

Introduction to the Theory & Practice of Poker

Lecture #4

January 16, 2020

Some logistics

- Reminder to register for Saturday, 8pm poker tournament
- We are showing Rounders at 7:30 pm in this room
- Second showing of All In the Poker Movie on Monday, 1/20, 1:30 pm
- Feedback for last night's poker play
 - Less open limping
 - But some of you still doing it
 - Raise sizes still seem a bit unusual
 - Unless you have a specific reason stick to 3 times the previous bet
 - Opening ranges a bit wide
 - Typically you shouldn't play more than one or two hands per round, if that
 - If you do, you're playing too loose
 - This might be fun with play money, but when you play for real money, tighten up
- Lots of use of the word "dominated" in the banter in the chat

Poker Riddle:

Looking back on the hand afterwards, you had the absolute nuts on the flop and the absolute nuts on the turn. On the river, you could not win or even chop.

To answer correctly: Describe your hand, the flop, the turn, and the river and prove that you solved the riddle. The conditions must be true for every possible set of opponents.



Amber Hamelin

How to describe a hand

Describing a hand

- Stack sizes
 - Effective stacks
- Table image: yours and theirs
- Recent activity: aggressive, passive
- Position
- Cards
- Thought process
 - Opponents thought process, if any
- Action

Example: how not to do it

I had a pair of aces. I bet big and got one caller. Flop came low cards. I check-raised him, and he called. Turn was another blank and I bet out. He shoved all in, and I called. I can't believe he hit a set and I lost my whole stack.

A better way to describe a hand

I started the hand with 100 big blinds and looked down at pocket aces on the button. Most of the table had me covered, but the donkey in seat 3 had only 60 big blinds, and he had been very active lately and he was steaming because of a few recent bad beats. He did not like folding, so I was going to try to isolate him. UTG player who hasn't been very active raises to 3 big blinds and donkey called. It got to me, and I decided to try to isolate the donkey rather than go multi-way to the flop, so I 3-bet to 9 big blinds. UTG folded, as I expected, and the donkey calls. I hadn't been raising much, so I was worried that I would give away the strength of my hand. That said, the donkey wasn't much of a thinker and I doubt he was paying attention to how often I was raising. He probably had a hand he liked and was going with it. The flop came with 3 low cards - rainbow, which I was happy to see, but then the donkey came out firing a pot sized bet. Considering the way he had been playing, I decided that he often has nothing there or some low pair that I'm beating, and I can't fold. No point in raising as he'll just fold out any hands that I'm beating. However, if he is bluffing and I call, he might continue bluffing on later streets, and I have position, so I just call. Turn card looks like a blank, and he shoves all in. At this point I have to call, as I was hoping to induce a bluff, and I can't fold when he does. Furthermore, since he only started with 60 bigs, it's not that big a bet, so I call. River is a 2, and he shows 72 for two pair and cracks my aces. That's okay, I want this guy at my table anytime.

Student participation



- You will play lots of hands in the course
- Over time, you will learn a lot about how to read opponents ranges, and how to reason in a hand
- If you have an interesting hand
 - Email a description to us
 - rubin@jhu.edu, dblessi2@jhu.edu, dwang89@jhu.edu
 - I may follow up with some questions, and we can discuss it over email
 - Really interesting ones we can discuss in my office or before or after class
- I may invite the best ones to be presented to the class
 - By you
 - And I'll encourage discussion
- Be sure to include all the important details
 - Stack sizes, position, perception of opponent, your table image, etc

Starting hand strategy (cont.)

Review



- Hand selection criteria
 - Position, stack size, opened or unopened pot, strength of cards
 - Aggressiveness of table, opponents, table image
- So far, we've looked at:
 - AA, KK, QQ
 - Raise, re-raise from any position
 - Medium pairs
 - Raise from middle to late position
 - Small pairs
 - Raise sometimes from late position
 - Prefer deep stacks, but not too deep
 - AK, AQ
 - Unusual hands, but strong, AK >> AQ

A2 - AJ

- The following applies to both suited and not
 - Only 2.5% difference in winning percentage
 - Suited carries more weight with deeper stacks
- Perhaps most overrated hand
 - Most overplayed by bad players
 - They are dominated by better aces
 - Very hard to find a really good flop
 - When you make a strong hand, it's hard to get paid
 - If you make nut flush, it's obvious to opponent



A2 - AJ

- These hands play better in position
 - Fold them all UTG
 - If unopened pot near the button, play like AK
 - Less likely to be dominated with fewer players
- Play better at weak, low-stakes tables
 - At strong tables, most good players are playing stronger aces and tossing weak aces so you will be dominated more often
- In early position
 - Play AJs and throw away all the others
- In middle position
 - Play AJ, AT, and suited aces at passive tables
- In late position
 - Play suited aces and AT, but do not play any other aces if pot is already opened.

Trouble hands

- Term “Trouble Hands” coined by Doyle Brunson
- Pretty looking hands
 - KQ, KJ, KT, QJ, QT
- If you make top pair, you feel good
 - But if you are dominated, you are in trouble
- Every one of these easily dominated by
 - AK, AQ, AJ, AT
- Some of these dominated by the others. $KQ > KT$
- Don't call raises with these hands



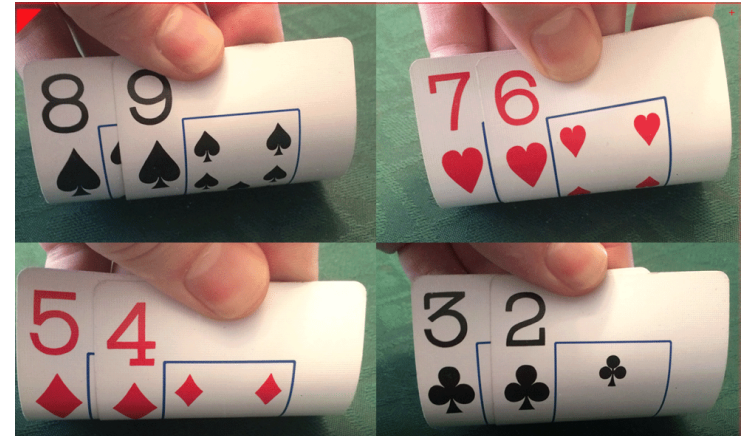
Trouble Hands

- In early position
 - Maybe play KQs, but toss the rest of them
- In middle position
 - KQ, KJ, QJ can be played in unopened pot, but don't call a raise
- In late position
 - Okay to play and raise with these hands, but proceed with caution on the flop
 - Take opponent tendencies into account
- If you ever get 3-bet with the trouble hands, say bye bye



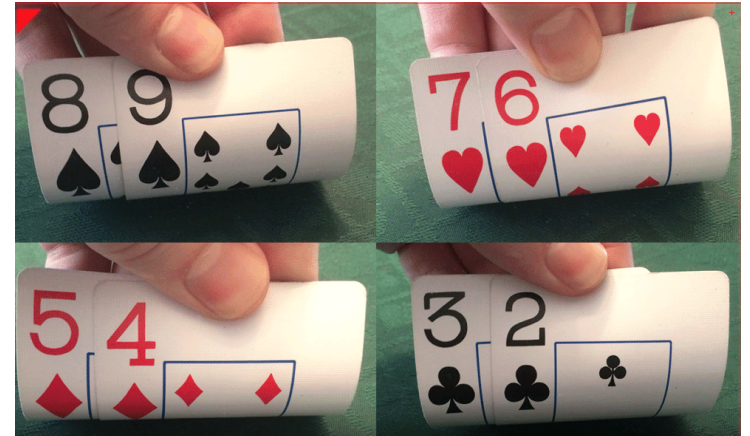
Suited Connectors

- Annie Duke hates suited connectors
- Dan Harrington & Doyle Brunson love them
- I like them in deep stack cash games, not as much in tourneys
- Play well as disguised hands
 - E.g. Raise pre-flop and when your 89 hits a 7T3 flop, you have a hidden big draw
- In early position
 - Fold most of the time, raise occasionally, around 20% of the time
 - Lean towards the larger cards, fold 23 – 67, raise 78-TJ
 - Depends on table, if lots of 3 and 4 betting, fold more often
- In middle position
 - Raise more often, say 50% of the time
 - Also depends how active I've been lately
- In late position
 - If unopened, almost always raise
 - Call one bet unless the blinds are known to be super aggressive



Suited Connectors

- When to play?
 - Try to be multi-way
 - One raiser and lots of callers
 - Favor late position
 - Be willing to fold top pair on the flop to pressure
 - You will have kicker problems
- Advantages of these hands
 - Better express odds in larger multi-way pots
 - Better implied odds because straights are hidden monsters
 - Better chance of winning when in position



Other playable hands

- Mostly, only play these in late position
 - Occasionally raise with them in early/mid position for deception
 - Don't get carried away with deception
- Unsuit connectors (e.g. 9To)
- Suited and unsuited one gappers (e.g. 97)
 - Suited or unsuited two gappers (e.g. 8T)
- Conditions for playing these:
 - Good position
 - Tight table with lots of folding and little 3 betting
 - This is important
- You want every flop to contain a threat. Opponent should know that if the flop is that you might have two pair or a monster
 - They shouldn't always put you on AK or AQ.
 - If you show down 96 for a straight, table will remember that

AA	AKs	AQs	AJs	ATs	A9s	A8s	A7s	A6s	A5s	A4s	A3s	A2s
AKo	KK	KQs	KJs	KTs	K9s	K8s	K7s	K6s	K5s	K4s	K3s	K2s
AQo	KQo	QQ	QJs	QTs	Q9s	Q8s	Q7s	Q6s	Q5s	Q4s	Q3s	Q2s
AJo	KJo	QJo	JJ	JTs	J9s	J8s	J7s	J6s	J5s	J4s	J3s	J2
ATo	KTo	QTo	JTo	TT	T9s	T8s	T7s	T6s	T5s	T4s	T3s	T2s
A9o	K9o	Q9o	J9o	T9o	99	98s	97s	96s	95s	94s	93s	92s
A8o	K8o	Q8o	J8o	T8o	98o	88	87s	86s	85s	84s	83s	82s
A7o	K7o	Q7o	J7o	T7o	97o	87o	77	76s	75s	74s	73s	72s
A6o	K6o	Q6o	J6o	T6o	96o	86o	76o	66	65s	64s	63s	62s
A5o	K5o	Q5o	J5o	T5o	95o	85o	75o	65o	55	54s	53s	52s
A4o	K4o	Q4o	J4o	T4o	94o	84o	74o	64o	54o	44	43s	42s
A3o	K3o	Q3o	J3o	T3o	93o	83o	73o	63o	53o	43o	33	32s
A2o	K2o	Q2o	J2o	T2o	92o	82o	72o	62o	52o	42o	32o	22



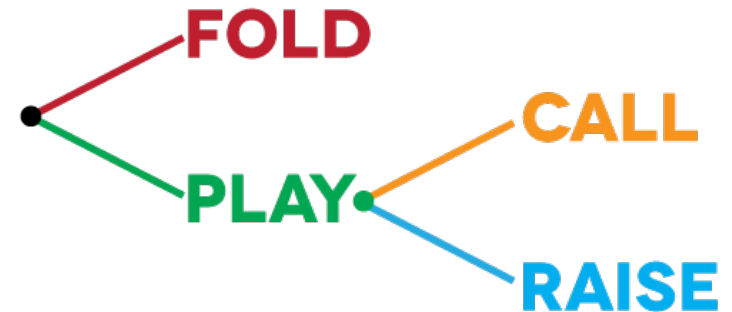
All remaining hands

- Just fold!
- Don't do it.
- You should not play garbage
 - J3, 82, K4, Q6, etc
- What do you enjoy more, playing or winning?
- In deep stack cash games, winning 1.5 blinds is not a thing
 - Sometimes have to in tournaments, especially blind vs. blind
 - In cash games, blinds usually chop if pot is unopened
- If you only play top 20% of hands, you will play 2 hands/orbit
 - Fewer in position
 - That's okay. Good hands will come in bunches
- "No shame in folding"



Epilogue – starting hand strategy

- Starting hand strategy described here is TAG
- LAG will play more hands
 - Make more disguised hands
 - Put to more tough decisions
 - Kicker problems
 - Relies on good hand-reading skills
 - Has to bully
 - And risks losing big
- Most players will not play as tight as you if you play TAG
 - So you will be easier to read but will often have the better hand

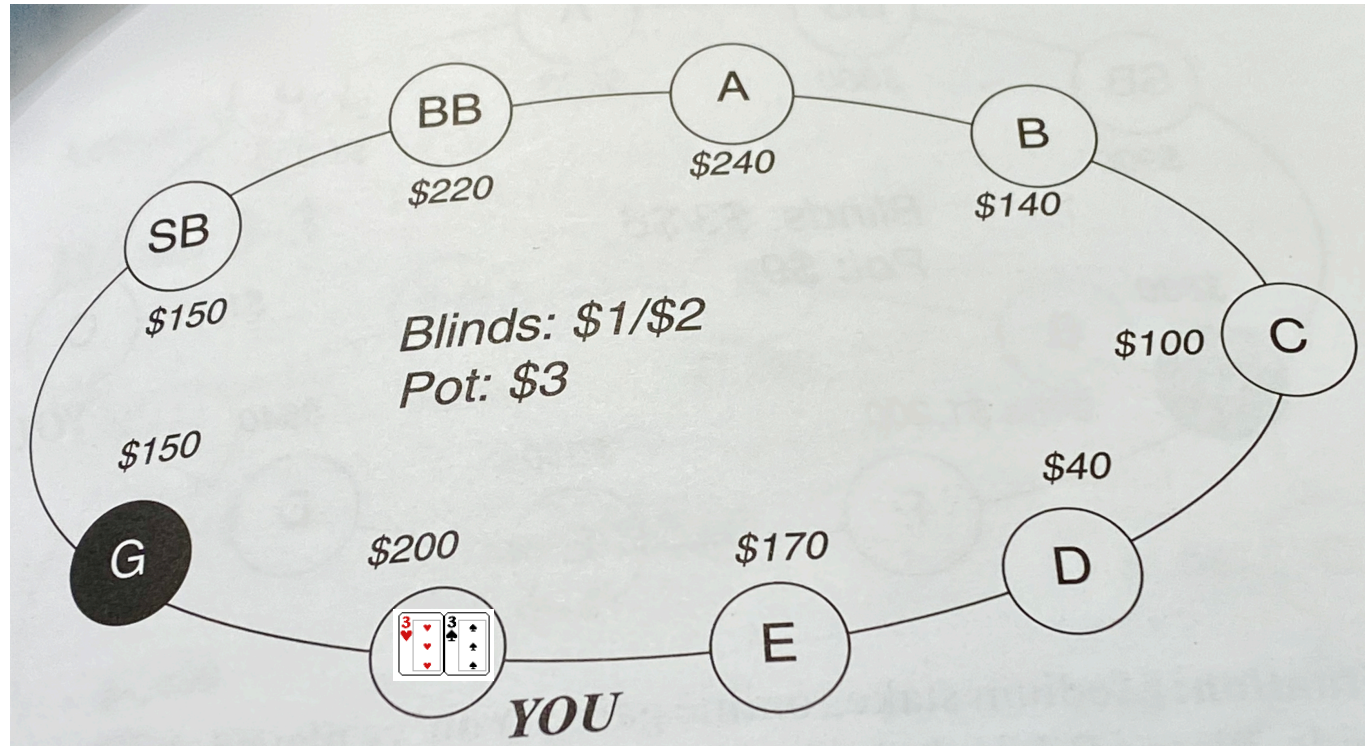


The GAP concept

- Sklansky's rule
 - You need a better hand to call a raise than the original raiser needed to make the raise
- Reasons:
 - Raise was made from earlier position
 - He could have opened anywhere in his range
 - And you are not calling with the bottom end of your range
 - So calling range is narrower than opening range
- The deeper the stacks, the less important the GAP concept
 - Because you are playing for implied odds, which tend to be weaker opening hands.

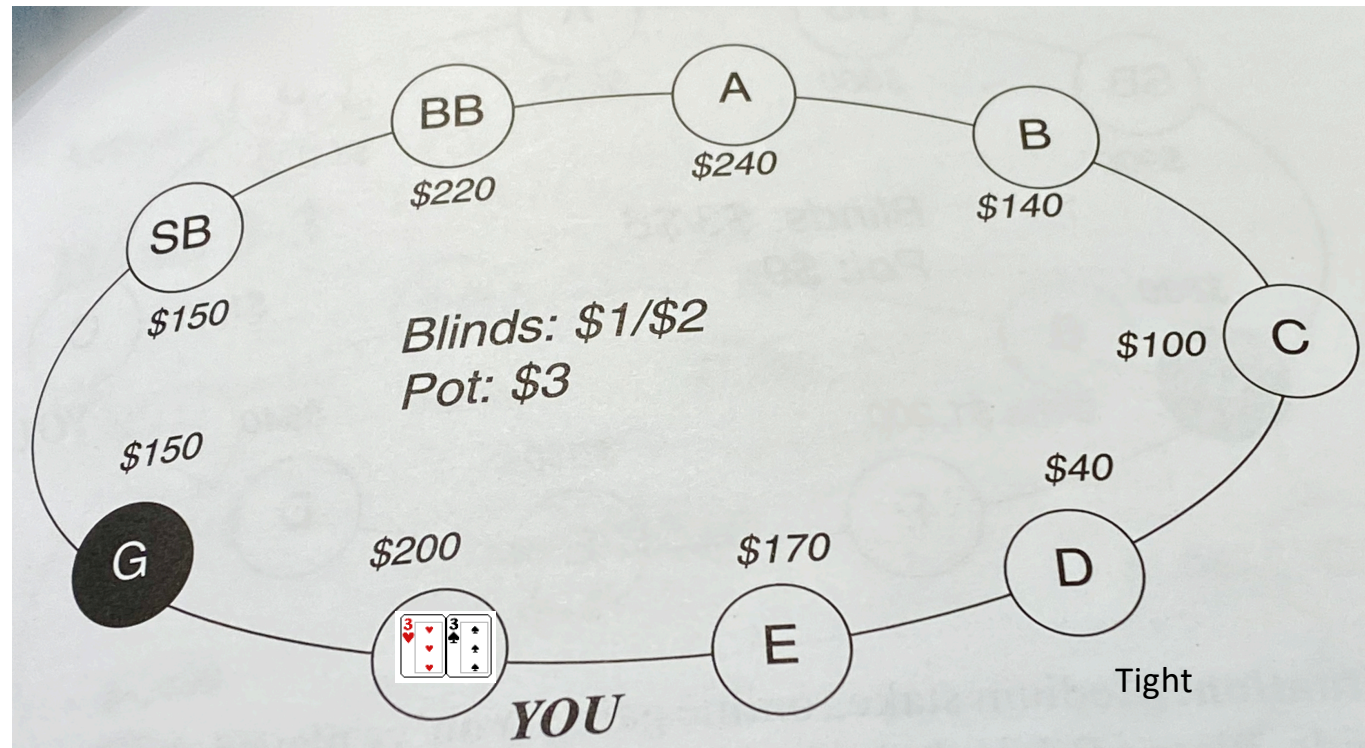
Some exercises
For pre-flop decisions

Your hand 



- You have observed that player D is tight
- Action: A,B,C fold; Player D raises to \$8
- Should you Call, Fold, or Raise?

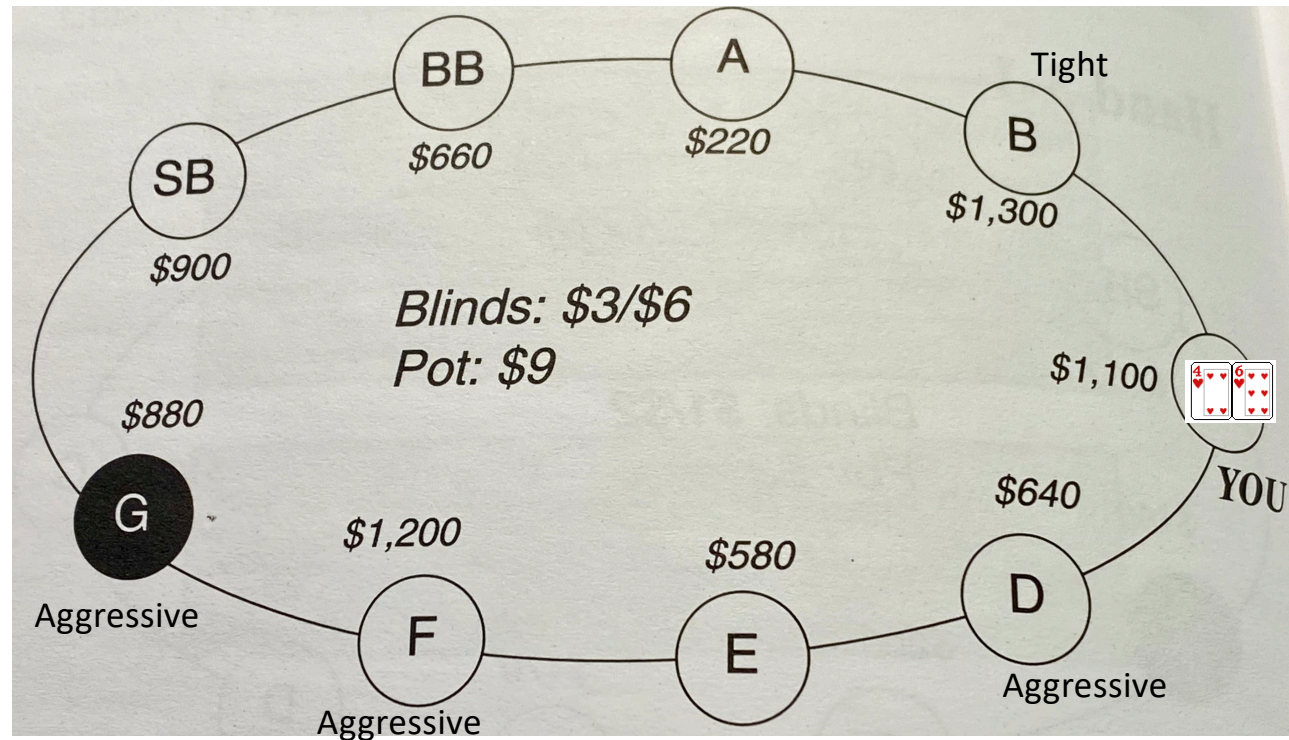
Your hand: 



- Opponent only has \$32 behind
- Odds against hitting a set are 7.5 – 1
- You won't be able to call on most flops
- FOLD
- Does this change if D is loose and aggressive?

Your hand: 

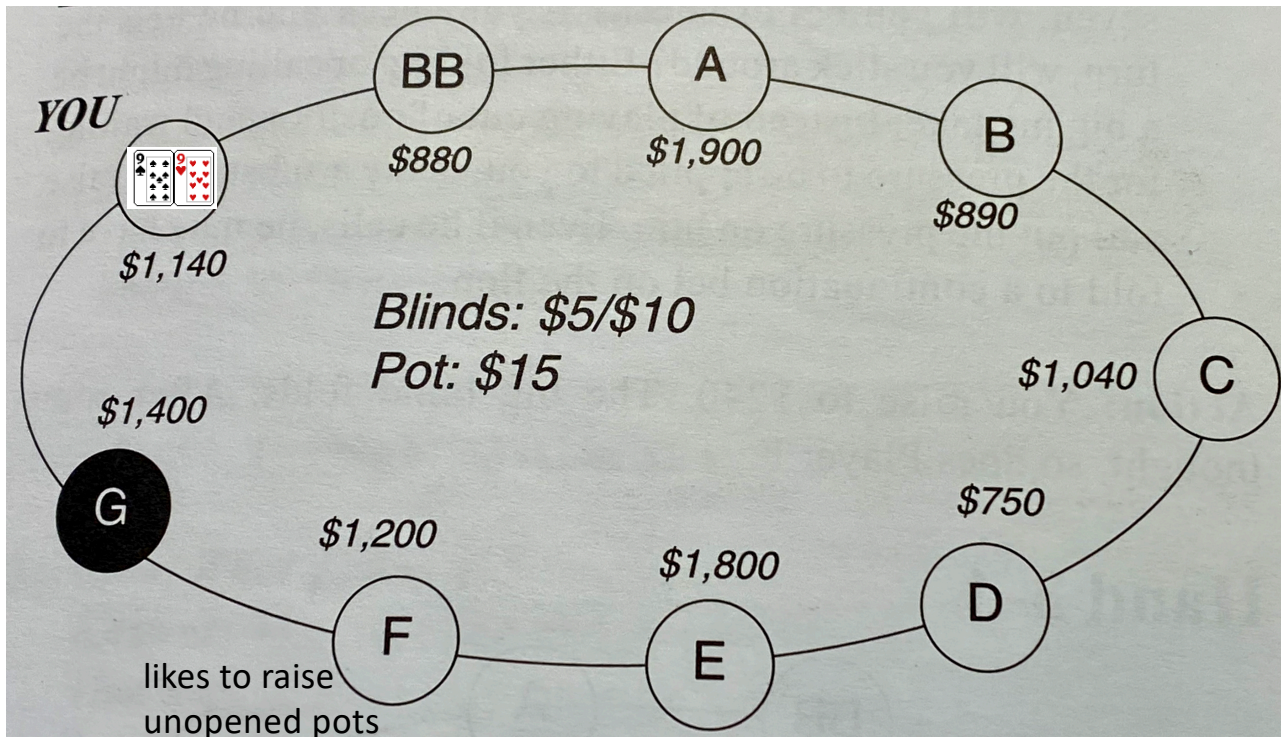
- Player A folds
- Player B raises to \$20



- Should you Fold, Call, Raise?
- Considerations:
 - Stacks are deep enough
 - Early position, with aggressive players behind
- Fold

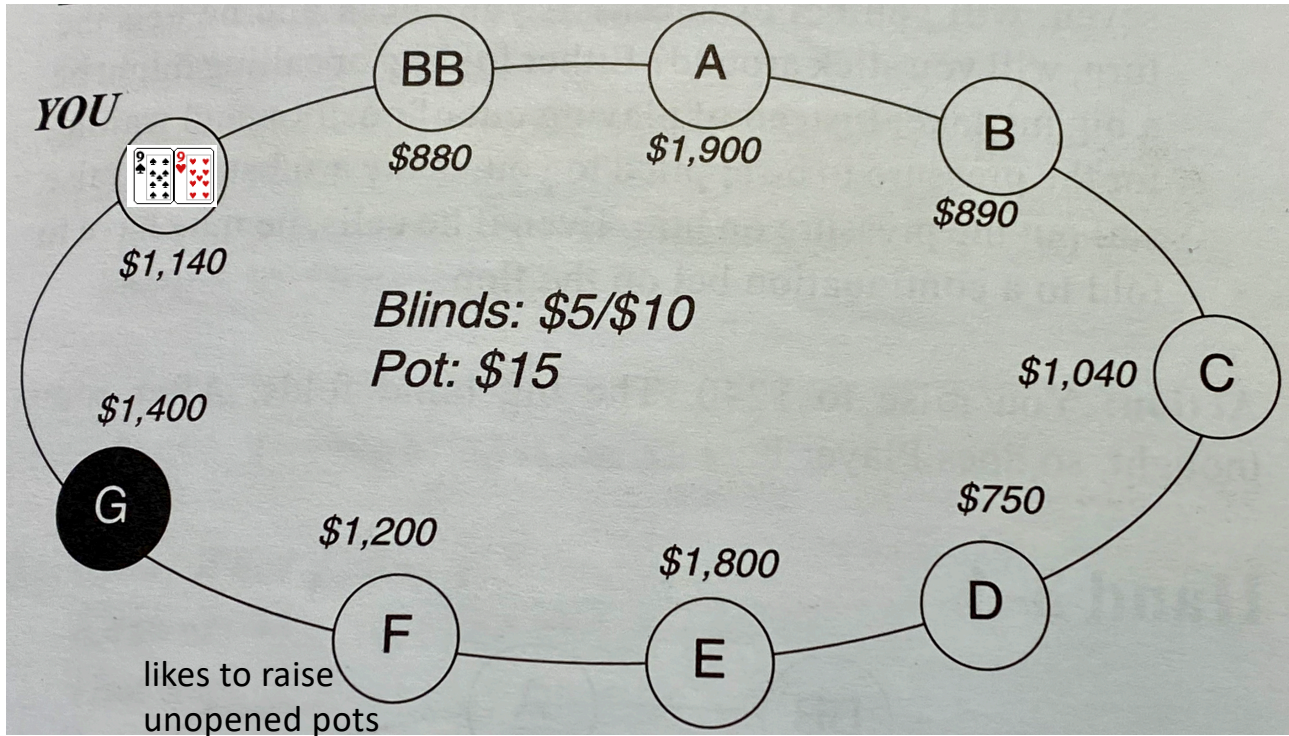
Your hand: 

- Table is tight
- Players A-E fold
- Player F raises to \$40
- Button Folds
- Do you fold, call, raise?
- Considerations:
 - What is F's range here?
 - How will my 9s play post-flop?
 - Will I have position after the flop?



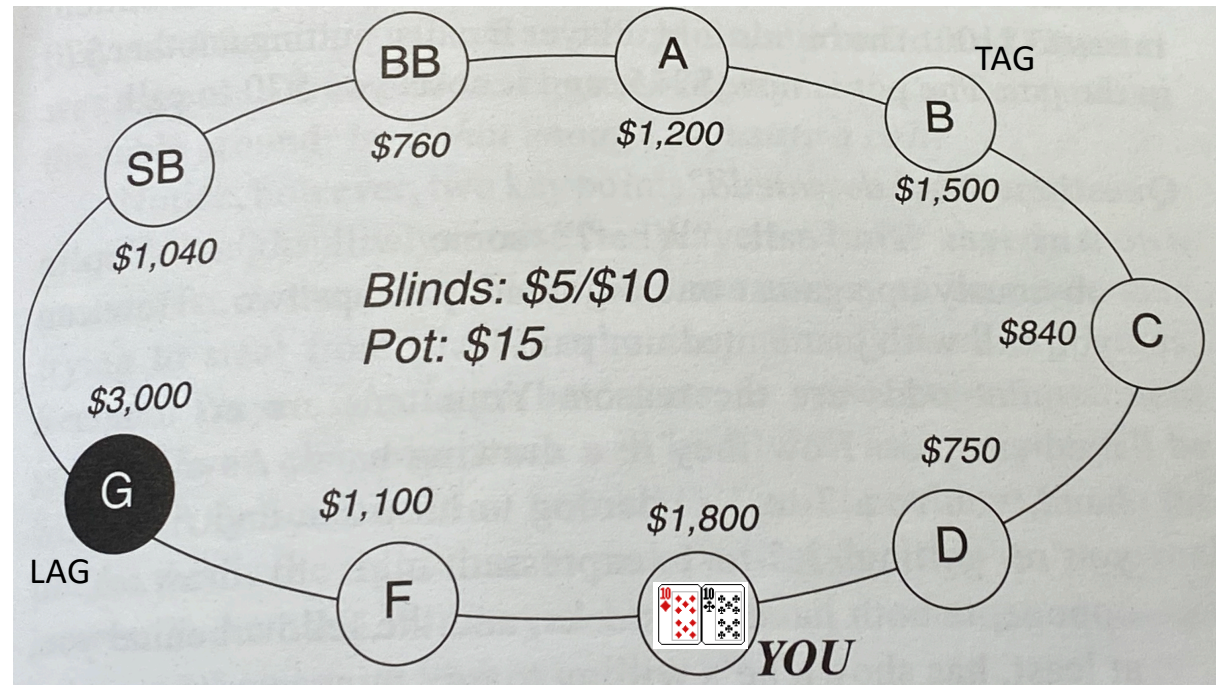
Your hand: 

- You raise to \$240
- Everybody folds



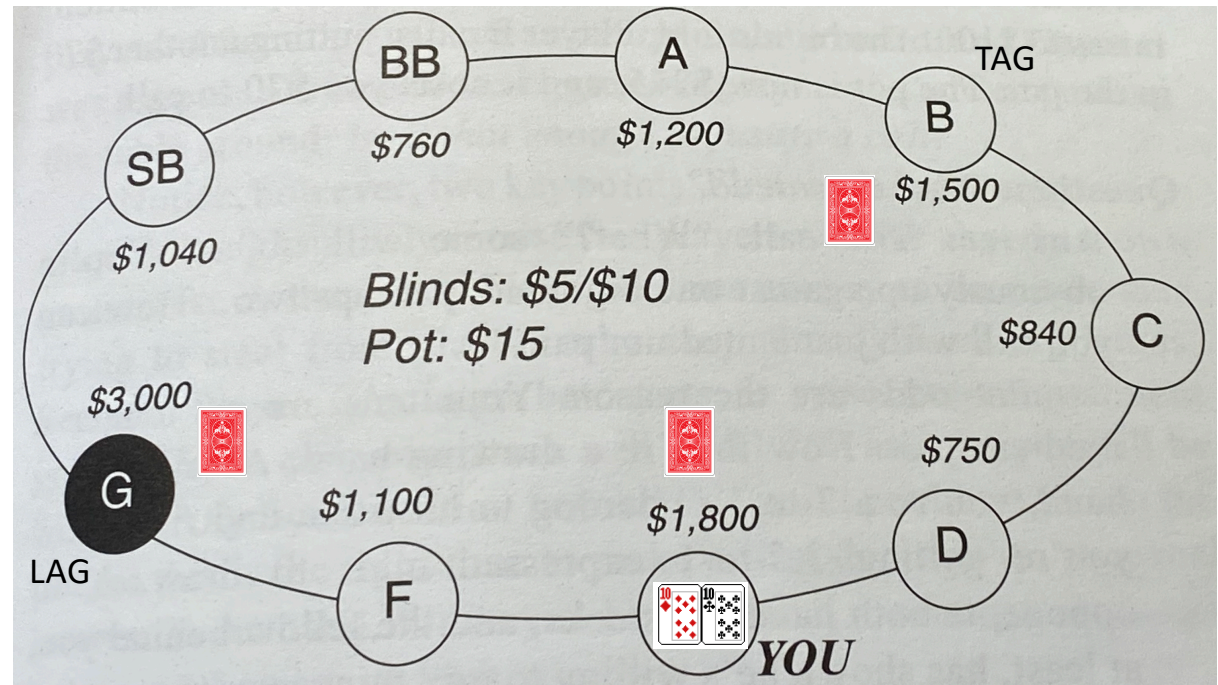
Your hand: 

- A folds; B raises to \$30
- C & D Fold
- Do you fold, call or raise?
- Consideration:
 - Not strong enough to raise
 - Too strong to fold
 - So call



Your hand: 

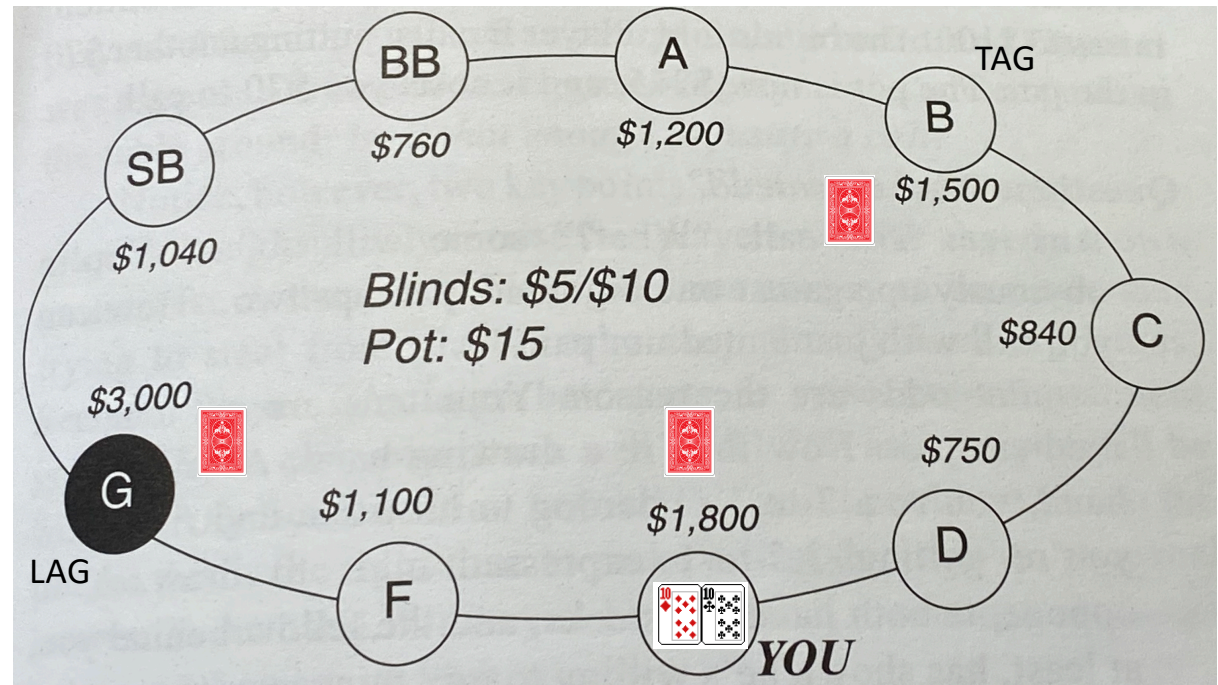
- You call \$30
- Player F Folds
- Player G raises to \$100



- Blinds fold, A folds, B calls another \$70
- Pot is \$245, and costs you \$70 to call
- What do you do?
- Consideration:
 - Pot odds are 3.5 -1, but implied odds with deep stacks are high

Your hand: 

- You call \$70
- Pot is now \$315
- Flop is 



- Player B checks
- What do you do?
- Consideration:
 - You were playing for implied odds to hit a set
 - One of your opponents (or both) could easily have you beat

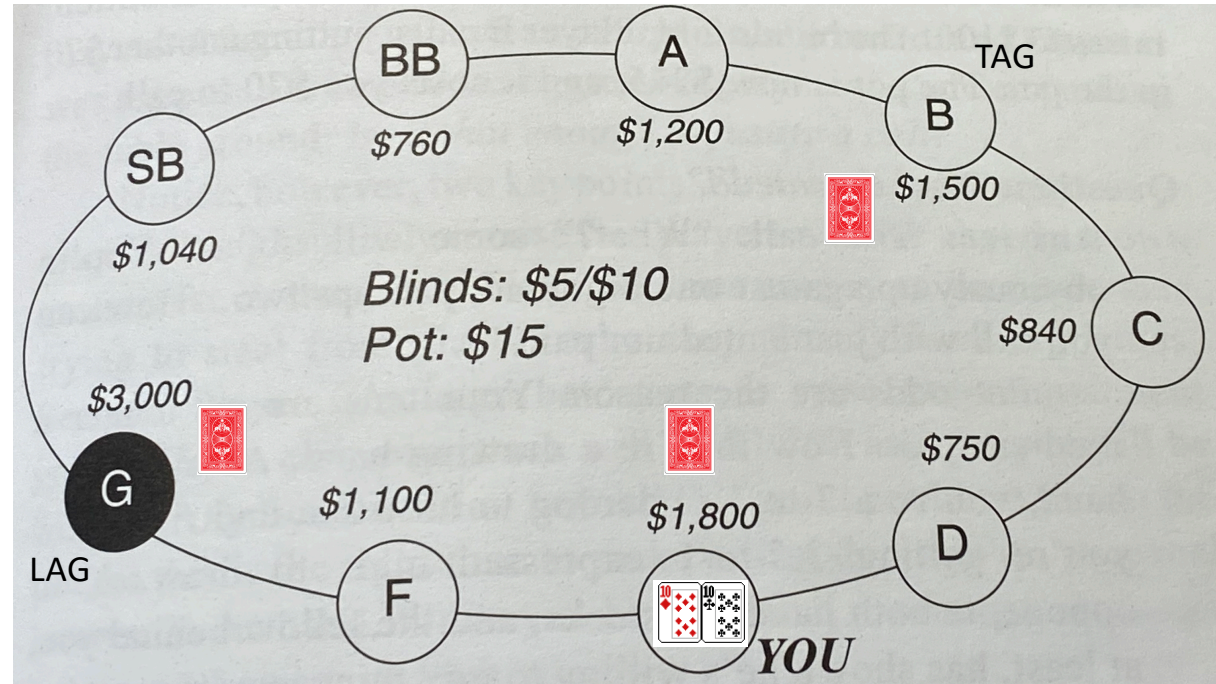
Your hand:



• Flop:



- Pot: \$315
- You check
- Player G bets \$400
- Player B folds
- What do you do?
 - Fold!
 - If you call, pot will be \$1,115, and your stack will be \$1,300
 - You will be pot committed with just TT. You missed your set – let it go.



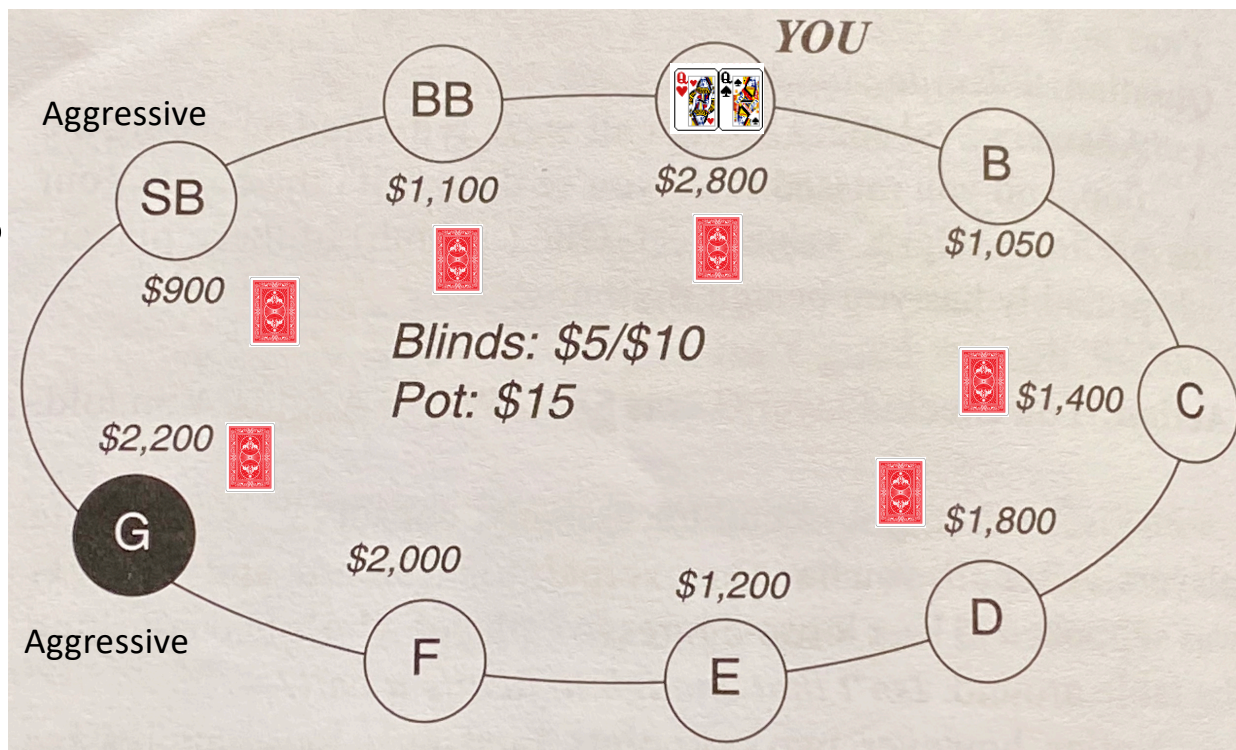
Cooler hand (next-level commentary)



Your hand:



- Do you fold, call or raise?
- Easy play: Raise to \$30
- However, you call \$10
- Player B folds, C & D call
- E & F Fold
- G calls \$10; SB calls
- Big blind checks
- See what you did? You now have 6 players to the flop
 - They could have all kinds of crazy hands
 - One of the main reasons you raise is to narrow the field
 - QQ plays much better heads up



Your hand: 

• Pot: \$60

• Flop: 

• SB & BB both check

• What do you do?

• Not a bad flop

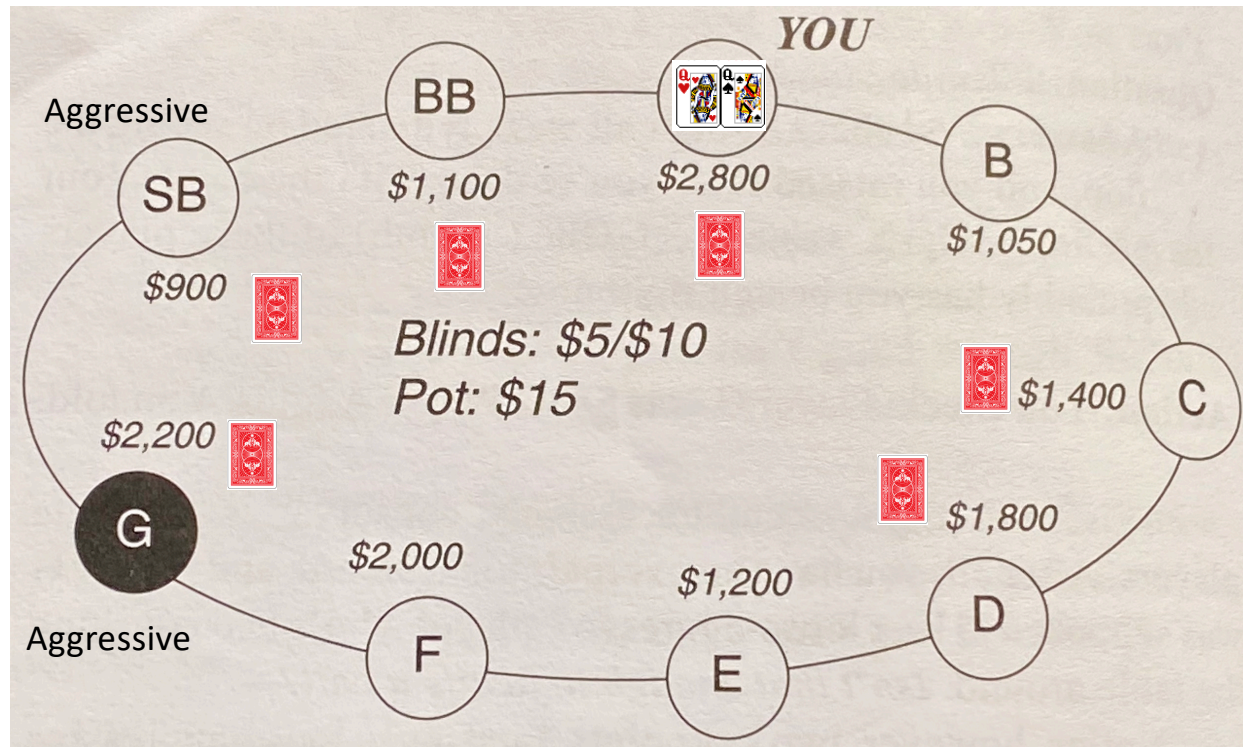
- Avoided A or a K

- Only hands that beat you are sets, unlikely 2 pair, 67 for the straight

- With 5 opponents most likely one of them hit a pair but nothing else

- You cannot let it check around – bet for value

• Unfortunately, you misplay it again and check.

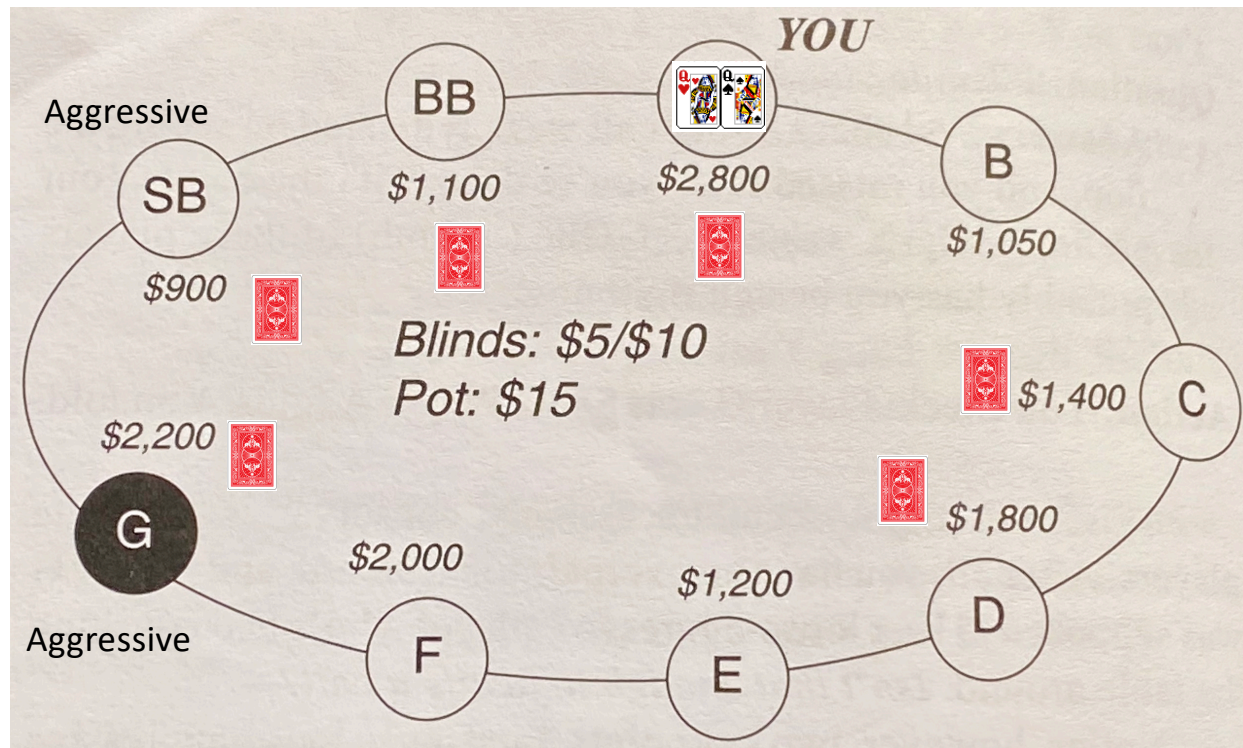


Your hand: 

• Pot: \$60

• Flop: 

- SB & BB both check
- You check
- C & D check
- Player G bets \$45
- Small blind folds; Big blind calls \$45.
- Pot is now \$145, and it's \$45 to you
- What do you do?



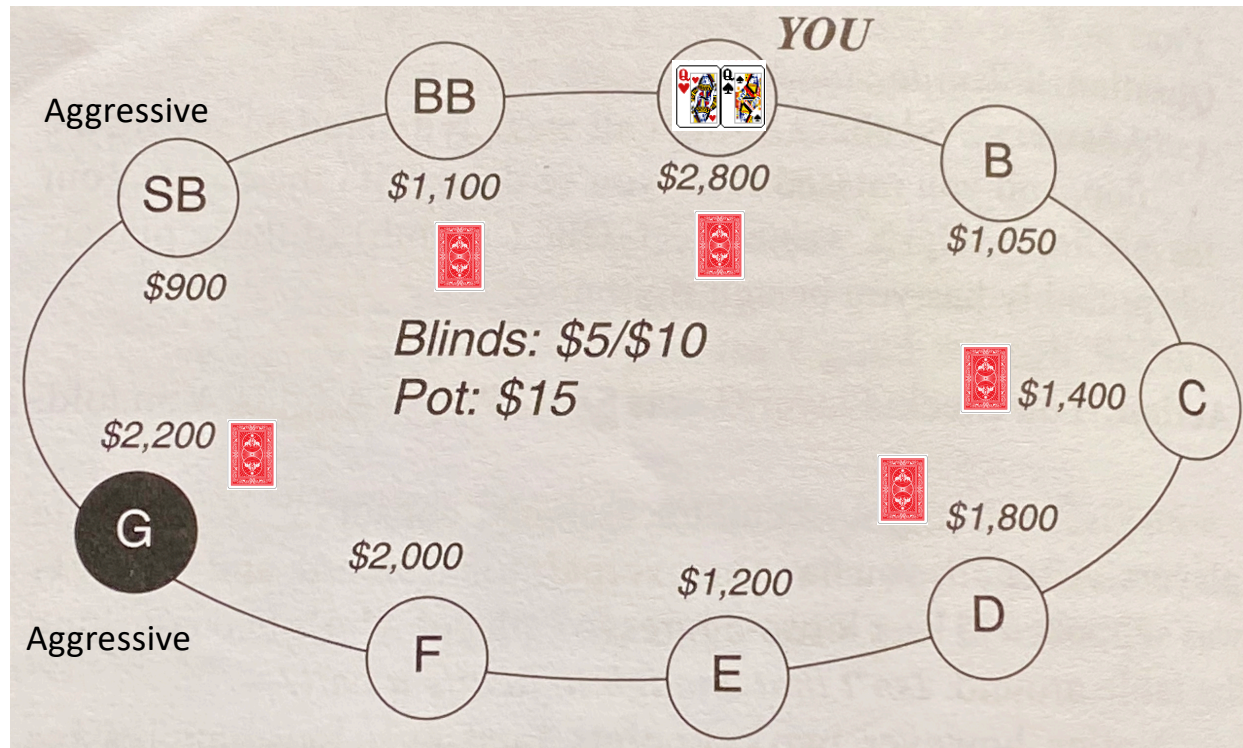
Your hand: 

• Pot: \$145

• Flop: 

• Considerations:

- You're probably best
 - Pot odds are good 4.2 - 1
 - Lots of turn cards you don't want to see (straights, 2 pair)
 - Get the money in while you're ahead
 - I would put in a healthy raise to \$200
- Unfortunately, in this hand, you just call \$45
- C & D fold. Pot is now \$195



Your hand: 

• Pot: \$195

• Flop: 

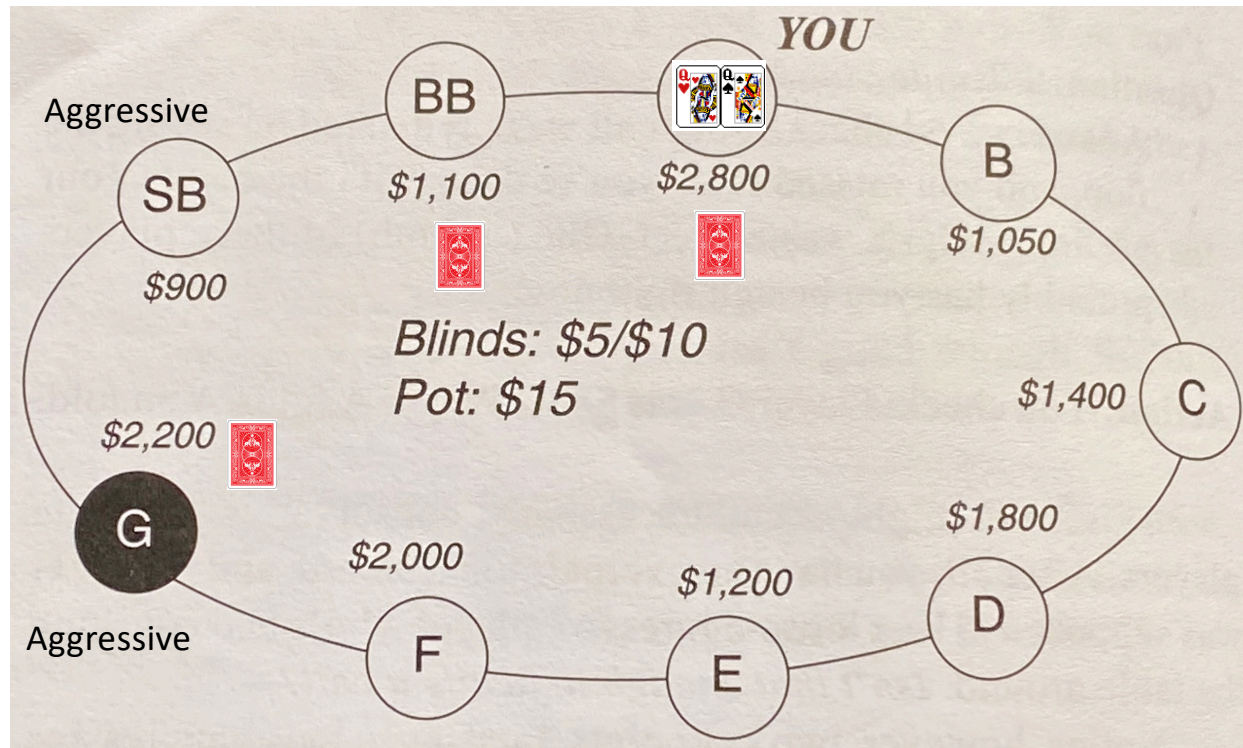
• Turn: 

• BB checks

• What do you do?

• Considerations:

- Anyone with a 7 has a straight.
- Many two-pair combinations are possible
- You may not have the best hand – don't put any more in the pot
- Likely worse hands fold if you bet and better hands call or raise
- So no point in betting.

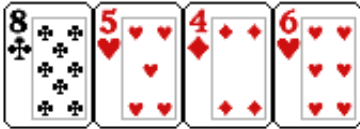


Your hand:



Pot: \$195

• Turn:



• You check, G checks

• River:

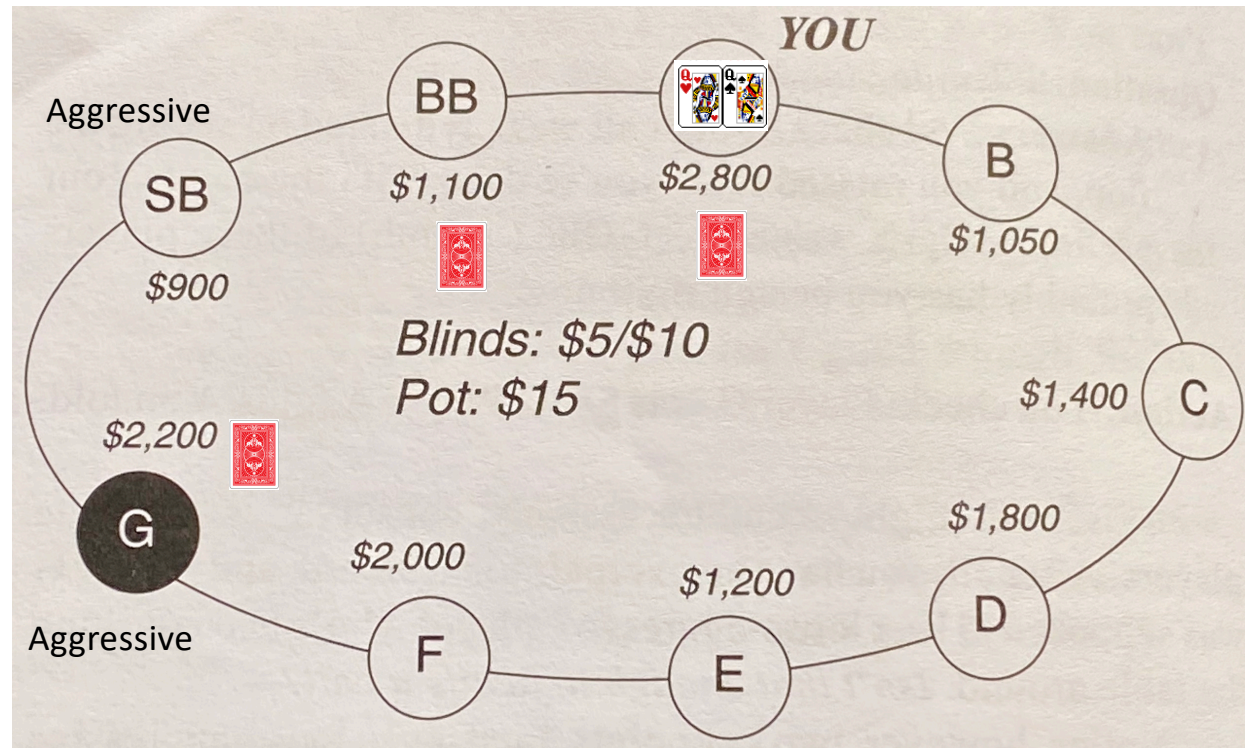


• Big blind bets \$100

• What do you do?

• Consideration:

- He bet only half the pot
- He is giving you 3-1 odds
- He wants you to call
- QQ no good, you should fold, and you do



Lessons from the last hand

- Passive play gets you in trouble
- You did not raise pre-flop and let in all kinds of hands
 - Someone could easily have a 3, a 7 or 68s
- You did not raise on the flop when you were probably good
- At least you made a good fold on the river
 - But that is a pretty bad result for a pair of queens

- Moral of the story: Play more aggressively pre-flop and on the flop with a strong holding

Pre-flop play roundup

- Starting hand choices depend on stack sizes
- Question:
 - Should you ever fold KK preflop?
 - Watch video on next slide
 - Some say never
 - Odds you are up against AA are so small (we will study this later)
 - In tournaments, there can be factors
 - E.g. bubble situation

Fold KK pre-flop?



Bet Types

The Value Bet


- You think you have the best hand
- Bet size
 - Usually $\frac{1}{2}$ to full pot amount
- Value bet is designed
 - Get more money in pot with best hand
 - **Make a worse hand call**
 - Deny proper odds to drawing hands
 - They either fold
 - Or put money in with negative expectation
 - Take control of the hand
 - Opponents may be reluctant to bet marginally better hands

The Bluff

- You think you do not have the best hand
- Goal: **Make a better hand fold**
- Other goals
 - Setting up future bluffs on later streets
 - Credibility: making it difficult for opponents to read you
- Bet sizing: smallest amount that will do the job
- Warnings:
 - Don't overdo it – after all you are putting money in behind
 - Sizing should represent what you would do if you had a better hand

The semi-bluff

- Semi bluff is bet made by a drawing hand against a better hand

- Example: you have 
- Flop comes:



- You bet, and if opponent has a pair, he calls.
- You have an overcard to the board and nut flush draw
- So, we assume you have 12 outs (3 aces, 9 clubs) but you are behind
- If a blank comes on the turn, you can semi-bluff

The semi-bluff (analysis)



- With 12 outs, you are 44% to win the hand
 - If you see two cards (turn and river)
- Say, 30% of the time, opponent folds to turn bet
- So, ways of winning:
 - He folds: 30% chance of winning
 - He calls and river checks down: $44\% \text{ (hit your card)} \times 70\% \text{ (he doesn't fold)} = 30.8\%$
- So total chance of winning is 60.8% of the time
- In this scenario, semi-bluffing makes you a favorite

The semi-bluff (analysis)



- Warnings
 - Maybe you overestimate his chance of folding 30% of the time
 - If you semi-bluff and he raises, your analysis goes out the window
 - If you miss draw on the turn, he might bet big and you have to fold
 - You might hit your hand (e.g. A), and he might have a bigger hand, e.g. 2 pair or a set
- Semi-bluffs are powerful but not to be overused.
 - Makes you hard to read – sometimes you have a monster and opponent will think you're semi-bluffing if draws are out
 - Don't semi-bluff EVERY big draw
 - A lot of players semi-bluff too much

The probe bet

- Usually when you don't know where you stand
 - Do you have the best hand? Possibly, but possibly not
- Usually smaller than a value bet
 - But don't give away too much with your bet sizing
- Goal is to gain information and control pot size
- Probe bets can accomplish
 - Winning the pot (unexpected, but nice)
 - Establishing control, taking the lead, and maybe getting a future free card
 - Preventing opponent from making a bigger bet (pot control)
 - Narrowing the field – getting weak hands in a multi-way pot to fold
 - Prevents silly suck outs when they draw to a ridiculous hand (e.g. 26 hitting two pair)

The Continuation Bet

- You raised pre-flop and were called
- Flop comes out
- You bet the flop no matter what

- Heads up, 70% of the time, opponent missed the flop with two unpaired cards.
- If you bet, he might fold

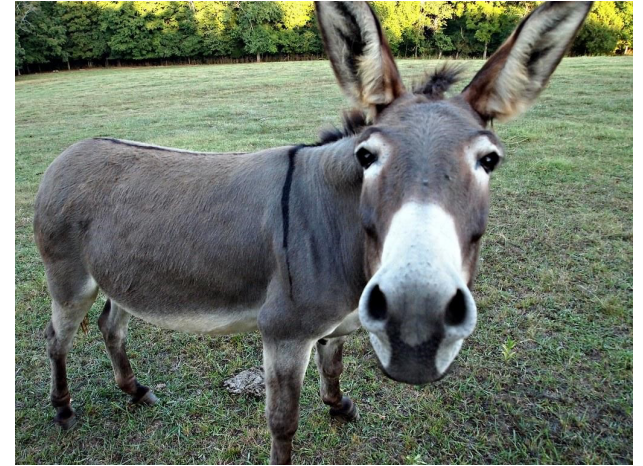
- Caution: Most opponents today expect a continuation bet
 - 70% of the time, you miss the flop

Continuation bet

- More effective in position
 - Opponents less likely to float out of position
 - You get to see them check first
- Less likely to work multi-way
 - 3 opponents or more – one of them likely to hit something on the flop
- If you C-bet a lot, you get called more often when you do hit the flop

The Donk Bet

- You are out of position
- Your opponent raised pre-flop & you called
- The flop is dealt
- You are first to act
- You bet – this is called a “Donk bet”
 - Named after the animal that is apparently the worst at poker
- This is an unusual way to play
 - If you have a strong hand
 - More likely to check and let opponent continuation bet
 - If you have a weak hand, no point in putting money in
- Thus, often interpreted as a weak play
 - But advance players know this
 - Sometime will donk bet strong hands to appear weak to a thinking player
 - Some more advanced players will donk bet weak hands to look like a strong hand trying to look weak
 - Etc.



The blind bet

- Some players will bet before a card comes
 - Must be first to act
 - E.g. pre-flop betting is over, player checks “in the dark”
 - E.g. player goes all in before the turn card is turned over (usually short stacked)
- Betting in the dark
 - makes poker easier
 - Takes away your decisions
 - Can compensate for bad position
- I don't like it
 - You are making a decision with less information than you can get by waiting

The Check

- Goals of checking
 - You have a small value hand
 - No better hand is likely to fold
 - No worse hand is likely to call
 - Eliminate a betting street and keep the pot smaller for a small-pot hand
 - Trapping
 - Represent weakness with a strong hand to induce betting from a weak opponent
 - If you think your opponent might be strong, don't trap!
 - One of the most over-used and abused play
 - In general, bet your strength

The check-raise

- You check with the intention of raising if someone bets
- A way to get an extra bet out of an aggressive opponent
- You have to believe someone will raise
- Represents a lot of strength
- Sometimes used as a bluff: Check-Raise-Bluff (advanced move)

- When you get check-raised, proceed with caution
- If opponent is known to check-raise a lot, forces you to check back sometimes
- If you are known to check-raise often, you might get free cards

