinary Canasta. Each canasta meld can contain at most two wild cards.

Unlike Canasta, a team can have several canasta melds of the same rank.

A samba meld consists of consecutive natural cards of the same suit. Wild cards and threes cannot be used in samba melds. A samba meld must have at least three cards and at most seven cards. A samba meld of seven cards is called a samba.

Wild cards cannot be added to complete canastas/sambas.

## 25.3 Taking cards from the stock

If a player takes cards from the stock at the beginning of his turn, he takes two cards.

## 25.4 Taking the discard pile

A frozen pile is taken as in Canasta.

An unfrozen pile can be taken with a natural pair (i.e. no wild cards) from the hand, the pair matching the top card or the pile, or if the top card of the pile continues an existing meld (including samba melds) of the team. The meld in question must not be a complete canasta or a samba.

## 25.5 Going out

To go out, the team must have at least two canastas/sambas.

When going out, the player is allowed to meld three or more black threes. Opening and going out at the same turn gives no extra bonus.

## 25.6 Red threes

Red threes are minus, if the team does not have at least two complete canastas/sambas. There is no extra bonus for getting four or all red threes.

## 25.7 Scores

Differences in scores to Canasta are as follows:

Samba	1500
Going out	200
Opening zones:	
- -5	0
0 - 1495	50
1500 - 2995	90
3000 - 6995	120
7000 -	150

The game is won by collecting 10000 points.

## 25.8 Strategy tips

Each complete samba contains an eight, a nine and a ten. This makes eights, nines and tens valuable cards.

If the opponents have better chances to complete sambas than you, forget about sambas, start collecting canastas and go out before the opponents complete their sambas.

# Chapter 26

## Contract Samba

*4 players, 3 standard decks of playing cards, pen and paper*

Contract Samba is an old, Finnish variant of Canasta, which offers more possibilities for strategical play than Canasta. I have not designed the game. The game is played by four players in two teams of two players.

The game is played with the rules of Canasta, except for the following.

### 26.1 Setup and deal

The game uses three 54 card decks (standard 52 card deck plus two jokers) that are shuffled together.

Each player is dealt 15 cards.

### 26.2 Auction

In the beginning of a hand, there's an auction. The players bid for the number of points they will achieve in the hand. Each bid consists of an integer number (at least 1) and a type, which is one of the following (in an ascending order)

Clubs

Diamonds

Hearts

Spades

Canasta

Canasta of twos

Each bid must have either a higher number than the previous one or the same number and a higher type. The number indicates how many thousands of points the player promises their partnership will achieve in the deal, and

the type indicates how the player promises to make his opening meld. (For example, the bid "4 hearts" means that the team will achieve at least 4000 points in the deal and make the opening meld with a sequence of hearts.)

A player who does not wish to make a bid may pass. A player is allowed to bid even if he has passed before. The auction ends after three consecutive passes (four passes, if no-one has made a bid), and the highest bid becomes the contract.

A player who does not believe that the opponents will not achieve the promised number of points may double in his turn to bid. This requires that the highest bid so far was made by the opponents. A double ends the auction immediately, and the highest bid becomes the contract.

The player who made the highest bid is called the declarer. In case of a doubled bid, the declarer is the original highest bidder, not the player who doubled.

## 26.3 Opening meld

The declarer makes the opening meld immediately after the auction has ended. If the contract is at most at the level of three, the declarer opens with the required points, as in canasta.

A complete canasta is always a valid opening.

If the contract is at least at the level of four, the declarer may open with the type of the contract (of course, the required-point opening is also allowed). In suit contracts, the declarer may open with three consecutive cards of the suit of the contract. This may include twos and threes. The sequence may go round the corner, so K-A-2 is a valid opening. If the type of the contract is Canasta, the declarer may open with four cards of the same rank (but not with threes). If the type of the contract is Canasta of twos, the declarer may open with four twos.

If the declarer cannot open, he is penalized 1000 points and the second-highest bid becomes the contract, and the second-highest bidder the declarer. Then he is required to open as described above. If he cannot open, he is penalized 1000 points, and the third-highest bid becomes the contract and so on.

The bottom card of the discard pile is turned after the declarer side has opened or it is determined that there is no contract. The game starts with a turn of the declarer. If there's no contract, the game starts with a turn of the player left to the dealer.

## 26.4 Beginning of a turn

In the beginning of the turn, the player in turn either draws two cards from the draw deck, or takes cards from the discard pile (this is described in depth later on) and takes one card from the draw deck.

## 26.5 Non-declarer opening

Happens with the required points as in Canasta. Exception: If the opening contains a canasta meld of twos, there must be at least five of them.

A complete canasta is always a valid opening.

## 26.6 Melds

There are two kinds of melds: Canasta melds and Samba melds.

A canasta meld consists of cards of the same rank. Jokers and twos are wild, so they can be used to substitute natural cards. A canasta meld cannot be made out of threes. Each canasta meld must have at least three cards, and each canasta meld must contain at least two natural cards and at most two wild cards. A canasta meld can also be made out of twos. Such a canasta meld may contain at most two jokers. A canasta meld of at least seven cards is called a canasta.

Unlike canasta, a team can have several canasta melds of the same rank.

A samba meld consists of consecutive cards of the same suit. There are no wild cards in a samba meld, but twos and threes can be used if they continue the meld naturally. The meld can go round the corner, so Q-K-A-2-3 is a valid meld. A samba meld must have at least three cards and at most seven cards. A samba meld of seven cards is called a samba.

Natural cards can be added to a complete mixed canasta, but not to a complete natural canasta, a canasta of twos or a complete samba. Wild cards cannot be added to complete canastas/sambas.

## 26.7 Taking cards from the discard pile

When you take cards from an unfrozen discard pile, you take the entire pile. When you take cards from a frozen pile, you take the top cards until the topmost freezing card, including the freezing card. If there are several adjacent freezing cards, you take them all.

You can take cards from the discard pile, if you meld its top card with a matching natural pair (natural triplet in the case of a frozen pile) from



your hand. Twos, threes and jokers cannot be taken this way. If you have a matching canasta meld of at most four cards (three cards in the case of a frozen pile), you can use the top card and the natural pair/triplet in the canasta meld. (By natural pair we mean two natural cards of the same rank and by a natural triplet three natural cards of the same rank.)

You can take cards from a non-frozen or a frozen discard pile, if the top card continues naturally your existing samba meld (and you use the top card in that meld). Also a two and a three can be taken in this fashion.

If you take cards from the discard pile while opening, the discard pile-taking cards and the top card of the pile are not counted in the opening meld score.

## 26.8 Red threes

You can use a red three similar to canasta, but then it gives 300 minus points. Unlike canasta, it is not mandatory to meld a red three.

Red threes can also be discarded to the discard pile, and then they freeze the discard pile.

## 26.9 Going out

The declarer side can go out once they have achieved the points required in the contract. The non-declarer side can go out if they have made two canastas (out of which at least one must be natural), and at least one samba.

In both cases, the player who goes out must meld all his hand cards, except for one, which is thrown to the discard pile.

When going out, the player is allowed to meld three or more black threes.

## 26.10 Scoring

The differences to Canasta in scoring are as follows:

Each red three in hand	-500
Each black three in hand	-100
Each three as a part of a samba meld	5
Natural Canasta of twos	3000
Mixed Canasta of twos	2000
Samba	1500
Natural Canasta of aces	1000
Mixed Canasta of aces	500
Going out	200

If the declarer side got at least the number of points indicated by the contract, they get a bonus that's half of the sum indicated by the contract. If they did not get so many points, the opponents get a bonus that is the sum indicated by the contract. If the contract was doubled, the bonuses are simply doubled.

When determining if the contract is met, all the other points (minuses, the points for complete canastas and sambas, and the bonus for going out) except for positive card points on the table are counted. If the contract is at the level of five or higher, also positive card points are counted.

If the draw deck ends, the contract is void.

## 26.11 End of game and opening zones

The score required to win a game is 20000 points.

The opening meld zones are as follows:

- 5	15
0 - 1495	50
1500 - 2995	90
3000 - 6995	120
7000 - 9995	150
10000 -	200

# Chapter 27

## Hand and Foot

*4 players, 5 standard decks of playing cards, pen and paper*

Hand and Foot is a modern American variant of Canasta. It has many minor variations, and I have picked the most appealing characteristics across variants. Other than that, I have not designed this game. Hand and foot is a light game, requiring less strategical thinking than Canasta. Here's how Hand and Foot differs from ordinary Canasta.

### 27.1 Cards and deal

Five decks of 54 cards (52 card deck plus two jokers) are shuffled together.

Each player is dealt a hand of 11 cards, and a foot of 11 cards. The players do not look at their feet.

### 27.2 Melds

Melds are the same as in canasta, except that a meld cannot contain more than seven cards. A team can have more than one meld of each rank.

### 27.3 Beginning of a turn

The player either takes two cards from the stock, or cards from the discard pile, as explained below.

The discard pile is always frozen. When a player picks up cards from the discard pile he only picks up top seven cards (the entire pile, if there are fewer than seven cards in it.)

## 27.4 Threes

Both black and red threes function similarly to black threes in Canasta, and they cannot be melded at all.

## 27.5 Foot and going out

When a player gets rid of all his hand cards, he picks up the foot and continues playing with those cards. This can happen even in the middle of a turn.

The player goes out when he gets rid of all of the cards in the foot. A player is not allowed to go out until their team has at least five canastas, out of which at least two are natural.

## 27.6 Scoring

Also the cards in feet that have not been picked up give negative points.

A black three in a hand or a foot is minus 100 points, and a red three is minus 500 points.

## 27.7 Match

A match lasts four deals.

The opening zone depends on the number of the deal.

1st deal	50
2nd deal	90
3rd deal	120
4th deal	150

## Part VI

# Miscellaneous games

# Chapter 28

## Sakaali

*4 players, standard deck of playing cards, pen and paper*

Sakaali is a card game for four players in two teams of two players. The purpose of the game is to offer the communication experience of Bridge in an easily adoptable package. In Bridge, the team-mates can agree that certain plays are signals that give information for the partner. However, Bridge is very difficult to learn, and may hence be off-putting to new players. Sakaali can be learned in a minute, and it provides good possibilities for signalling. Sakaali was also designed by myself.

### 28.1 Summary

In this four player partnership game, each player is dealt 13 cards and discards 8 of them face up. Partners then combine their remaining 5-card hands, and the aim is to have sets of three or four of a kind within these ten cards. By agreeing a system of signals, partners can use their discards to suggest to each other what cards to keep.

### 28.2 Setup

The game uses one standard 52 card deck and it is for four players. The players are divided into two teams of two players. The players are seated so that everyone sits between two opponents.

The cards are shuffled and each player is dealt 13 cards.

## 28.3 The game

A turn consists of playing one card from the player's hand to the table. The cards are played in a row in front of each player so that everyone can easily see who has played which cards, and in what order. The game goes on like that until each player has played eight cards and has five cards remaining in his hand.

## 28.4 Scoring

When everyone is down to five cards in hand, each team combines their hand cards to make a single ten card hand. A team loses points for unmatched cards and to a lesser extent for pairs in their final ten-card hand. The point scores are as follows.

In the team's hand:

- Cards in a four of a kind or a three of the kind give no minus card points.
- Each pair gives 25 minus card points.
- Each single card (not included in a pair, three of a kind or four of a kind) gives the value of the card (ace=1, two=2, ..., king=13) plus 20 minus card points.

The team with fewer minus card points wins as game points the difference of minus card points, plus 20 game points. If the winning team got all their cards in three of a kinds and four of a kinds, the team gets additional 30 game points. The other team gets no game points. If a deal is a tie, the 20 game point bonus for winning the deal goes to the next deal, so the bonus is there 40 game points and so on.

The team wins the game who first collects 100 game points. If a longer game is desired, play a best-of-three match of such games.

## 28.5 Team play

During the game, team mates are not allowed to talk about the game to each other. They are also not allowed to use gestures or "foot signals" under the table or other such means to communicate about the game.

Team mates are, however, allowed to agree meanings for played cards, so that they signal what kind of cards the player has in his hand. Before the

game begins, however, they are must tell their opponents all the meanings of such signals. (Writing a crib sheet for the opponents is a good idea, if there are a lot of different signals).

The players are also allowed to "lie", i.e. play a signal even if the signal is false (and sometimes their cards are such that this is the only possibility.) However, in this case they must confuse the partner as much as the opponents. (Meaning that there must not be secret agreements about when to lie.)

## 28.6 Strategy

The basic signalling system is as follows:

The first three cards played by each player signal pairs or three of a kinds in the player's hand. The first and the third card signal that the player has a pair or a three of a kind that is one lower than the played card. The second card signals that the player has a pair or a three of a kind that is one higher than the played card.

(If the player can play only one of the cards # 1 and # 3 honestly, the player plays the # 1 honestly and lies with card # 3.)

The cards # 4-# 6 are replies to the partner's three first cards. The card # 4 is a reply to the partner's card # 1, the card # 5 is a reply to card # 2 and the card # 6 is a reply to the partner's card # 3. Low card indicates that the player has a card that matches the signalled pair or a three of a kind, and a high card indicates that the player does not have such card.

The cards # 7-# 8 have no meaning: at this stage the players just discard unwanted cards.

This system is not optimal, and the team-mates are allowed to agree on improvements on it. They are also allowed to develop a completely different signalling system.

## 28.7 Sakaali for eight players

This variant uses eight players, divided into two teams of four, eight decks, preferably with different backs, and two card tables, preferably in different rooms. The players are seated so that each table has two players from both teams.

### 28.7.1 The first four deals

In both tables, four deals are played, each with a different deck. When a deal has been played, each player places his original 13 card hand in front of him,



stacked and face down. (It is a good idea to shuffle the 13 cards.) The score for that hand is recorded on a piece of paper, and the scorekeeper places it, text down, under his stacked hand.

### **28.7.2 The last four deals**

All the players switch tables, and they play again the deals that the other table played during the first four deals. The teams also switch seats so that all the cards are played by members of both teams (i.e. if a member of team A played a hand during the first four deals, then a member of team B plays it during the last four deals). Scores are recorded on the same pieces of paper so that after each deal the players may compare how others played the hands.

### **28.7.3 Scoring**

The points are summed up, and the team wins who collected more game points during the  $2 \times 8$  deals.

# Chapter 29

## Valepaska

*2 - 6 players, standard deck of playing cards*

Valepaska is my childhood favourite. There are many minor variations to Valepaska, but these are the rules we used as children. The speciality of Valepaska is that the cards are played face down, and when you play cards, you say what you play. You are allowed to lie, but other players are allowed to challenge your announcement. I have not designed this game.

### 29.1 Setup

One deck of 52 cards is used, the ranking of cards, from the highest to the lowest, is 2,A,K,Q,J,10,9,8,7,6,5,4,3. The game is played by two to six players. Everyone is dealt five cards. The rest of the cards form a face-down stock.

### 29.2 The game

In each turn the player in turn places one or more cards of the same rank from his hand into a pile next to the stock according to the following rules:

- If the pile is empty, the player must play cards that are lower than jack.
- If the pile is not empty, the new cards must be of the same rank or of a higher rank than the previous cards in the pile.
- Twos can be played on the top of any card or on an empty pile. Only another two can be played on the top of a two.
- If the top cards of the pile are lower than seven, the player is not allowed to play face cards.

- Aces can be played only on the top of face cards. They can be played to an empty pile, but then the next player must pick them up; and the turn remains on the same player.

If a player plays a ten or an ace, the pile falls. The pile falls also when a player plays cards so that there are four or more cards of the same rank on top of the pile (exception: Four or more twos do not cause the pile fall). When the pile falls, the cards in the pile are discarded from the play, and the same player plays the first cards to the now-empty pile.

If a player has fewer than five cards in his hand, he must take cards from the stock so that he has five cards (if there are cards left in the stock).

### 29.3 End of game

When a player gets rid of all his cards after the stock has exhausted, he is out and does not participate in the game anymore. The first player to go out is the winner. The loser is the player who has cards left when everyone else has gone out.

### 29.4 Crucial rule

The cards are always played face down, and when playing cards, you announce what cards you play (you announce the number and the rank of the cards, for example, three eights). You need not be truthful, and your plays need not be legal plays as long as you announce them to be legal plays. However, you must always play as many cards as you announce.

Other players are allowed to challenge the announcement by saying 'I doubt it'. If someone 'doubts', the last-played cards are turned face up, and if they were fake, the person who played the cards must take the entire pile in his hand. If they were played truthfully, the doubter must take the entire pile in his hand. In any case, turn passes to the next player. With the following exceptions: If the doubted cards fell the pile and were played truthfully, then the same player continues. If the doubter picked up cards, and he is the next player, turn passes to the player next to him.

### 29.5 Note

These are the rules as I remember them from my childhood, and as far as I remember, the game never went into a deadlock. However, there is a theoretical possibility of a deadlock, if everyone has only jacks or higher in their

hands and the pile is empty. Perhaps it could be a good idea to allow playing jacks or higher on an empty pile; some people play Valepaska so that this is allowed.

# Chapter 30

## Musta Maija

*3 - 6 players, standard deck of playing cards*

Musta Maija is a game from by childhood. It is primarily a children's game, but due to tactical possibilities, it can be enjoyed by adults as well. I have not designed the game.

### 30.1 Setup

The game suits to 3-6 players, and it uses the standard deck of 52 cards. Ace is the highest. Everyone is dealt five cards, and the rest of the cards forms a face-down stock. The top card of the stock is placed face up sideways under the stock, and it determines the trump suit. If it is spades, the card is returned into the middle of the stock, and a new card is turned to determine the trumps. Repeat until you have a non-spade card to determine the trump suit.

The queen of spades is a special card, and it is called Musta Maija.

### 30.2 Gameplay

Whenever, during the play, a player has less than five cards in his hand and there are cards left in the stock, the player must take cards from the stock so that he has five cards.

In each turn the player in turn plays one or more cards from his hand onto the table with the following restrictions: The cards must all be of a same suit (in this purpose, Musta Maija counts as a spade). Their number must not exceed the number of cards that the player left to the one in turn has in his hand. Playing cards onto the table is one action, and the player is not allowed to take cards from the stock in the middle of playing cards onto the table.

After that the player left to the player in turn tries to beat the cards on the table. A card can be beaten with a higher card of the same suit. A non-trump card can be beaten with any trump. A card can beat only one card. Musta Maija cannot be beaten, and it cannot beat any cards. Beating cards is one action, and the player is not allowed to take cards from the stock in the middle of beating.

Beaten cards, and the cards that were used to beat cards, are removed from the play.

If the player in the left beat all the cards on the table, it is his turn to play cards to the table. If the player could not or did not want to beat all the cards on the table, he must pick up the remaining cards into his hand, and the turn passes to the player left to him.

### **30.3 End of game**

When a player gets rid of all his cards after the stock has exhausted, he is out and does not participate in the game. The last player to have cards in his hand (including Musta Maija) is the loser.

# Chapter 31

## Believe or Doubt

*3 - 6 players, Trivial Pursuit set or other trivia game set, poker chips*

Believe or Doubt is a bluffing trivia game for 3 - 6 players. If you do not know the answer, you can give a wrong answer and pretend that it is correct. Other players can call your bluff. This game was designed by myself and my father.

The game uses the question cards from Trivial Pursuit or some other trivia game. Also other gaming equipment of the trivia game can be used to determine the categories of the trivia questions asked. How to use the Trivial Pursuit board for that is explained in the last section.

### 31.1 Basic rules

On each turn, a trivia question is asked, and the player whose turn it is, answers it. The question category or topic is determined by whatever means appropriate for the trivia game you are using. (Roll a dice, or move on the board, or...)

After the player has answered the question, the other players announce if they 'believe' or 'doubt' the answer. First, the player left to the answerer makes the announcement, then the player left to him, and so on. This goes on until one of the players announces that he 'doubts' or everyone has announced that they 'believe'. No 'table talk' is allowed during the announcement phase.

If all players 'believe', the answer is regarded as correct (whether or not it actually is).

If someone 'doubts' and the answer is wrong, turn passes to the player who 'doubted'. (i.e. he is asked a new question, he answers it etc.)

If someone 'doubts' and the answer is correct, one point is subtracted from the score of the player who 'doubted'. A player's score can go negative.

In any case, if the answer is correct (or is regarded as correct), the player who answered gets one point and a new turn.

The first player to get ten points wins.

## 31.2 Poker chips

Scorekeeping is most convenient with poker chips that represent "minus" points. In the beginning of the game everyone is given ten poker chips. When a player gives an answer and no-one doubts, the player removes one of his poker chips from the game. When a player gives a correct answer and someone doubts, the answerer gives one of his poker chips to the doubter. When a player gets rid of all of his poker chips, the player wins.

## 31.3 Accuracy of the answer

Extensive house rules are needed to determine the accuracy required for an answer to be accepted as correct. When the required accuracy is unclear, any player may ask the players to negotiate the required accuracy before the start of the announcement round, and, if needed, ask the answerer to provide a more detailed answer. It is also a good practice to regard the answer printed in the question card as authoritative ( $\rightarrow$  no negotiations whether the answer printed in the card actually is correct or not).

## 31.4 Special rules for Trivial Pursuit board

Trivial Pursuit board can be used in the following manner. Each player places his pawn in the center.

In each turn, the player whose turn it is rolls the dice and moves his pawn according to the dice roll. (In the first turns, the players must move towards the outer track, and once they have reached the outer track, they are not allowed to exit it.) Then the type of the square he lands on determines the continuation.

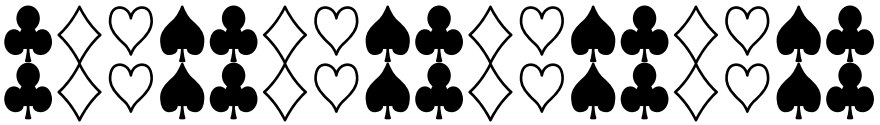
- In ordinary squares, the color of the square determines the question category. A trivia question is asked, as described above.
- In the free reroll or teleport squares (we have a very old Trivial Pursuit having free reroll squares. I think newer versions have teleport squares



instead of free reroll squares), a trivia question is asked like in the ordinary squares. The answerer bans one color, and the player right to the answerer chooses the color of the question from other colors. Other players can try to affect the choice of the color with 'table talk'.

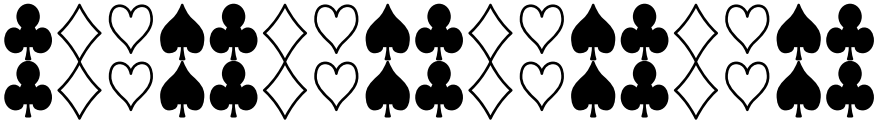
- In 'pie' squares (that would give a point in the normal Trivial Pursuit), the answerer may choose: He can either proceed like in an ordinary square, or he can change seats. If the player changes seats, he chooses between which two players he will sit. Other seats are adjusted accordingly. The two chosen players must be adjacent before the change of seats. Turn passes to the player who sat left to the player in turn before the change of seats.

The order of seating makes a difference when some players are more knowledgeable than others. When all the players are of equal strength, the change of seats rule can be ignored.



# Superpart C

## The Science of Games



Part VII

**Mathematical**

# Chapter 32

## Hex

*2 players, Hex set*

Hex is a board game for two players, invented by mathematicians Piet Hein and John Nash. This booklet contains the rules of Hex, instructions to make a Hex set and a bit about the mathematics of Hex.

### 32.1 Rules

Hex is a board game for two players, played on a diamond-shaped board with a hexagonal grid. Two opposing sides of the board are marked red, and the other two opposing sides are marked blue. For an illustration of a small board, see the picture.

One of the players plays with red pieces and another plays with blue pieces. The game starts on an empty board. Turn consists of playing a piece of the player's color on a vacant hexagon on the board. The game is won by connecting the sides of the board that are of the player's color by a chain of the player's pieces. The winning chain may make curves on the board as long as any two successive pieces of the chain lie in adjacent hexagons and the chain connects the sides. The corners of the board belong to both adjacent sides.

Since there is a considerable first player advantage in Hex, the following extra rule is used to neutralize the advantage: After the first move of the first player, the second player may swap the colors the players use (and hence, if he swaps, the first move becomes a move of the second player's color.) Turns are in any case arranged so that the plays of different colors alternate all the time.

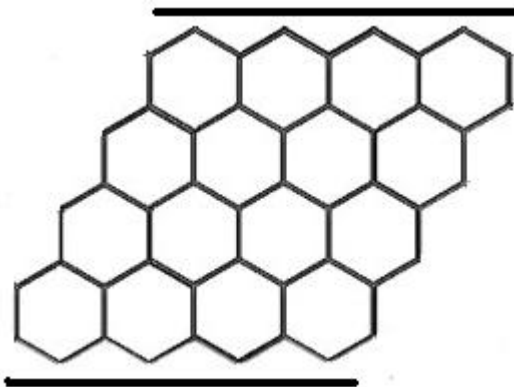


Figure 32.1:  $4 \times 4$ -board

## 32.2 Mathematics

What makes Hex interesting is that it can be analyzed mathematically quite extensively, but not so extensively that gameplay would be mechanically following formulas.

For example, it can be proved that the game cannot end in a draw. The idea of the proof is as follows: Assume that the game has been played until the board is full. Imagine the hex grid continues outside of the board, and on all hexes outside of the board that are next to the red sides of the board there are red pieces. Imagine similarly blue pieces next to the blue sides. Start from a corner of the board, and draw a path on the board on the boundary red and blue pieces. The path will eventually meet one of the sides of the board that are opposite to the starting corner. Now there is a winning chain of pieces next to the path.

A standard strategy stealing argument shows that the second player cannot not have a winning strategy if the swap colors rule is not used. Since the game cannot end in a draw, the first player has the winning strategy in this case.

However, this is a non-constructive existence result for the winning strategy, and in practice, the winning strategy is not known.

It is easy to show that in any game with the swap colors rule and no possibility of a draw the second player has a winning strategy. Namely, after the first move one of the sides has a winning strategy, and the second player may choose the side with a winning strategy for himself. Again, this is non-constructive.

## 32.3 Y

Y is a game similar to Hex, except that the board is an equilateral triangle, and the object of the game is to make a chain that connects all three sides of the triangle.

## 32.4 Making a Hex set

Hex sets are not sold anywhere, but it is easy to home-make Hex equipment. Stores selling role playing game equipment sell a product called Chessex Battlemat. It is a thin vinyl board with a hex grid on one side and a square grid on the other side. It is easy to cut a Hex board of desired size ( $11 \times 11$ ,  $13 \times 13$  and  $14 \times 14$  being the most common sizes for a hex board) out of it. The playing pieces of Go, called Go stones, can be used as the playing pieces. Due to a lucky coincidence, standard Go stones are just optimally sized for a Battlemat with 1 inch hexes.

Hex can also be played as a pen and paper game. You can print boards for this purpose at [http://hexwiki.amecy.com/index.php/Printable\\_boards](http://hexwiki.amecy.com/index.php/Printable_boards)

# Chapter 33

## Beginners' Go

*2 players,  $8 \times 8$  square board, 40 black pieces, 40 white pieces*

Beginners' Go is an adaptation of the complex board game Go for beginners, using a smaller board and simplified end game rules. The rules of go - even in this simplified form - are difficult to explain in an exact manner. This is my attempt to do it, but I do not know if this chapter is comprehensible for people with no mathematical background.

### 33.1 Setup

The game is for two players and it uses a board with a  $8 \times 8$  square grid. The pieces are played on the intersections of the lines that mark the boundaries of squares. There are  $9 \times 9$  such intersections, and they are called points. One player plays with black pieces and another with white pieces. The pieces are called stones, and the black player starts the game. The game starts on an empty board. There are "enough" stones so that the supply of stones does not end.

### 33.2 Concepts

#### 33.2.1 Adjacency

Two points are said to be adjacent, if they are adjacent horizontally or vertically. Diagonally "adjacent" points are not said to be adjacent.

### 33.2.2 Sequences

A sequence of stones is a sequence such that any two successive members of that sequence lie on adjacent points on the board.

A sequence may make curves on the board. A sequence can consist of one or more stones.

A sequence of empty points is defined similarly.

### 33.2.3 Groups

The black stones on the board are divided into groups. A group consists of those black stones that are connected to each other by sequences of black stones.

A group can consist of one or more stones.

*Intuitive idea: A group of black stones is a connected set of black stones.*

White stones are divided into groups similarly.

### 33.2.4 Area

An empty point on the board is black area, if there is no sequence of empty points connecting that point to an empty point adjacent to a white stone.

*Intuitive idea: Those empty points are black area that are completely enclosed by black stones.*

White area is defined similarly.

### 33.2.5 Liberties

A liberty of a group is an empty point adjacent to a stone of that group.

## 33.3 Game

Turn consists of placing one stone of the player's color on an empty point on the board. If the player does not want to place a stone, he may pass.

If a stone is placed on the last liberty of some of the opponent's groups (i.e. after the placement the opponent's group has zero liberties), the opponent's group having zero liberties is removed from the board.

### 33.3.1 No suicide

A stone cannot be placed so that some of the player's own groups has zero liberties after the placement.



A stone can, however, be placed so that both the player's own group and the opponent's group have zero liberties after the placement. Then the opponent's group is removed from the board, and the player's own group gains liberties.

### **33.3.2 Ko**

A stone cannot be placed so that the whole board situation after the player's previous move repeats. This is to ensure that there will be no stalemate.

## **33.4 End of game**

The game ends when both players pass on consecutive turns. Then each player gets one point for each of their stones on the board, and one point for each empty point on the board that is their area. Furthermore, white gets 6.5 points bonus to mitigate the first player advantage. The player with more points wins.

## **33.5 How close is this to real Go?**

Real Go is played on an  $19 \times 19$  point board, and that is the main difference between it and Beginners' Go.

Go has two scoring systems, Chinese and Japanese. The outcome of the game in Chinese and Japanese scoring systems differs by at most one point. Chinese scoring system is used in China and Japanese scoring system outside of China.

Although the end game procedure in these Beginners' rules differs from real Go, the outcome of the game under the Beginners' rules is the same as in real Go under Chinese scoring system, so there is not much difference to real Go.

# Chapter 34

## Go and topology

Both the game of go and the branch of mathematics called topology deal with connectedness. In this text we give a generalization of a topological space that can deal with go, and give the definitions of a group of stones and area in our formalism. The generalization was made by Eduard Cech, but its application to go is my own idea. We assume that the reader is familiar with the chapter on Beginners' Go.

**Definition.** A pair  $(X, \text{cl}_X)$  is a closure space, if  $X$  is a set, and  $\text{cl}_X$  is a function from the power set of  $X$  to the power set of  $X$ , and the following axioms are satisfied:

1.  $\text{cl}_X \emptyset = \emptyset$
2.  $A \subset \text{cl}_X A$  for all  $A \subset X$ .
3.  $(\text{cl}_X A) \cup (\text{cl}_X B) = \text{cl}_X(A \cup B)$  for all  $A, B \subset X$

**Definition.** A closure space  $(X, \text{cl}_X)$  is a topological space, if  $\text{cl}_X \text{cl}_X A = \text{cl}_X A$  for all  $A \subset X$ .

**Definition.** Let  $\mathbb{G} = \{0, \dots, 8\} \times \{0, \dots, 8\}$ . Let  $\text{cl}_{\mathbb{G}}\{(x, y)\} = \{(x, y), (x - 1, y), (x, y - 1), (x + 1, y), (x, y + 1)\} \cap \mathbb{G}$ . Define the closure for bigger subspaces using Axiom 3. Now  $(\mathbb{G}, \text{cl}_{\mathbb{G}})$  is the Beginners' Go board and it is a closure space.

**Definition.** Let  $\mathbb{B} \subset \mathbb{G}$  be the set of those points that have black stones, let  $\mathbb{W} \subset \mathbb{G}$  be the set of those points that have white stones, and let  $\mathbb{A} \subset \mathbb{G}$

be the set of empty points.

**Definition.** Let  $(X, \text{cl}_X)$  be a closure space and let  $A \subset X$ . Define  $\text{cl}_A$  by  $\text{cl}_A B = A \cap \text{cl}_X B$  for all  $B \subset A$ . Now  $(A, \text{cl}_A)$  is a closure space, called a subspace of  $(X, \text{cl}_X)$ .

**Definition.** Let  $(X, \text{cl}_X)$  be a closure space. We say that  $(X, \text{cl}_X)$  is non-connected, if it can be partitioned into  $A, B$  such that  $\text{cl}_X A = A$  and  $\text{cl}_X B = B$ . We say that  $(X, \text{cl}_X)$  is connected, if it is not non-connected.

**Definition.** Let  $(X, \text{cl}_X)$  be a closure space and let  $A \subset X$ . We say that  $A$  is a connected component of  $X$ , if  $(A, \text{cl}_A)$  is connected, and there does not exist  $B \subset X$  such that  $A \subset B$ ,  $A \neq B$  and  $(B, \text{cl}_B)$  connected.

**Definition.** Black groups are the connected components of  $(\mathbb{B}, \text{cl}_{\mathbb{B}})$  and white groups are the connected components of  $(\mathbb{W}, \text{cl}_{\mathbb{W}})$ . If  $A$  is a group, the set of liberties of  $A$  is  $\mathbb{A} \cap \text{cl}_{\mathbb{G}} A$ .

**Definition.** Areas are the connected components of  $(\mathbb{A}, \text{cl}_{\mathbb{A}})$ . An area  $A$  is a black area, if  $\mathbb{W} \cap \text{cl}_{\mathbb{G}} A = \emptyset$ . An area  $A$  is a white area, if  $\mathbb{B} \cap \text{cl}_{\mathbb{G}} A = \emptyset$ .

## Chapter 35

# Mathematical problems on games

*1 player, pen and paper*

Here are a couple of mathematical problems of games. I have myself designed the problems and also solved them.

1. The rules of Musta Maija can be found in this booklet. Assume there are  $n$  players in Musta Maija. On which values of  $n$  does one of the players necessarily get rid of all his cards, regardless of how smart or stupid the players play?
2. Two players play Hutunkeitto as follows. The first player throws a pesäpallo bat (similar to a baseball bat) in the air, and the second player catches it. Then the first player grabs the bat so that his hand touches the hand of the second player and it is nearer to the handle of the bat than the hand of the second player. Then the second player disattaches his grip from the bat and grabs the bat so that his hand touches the hand of the first player and is nearer to the handle of the bat than the hand of the first player. The game goes on like this, and the player wins who eventually holds the end of the bat. For a video on Hutunkeitto, see <https://www.youtube.com/watch?v=VjD2uNctZCg>  
When the bat is first caught, there is  $k$  units of length between the hand and the end of the bat. On subsequent turns the players can choose the size of their hold from the interval  $[n, m]$ . Which player has the winning strategy when  $k$ ,  $n$  and  $m$  are given?

3. One player plays the following game on an infinite grid paper. The intersections of the lines that form the grid are called places. In the

start of the game, a finite number of places are marked. In each turn, the player first marks a place and then draws a straight line segment through five marked places horizontally, vertically or diagonally in 45 degree angle. Two drawn line segments are allowed to intersect only at one point. The game ends when the player cannot draw the line segment according to the rules. Does there exist an initial marking of places so that the player can continue the game infinitely long?

4. There are  $2n$  marked points at even intervals on a circle. One player plays the game where he colors the marked points one at a time. If a point is colored and its neighboring point is not, both of these points are called boundary points. If at some point of the coloring two antipodal points are boundary points, the player loses. The player wins if he manages to color all the marked points without losing. Can the player win the game?
5. There are  $2n$  sticks on the table. The lengths of the sticks are  $1, 2, 3, \dots, 2n$ . Two players play a game where each player takes a stick from the table on his turn. When all the sticks have been taken, the player wins who has a bigger sum of lengths of sticks. By how many units does the first player win, if both play with the optimal strategies (i.e. maximize their sums)?
6. Same as the previous problem except that at his first turn the first player takes one stick, and on subsequent turns each player takes two sticks. (On the last turn the player whose turn it is takes the one remaining stick.)
7. (I have not been able to solve this.) Assume there is a deck of  $2n$  cards, all of the same suit. The cards are numbered  $1 \dots 2n$ . There are two players, and all the cards are dealt to them. Then the players play a standard trick-taking game as described in Chapter 2. The player wins the game who wins more tricks. Which player has the winning strategy, when the start player and the contents of the players' hands are given?

## Chapter 36

# Solutions to mathematical problems

1. One of the players will necessarily get rid of his cards if and only if  $n$  is even. Assume  $n$  is even. Divide the players into two groups so that every player sits between two players of the other group. If a player attacks and the next player picks up cards, either cards are taken from the talon or the total number of hand cards of the attacking group decreases. Hence, one of the players of the attacking group gets rid of all his cards, if the same group attacks 52 times in a row. If the turn to attack changes from one group to another, cards are removed from the play. Hence, if the turn to attack changes from one group to another 52 times, one of the players gets rid of all his cards. Hence in  $52 \times 52$  turns, someone gets rid of all his cards.

Assume  $n$  is odd. There is a deadlock, if the attacker always plays one cards and the defender always picks it up.

2. The basic strategy is as follows: If the room left in the bat is more than  $m$ , the size of the grip is  $n + m - x$ , where  $x$  is the size of the previous grip of the opponent. If the room left is at most  $m$ , the size of the grip is  $m$ .

Let  $y$  be a real number. Let  $f(y)$  be the smallest positive real number for which there is an integer  $\ell$  such that  $f(y) = \ell(n + m) + y$ .

If  $f(k) > m$ , the second player wins with the basic strategy.

If  $n \leq f(k) \leq m$ , in his first turn, the first player plays so that there is  $k'$  room left after his play,  $f(k') = n + m$ , and after that he wins with

the basic strategy.

If  $f(k) < n$ , the first player plays his first play in the size on  $n$ . After that, he wins with the basic strategy.

3. No, there is not. Each marked place has eight directions where a line segment can go. Marking a place adds eight free place-direction pairs, and each line segment reserves eight place-direction pairs. Hence the number of free place-direction pairs remains constant throughout the game. At the boundary of the game situation there are necessarily free place-direction pairs; the more the bigger the game situation is. Hence the game situation cannot grow arbitrarily large.
4. No, he can not. Make the antithesis that the player wins. Assume a point  $x$  is colored before its antipodal point  $x'$ . Let  $y$  be a neighboring point of  $x$ , and  $y'$  the antipodal point of  $y$ . By going through all the orders to color  $x$ ,  $x'$ ,  $y$  and  $y'$  we find out that also  $y$  is colored before  $y'$ . Let  $x_0$  be the point that is colored first. By induction starting from  $x_0$  we show that it holds for every point  $x$  that  $x$  is colored before its antipodal point, which is a contradiction.
5. The optimal strategy is to take the longest available stick.

Arrange the sticks into pairs such that the longest and the second-longest are a pair, the third-longest and the fourth-longest are a pair etc. From each pair the first player takes the longer and the second player the shorter. Thus, in each pair the first player wins one unit. Since there are  $n$  pairs, the first player wins by  $n$  units.

Let now there be  $n$  sticks, of the lengths  $s_1, \dots, s_n$ , so that  $s_i \geq s_{i+1}$  for all  $i$ .

Let  $G_1$  be the game where both always take the longest available stick. Let  $G_2$  be the game where the first player takes first  $s_i$ , and on the subsequent turns both take always the longest available stick. We prove that the first player gets at least as good outcome in  $G_1$  as in  $G_2$ , where the outcome means "the sum of the first player minus the sum of the second player".

Sticks  $s_j$ ,  $j > i$ , are taken by the same player in  $G_1$  and  $G_2$ , so these sticks do not affect the difference of outcomes, and thus we may assume that  $i = n$ .

Consider the outcome of  $G_1$  minus the outcome of  $G_2$ . In the first turn, the difference of outcomes is  $s_1 - s_n$ . On subsequent turns  $k$  it is either  $s_k - s_{k-1}$  or  $s_{k-1} - s_k$ .

Hence, "the outcome of  $G_1$  minus the outcome of  $G_2$ " is at least  $(s_1 - s_n) - (s_1 - s_2) - (s_2 - s_3) - \cdots - (s_{n-1} - s_n) = 0$ . Hence,  $G_1$  is at least as good for the first player as  $G_2$ .

Now it can easily be proved by induction that the optimal strategy is to always take the longest available stick. We essentially just did the inductive step.

6. That it is optimal strategy to always take the longest available stick(s) is proved exactly in the same way as in the previous problem. Just regard taking two sticks as two consecutive turns of one player.

Arrange the sticks into pairs like in the previous problem. Now the players alternate in winning one unit in each pair. Hence, the first player wins by one unit if the number of pairs is odd, and the game is a draw if the number of pairs is even.



## Part VIII

# The Metaphysics of Games

# Chapter 37

## Introduction

In this text I study the metaphysics of games. We start by making concepts exact. The word game can mean either of two things. First, it can mean a certain type of activity determined by rules. Examples of such games are Chess, Go and Pool. Second, the word game can mean an individual match. Examples of games in this sense are the game of go played by Honinbo Dosaku and Yasui Senchi 19. 11. 1693 in Shogun's palace and the game of Hex I played in Internet (<http://www.littlegolem.net/jsp/game/game.jsp?gid=902999>), which started 1.7.2008 and ended 21.7.2008, and which I won. For clarity, we use the word game only in the first sense, and we call the games in the second sense matches.

In this first part I try to characterize what is a game in the first sense. First I motivate and give a characterization, which works for a limited set of games (that are usually called board and card games). In the second chapter I present critique for my characterization in the case where we do not limit ourselves to that limited set.

We start by studying games such as chess, checkers and go. We see that the games are played using playing equipment (board and pieces) according to rules. So our first candidate for a characterization is that the game is determined by playing equipment and rules.

However, we note that not all matches use physical playing equipment. For example in the match of Hex I linked above, there was no board or pieces as physical entities. They were located in the memory of a computer. If we study correspondence chess, we note that each player has his own board that have the same situation of the game. The players are not physically present, they rather mail moves to each other, and illustrate the state of the match each on his own board. It is also in principle possible, although practically

cumbersome, to play without playing equipment so that the players announce the moves verbally and imagine the board in their minds.

The example of correspondence chess presented above leads us towards the characterization of a game I want to give. In correspondence chess, you use the board to illustrate an abstraction, and that abstraction is essentially the game.

What is this abstraction about? In the beginning, we noted that a game has playing equipment and rules. Then we noted that the playing equipment is irrelevant to the definition of the game. So we are left with the rules. Could it be that the rules characterize the game? Not at least in a one-to-one way, because one game can have several rule texts, which describe the same game but differ in wording. Could a game be then an abstracted collection of rules, where the details of wording have been "abstracted away?"

Now we are close to the characterization I am going to end up with. There are, however, two problems left:

- It is artificial to identify a game with rules, since game is not rules, but rather a thing described by the rules.
- The collection of rules of any game consists of two types of rules.

At this moment, we do not know what a game is, except that it is something abstract, illustrated with playing equipment and described by the rules. We continue by analyzing the two types of rules.

I give examples of the two types:

1. In chess, the bishop moves arbitrarily many squares diagonally, but it is not allowed to jump other pieces.
2. In chess, a move is made and you are not allowed to take it back, once the piece has touched the destination square.

The difference between these types of rules is that if you play chess so that you do not have rule (2) (but, for example, the move is judged made once you release the piece), the game is still chess. Rule (2) is also not obeyed in internet chess, where pieces are moved with mouse clicks. If you do not have rule (1) (but, for example, the bishop is allowed to move only one square diagonally), the game is not chess, but a variant of chess.

So, the rules can be divided in two categories. One class defines the game and the other does not. Next I am going to make a claim that is central to this text:

The rules of a game can be divided in two classes. The first class describes the game as an abstraction. More accurately, it describes the laws of nature of a small imaginary world. (I'll explain this more later on). The second class describes how to approximate that abstraction in the real world with an adequate accuracy, or in other words, how to build a simulation of that imaginary little world into the reality.

This is my answer to the question "What is a game?" asked in the beginning of this text: Small imaginary world with its own laws of nature. (I do not claim that any small imaginary world with its own laws of nature is a game, but the exact characterization for when a small imaginary world is a game is not interesting. I simply claim that for each game there is a small imaginary world that can be identified with the game.)

I have claimed that part of the rules of a game characterize the laws of nature of an imaginary world. I motivate my claim by describing that world in the case of chess. The space in the chess world is two-dimensional and discrete. It is eight places long and eight places wide. Each place can hold one piece, and the location of the piece is uniquely determined by telling in which place it is. A piece can be a king, a queen, a rook, a knight, a bishop or a pawn. During a match, the pieces move on the board. The first move is made by white, then by black, then by white and so on. With one move, the bishop moves diagonally arbitrarily many places, but it is impossible for it to jump over other pieces. And so on.... I hope that the reader has at this point understood what I mean with a game world.

Next we study the rule (2). In the game world, time passes in discrete units, moves. Because the real world has continuous time, we need a means to simulate a discrete moves in the real world. In particular, we need to determine the exact moment at which a move is made. So we need the rule (2), which tells it.

This view, among other virtues, explains why cheating in a game is absurd. The type (1) rules are laws of nature, which cannot be broken inside the game world. When a player cheats (i.e. breaks the type (1) rules), the player breaks the correspondence between the game world and the real world, and in effect stops playing the game. When the player breaks the type (2) rules, the correspondence is not necessarily broken. Type (2) rules, however, as a whole, illustrate a contract between players how the game world is simulated in the real world, and the correspondence is at least weakened by breaking type (2) rules.

Now we have characterized what are games such as chess, checkers and go. In the next chapter we show examples of situations where it is problematic to think a game as a little world with its own laws of nature.

## Chapter 38

# The Limits of Applying the Theory

In the previous chapter we studied games such as chess, checkers and go, and we decided that these games are idealized little worlds approximated by real game situations. We also decided that the rules can be divided in two categories, the first category describing the laws of nature of the imaginary world, and the second category describing how to approximate the imaginary world in the real world. My theory works well for a class of games, called board and card games.

In this section we study what happens when we try to apply the theory outside the class of board and card games. We concentrate on Pool and Petanque.

In board and card games, the game is an abstraction represented or illustrated with the gaming equipment. Pool is different, because in Pool the playing equipment does not represent abstractions, but Pool is played by hitting concrete balls with concrete cue sticks. The question I am interested in is that does there exist idealized Pool, approximated by real-world Pool.

The answer seems to be "yes". In idealized Pool the table is absolutely even, and the balls are absolutely round, and the mass of the balls is absolutely evenly distributed. The real-world playing equipment never reaches the ideal completely, but Pool tables are very expensive, because the players want them to be a good approximation. Also the mass distribution of the balls is wanted be a good approximation of even: Before synthetic materials, the best pool balls were made of ivory.

Petanque seems to be different. Also ideal Petanque balls are round and the mass is evenly distributed. (In tournament Petanque there are strict

rules for accepted balls. Every player plays with balls he owns, and balls where the mass is not evenly distributed are forbidden. Such balls would be advantageous in certain situations.) Nevertheless, it is a part of the spirit of petanque that the playing surface is even only to a certain extent. It is the spirit of petanque to use the deviations of evenness of the playing surface in one's strategy. So, such a creature as the idealized petanque field does not exist, and petanque is played on the uneven surfaces of the real world.

So far, we have decided that such games as Pool and Petanque the playing equipment and surfaces are a part of the game (unlike board and card games, where they represent abstractions). And depending on the game and the type of equipment, they can be approximations of the ideal, or the unevennesses of the real world can be a part of the game.

In the case of board and card games I mentioned that a part of the rules describe the laws of nature of an imaginary game world. Next I will study whether one can think Pool as a little world with its own laws of nature.

Pool has rules such that they players play in turns, where the turn ends when the player fails to pocket a ball, that are most easily thought of as laws of nature of an imaginary game world. The big difference to board and card games is that the laws of nature of the real world, that is, Newtonian physics when it describes the movement and collisions of objects, are a part of the laws of nature of the pool world. The same is true for petanque. Pool also has type (2) rules. Abstract Pool is most easily formed so that it is impossible for the balls to fly off the table. Because this can happen in the real world, we need type (2) rules which tell what to do if the balls fly off the table.

As a conclusion, Pool and Petanque can be thought of as imaginary game worlds. However, the laws of nature of the real world are mixed with the game world unlike in board and card games. In the case of Petanque, also the unevennesses of the playing surface are mixed with the game world.

Now we have ended the excursion outside board and card games, and in the continuation, we will only study board and card games.

# Chapter 39

## Ethics

I do not believe that "good" and "evil" are natural properties of the real world. They are only inventions of the man. In this case some imaginary worlds differ from the real one. For example, in the world of Lord of the Rings by J.R.R. Tolkien, "good" and "evil" are natural properties.

The game worlds are similar to the Tolkien's world in that the ethical concepts describe natural properties of the game world. Those ethical properties are not "good" and "evil", but "winning" and "losing". Winning is what the player has the duty to try to achieve, and losing is what the player has the duty to avoid.

It can be easily seen that the winning and losing conditions are part of the game world: Some games can be played as Misere (<http://en.wikipedia.org/wiki/Misere>), and like every gamer knows, the misere version of a game is a different game from the original.

The particular kind of winning the player has a duty to pursue can depend according to the exact variant of the game. For example, in the game of Canasta, the teams get points, and the team wins that first gets 5000 points. Canasta can be played simply to win, so that the ethical duty is to be the first team to break the 5000 point limit. The other possibility is to play so that the ethical duty of the winning team is to maximize the difference of scores, and the ethical duty of the losing team is to minimize the difference of scores. Which variant is played, is a matter of agreement among the players. We play so that normally we play the former variant, and if we want to play the latter variant, we agree that the losing team pays for the winning team the difference of scores in money. This is a way to approximate the abstract ethical responsibility of the game world with a real-world monetary incentive.

While the player functions as an agent inside the game world, the player

has only one duty: To try to win, and to try to avoid losing (or, according to the variant played, to maximize the victory and to minimize the loss). Some might ask if the player has a duty to, for example, not to cheat. My answer is: Yes, but not as an internal agent of the imaginary game world. We remember that the rules of the game are the laws of nature of the game world, and hence cheating, breaking the rules, is impossible for the player as an internal agent of the game world. So we do not need a responsibility for the player not to cheat as an internal agent of the game world, since it is impossible.

However, playing a game happens in the real world, and it is indeed possible to cheat, that is, break the correspondence between the imaginary game world and the part of real world that simulates it. This leads us to the central ethical responsibility that each player has as a real-world player: Act so that the correspondence between the imaginary game world and the real world remains as complete as possible. This responsibility includes choosing moves so that they are the best possible in terms of victory, not cheating, and a couple of other things we will return later on.



# Chapter 40

## Examples from Card Games

In the previous chapters we have decided that board and card games are abstract, imaginary little worlds approximated by real-world gaming. In this part I explain some phenomena encountered in card games using my theory.

### 40.1 Marked cards

In card game worlds, there is an universal law of nature that cards cannot be distinguished by their backs. (If we are accurate, I think that the cards are symbols for something abstract, but in this example, it is enough to talk about idealized cards as objects of the card game worlds.) In the real world, the backs of the cards are only approximately identical and there are tiny differences.

Usually, for example at Bridge clubs, the cards used are relatively new, and the people cannot tell the cards by their backs. In this kind of situations, relatively new playing cards approximate idealized cards with a sufficient precision.

Sometimes, for example in home use, older cards are used. In principle, they might be recognizable by their back, if only the players bothered study which card has which wear. Usually the players won't bother, since it takes quite a lot of effort, and it would break the correspondence between the game world and the real world, in other words, it would be cheating.

In some rare cases, typically in a summer cottage, the cards can be so worn that there are some individual cards that can be recognized by their

backs. Playing with such a deck offers quite bad correspondence between the abstract game world and the part of real world approximating it, but the correspondence may be good enough for a light entertaining game.

Recognizing cards by tiny differences in their backs produces problems in one situation: When playing for so big sums of money that there might be professional card cheaters participating. They can make tiny marks that are invisible for a layman on the backs of cards and recognize the cards by those marks. In his book "Scarne's Encyclopedia of Card Games" the magician and card sharp John Scarne describes the problem as follows:

*Some years ago, I invited six card-playing couples to my home and tried an experiment. I gave them a dozen decks of cards still sealed in their original wrappers. "You have been playing cards for the past twenty years", I said. "[...] One deck is marked and can be read from the back. I'll bet that [...] none of you can find it."*

*[...] They even examined the card cases before opening the decks, looking for signs of tampering with the government seal. [...] Then they began examining the backs of the cards. [...]*

*"Okay", one of them said finally. "We give up. Which one is it?". "I have confession to make", I said then, "I lied, when I told you that one deck is marked." [...] [I said:] "As a matter of fact, all twelve decks are marked."*

In situations, where it is possible that a skillful cheater participates in a game it is very difficult to get a good correspondence between the abstract card game world and the part of real world approximating it.

As a conclusion, we have seen that in how good shape the cards have to be depends on many things: The resources available, the seriousness of the game and the ability of the players to recognize cards.

It must be noted that for example Scarne thinks that activity of the professional cheaters is cheating and not a legitimate strategy. I hold this as a strong argument for my theory: One cannot give a rule that would determine when the cards are in a good enough condition, but it is situation-specific. So the best way to understand the situation is my theory: The game happens in an idealized little world. Marking cards and recognizing marks breaks the idealization and breaks the ethical responsibility of the gamers to preserve the correspondence between the real world and the idealized game world.

## 40.2 Peeking at opponents' cards

In card game worlds, there is an universal law of nature that the cards in a player's hand cannot be seen by other players. In the real world, however, some players hold their cards so carelessly that the players next to them can

peek at their cards. Sometimes someone even holds his cards so carelessly that the player next to him cannot help but see the cards.

Many players think that seeing other's cards ruins the game and they try not to see the opponents' cards even if they are held carelessly. Many players also ask a careless opponent to hide his cards better. According my theory, this is the ethical thing to do. All the players have the collective responsibility to keep up the correspondence between the game world and the part of the real world that simulates it.

In bridge clubs, there is a type 2 rule stating that a careless opponent must be asked to hide his cards better three times, and if the third request does not work, after that the player can freely peek at the cards of the careless opponent. This is a compromise between convenience and simulating the abstract game world. If three requests are not enough, why bother?

However, there are a lot of players, at bridge clubs and in home card games, that do not request opponents to hide their cards better, but instead peek at the opponents' cards if given the opportunity. The rationale they give that it is the careless opponent's own fault if he shows his cards; it is indeed possible to hold one's cards so that they cannot be peeked by others. These players think that keeping one's cards hidden is a part of game, and showing cards is bad play that can be freely exploited by others. In my opinion, these players construct the game world plain wrong: Card games are intellectual games, and physical details such as the way one holds his cards simply are not a part of the game world.

### 40.3 Messaging in partnership cards

Next I study the example, for which I developed the theory about fictional game worlds.

Some card games, such as Bridge and Canasta, are played in two-player teams. Usually in these kind of games there are two teams playing against each other, so there are total four players. The team members do not see the cards of each other. They are not allowed to discuss the playing strategy during the game. The most important thing in this example is the following: The team mates are not allowed to message to each other by using gestures, body language, secret signals or anything like that. They are also not allowed to signal with the thinking time.

The team members are, nevertheless, allowed to communicate using things internal to the game world, that is, the choice of their move.

In his book "Uusi täydellinen skruuvipelin ohjekirja" E.N. Maalari describes the situation as follows:

*Skruuvi is a game for gentlemen. Between players, it has been always a rule to kick out players who behave bad or cheat.*

*One must aim at acting fast, without wasting time. To describe own situation by thinking too long is bad behaviour. The face must be emotionless like a mummy. The face must not be used to show anger, joy, disappointment or acceptance as long as the game is being played.*

*[...]It is not appropriate to stare at the eyes of the partner. You shame yourself and insult your partner if you try to read his face.*

*However hot-tempered you are, you must not show emotion as long as the game is being played. After the game many players are not able to control themselves. But outbursts after the game are not against the rules of the game.*

In the light of my own theory, I analyse the situation as follows: In the idealized partnership card game world the players do not see the body language or the face of their partner, and they are not able to (for example) talk to their partner. In idealized partnership card game worlds the players also do not know the thinking time of their partner. (In idealized card game worlds the game proceeds in discrete moves, so that there is not a block of time between turns).

Partnership card games are problematic creatures, since getting a good approximation of the idealized game is difficult. People message unintentionally with their body language, likewise with the time they take to think. Usually, at home games and also at bridge clubs, the approximation is taken care of with a gentlemen's agreement: Each player does his best to keep the "poker face" as well as possible and tries not to read the body language of the partners. Of course, making gestures intentionally is cheating.

This is a functioning compromise between functionality and ease of implementation, even if it does not work perfectly. More drastic measures are taken only in top-level bridge. In really significant bridge tournaments they use so-called screens, i.e. boards blocking the vision are placed on the table so that team-members cannot see each other.

In club and tournament bridge they also restrict unintentional messaging with the length of thinking time. In certain situations a player may place a so-called stop signal on the table. After that the next player (which is an opponent), must not play his next move immediately, but must at least pretend he is thinking for a while. In other situations, unintentional messaging with thinking time does not carry sanctions.

To prevent messaging by speaking is usually taken care of in club bridge so that you do not speak with cards in your hand (except for expressions necessary for the game, such as asking whose turn it is, if you have forgotten it.) When I play canasta with friends, we use a less strict agreement: Everything

else can be discussed except for the current situation of the game. We even allow talking about past situations of the game. Sometimes players disagree whether a past situation affects the current one. In such a case any player can prohibit speaking about a particular past situation. This is a compromise between sociality and approximating the ideal, and it has proved itself a good enough compromise.

To finish, I point out that when playing bridge in the internet you do not see the partner, so you get a better approximation of the ideal than in face-to-face play.

## 40.4 Passing cards in Skruuvi

Sometimes there arises situations where the players agree how the game proceeds in the real world, but they disagree on the correct abstracted game world.

In Skruuvi, there is a situation where a player passes four cards simultaneously for his team-mate. The cards are stacked, so in the real world they are in a certain order. However, the question whether the cards have an order in the abstract game world has raised disagreement. (Expressed mathematically, the question is whether the player passes a *set* or a *sequence* of cards.)

The question affects the gameplay in practice. If you give a sequence of cards, that is, the cards have an order in the abstract game world, it is legitimate to communicate things to the partner with their order. If you give a set of cards, communicating with the order is cheating.

E.N. Maalari describes the situation as follows. He is (in my terminology) in favour of the set-idealization, but admits that he is in the minority.

*Earlier it was inappropriate to signal the voided suit by using the order of cards. If someone tried it, he was not longer accepted among gentlemen. Nowadays two signals have become so common that it is hopeless to fight against them. For this reason I adopt these two signals in my book, even if I have until now tried to do everything I can against their use.*

This was from the year 1944. In a Skruuvi guide published in 2004 (ed. Hannu Taskinen) there is a system called Kallio passing, which is a two-page guide to signalling with the order of cards. Even if the guide recommends the sequence interpretation, it also presents the set interpretation as a possible one:

*The development of Skruuvi we have described and in particular Kallio passing are examples of a general tendency of increasing the amount of information in card games. This has the effect of reducing the effect of chance. If it is too demanding to use these conventions, they can be ignored.*

## 40.5 Accidentally shown cards

According to my theory the rules are laws of nature in abstract game worlds, so the rules cannot be broken. In particular, in partnership cards, it is impossible to show cards to the partner, except in ways allowed by the rules. However, accidents happen, and in the real world the players sometimes show cards to their partner in ways not allowed by the rules.

So in Canasta (a card game played by two two-player teams) there is quite a lot of type (2) rules that deal with accidentally shown cards and other information passed in ways not allowed by the rules. The main rule is that the accidentally shown cards must be played when the first opportunity arises. For certain accidentally revealed illegitimate information there are also penalties in points given to the opponents.

It is the purpose of these rules to ensure that you do not suffer when the opponents accidentally and illegitimately reveal information to each other. So it makes it not worthwhile to even accidentally break the correspondence between the game world and the approximating reality. These rules mostly fulfill their purpose, although not in absolutely all cases.

What is noteworthy is that it is unethical to strategize with the above-described type (2) rules. You are not allowed to make a "mistake" intentionally, even if the penalty is less than the benefit. So we see again the ethical maximum of players to preserve the correspondence between the game world and the real world approximating it.

# Chapter 41

## Conventions

Normally, the things related to a game comprise rules and strategies. Rules describe the possible moves, and the winning condition, which gives a goal to the players. The strategies describe how to choose the moves so that they reach the winning condition as efficiently as possible.

In partnership cards (that is, in card games played by two two-man teams) there is a third element in addition to rules and strategies: Conventions.

In partnership cards, the team-mates do not see the cards of each other, and they are not allowed to message with speech, gestures, body language or other such things. However, they are allowed to message with the choice of moves. Before the game begins, the partnership may agree that certain moves are signals with a meaning. Typically the signals are of the type "If I make such-and-such move, it means that I have such-and-such cards in my hand." These kind of pre-agreed signals are called *conventions*. So conventions have *semantics*.

Partnership card games are quite often bid trick games. In bid trick games a hand begins with an auction, where the players make bids. In bids the players commit themselves to taking a certain amount of tricks or points during the actual game. The highest bidder gets typically some privileges such as determining the trump suit. In bid trick games, including Bridge and Skruuvi, there are typically quite a lot of bidding conventions that message the contents of the hand to the partner. These are of the type "If I make such-and-such bid in a such-and-such situation, it means that I have such-and-such cards in my hand."

Next I present a proposition what kind of laws of nature govern conventions in partnership card game worlds. Then I study how bridge approximates my proposition in practice. In the end I present critique against my proposition.

My proposition is as follows:

1. A team agrees freely among themselves what conventions they use.
2. Everyone knows what conventions the opponents use.
3. A team has had a chance to agree on defence conventions against the opponents' conventions. (And when agreeing the defence conventions, they have naturally known what conventions the opponents use.)
4. You are allowed to break your conventions, but then you mislead your partner in the same way you mislead the opponents.

Point (2) is indisputable. This is the primary rule of conventions in partnership card games. Points (1) and (3) are ideals that sometimes contradict each other. Point (4) causes some minor problems.

Point (2) is fulfilled in club bridge by using so called system cards. A partnership writes the conventions they use on a crib sheet, and before the game starts they give the crib sheet to the opponents. The opponents can read the crib sheet throughout the game. In addition, unusual conventions must be alerted. If a player makes a bid that is an unusual convention, the partner of the player must knock on the table to alert the opponents so that they know that something happens out of the ordinary. In addition, the players can, on their own turn, ask the opponents for the meanings of their bids.

The points (1) and (3) contradict each other. Usually the system card is given to the opponents just before the game starts, and if the conventions are very unusual, the opponents have not had an opportunity to agree on a defence against them. Hence, in clubs and usual tournaments the usual policy is to allow the choice of conventions only from relatively usual ones. It can be assumed that a competent bridge partnership has agreed on a defence against them. The reason for this restriction is the chance to agree on defence conventions.

In the very top level bridge, there is a better approximation of (1). A partnership can agree on the conventions they use freely, but they must publish their conventions at a certain time before the tournament. This way the opponents have an opportunity to agree on defence conventions against their conventions.

Points (2) and (4) cause certain problems. Usually conventions leave choices for the player, and different players make these choices in their personal style. Also the players break the conventions in their personal style. If a bridge partnership has played long together, they have learned each other's personal style, and this (usually non-verbal) knowledge can be seen as de facto -conventions that the opponents do not know. Because of this (2) and (4) are



not fully satisfied, but there is no remedy other than a gentlemen's agreement to minimize the effect.

I promised to give critique for my proposition to the laws of nature of game worlds regarding conventions. My criticism is towards (1). As we saw earlier, it is not fully satisfied in club bridge.

I remember seeing a humorous post on a bridge discussion forum. The writer wrote what would happen if chess was played similarly to bridge. The opponent would bring a system card which would say that his horse moves three steps to one direction and then one step to the side. The system card would also say that in such-and-such situations the rook moves diagonally. The writer presented an absurd situation where the system card changed the laws of nature of the game world. The obvious purpose of the writer was to present that freely choosing the conventions changes the description of the bridge world, which is in his opinion wrong. Hence everyone should start using same, most usual conventions. Hence, the writer seemed to advocate that the most usual conventions should be made mandatory, and hence into a part of the abstracted bridge world. You hear similar wishes from time to time. The reason given is usually that freely agreeable conventions make the game too complex.

I ran into a similar situation when I planned a Huutopussi tournament with other math students. We played four-player partnership Huutopussi at the student room, and it had become customary to use a certain set of conventions, which were a nice compromise between efficiency and ease of use. However, it was expected that certain players would develop new, ultra-effective convention systems for the tournament. The end result (with which I disagreed) was to forbid other conventions than those generally used in the student room. The reason given was that those that used the ultra-effective conventions would get an unfair advantage. (My personal opinion is that using efficient conventions is good playing, and it should be rewarded.)

So that collection of conventions became a part of the abstract world of math students' Huutopussi.

This world was strange, because it has laws of nature, built-in ethics (winning), and certain signals had even built-in semantics.

Hence, we must conclude that the right way to deal with conventions depends on situation: Sometimes the right way to form the abstract game world is to allow freely agreed-on conventions. Sometimes, to prevent the theory from drifting too far from practice, the conventions must be taken as a part of the game world.

Also the Skruuvi -guide (ed. Hannu Taskinen) seems to identify conventions and rules, and hence make conventions as a part of the game world:

*The only important thing is that everyone uses the same rules and con-*

*ventions.*

In the proposition given in the beginning of this part the above does not hold, since a team may agree on different conventions than the opponents. (In this case, the important thing is that everyone knows what conventions others use.)

## Chapter 42

# Time in Board Games

Earlier we have determined that games are abstract, idealized small worlds with their own laws of nature.

In board and card game worlds time does not pass in hours and minutes, but in discrete moves that follow each other. Because we want to approximate game worlds in the real world, we need tools to adjust the different times of the game worlds and the real world. Because we want the moves to be of more or less high quality, the players must have a chance to think about their moves. The game must end in a reasonable time, so the thinking time must be restricted in one way or another.

At homes and clubs the matter is taken care of with a gentlemen's agreement: The players try to play relatively fast, but are allowed to take themselves time to think if the situation is difficult. Usually drawing the line between appropriate and inappropriate thinking does not cause problems, the players adjust to each other's playing speed without a verbal agreement. Sometimes there is a particularly slow player in the game, and others can either tolerate his thinking or ask him play faster.

It is important in club and tournament bridge that all the tables in the club or tournament play approximately at the same speed. Usually there is a certain amount of time (a little less than 10 min) reserved for each hand. The players do their best to stay in the schedule, but can take themselves thinking time in a difficult situation. If keeping in the schedule presents problems, tournament director shouts at the table that they should play faster. The system works.

In Go and Chess tournaments the players get an enormous advantage from taking themselves thinking time. Hence the need of formal time control. In these games, a chess clock is used. Every player has a quota of time, and if a

player exceeds his quota, he loses the game.

Losing on time is not a good approximation of the abstract game, but here we see the difference between casual play and tournament play. In a tournament winning and losing mean much to some players, and hence it is important to have rules that leave no room for interpretation. Also type (2) rules have to be such, and "gentlemen's agreements" should be minimized. Hence things such as exceeding your quota of thinking game and disrupting the game by breaking a type (1) rule are punished by a loss, (or sometimes: By a fine in points.) Because in tournament "gentlemen's agreements" are a bad thing, it is usually deemed permissible to strategize with type (2) rules.

Hence, one may think tournament chess and go so that the time control is a part of the abstract game world, a part of the game. Next I present a situation where players disagreed whether time control is a part of the game world or a part of the approximation process.

## The Master of Go

The Master of Go is a novel written by Japanese Yasunari Kawabata, which is partially fictitious, partially based of true events. It describes a go game played in 1938 between Otake (based on the real player Kitani Minoru) and Master (based on the real player Honinbo Shusai).

Traditionally, in the 1800s, Japanese Go did not have formal time control. Top level games could last months, consisting of very many sessions. At the end of the day, the game was stopped at the decision of the elder player. When Japan westernised, it affected also Go, and the game described in the novel is played with formal time control, which was a new thing in that day's Japan. (Nowadays top level Go games last two days, and each player has 8 hours thinking time.)

When you play games of the length of several days with formal time control, the game clocks are stopped every night, at the end of the day's session. The last move of a day is so-called sealed move. It is not played on the board, but written on a paper closed in a envelope, which is opened at the beginning of next session. This way the other player does not know what the last move is, and cannot spend the night thinking of a response move. If such thinking were possible, it would be an unfair advantage for the player who has the possibility to think. Because of the sealed move, both players have an equally blurry picture of the continuation of the game.

The game described in the novel took 14 sessions, and it used sealed moves. Also sealed moves were a new thing at that day's Japan.

Central to the novel is a sealed move that Otake, the younger of the players

made. He made such a move that it was not the best possible in the sense of the abstract game, but the opponent could reply it only in one way. This way Otake knew what the next move of the opponent would be, and he could use the night thinking of his next move. This gave him an advantageous position.

In terms of my theory, Otake thought that making a move as a sealed move was part of the abstract game world, and using it as a tactic was legitimate. His opponent, Master, was deeply offended by this "tactic", and I'd like to interpret the situation so that the Master did not think that the time control was part of the abstract game world, and using it to gain an advantage was cheating. In Master's view, Otake should have made the move that was best when one did not consider time controls, but only the game as an abstraction.

According to the novel, Master commented the move later as follows:

*The match is over. Mr. Otake ruined it with that sealed play. It was like smearing ink over the picture we had painted. The minute I saw it I felt like forfeiting the match.*

The continuation of the novel describes how the Master, whose health had not been so good, continues the game but gets seriously ill, that upset as a partial reason, and finally, after a couple of years, dies.

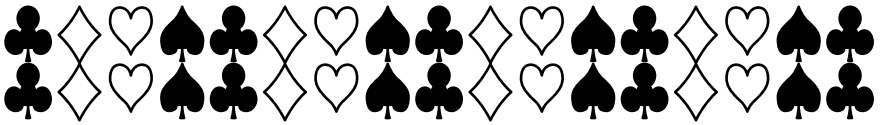
## Chapter 43

# Two-subject theory

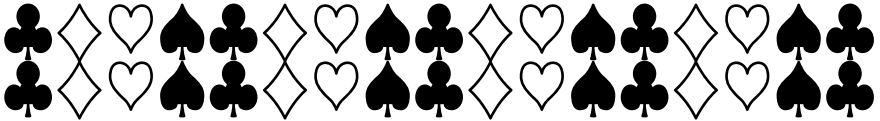
When a player plays a game, he actually represents two subjects, which I call the game-me and the mundane-me. The game-me operates inside the abstract game world and makes the choices of game moves. Mundane-me takes care that the correspondence between the game world and the real world is preserved, and in general makes all the decisions not concerning the choice of a move. So it is a responsibility of the mundane-me to obey type (2) rules, which are typically taken care of by gentlemen's agreements. He for example makes sure that the player does not peek at other players' cards, even if it was be possible. If in the middle of a game it is found out that the players have different ideas about the rules of the game, it is up to the mundane-me's to negotiate, which rules are used in the continuation.

Game-me has only one goal: To win the game (or to win as much as possible when playing on money, or to rank as high as possible). The goals of the mundane-me are the various motives that the players have to play a game, such as enjoying the game and learning to play better. The pleasure characteristic to a game is obtained by the mundane-me by observing the game-me in his pursuit of victory.

The main purpose of the game-me - mundane-me division is to enable playing at the same time to win, and in a way fitting to a gentleman. It is essential to the enjoyment of a game that the game-me and mundane-me stay at their reserved fields (moves in the game vs. everything else.) If you try to optimise victory in things that belong to the mundane-me, the game suffers, as well as the game suffers if you start making "fun" moves instead of moves that aim at victory.



# Superpart D Physical Games



## Part IX

# Dart games



## Chapter 44

# Introduction to Dart Games

### 44.1 Basics of the English/international dartboard

All the dart games in this booklet are games for the English/international dartboard. With this dartboard, the throwing distance is 2.37 meters, and a turn consists of throwing three darts. All the games in this booklet follow these conventions.

The standard way to hang the dartboard is to do it so that the center of the dartboard is 1.73 metres above the floor level, so that the center of the dartboard is at the level of an average adult male's eyes. If the players are very young and hence short, it might be a good idea to hang the dartboard lower than the standard height.

The dartboard is divided into 20 sectors, numbered 1-20. At the outer edge of each sector there is a narrow area, called the double of that sector. In the middle of each sector, there is a narrow area, called the triple of that sector. In center of the dartboard there's a small area that is not a part of any sector. It is called the bull. The bull is divided into the inner bull and the outer bull.

## 44.2 On games in this booklet

Many popular dart games presume that the players are very accurate throwers. For example, to win the most popular dart game, 501, the player must hit the double of a particular sector, which is a very small spot on the dartboard. When the players are not so good, such games become frustrating.

The games in this booklet are different; these games work best if the players are not so good throwers. Although doubles and triples give small bonuses, hitting the right sector is usually all that is needed.

## 44.3 Finnish dartboard

There is also the Finnish dartboard. It is approximately of the size of the scoring area of the English/international dartboard. It is divided into nine concentric rings, numbered from one (outermost) to nine (innermost) and the center (numbered ten). It is hung so that the center is 1.50 meters above the ground, and the throwing distance is 5 meters (men) or 4 meters (women). Turn consists of throwing five darts. The rings give from one (outermost) to nine (innermost) points and the center gives ten points. With this dartboard, the players just try to achieve as big a score as possible with five darts.

Unlike English/international darts, Finnish darts is an outdoor game.

# Chapter 45

## Tuomas's Round the Clock

*1 or more players, dartboard, 3 darts*

This is my variant of the dart game Round the Clock. It was my standard practice game alone when I was a teenager. Nowadays I practice with the standard Round the Clock, since I now have an electronic dartboard, and it is easier to play a game programmed to the dartboard.

The game is for one or more players, and it uses the standard English/international dartboard and three darts.

### 45.1 Gameplay

The object of the game is to hit all the sectors in the numerical order. So the player tries first the 1 sector, and after he has hit it he tries the 2 sector and so on. The player wins who first hits the 20 sector after he has hit all the other sectors.

If the player hits the double of the sector he is supposed to hit, he can skip the next sector. So if a player tries five and hits double five, he must next hit seven. Similarly, a triple of the right sector lets the player skip the next two sectors. (Triple 18 when trying 18, triple or double 19 when trying 19, and triple or double 20 when trying 20 are winning throws.)

The outer bull is a joker, so a hit to it counts as a hit to the right sector, whatever the right sector is. The inner bull is a double joker, so a hit to it counts as a hit to the double of the right sector.

The result is counted after the three darts have been thrown, as if the three darts were thrown in the order that is the most favourable to the player. Assume, for example, that the player tries seven and accidentally hits eight. If the player hits a seven after that with the same set of three darts, hits to both seven and eight count, and the player next tries nine.

## Chapter 46

# Kangaroo

*2 or more players, dartboard, 3 darts*

This is a dart game that is a variant of Round the Clock. Some players prefer it to standard Round the Clock, since it is easier for players who have fallen behind to make a comeback in this game. I have not invented this game. The rules differ from Tuomas's Round the Clock as follows:

Hits to (inner or outer) bull do not count, and the result is counted in the strict order in which the darts were thrown.

Doubles and triples are special. A hit to a double or a triple counts (only) when you are trying the single of that number. However, they count *as* two (double) or three (triple) times the single number. *Example: A hit to the double six counts only when the player tries six, but it counts as  $2 \times 6 = 12$ , so the player next tries 13.* If the product is more than 20, the hit does not count, and a hit to double ten when trying ten is an immediate victory.

If all three darts hit the sectors the player tries (For example 1, double-2 and 5 in the beginning of the game), the player gets a new turn.

Advanced players can add the rule that after 20 or double-10, the player still has to hit the bull (both inner and outer count) to win.

# Chapter 47

## Merirosvo

*2 players, dartboard, 3 darts, 20 thumbtacks, pen and paper*

This is a dart game from my childhood. I read the rules somewhere, but the use of thumbtacks is my own addition.

The game is for two players, and it uses the standard English/international dartboard and three darts. The most convenient scorekeeping device for this game is a cribbage board or a Carcassonne score track, but if you do not have either of them, pen and paper will do.

### 47.1 Gameplay

One of the players is a defender and another one is an attacker. In the beginning all the sectors are open. The defender starts the game.

When the defender hits a sector, the sector becomes closed. Closed sectors are marked with thumbtacks. The thumbtacks are pressed on the dartboard, next to the closed sectors, outside of the scoring area of the dartboard. If the defender hits the bull (inner or outer) he may close a sector of his choice.

When the attacker hits an open sector, he gets one point. The double of an open sector gives two points and the triple of an open sector gives three points. Inner or outer bull give no points.

After all the sectors have been closed, the players switch roles, and the player wins who gets more points as an attacker.

# Chapter 48

## Killeri

*3 or more players, dartboard, 3 darts*

Killeri is a very popular dart game among casual dart players in Finland. I have not designed the game.

The game is for three or more players, and it uses the standard English/international dartboard and three darts.

### 48.1 Beginning

In the beginning each player gets an own sector. The player throws one dart with his weaker hand, and the sector the dart lands on becomes the player's own sector. If the dart misses the dartboard or hits the bull, the player throws again.

Two players cannot have the same sector or sectors that are next to each other as their own sectors. Hence, if the dart hits the own sector of a player who already has got an own sector, or the sector next to such a sector, the player whose turn it is throws again.

### 48.2 Gameplay

There are two kinds of players: Ordinary players and killers. Everyone starts as an ordinary player.

An ordinary player tries to collect five points. A hit to the own sector of the player gives one point. A hit to the double of the own sector gives two points, and a hit to the triple of the own sector gives three points. The player tries to collect exactly five points, and if he gets more, the extra points are subtracted from five points. So, if a player gets six points, he drops down to four, and if he gets seven points, he drops down to three.

If an ordinary player accidentally hits another player's own sector, that other player may choose whether the points from that dart are added to that other player's score. Note that, also in this case, if the other player gets a score of more than five points, the extra points are subtracted from five.

When a player has five points, he becomes a killer. When someone becomes a killer, those players who have zero points drop out of the game. (Exception: Everyone has at least one turn in the game. So, if someone becomes a killer in his first turn, those players who have not had a turn still have their turns. They drop out only if they do not get a positive score on their turns.)

A killer tries to hit other players' sectors to reduce their score. A hit to another player's sector reduces that player's score by one point. A hit to the double of another player's sector reduces that player's score by two points, and a hit to the triple by three points. If a player's score becomes zero or negative that player drops out of game.

When there are two or more killers, they can also reduce each other's scores. If the score of a killer drops below five, he becomes an ordinary player. Also, if a killer accidentally hits his own sector, the points are subtracted from his score, and he becomes an ordinary player.

The game is won by the last player in the game after everyone else has dropped out of the game.

## Part X

# Outdoor games for small groups



## Chapter 49

# Tuomas's Petanque

*2, 4 or 6 players, Petanque set, yard covered with gravel*

In my late teens I played a lot of Petanque with my friends. We had relaxed rules for throwing the target ball, and that added variety to the game.

The game is for 2, 4 or 6 players, and it uses a Petanque set. Unfortunately, an odd number of players cannot play, since they cannot be evenly divided into two teams.

The game is played on a field covered with gravel. Standard Petanque is played on a flat field, but we thought (and still think) that the game is more interesting if there are pits, trees and other obstacles present.

The best place to play Petanque is a little used gravel road that is exclusively reserved for pedestrians. As a new round starts from the finishing place of the previous round, you move along the road as the game progresses. During a game night you might walk a couple of kilometers along the road. When playing this way, it is best to have a player standing behind the target ball as well as at the throwing place, so that passers-by know where the bounds of the game are. The game must, of course, be paused when there are passers-by at the game area.

The players are divided into two teams, and each team has an equal number of Petanque balls (large metal balls). If there are two players, each player should have three or four balls. If there are four players, each player should have two or three balls (it is okay if one member of a team has two balls and the other has three), and if there are six players, each player should have two balls.

## 49.1 Beginning of a round

A circle with a diameter of 60-100 cm is drawn on the gravel. On the second round and on later rounds, the center of the circle is where the target ball lay after the previous round. All the balls in the round are thrown from this circle.

Then the target ball (the little wooden ball) is thrown. On the second round and on later rounds, the winner team of the previous round throws the target ball.

In standard Petanque the target ball is thrown 6-10 meters away. In my rules, it can be thrown any distance, from 10 centimeters away to 50 meters away. The throw is always legal. Also, obstacles spice up the game, so in my rules the target ball might lie next to a tree, in a pit or on the boundary of gravel and lawn, and it is legal.

There is just one thing to take into the account: Petanque is meant to be played on sand or gravel. Lawn or - still worse - asphalt are bad surfaces for Petanque. So the target ball should not be intentionally thrown to lawn or asphalt. If it accidentally goes less than a meter deep to the lawn, the round is playable, since the balls roll most of the distance on gravel. Just return to the gravel on the next round. If there are worse violations of the gravel rule, the target ball should be rethrown.

However, most of the rounds should be 6-10 meter rounds, and extreme distances should be used only occasionally to spice up the game.

## 49.2 The actual gameplay

The team that threw the target ball throws also the first actual (metal) ball. After that, the other team throws a (metal) ball.

In the continuation, it is always that team's turn to throw a (metal) ball whose ball is not closest to the target ball. If only one team has balls left, it is of course that team's turn to throw.

The game goes on like this until all the balls have been thrown.

Thrown balls are allowed to hit previously thrown balls (including the target ball) and move them.

In standard Pentanque, a round is void, if the target ball moves outside the playing area during the round. In my rules, this rule does not apply. The round is always finished, even if the target ball moves to lawn or asphalt.

In my rules, there are no rules concerning the throwing style. It is just forbidden jump outside the circle while throwing. Also, the throwing order within a team is not regulated by the rules.

## 49.3 Scoring

The scoring is done after all the balls have been thrown.

The team wins the round whose ball is closest to the target ball. The ball of the losing team that is closest to the target ball is called the best loser. The winning team gets one point for each of their balls that are closer to the target ball than the best loser is to the target ball. The losing team gets no points.

On rare occasions it might happen that two balls are equally close to the target ball. Then it is the losing team's advantage: The winning team's ball that is as close to the target ball as the best loser is to the target ball gets no points. If both teams have the closest balls equally close to the target ball, no points are awarded in the round.

## 49.4 End of match

The match is won by collecting at least 13 points.

# Chapter 50

## Contract Petanque

*3 players, Petanque set of  $3 \times 2$  balls and the target ball, yard covered with gravel*

Contract Petanque is my attempt to develop good Petanque rules for three players. Petanque is characteristically a two-team game, and Contract Petanque uses a bidding system familiar from card games to temporarily divide the players into two teams. In the nineties, most Petanque sets sold in Finland contained three sets of two balls, and the game was developed for such petanque equipment.

The game is for three players. The game utilizes two petanque balls for each player and one target ball. Here's how the rules differ from ordinary Petanque.

### 50.1 Beginning

The target ball is thrown, 6-10 meters away, and then every player throws one ball.

### 50.2 Auction

Then the auction occurs. The players bid for the score they are going to get in the round. First bids the player whose ball is farthest from the target ball, then the player whose ball is second-closest to the target ball, then the player whose ball is closest, then the one with the farthest ball and so on.

The possible bids are as follows:

**Number bid** Number bid is a number 1 - 5 and it promises how many points the player will get in the round. Each number bid must be higher than

the previous number bid.

**Double** If the last number bid was made by an opponent, the current bidder may bid "double". Then the current bidder does not believe that the last number bidder will get as many points as he bid. Only one double is allowed per number bid. A new number bid voids previous doubles.

**Redouble** If the last number bid was made by the current bidder, and one of the opponents bid double, the current bidder may bid "redouble". A new number bid voids previous redoubles.

**Flee** If one of the opponents of the current bidder made the last number bid, and another opponent bid double for it, the current bidder may bid flee. This means that the current bidder believes that the last number bidder will get the points indicated by the bid. A new number bid voids previous flees.

**Pass** The bidder does not want to make a bid. The first bid of the first bidder of an auction cannot be a pass.

Auction ends when two players have passed on consecutive turns. Then the last number bid, together with doubles, redoubles and flees becomes the contract, and the last number bidder becomes the declarer. The other players are called defenders.

### 50.3 End game

Every player throws one ball. First one defender, then the declarer, and last the other defender. If the contract was fled by one of the defenders, the person who fled gives his ball to the other defender, and he throws the the ball instead of the fleer.

### 50.4 Scoring

The closest ball to the target ball gives 3 ball points, the second-closest gives 2, and the third-closest gives 1 ball points. If the declarer got at least as many ball points as the final number bid indicated, he fulfilled the contract. Otherwise he failed the contract.

If the declarer fulfilled the contract, he gets as many game points as his final number bid indicated. Otherwise, he loses as many game points as the final number bid indicated. If the contract was doubled, these game points got or lost are doubled, and if the contract was redoubled, these game points

got or lost are quadrupled. If one of the opponents fled, he gets or loses as many game points as the declarer.

The game lasts for ten rounds. After that the player wins who has most game points. If one of the players is more than twenty points behind the others in the final round, the only bid he is allowed to make is pass (if he is the first bidder he makes the initial bid of 1 points.)

# Chapter 51

## Swing Dodgeball

*3 - 5 players, two swings, ball*

Swing dodgeball was a very popular game among children when I was a kid. As a kid, I tweaked the rules to diminish the advantage good players had. So, although I have not invented the game, I have modified the rules.

### 51.1 Setup

You need from three to five players (typically ages 6-13), two swings parallel to each other and a ball. The ball should be of similar size as a soccer ball, but lighter, so that it does not hurt when it hits a player.

In front of the swings, approximately 5 meters away a line is drawn on ground. The line is called the *burning line*, and the older the players are, the farther it should be away from the swings. A tree, a lamppost or something similar is chosen 20-50 meters away from the swings.

### 51.2 Basic rules

Two of the players sit in swings and are called *targets*. The third player is a *burner*. The players in the swings must swing, i.e. they are not allowed so keep their swing still. The burner stands behind the burning line and throws the ball towards the players that sit in swings. A target *burns*, if the ball hits him between knees and neck. (Exception: If a hand holds the rope of a swing, then hits below the wrist of that hand do not burn the target.)

When a target burns, he and the burner switch roles, i.e. the target becomes a new burner and gives his place in the swing to the old burner, who becomes a target. There is no actual winning or losing in the game. Targets just try to remain in swings, and the burner tries to get a place in a swing.

## 51.3 Catches

Since targets do not burn from hits below the knee, they can kick the ball with their feet. If the burner gets a catch (the ball has not bounced off the ground) from a ball kicked with feet, the target who kicked the ball burns. When the burner tries to get a catch, he can move freely, he can even cross the burning line.

A half-catch means a catch after one bounce off the ground. If the burner gets two half-catches on consecutive throws of kicks of the same target, the target burns. After a half-catch, the burner can make the new throw from the place where he caught the ball, i.e. he needs not return behind the burning line.

## 51.4 Runs

If a target can stop the ball so that it is under the swings, he can get out of the swing and kick the ball as far as he can.

Then the burner goes to fetch the ball, and the targets may go run around the tree, lamppost etc that was chosen in the beginning of the game.

If the burner fetches that ball and throws in between the ropes of an empty swing, the target whose swing it is, burns.

If a target has run round the lamppost, tree or such, and returns before the burner has thrown the ball between the ropes, the target gets a run. It is enough that the target touches the rope of his swing before the ball goes between the ropes.

Before the game starts, it is possible to agree that there are several different things to run around so that farther objects give more runs, varying from half a run to two runs.

## 51.5 Bonus lives

When a target has collected three runs, he gets a bonus life. If a target with a bonus life burns, he does not leave the swing and become the burner. Instead, he loses the bonus life. A target cannot have two or more bonus lives at the same time.

## 51.6 Back-burners

If there are more than three players, the extra players go behind the swings and become *back-burners*. The back-burners can burn the targets with catches



and half-catches when the targets kick the ball behind the swings.

The back-burners can also try to burn the players by hitting them with the ball. In that case, the ball must be thrown over the upper bar of the swing frame.

When a target burns in a game with more than three players, he becomes a back-burner, the burner becomes a target and the back-burner who has been a back-burner for a longest time becomes the burner.

# Chapter 52

## Seinis

*2 or more players, piece of wall, soccer ball*

Seinis is another game from my childhood. It is a kind of mix of squash and soccer. I have not designed this game.

You need two or more players, a soccer ball and a wall. 3-5 meters long piece of the wall is designated as the target. The players are ordered from the first to the last. A spot on the yard is chosen as a designated starting spot.

### 52.1 Gameplay

The players kick the ball to the target in the designated order. After the last player has kicked the ball, it is again the first player's turn and so on. The kicks must be made after the ball from the previous kick has rebounded from the target, either to a moving ball or after the ball has stopped naturally. The players are not allowed to stop the ball or move it before the kick. (The first kick of the game is done to an immobile ball that is in the designated starting spot.)

If a player does not hit the target, he drops out of the game, and the game starts over with one less player; the next player in succession starts the new round from the designated starting spot.

After all players except for one have dropped, the last player in the game is the winner.

# Chapter 53

## Totem Tennis

*2 players, 2 rackets, ball, piece of string, pole*

Totem Tennis is another game from my childhood. I saw the game at some camping area, and then improvised my version at the summer cottage of our family. I have not designed this game.

In Totem Tennis two players hit a ball with rackets. The ball is attached to a pole with a piece of string.

### 53.1 Equipment

First, you need two rackets and a ball of the size of a tennis ball. They sell suitable sets consisting of a soft ball and plastic rackets for use at beaches. An ideal ball is slightly lighter than a tennis ball, but still somewhat heavier than the lightest foam balls.

Then you need an approximately 2.5 meters long pole. The thickness of the pole should be a couple of centimeters.

Erect the pole so that it stands firmly. There should be approximately 2 meters of the pole above the ground. Tie one end of the string firmly to the upper part of the pole so that there are only a couple of centimeters between the string and the top of the pole. Attach the other end of the string to the ball. This can be done for example by putting the ball into a small bag and attaching the string to the bag. The string is of the correct length if the ball hangs about 30 centimeters above the ground.

### 53.2 Game

The players stand on opposite sides of the pole and hit the ball with their rackets. One player hits the ball clockwise around the pole and the other

anticlockwise.

The object of the game is to make the string completely wind around the pole. When a player succeeds in this, he earns a point and the rally is over. The first player to earn ten points wins the game.

At the start of a rally, the string is completely unwound, and serving is done by taking the ball in hand and hitting it with the racket. The turn to serve alternates between the players.

## Part XI

# Outdoor games for large groups

# Chapter 54

## Purkkis

*around 10 players, large yard, soccer ball*

Purkkis is a variant of Hide and Seek from my childhood. Although I have not designed the game, I added the extra rule for third round as a kid to give weaker players a chance.

### 54.1 Setup

In this game you need around ten players (typically ages 6-12), a large yard and a soccer ball. One of the players is designated as the seeker, and others are hidiers. A spot on the yard is chosen as the designated spot for the ball.

### 54.2 Basic rules

The ball is placed on the designated spot, and one of the hidiers kicks it as far as he can. The seeker goes to fetch the ball, and the hidiers go hiding into different places in the yard.

After the seeker has returned the ball to the designated spot, he can go seeking the hidiers. When the seeker sees a hider, he runs to the ball, touches it and shouts the hider's name. Then the hider becomes a prisoner and he must go standing near the ball.

After the seeker has found all the hidiers, the game starts over, and the hider that was found first becomes the seeker. (And the old seeker becomes a hider.) So there is no actual winning or losing, the hidiers just try to remain hidiers, and the seeker tries to become a hider.

### 54.3 Own name and rescuing

If there are no prisoners, a hider can run to the ball, touch it and shout "Own name". Then he is otherwise treated as if he was a prisoner, but he does not become the next seeker. (The next seeker will be the first of the actual prisoners.) If all the hidens become own name sayers, the ball is kicked, and the game starts over with the same seeker.

If there are prisoners (and not only own name sayers), one of the hidens (who is neither an own name sayer or a prisoner) can run to the ball, kick it as far as he can and shout "All rescued". Then the game starts over with the same seeker. (i.e. prisoners and own name sayers go hiding, and those who are still hidden stay hidden.)

### 54.4 Extra rule

The same seeker can be a seeker consecutively only for three rounds. After the third time the seeker fetches the ball, he shouts "Third round". In the third round, prisoners cannot be rescued, and if all the hidens say "Own name", the last of them becomes the new seeker.

In the third round, hidens can say "Own name" even if there are prisoners.

### 54.5 Etiquette

If the seeker remains near the ball all the time, he is not considered a good sport.

Saying own name and rescuing are considered desirable achievements.

## Chapter 55

# Kymmenen tikkua laudalla

*around 10 players, large yard, two pieces of wood, ten sticks*

This is a variant of Purkkis which uses a piece of plank and ten sticks instead of a ball. The plank should be a meter or a bit less long, and the sticks should be of the size of an ice cream stick. In addition, the game uses a thick piece of wood, of the size of approximately  $5 \times 5 \times 20$  centimeters. This is how the rules differ from Purkkis. I have not invented the game

### 55.1 Gameplay

At the initial position, the plank is placed on the ground so that one end of the plank is on the ground. The thick piece of wood supports the plank from the middle, and the other end of the plank is in the air. The sticks are on the plank, at the end of the plank that touches ground.

Instead of kicking the ball, in Kymmenen tikkua laudalla, one pushes down, with one's foot, the end of the plank that is in the air so that the sticks scatter.

Instead of fetching the ball, in Kymmenen tikkua laudalla, the seeker returns the plank and the sticks to the initial position.



# Chapter 56

## Tuikkunen

*10 or more players, large yard, flashlight for each player*

Tuikkunen is a game for dark autumn evenings, played in the light of flashlights. It is a game from my childhood, and I have not contributed to the rules.

### 56.1 Setup

In this game you need ten or more players (typically ages 7-13), a large yard and a flashlight for each player. The game is played late in the evening when it is dark. A place in the yard is designated as a prison.

The players are divided in two equal teams, one team are seekers and the other are hidere.

### 56.2 Gameplay

The seekers count to 100, and the hidere go hiding. Then the seekers search for the hidere using their flashlights. If a seeker manages to touch a hider, then the hider becomes a prisoner and he must go to the prison.

If a hider who is not a prisoner manages to touch a prisoner that is in prison, the prisoner is freed, and he can go into hiding.

After all the hidere have become prisoners, the teams switch roles.

If the seekers cannot otherwise find the hidere, they can shout "Flash your lights". Then the hidere must turn their flashlights on for a brief moment.

# Chapter 57

## Poliisi ja Rosvo

*10 or more players, yard*

Poliisi ja Rosvo (Cops and robbers) is the game whose variant Tuikkunen is. We played Poliisi ja Rosvo in the preschool when I was six years old. This is how the game differs from Tuikkunen. I have not contributed to the rules.

### 57.1 Gameplay

Poliisi ja Rosvo is played in daylight without flashlights. Poliisi ja Rosvo played in a smaller area where there are no hiding places, so all the players are visible all the time. The cops (seekers) need not count to 100 in the beginning of the game. The cops and robbers just start from different ends of the yard.

# Chapter 58

## Rymypallo

*around 10-20 players, ball, field covered with snow*

When we were kids, we played Rymypallo at scout camps. It is an informal ball game for the winter allowing some physical contact. The players are usually clumsy due to thick snow on the field as well as heavy winter clothing, and this is an essential part of the game. I have not designed this game.

### 58.1 Setup

The game is for around 10-20 players. The game uses a ball of the size of a soccer ball, and it is played on a field covered with deep snow. The snow should be at least half a meter deep in the beginning of the game, and the field should be at least 20 meters long. The players are divided into two teams, and at both ends of the field, goals are marked. The goals should be two meters wide.

### 58.2 Game

The game has few formal rules. Both teams have a goal, and the object of the game is to make the ball go over the opposing team's goal line. One is allowed to touch the ball with any part of the body, run holding the ball, pass it to team-mates and throw it to the opposing team's goal.

Striking the opponents is forbidden, but one is allowed to use grappling techniques against an opponent that has the possession of the ball. However, any technique that might cause pain or injure the opponent is forbidden. Since this rule is vague, the game can be played only in a friendly, non-serious way. Physical contact against a player who does not have the possession of the ball is forbidden.

When the players are kids of different ages, bigger children must be extra cautious when they use grappling techniques against smaller children. Smaller children usually cannot hurt bigger children, so they can play as hard as they can against bigger children.

At the beginning of the game, one of the teams has the possession of the ball near their goal, and after a goal, the game continues with the non-scoring team's possession of the ball near their goal.

The game ends after a pre-determined time. The team wins that scored more goals during the game.

# Chapter 59

## Breakthrough

*15 or more players, forest, campfire, flashlight for each player*

This is another game we played as kids in scout camps. It is played in a forest when it is dark, in the light of flashlights. A campfire functions as the home base, and the game is for 15 or more players. I have not designed this game.

### 59.1 The game

The players are divided into two teams. One team is attackers and another team is defenders. A spot in the forest, a couple of hundreds of meters away from the campfire is designated. A circle, with a center in the campfire and a radius of approximately 50 meters or a bit less is designated. The more players there are, the bigger the circle must be.

The attackers start from the designated spot in the forest. The defenders start from the campfire. The attackers try to get to the campfire untouched. The defenders try to touch the attackers. If an attacker is touched by a defender, he is out of the game and must go to the campfire. Flashlights can be turned on and off at will.

The defenders are not allowed to lurk inside the designated circle; if they are inside the circle, they must move away from the campfire. When a defender is pursuing an attacker, he may move inside the circle, but he must return outside it once the situation has resolved.

When all the attackers are at the campfire, the attacking team gets one point for each attacker that got to the campfire untouched. Then the teams switch roles and the team wins that got more points as an attacker team.

## 59.2 Note

When we played this, the campfire was always next to a lake, so it could not be approached from all directions, and the game worked well in this case. I do not know how the game works if the campfire can be approached from all directions.