Introduction to the Theory & Practice of Poker

Lecture #6

January 21, 2020
Last Saturday’s tourney

- 109 players entered
- Lasted about 3 hours
- 3k starting stack
- 10 minute levels
- 27 places paid
- Top-heavy payouts
- Final table, please stand up!
- Winner: Justin Camargo
Tonight & Tomorrow night

• Mandatory to play at least one of these satellites
  • Remember this class is pass/fail
  • And this is the easiest requirement for me to check
• I expect around 200 players in each
• Top 21/22 from each tourney qualify for seat
  • At live tournament Thursday at my house
• Tourneys start at 7pm
  • Should end by 10:30 or 11:00 at latest
  • About half the field will be out in the first hour
• At tourney start time, if you are registered and logged into PokerStars, you’ll be put at a table and game will start.
  • I think you can join up to 20 minutes late (don’t count on it)
### Blinds Structure

<table>
<thead>
<tr>
<th>Level</th>
<th>Blinds</th>
<th>Ante</th>
<th>Time Bank</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15/30</td>
<td></td>
<td>60 sec</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>20/40</td>
<td></td>
<td></td>
<td>10</td>
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<tr>
<td>3</td>
<td>25/50</td>
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<td></td>
<td>10</td>
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<tr>
<td>4</td>
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<tr>
<td>8</td>
<td>75/150</td>
<td>20</td>
<td></td>
<td>10</td>
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<tr>
<td>9</td>
<td>100/200</td>
<td>25</td>
<td></td>
<td>10</td>
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<td>10</td>
<td>125/250</td>
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<td>19</td>
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<td>175</td>
<td>+10 sec</td>
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<tr>
<td>20</td>
<td>800/1600</td>
<td>200</td>
<td></td>
<td>10</td>
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<tr>
<td>21</td>
<td>900/1800</td>
<td>225</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>22</td>
<td>1K/2K</td>
<td>250</td>
<td></td>
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</tr>
<tr>
<td>23</td>
<td>1.2K/2.4K</td>
<td>300</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>24</td>
<td>1.4K/2.8K</td>
<td>350</td>
<td></td>
<td>10</td>
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<tr>
<td>25</td>
<td>1.6K/3.2K</td>
<td>400</td>
<td>+10 sec</td>
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### Award Structure

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<td>6-15</td>
<td>3</td>
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<tr>
<td>16-20</td>
<td>4</td>
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<tr>
<td>21-25</td>
<td>5</td>
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<td>26-30</td>
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<td>31-35</td>
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<tr>
<td>36-40</td>
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<tr>
<td>41-45</td>
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<td>76-90</td>
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<td>91-135</td>
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<tr>
<td>136-180</td>
<td>36</td>
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<tr>
<td>181-225</td>
<td>45</td>
</tr>
<tr>
<td>226-270</td>
<td>54</td>
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<tr>
<td>271-315</td>
<td>63</td>
</tr>
<tr>
<td>316-360</td>
<td>72</td>
</tr>
<tr>
<td>361-405</td>
<td>81</td>
</tr>
<tr>
<td>406-450</td>
<td>90</td>
</tr>
<tr>
<td>451-495</td>
<td>99</td>
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<tr>
<td>496-540</td>
<td>108</td>
</tr>
<tr>
<td>541-585</td>
<td>117</td>
</tr>
</tbody>
</table>
Live tournament at my house - Thursday

• Automatic entries
  • Course CAs: Danny, Daniel, Eda
  • Riddle solver: Amber
  • Some members of my family & Hopkins administration
  • 21/22 students from the satellites
  • If you cannot make it, let me know ASAP, and next person on satellite finish gets the seat

• Setup
  • 5 tables in the poker room, 1 in the hall
  • 53 total players, 5 tables of 9 and 1 table of 8
  • “Professional” dealers will be dealing the cards
    • You will help by shuffling second deck when you’re on the button

• Pizza and soft drinks
  • Arrival 5:45 pm, no later than 6:15
  • Draw seats upon arrival
  • Cards in the air at 6:30
  • You can arrive late, and your blinds will be posted, but let me know

• It’s a 17 minute drive – share Ubers
• Google doc with all the logistics for those who qualify
Cash game survey

• Raise your hand if you are gunning to win trophy
  • No more than 5 chip add ons
• Formula:
  • Starting chips + 5 add ons = 125k
  • Add 20k for each tournament you played
  • Subtract any amount you won in any tournaments
  • That gives you the total
• Survey class to find current leader
• Thursday, at start of class, we will determine winner
  • You will need to back it up with emailed
    • screen shots for evidence

• Trophy awarded Friday with other trophies
Tomorrow’s guest lecturer – Steve Dannenmann
Tournaments
Types of tournaments

- Regular multi-table (our focus)
- Sit ‘n go
- Survivor
- Satellite
- Turbo
- Deep stack

- Bounties
- Multi-Day
- Tag team
- Re-entry, re-buy, Add ons
- WSOP, WPT, Daily
- home game
- online
Structure (regular multi-table)

• Blind levels are timed
  • 15 minute (turbo)
  • 20-30 minute standard
  • 45-60 minute Long structure, usually multi-day
  • 90-120 minutes
    • Only found at major events with huge fields and big buy-ins
    • Often multiple flights for day 1 and sometimes day 2

• Buy-in amounts
  • Typical daily: $80 - $120
  • Larger events: $250 – $350
  • Major events: $1,100 - $3,500, and even $10k and $100k
    • Big one for one drop $1M
    • Usually offer satellites of around 1/10 the buy-in
  • Young pros (and some amateurs) get “staked”

• Antes
  • Used to be each player anted starting around level 4
  • Nowadays: Big blind ante
  • Big blind ante goes in first and is NOT part of the BB’s bet
Payout structure

- Usually 10% of the field, sometimes 15%
  - In recent years, WSOP Main Event pays 15%
- Some are uniform payouts
- Some are very top heavy
  - Means a lot to win
  - Affects late tourney strategy
- Some carry a trophy for winner
- Very common to see chops
  - Either through ICM (more later), chippy chop, or other

### Payout Structure

<table>
<thead>
<tr>
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<th>Payout</th>
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<td>2nd</td>
<td>$750</td>
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<tr>
<td>3rd</td>
<td>$500</td>
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<tr>
<td>4th</td>
<td>$450</td>
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<td>5th</td>
<td>$400</td>
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<td>6th</td>
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<td>7th</td>
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<tr>
<td>9th</td>
<td>$200</td>
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<tr>
<td>10th</td>
<td>$150</td>
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<table>
<thead>
<tr>
<th>Finish</th>
<th>Payout</th>
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<td>11-12th</td>
<td>$100</td>
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<tr>
<td>13-14th</td>
<td>$75</td>
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<tr>
<td>15-20th</td>
<td>$50</td>
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<td>21st-30th</td>
<td>$50</td>
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<td>31st-40th</td>
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<td>41st-50th</td>
<td>$25</td>
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<td>51st-70th</td>
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<td>71st-100th</td>
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<td>101st-200th</td>
<td>$20</td>
</tr>
<tr>
<td>201st-250th</td>
<td>$20</td>
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</table>
Setup

• Tables remain balanced
  • Two people eliminated from one table
  • Often move someone from another table
  • As tournament progresses, tables are broken up
  • Seat cards are given to players to take new seat at new table

• Bubble play (in large tournaments)
  • Before the money bubble or major pay jumps
    • Play often goes hand for hand
    • Clock stops and each hand has a 2 minute runoff
    • All tables play one hand until all the tables are done
  • We will talk later about bubble strategy
Initial setup

• Seats drawn at random
  • You cannot pick who you sit with
  • Assigned a table # and a seat #

• Initial button is often seat 9, but sometimes randomly drawn

• Tournament supervisor (or guest celebrity) announces
  • "Shuffle Up and Deal"

• Clock starts and first hand is dealt

• Each round, the blinds go up
My home game blind structure

<table>
<thead>
<tr>
<th>n°</th>
<th>Play Time</th>
<th>Duration</th>
<th>Little Blind</th>
<th>Big Blind</th>
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<td>0 min</td>
<td>20 min</td>
<td>100</td>
<td>100</td>
<td>0</td>
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<td>1 h 00</td>
<td>20 min</td>
<td>200</td>
<td>400</td>
<td>400</td>
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<tr>
<td>5</td>
<td>1 h 20</td>
<td>20 min</td>
<td>300</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
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<td>1 h 40</td>
<td>20 min</td>
<td>400</td>
<td>800</td>
<td>800</td>
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<tr>
<td>7</td>
<td>2 h 00</td>
<td>20 min</td>
<td>500</td>
<td>1000</td>
<td>1000</td>
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<tr>
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<td>2 h 20</td>
<td>20 min</td>
<td>600</td>
<td>1200</td>
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<tr>
<td>9</td>
<td>2 h 40</td>
<td>20 min</td>
<td>800</td>
<td>1600</td>
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</tr>
<tr>
<td>10</td>
<td>3 h 00</td>
<td>20 min</td>
<td>1000</td>
<td>2000</td>
<td>2000</td>
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<tr>
<td>11</td>
<td>3 h 20</td>
<td>20 min</td>
<td>1500</td>
<td>3000</td>
<td>3000</td>
</tr>
<tr>
<td>12</td>
<td>3 h 40</td>
<td>20 min</td>
<td>2000</td>
<td>4000</td>
<td>4000</td>
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<tr>
<td>13</td>
<td>4 h 00</td>
<td>20 min</td>
<td>2500</td>
<td>5000</td>
<td>5000</td>
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<tr>
<td>14</td>
<td>4 h 20</td>
<td>20 min</td>
<td>3000</td>
<td>6000</td>
<td>6000</td>
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<tr>
<td>15</td>
<td>4 h 40</td>
<td>20 min</td>
<td>5000</td>
<td>10000</td>
<td>10000</td>
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<tr>
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<td>5 h 00</td>
<td>20 min</td>
<td>6000</td>
<td>12000</td>
<td>12000</td>
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<td>18</td>
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<tr>
<td>19</td>
<td>6 h 00</td>
<td>20 min</td>
<td>20000</td>
<td>40000</td>
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Starting stack sizes

• Starting stack determines style of play
  • WSOP main event: 50,000 starting chips
  • Typical daily tournament; 10,000 starting chips

• If blinds start out 100-100, and you have 10,000 starting stack
  • That’s 100 big blinds

• With 30k starting chips
  • That’s 300 big blinds

• Recall that # of big blinds determines implied odds
  • In early rounds, big cards and big pairs go down in value
  • In later rounds, e.g. blinds are 5k – 10k, stacks are shorter
    • Very common to see pre-flop all ins

• Total chips in play does not change
  • As players get knocked out, some will have massive stacks, others short stacks
  • Important to remember effective stacks are what matter
Tournament strategy

• Many advocate TAG style in early stages
  • Counter intuitive – different from deep stacked cash games
• Your stack is your lifeline. Cannot add chips like in a cash game
• Do you want to get it all in as a 60-40 favorite? How about 70-30?
• Consider:
  • If you get it all in 5 times in a row as an 80-20 favorite
  • You’ll probably be out of the tournament
  • (not really, unless you are all in and at risk each time)
Middle tourney strategy

- Strategy depends on stack size
- With small to medium stack
  - You cannot wait for good hands
  - You won’t have time
  - You have to play some more speculative hands
  - You have to steal some pots
- Good players with big stacks understand this
  - They will put you to the test
  - Avoid the big stacks if you can
    - But they will be super active
- With big stack
  - Be super active
  - Medium stacks will fear you and often fold to aggression
    - They don’t want to become a short stack
  - Short stacks will often shove on you, but you can handle it
Blind stealing

- As the blinds go up
  - Betting with wide range in late position to steal blinds is common
- Even if called, you will have position post-flop
- Common line:
  - Late position open for 2.5x
  - Continuation bet any flop
- Response: Big blind defense
  - When deciding whether to steal blinds
    - Consider if BB is a defender
    - Steal more often against non-defenders
Blind defending

• You should defend big blind with a wide range
  • Sometimes with re-raises

• Consider:
  • How likely is raiser to be stealing?
    • What type of player?
    • Has he been stealing blinds a lot lately?
  • What’s your image?
    • Are you known as a defender?
    • Will your re-raise get respect?
  • You will be out of position after the flop
    • Are you expecting to check-fold most flops?
The concept of "M"

• The number of rounds you can survive posting the blinds and antes
  • Changes as blinds go up

• Example:
  • You have 30k in tournament chips
  • Blinds are 2000-4000 with a 4k ante
  • It costs 10k/round
  • So your M is 3, danger zone

• Example:
  • You have 250k
  • Blinds are 1500-3000 with 3k ante
  • It costs 7500 per round
  • So your M is 33, very healthy

• Your style of play is dictated by your M and other players’ M values
Playing against different stack sizes in tourneys

• **Big stacks**
  • They can be fearless
  • They can take chances
  • They can bully you and force you to fold good hands
  • Careful against them, especially strong players

• **Small stacks**
  • They have one move, and they can use it
  • Ask yourself if you will call their shove
  • Some will shove pretty light if they think you’ll fold
  • Tread carefully

• **Medium stacks (e.g. M = 12)**
  • Every chip is valuable to them
  • You can make them fold
  • They will not take unnecessary risks
  • These are the guys you want to put to the test
How to play different M values:

• M above 20
  • You can play poker. No need to rush. Play your game

• M between 8 and 16
  • Every chip counts. Pick your spots. You need to steal some.
  • You should start feeling some pressure to win pots

• M below 5
  • You are looking to get it all in with any decent hand
Responding to different Ms

• Consider your opponent’s M
  • Is your opponent aware of different M strategies?
  • If so, interpret his moves based on his view of his M

• If opponent’s M is high
  • His range will be very wide
  • He will be more likely to fold to your shove or big raise
  • He will also be more willing to lose chips and take chances

• If opponent’s M is medium
  • He should play a tighter range
  • Not the right person to bluff

• If opponent’s M is very low (danger zone)
  • Often call their shove with any A, with any pair or two Broadway cards
Your tournament life

• Some tournaments
  • Struggle the whole way short stacked
  • Every time you get some chips, blinds go up
  • Hover around 15 bigs the whole way
  • Really grinding it out
  • But be patient – can still win

• Some tournaments
  • Build huge stack early
  • Coast all the way to the end

• Some tournaments
  • Stack fluctuates all over the place

• These variations are common – key is to stay patient and play best poker possible in each hand. One hand at a time

• Remember “Chip and a chair” (but don’t overuse the expression)
  • Nothing more annoying than losing huge all-in with tiny stack remaining and somebody says it
Tourney situation - example

• 8 players remain in a 100 person tournament
• You are already in the money
• Pay jumps are steep
• You are second in chips and put in a raise with 🂢♦️️
• Chip leader re-raises you all in
  • He has been doing this a lot lately – pushing the table around
• There are three very short stacks
• What do you do?
Example (cont.)

• Considerations
  • You probably have the best hand right now
  • You will be ahead if you call and in position to double up and win the tourney
  • But pay jumps are steep – you can let 3 players get eliminated and climb the money ladder
  • You have a good hand, but not a pair, and possibly are dominated
    • More likely dominating
  • Say you figure to be 60-40 favorite, is it worth risking going out now?

• Your decision
  • How much does winning mean?
  • How much do you care about the money in the jumps?
    • Is it the same decision if each pay jump is $50,000? What if it is $100?
  • Just how steep are those pay jumps?
  • How bad are the other players? What’s your skill edge?
Another example

- 15 players (2 tables) remain in a 300 person tournament
- Pay jumps have not been steep, but final 9 places are very steep
- You are the chip leader
- Good player in middle position with medium stack opens for 3BB
- Button also with medium stack calls
- You are in the big blind with any two cards
- Very often, a big raise here is very effective
  - If you get shoved on you can fold
  - But you will take it down often enough that this is worth it
    - If they just call, a continuation bet will often take it down on the flop
  - You also want to let them know you are the table captain
Bubble strategy - example

• 200 person tournament; 20 people get paid
• Now there are 22 people left
  • 4 of them are super short stacked, less than 3 big blinds
• Consider several cases:
  • You are chip leader
  • You have above average stack
  • You have below average stack, but decent M
  • You are on life support (M=2)
Bubble – chip leader

• This is as good as it gets
• The medium stacks do not want to be eliminated before the super short stacks
• You can bully them like crazy
• Not unheard of to shove against any raise from a medium stack
  • They should only call you with top 5% hand or better
  • Sometimes, they will fold even the best hands
  • Take into consideration their motivations
    • Are they getting life-changing money if they cash?
    • Are they a pro playing to win and will play “correctly” and call you?
    • Are they a laddering person?
• You can liberally steal blinds, 3 bet, and have your way with the table
• You want to sustain the bubble as long as possible
  • Don’t knock out the super short stacks if you can help it
  • The bubble is a cash cow for you
Bubble – above average

• You can use many of the tricks of chip leader

• Try to avoid the bigger stacks
  • You will be their primary bully target

• You can bully big stacks back (high risk/high reward)
  • They will be bullying you with a wide range
  • If you play back at them, that will show great strength
  • There are leveling issues here

• You can/should bully the smaller stacks
  • But not the desperate shortest ones
Bubble – below average stack

• You are the most vulnerable
• You can wait out the tiny stacks until the bubble pops
• I prefer to pick spots and shove
  • A min cash isn’t so great – better to try to double up
• Bubble presents strange dynamic
  • More chances to get called by weak holdings
  • Remember that big stacks don’t want bubble to pop so may fold to your shove for that reason
• You have to consider the bubble dynamic in every decision
  • Make sure you understand how opponents are responding to the bubble
Bubble – tiny stack

• You will be eliminated in 2 rounds or less without betting
• Find your first decent hand and shove it in
• Best if you can do it in late position to not go multi-way
• Opponents will probably check it down to knock you out
  • Especially medium stacks
  • This is not collusion if they don’t talk about it
• Very common in tournaments
  • especially around the bubble
Tournament-specific strategy

• Isolation move
  • In cash games, isolate to go heads up against bad players
  • In tournaments, isolate to improve odds of winning

• Example:
  • Short stack in front of you goes all in for 6 big blinds
  • You have medium stack (35 bigs) and AQ
  • You know that your range is way ahead of short stack
  • Your choices:
    • Call
    • Raise

• Which choice is better?
  • If you call, you might let in more players
  • If you raise, you are more likely to be heads up
  • I would raise in this position to isolate a most likely weaker hand and be heads up

• This scenario unlikely to occur in a cash game (nobody plays with 6 big blinds)
Blind vs. Blind

• In cash games usually chop the blinds
• In tournaments
  • Blinds are bigger later on
  • Lots of gamesmanship and leveling
  • Small blind often steals
  • Big blind often defends
• When small blind limps, I like to raise big
  • Get more walks later on
  • Very important: if you actually have a hand – don’t show it!
    • You want SB to fear that you will bluff raise often – they will steal less often
• Don’t get too carried away
  • A shame to get knocked out of tourney with junk hand blind vs. blind
    • I’ve been there – done that
Final table strategy

• At final table, you will play short handed
  • Hand values proportional to # of players
  • E.g. KJ is a very strong hand 3 ways
    • but mediocre at best 9 handed
  • Stack size dynamics are even more pronounced
  • Ladder is a big factor

• Heads up
  • Very rarely find yourself in this position
  • Most money ever is at stake
  • Strategy is completely different
    • Play any two cards
  • Hand reading becomes extremely difficult
  • Play the player and tendencies more than the cards
  • Hand values go way up
  • Most important factor is stack size – hard to overcome big chip lead
    • Be super super aggressive, don’t let up
    • Need to play a bit unpredictably
Chopping

• Very important decision
  • Affects take home pay more than most decisions at poker table
• Sometimes, pay out first place and chop the rest
• Some people care more about the title than the money
• In small time tournaments in casinos
  • Lots of pressure from all the regulars to chop
  • Almost never play it out to the end
  • House facilitates the chops
• In major televised tournaments
  • Always play to the end
  • But sometimes back room deals are made (on a handshake)
Chip chop

• Based on # of chips
  • If you have 35% of the chips, you get 35% of the prize pool
• Works well when chips stacks are similar, but not when there is a big chip leader or tiny stack

• Example:

<table>
<thead>
<tr>
<th>Position</th>
<th>Player</th>
<th>Chips</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Alice</td>
<td>320,000</td>
</tr>
<tr>
<td>2nd</td>
<td>Bill</td>
<td>260,000</td>
</tr>
<tr>
<td>3rd</td>
<td>Charles</td>
<td>220,000</td>
</tr>
<tr>
<td>4th</td>
<td>David</td>
<td>200,000</td>
</tr>
</tbody>
</table>

Payouts:
- 1st: $4,000
- 2nd: $2,500
- 3rd: $2,000
- 4th: $1,500
Chip chop

• Each player would get between $1,500 and $4,000
• Calculate percentage of the chips.
• Alice has 32% of the chips, so gets 32% of the 10k prize pool
• Seems like a fair deal

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Alice</td>
<td>320,000</td>
<td>$2,780.00</td>
</tr>
<tr>
<td>2nd</td>
<td>Bill</td>
<td>260,000</td>
<td>$2,540.00</td>
</tr>
<tr>
<td>3rd</td>
<td>Charles</td>
<td>220,000</td>
<td>$2,380.00</td>
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Payouts:
1st: $4,000
2nd: $2,500
3rd: $2,000
4th: $1,500
Chip chop

- However, what if Alice had a huge chip lead?
- She would get more than first place money
- So chip chop doesn’t work here
  - Also doesn’t work if someone has small stack for less than 4th place money

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<tbody>
<tr>
<td>1st</td>
<td>Alice</td>
<td>670,000</td>
<td>$4,180.00</td>
</tr>
<tr>
<td>2nd</td>
<td>Bill</td>
<td>150,000</td>
<td>$2,100.00</td>
</tr>
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Payouts:
1st: $4,000
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Independent Chip Model (ICM)

• Most common
• Does not take into account skill level
• Mathematical formula based on # of players left, stack sizes, payout amounts
• ICM takes into account that chip values change as tournament progresses
  • The more chips you have, the less each chip is worth
• Calculation:
  • Compute probability of each player finishing in each remaining spot
    • Based on stack size alone
    • Multiply percentages by theoretical cash value of each stack
    • Formula is complex, but players use ICM calculators
      • Enter chip stacks and payouts, and ICM calculator produces new payouts
ICM calculation

• ICM payouts for earlier example

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</tr>
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<tbody>
<tr>
<td>1st</td>
<td>Alice</td>
<td>320,000</td>
<td>$2,699.85</td>
</tr>
<tr>
<td>2nd</td>
<td>Bill</td>
<td>260,000</td>
<td>$2,537.58</td>
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<td>3rd</td>
<td>Charles</td>
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<tr>
<td>4th</td>
<td>David</td>
<td>200,000</td>
<td>$2,347.79</td>
</tr>
</tbody>
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Payouts:
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Compare to Chip Chop

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ICM calculation

- ICM payouts for big stack Alice

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<td>670,000</td>
<td>$3,460.73</td>
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<tr>
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<td>Bill</td>
<td>150,000</td>
<td>$2,370.83</td>
</tr>
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<td>Charles</td>
<td>110,000</td>
<td>$2,197.61</td>
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Chopping

• Interesting fact
  • ICM & Chip Chop produce exact same results for only two players
• People make all kinds of deals
  • Sometimes compute Chip Chop & ICM and utilize some compromise
• Some players are very bad and agree to ridiculous deals
• Some players care more about titles and will take less money to get title and bragging rights
• ICM, tweaked for skill level is probably the most fair
• Sometimes big stack demands first place money, and remaining players chop the rest – pretty common
• Some players refuse to ever chop
  • Often resulting in being the next one eliminated - karma