



MIT 15.S50 LECTURE 8

Friday, February 3rd, 2012

AGENDA

1. **3 most important poker lessons to take away from this class**
2. Playing poker for real money
3. Deals for students in this class
4. Life stories of Mike and myself
5. Prizes!
6. Future contact, goodbye



LESSON 1: DON'T FOLD WITH RIDICULOUSLY GOOD ODDS PREFLOP!

- “Any two cards have a chance against any two other cards preflop”
- It is difficult to have less than 30% equity preflop no matter what cards you have, unless your opponent is raising from early position
- It is difficult to have less than 30% equity preflop if you have an Ace in your hand, even if your opponent's range is really strong



RAISE 98S FROM HJ



BB GOES ALL-IN FOR 10BB'S



WE ONLY NEED 37% EQUITY TO CALL

LEAVE TABLE
VIEW LOBBY

UTG+1 \$12000

HJ-2 \$12000

UTG \$12000

HJ-1 \$12000

BB \$0

\$8000

\$900

\$8000

Call

\$400

SB \$11600

CO \$12000

BTN \$12000

Chat | Notes | Stats | Info

Last Action
HJ calls 6400\$



ANALYSIS

- Any hand we would raise from here in the first place, we have enough equity to call.



WE HAVE 4BB'S IN THE BIG BLIND



WE GO ALL-IN, KNOWING HE WILL CALL



HE CALLS, AS EXPECTED.

The image shows a screenshot of a poker hand in progress. The table is green with a brown border. The dealer button (D) is in the bottom center. The blinds are \$1000 (BB) and \$2000 (SB). The pot is \$900. The flop consists of the Queen of Clubs, the 8 of Diamonds, and the 4 of Diamonds. The community cards are the Queen of Clubs, 8 of Diamonds, and 4 of Diamonds. The stack sizes are: UTG \$12000, UTG+1 \$12000, HJ-1 \$12000, HJ-2 \$12000, BB \$0, SB \$11600, CO \$12000, and BTN \$12000. The HJ-2 position has a 'Call' button. The bottom left shows tabs for Chat, Notes, Stats, and Info. The bottom right shows a 'Last Action' log with the text 'HJ calls 1600\$'. There is an orange circle on the right side of the image.

Chat Notes Stats Info

LEAVE TABLE
VIEW LOBBY

UTG+1
\$12000

HJ-2
\$12000

UTG
\$12000

HJ-1
\$12000

BB
\$0

Call

SB
\$11600

CO
\$12000

BTN
\$12000

Last Action
HJ calls 1600\$

ANALYSIS

- If we go all-in for 4BB's we know we will get called
- But still, we would be risking 3BB's to win a total pot of 9.5BB's, so we need just under 33% equity
- Assuming he raises the top 20% of hands (which is a pretty tight player), we are still 34% against his range



LESSON 2: DON'T BE AFRAID TO GO ALL-IN PREFLOP

- Late in tournaments, with the addition of antes and declining stack sizes, winning the blinds and antes is so valuable.
- What you gain is so large relative to what you lose.
- Remember Lesson 1: “Any 2 cards have a chance against any 2 other cards preflop”!
- Of course, don't take this too far =)



ALL-IN.



ALL-IN.



ALL-IN.

A screenshot of a poker hand in progress. The table is green with a wooden border. The pot is \$8000. The stack sizes and positions are as follows:

- UTG: \$4000
- UTG+1: \$12000
- HJ-2: \$12000
- HJ: \$12000
- CO: \$12000
- BTN: \$12000
- SB: \$11600
- BB: \$2400

The HJ-1 player is all-in with the Ace of Spades and the 2 of Spades. The pot is \$8000. The last action is "HJ-1 is All-in".

Buttons: LEAVE TABLE, VIEW LOBBY

Chat: Chat, Notes, Stats, Info

Last Action: HJ-1 is All-in



ALL-IN.



ALL-IN.



THE MOST # OF BB'S I'M WILLING TO GO ALL-IN FOR FROM EACH POSITION, WITH A4O.



ALL-IN.



THE MOST # OF BB'S I'M WILLING TO GO ALL-IN FOR FROM EACH POSITION, WITH 76S.



NOTE THE DIFFERENCE IN THE CURVE!

- With A4o, the maximum # of BB's I could risk declined drastically with each position, because when you get called, you are usually so far behind.
- With 76s, the maximum # of BB's I could risk declined slower with each position, since it does relatively better against the monster hands.



DON'T DO ANYTHING FUNNY!



ALL-IN.



DON'T BE AFRAID TO DEFEND AGAINST LATE POSITION (BTN, CO, HJ) STEALS!



ALL-IN.



AGAIN, DON'T DO ANYTHING FUNNY,
ESPECIALLY WHEN YOUR OPPONENTS ARE
ALREADY GIVEN SUCH GOOD ODDS TO CALL



“SQUEEZE-PLAY” ALL-IN.



LESSON 3: DON'T GET BORED AND PLAY TOO MANY HANDS PREFLOP



FOLD.

LEAVE TABLE
VIEW LOBBY

UTG+1
\$16300

HJ-2
\$12000

UTG
\$4000

HJ-1
\$5400

BB
\$23200

HJ
\$12000

SB
\$21600

CO
\$12000

\$1700

\$800

\$400

\$900

D

Fold

Chat Notes Stats Info

Last Action
BTN folds



THIS RANDOM STEAL IS TERRIBLE FROM UTG, WITH SO MANY SHORTSTACKS BEHIND



GOING ALL-IN WOULD BE NOT TERRIBLE, BUT
CO IS USUALLY CALLING YOUR ALL-IN, SO I
PREFER FOLDING



DON'T CALL OR RE-RAISE AN UTG RAISE THAT EASILY!



FOLD. BOTH CALLING AND RAISING (BLUFF ALL-IN) ARE TERRIBLE



**UTG ALREADY HAS A STRONG RANGE;
UTG+1 MUST HAVE A MONSTER RANGE**



FOLD.



HJ-2 PROBABLY HAS A RANGE OF QQ+,
AK



FOLD.



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PLAYING FOR REAL MONEY

- Currently, playing online for real money from an United States IP is mostly illegal
- Don't try to change your IP; you'll get caught
- ANY form of poker bots is criminally illegal to use in online poker rooms (real or play money)
- The main poker site you **can** play on is Carbon Poker (skin of the Merge Poker network)



POKER = STARCRAFT?

- Being able to click fast and multitable well is the most important skill to learn for online poker
- We would play >20 tables at the same time, on >10 different poker networks
- This greatly increases productivity, and most importantly, reduces variance through variety



BANKROLL MANAGEMENT

- We would estimate the skill level of the better players in the league to be comparable to the skill level of the winners at \$5-10 buy-in games (\$3 buy-in Sit-n-go's (SNG), \$5 buy-in tournaments, 5c/10c NL)
- The bankroll required to play
 - SNG's : 50 buyins
 - Tournaments: 150 buyins
 - Cash Games: 40 buyins
- Note that these numbers are fairly high! Our recommended strategy is to play small stakes but lots of tables.



TYPES OF LOSS OF SELF CONTROL

1. Playing stakes too high / overestimating your ability
2. After getting unlucky in the previous hand, playing the next hand poorly
3. Playing when you're tired, just to get "unstuck" (win back the money you lost)
4. Being irrationally scared to go all-in, especially far in a big tournament
5. Playing poorly under pressure (playing way differently in real-time than when analyzing hands afterward)



BOOKS READING LIST

- *Small Stakes Holdem* (Ed Miller, David Sklansky, Mason Malmuth) – only for limit hold'em, but still one of the classic books in poker and written by mathematicians
- *Harrington on Holdem 1 and 2* (Dan Harrington) – slightly outdated but very good
- *Kill Phil / Kill Everyone* (Lee Nelson et al)
- *Every Hand Revealed* (Gus Hansen) – more entertaining than educational
- *The Mathematics of Poker* (Bill Chen) – not that practical, but theoretically very interesting
- *How to Read Hands at No-limit Hold'em* (Ed Miller)
- *The Mental Game of Poker* (Jared Tendler)
- *Building a Bankroll* (Pawel Nazarewicz) – mostly for full ring cash games



ONLINE RESOURCES

- Cardrunners.com – best paid resource
- www.twoplustwo.com – forums, best free resource



POKER TOOLS

- Poker Stove (equity calculator)
- Universal Replayer (hand history replayer)
- Hold'em Manager (statistical software)
 - Don't overestimate how much statistics on your opponents will help your decision making
 - Such an investment is usually not recommended until you can do PokerStove calculations "in your head"
 - The biggest issue with such an investment is that looking at your opponents' numbers while you're playing takes **time**, greatly reducing the # of tables you can simultaneously play



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CARDRUNNERS

- Large database of videos, of pros playing poker and video-recording their screens, talking through the hands
- Both Mike and I are pros there
- cardrunners.com for details
- Other than the free subscriptions as prizes, they are willing to give anyone who passed this course a 50% discount on a 12-month subscription
- To claim the discount, please email me



VERNEER'S BOOK

- Another Cardrunners pro, Pawel Nazarewicz
- His book is called “Building a Bankroll”
- www.mtmicropoker.com for more details
- He is willing to sell his book at 30% discount for anyone who passed the course
- He also donated some books as prizes and there is a reading from a section of his book posted on my website
- Email me to claim the discount



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OUR POKER STORY

- 2004 – Mike, 14 years old, and Will, 15 years old, attend a high school math camp, where we are introduced to the game.
- Mike immediately becomes interested in the game and yields half a million dollars by Summer of 2006 (when we graduated High School), playing the highest buy-in online tournaments possible (>\$100).
- Will starts playing by end of 2005 but doesn't get into the highest buy-ins until 2007.
- We play together regularly during 2007 – 2008, both yielding good results. Along with 5 or 6 other noted online players from Waterloo.
- We were fortunate to be part of such an awesome group; we were able to learn poker very quickly and efficiently.



OUR POKER STORY [2]

- In May 2007, Will wins Grand Prix de Paris for 450k euros, claiming the title for youngest player to win a major live tournament.
- In February 2008, Mike wins EPT Dortmund for 900k euros, taking the title from Will.
- Will starts playing slightly less by the end of 2008, after a 100k downswing (from a 600k bankroll). He focuses more on school, doing what he enjoys doing.
- In 2009, Mike and Will continue to get good results in poker. Mike becomes a Full Tilt pro and becomes an ambassador for the game.



OUR POKER STORY [3]

- In 2010, Will moves to MIT.
- In April 2011, Will stops playing online poker due to “Black Friday” =(This was a devastating day for the online poker community.
- In 2011, Mike is selected to be part of the Epic Poker league, and is currently ranked in the top 10 best live players after taking down an Epic Poker League tournament for 800k. Mike is also on the ethics community.
- ...and here we are in 2012.



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TOP 20 IN POINTS

Club Standings

Real Money Play Money

Season 1 (2012) Rename...

Rank	Player	Games	Points	Average	KO
1	AdamT_MIT	89	172.13	1.93	64
2	wetreal	53	119.95	2.26	107.5
3	Md. W. MIT	69	107.53	1.56	99.5
4	Maokai_MIT	58	104.39	1.8	117
5	yongnali	71	102.45	1.44	86.5
6	JohnR_MIT	87	91.92	1.06	106
7	GetWhipped!	67	91.28	1.36	106.5
8	eugenem_MIT	85	90.95	1.07	93.5
9	YutaK_MIT	58	86.05	1.48	43
10	morty2015	81	81.27	1	64.5
11	CalebC_MIT	58	78.46	1.35	53.5
12	ZackS_MIT	64	77.2	1.21	81.5
13	iltack_mit	69	73.12	1.06	66
14	qtdkj	41	72.08	1.76	56.5
15	JungLee_MIT	38	66.22	1.74	67
16	kevinc_mit	36	64.16	1.78	47
17	DavidF_MIT	55	63.88	1.16	60.5
18	jaewonk_MIT	84	62.64	0.75	68.5
19	AndrewJ_MIT	34	59.72	1.76	57.5
20	ARI O MIT	76	59.54	0.78	117
21	eric.h_mit	63	56.27	0.89	55
22	JohnK_MIT	54	50.22	0.93	51
23	ahessMIT	56	44.83	0.8	60
24	pandazzzz	68	44.17	0.65	37
25	ElliotS_MIT	24	42.52	1.77	30
26	Bchang_MIT	37	41.24	1.11	53.5
27	LeC_MIT	45	40.91	0.91	29
28	DanG_MIT	26	40.33	1.55	40
29	DafaelAV MIT	33	36.14	1.1	31



TOP 3 IN POINTS PER GAME

Club Standings

Real Money Play Money

Season 1 (2012) Rename...

Rank	Player	Games	Points	Average	KO
112	YangYang_MIT	5	11.9	2.38	10
50	johnsun_mit	10	22.92	2.29	33.5
2	weileaf	53	119.95	2.26	107.5
134	Timex	4	8.89	2.22	5
121	YiseulC_MIT	5	10.98	2.2	13
1	AdamT_MIT	89	172.13	1.93	64
61	Adrian_MIT	11	20.8	1.89	19
104	evanr_MIT	7	13.07	1.87	14
4	Maokai_MIT	58	104.39	1.8	117
16	kevinc_mit	36	64.16	1.78	47
25	ElliotS_MIT	24	42.52	1.77	30
58	NickC_MIT	12	21.2	1.77	19
14	qtdkj	41	72.08	1.76	56.5
19	AndrewJ_MIT	34	59.72	1.76	57.5
109	nicolai_MIT	7	12.34	1.76	7
15	JungLee_MIT	38	66.22	1.74	67
38	Kidhanis_MIT	17	29.48	1.73	14
35	WujieH_MIT	19	32.6	1.72	33
114	Diego_F_MIT	7	11.66	1.67	11
129	CutiePiB14	6	10.03	1.67	17
115	MikeV_MIT	7	11.64	1.66	5
60	Kiel_MIT	13	20.83	1.6	12
3	Md. W. MIT	69	107.53	1.56	99.5
28	DanG_MIT	26	40.33	1.55	40



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POKERBOTS FINAL COMPETITION

- Monday, February 6th, 2012 (Registration Day)
- 4:00 – 5:30
- Kresge Auditorium
- Triplicate poker
- There will be a MIT 15.S50 team there to compete against the bots



THE END.

- Mukul made a Facebook group; go to this link to join
- <http://www.facebook.com/groups/318182281551103/>
- I hope you met lots of friends in this class! Feel free to organize poker games, Foxwoods trips, etc. on the group
- Future of Pokerstars home games league – I won't be having any more games running regularly. If you want Admin status to create “fun” games that some of you can play, email me after you get a sufficiently large group on the Facebook group.
- I really enjoyed teaching all of you, you were a very enthusiastic group! Thanks to Prof. Dimitris Bertsimas for making this all happen!
- Next year? Not sure whether I'll be around during IAP, but I'll definitely do this again if I am!

