**Chapter 1 Preliminary Concepts (1 – 47)**

**1.1 Donkey Game Philosophy (1 – 9)**

*To beat low-stakes NLH lives games, first, stop making big mistakes, and second, exploit your opponents’ mistakes.*

NLH games fall under three major categories:

1. **Donkey** → live: $1/$2, $1/$3, $2/$5; online: 1¢/2¢ and 5¢/10¢
2. **Solid** → live: $5/$10 and $10/$20; online: 25¢/50¢ and $2/$4[[1]](#footnote-1)
3. **Tough** → live: high stakes; online: medium to high stakes[[2]](#footnote-2)

Donkey games (**DG**) play differently from solid games (**SG**) and tough games (**TG**). DG are filled with players – tourists and regulars alike – who make the same mistakes over and over again. So, how do you spot DGP?

* A **stubborn player** who consistently makes the same mistakes over and over again.
* May be very experienced, but simply **doesn’t recognize** his mistakes, or sometimes just **doesn’t care**.
* May exhibit **poor self-control**.
* **Confident** that his playing style is the best and can’t be convinced otherwise. This makes him exploitable.
* **Better than a fish**, but far from an expert.

SG strategies differ significantly from DG. **SG require mostly unexploitable poker strategies** since you can’t profitably take a line that good players can exploit because good players will exploit it. Consequently, SG profit margins are low because the difference between good versus average SG players is small.

**DG require you to use exploitable lines**. This may sound crazy, but context is everything since lines aren’t exploited by every player the same way. SGP will exploit you while TGP will crush you. However, **DGP will not come close to exploiting your line**.

*Here’s a highly exploitable preflop strategy. Limp with small pairs and suited connectors and raise with big pairs and big suited aces. SGP will raise your limps and avoid your raises. However, against DGP, this exploitable line can be very profitable since many DGP won’t notice and adapt to it. Even when a DGP notices, it’s likely they won’t exploit you since it requires them to get out of their comfort zone. This exploitable strategy also has a secondary benefit of having low variance.*

In DG, **small ball poker**, which utilizes ½ to full pot bets as opposed to overbets, offers low variance lines that are very profitable. DGP will often call you down with inferior hands as long as it doesn’t cost them too much. Whereas overbets force DGP to think about their decisions, inducing them to play optimally by folding their inferior hands.

**1.2 Poker Psychology (10 – 19)**

**The key to crushing poker is to make less frequent and less expensive mistakes than your opponents**. The challenge is that it’s not easy to see which decisions are mistakes and the extent of damage from those mistakes. Mistakes in poker most often stem from weak theoretical understanding, however, psychology is equally **consequential**. Therefore, in addition to developing solid theoretical fundamentals, it will also be critical to assess and improve along four psychological threads: personality traits, motivation, habits, and cognitive biases.

Whether you’re passive or aggressive, conservative or wild, optimistic or pessimistic, **your personality is ingrained in who you are**. You must first overcome bad traits that degrade your ability to play winning poker.

Some players are naturally **pessimistic**. They expect a bad flop and therefore play tightly. Others are naturally **optimistic** and tend to play too many hands and call too many raises. The tight pessimist perhaps loses less than the loose optimist, but both generally lose. It’s better to be a realist and **play the math and your reads**.

**1.2 Poker Psychology (10 – 19, continued)**

The pessimist expects to be behind and will fold to pressure. You can often push him off his hand when a scare card arrives and when he won’t go away, you know he has a strong hand. **Pessimism breeds predictability**. Against an optimist, you can play a tighter range and value bet him relentlessly since he plays weak hands like **QTo** and **K5s**. For example, you can bet a monochrome flop with your nut flush since he just won’t believe you have it.

Passive players lose value by checking and calling instead of betting and raising. They are risk averse and don’t like to rock the boat. They understand that limping is weak, but they just can’t pull the trigger and raise. Some limpers are action junkies, but many are just timid pessimists. **Passive pessimism is a profit killer**.

Naturally aggressive players tend to do well **if they can temper** their aggressiveness with sound judgment. Problems surface when they ignore signs of resistance. A typical passive DGP reaction to aggression is to trap → when a DGP calls your PFR and then CBets the flop, warning bells should go off.

**Patience** is absolutely critical in NLH. Knowledge of correct action is of little value if you don’t have the discipline to use your knowledge wisely. **Patience combined with knowledge** is a very powerful combination in poker.

**Superstition** → dispel with it and definitely make sure it doesn't feed into pessimism. If you base some of your decisions on superstition, your profits will suffer.

**Thrill Seeking** → aggressively optimistic action junkies are **maniacs**. You can also have passive action junkies that crave action in anticipation of flopping well. Properly moderated fearlessness for an action junkie can be a real asset, especially at the higher stakes. Generally, however, action junkies don’t do well in DG.

**Big Ego** → a player with a strong desire to prove he is the best player at the table. He doesn’t like to be pushed off hands and finds it difficult to fold. His ego won’t let him back down. He likes to trap because a successful trap makes him feel clever. He often reveals his hands at showdown since it boosts his ego, but this hurts him in the long run because it exposes his tendencies.

**Arrogant and Suspicious** → a player that just won’t believe you have the hand you’re representing and often times will call you all the way to showdown. He’ll have a hard time putting you on an accurate range. **Competitiveness shouldn’t be confused for arrogance**. Competitive players like to **study, practice, review hand histories, and analyze their failures and successes**. However, competitiveness can backfire at times when it leads to challenging another player at inopportune times, playing back at them, and/or bullying them.

What kinds of **personal motivation** drive DGP?

* He just wants to relax and have fun. Never ever criticize him.
* He believes he plays solid poker and that any two cards work if there are limpers because of the pot odds.
* He believes he’s on a rush or conversely, he’s on tilt.
* He is emotionally comfortable and has established a comfort zone within which to play.

These traits and motivations **make DGP predictable and exploitable** since their mental style is fixed and stable. DGP traits and motivations are unchanging and whatever happens to them is rationalized to fit into their poker worldview. These strong internal forces make it very difficult for DGP to adapt and improve.

**Habits** can be stubbornly difficult to eliminate once they are formed. There are some really bad poker habits:

* Preloading your cards in a way that predictably signals your intended action.
* Grabbing chips when you intend to raise.
* Reading, watching TV, and/or listening to music.

**No one can escape the strong psychological forces driven by cognitive biases**, that stem from an evolutionary flaw in the human mind. Cognitive biases are hard-wired distortions in the way we view the world that are reinforced or discredited by our brain’s perception of patterns. It’s fascinating to observe bias-driven behavior once you recognize the pervasiveness of bias.

**1.2 Poker Psychology (10 – 19, continued)**

Combating our biases can be incredibly difficult, but several efforts can help → gathering objective and relevant data, analyzing that data, forming better conclusions, and using all that we learn from this process to expel our counterproductive biases and improve our approach to solving problems and confronting challenges.

**Confirmation bias** is our tendency to pay attention to outcomes that agree with our beliefs and disregard those that conflict with them. Human beings form their opinions in many ways, but once they are formed, we tend to notice mostly the evidence that confirms that belief through selective information interpretation (**SII**). This is especially true when information is ambiguous or hard to quantify – like a poker outcome – because the evidence is often complex and contradictory. SII is unconscious and insidious. **Confirmation bias is pervasive in poker**. Understanding its pivotal influence is the first step in overcoming it. Many serious players stick to their poker biases regardless of the evidence because they simply do not recognize that evidence.

In DG, confirmation bias drives personal motivation. DGP knows what he knows, and he plays the way he plays, and he doesn’t see that there might be a better way to play. This is classically exhibited when a DGP overbets to “protect” his hand. The overbet induces everyone with weaker hands to fold and DGP seizes the pot immediately and this then confirms the bias that drives his motivation to overbet. Furthermore, he refuses to listen to why an alternative line may be more sensible and profitable.

Poker, as mentioned earlier, has many cognitive biases including expectation, egoistic, projection, negativity, rosy retrospection, and stereotyping.

**Expectation bias** can lead to predictable betting behaviors, especially preflop. Some players expect never to hit a flop and limp far too much, whereas other players expect to always flop well and thus play too wide a range.

With **egoistic and projection bias**, players tend to expect other players to play the same way they do. This colors a player’s ability to “read” other players’ hands and generally leads them to overvalue hand equities.

**Negativity bias** leads players to pay closer attention to negative results and this often leads to these players overbetting the flop out of fear from getting sucked out on by the turn and/or river. The opposite of negativity bias is **rosy retrospection bias**, that leads players to remember past events as being better than they actually were. This bias can make **T2o** more attractive to play because it recently won a large pot for a player.

Players often have a **stereotyping bias**, which is the tendency to assume a player looking a certain way will play a certain way. This is a very common bias and often leads to **rationalizing a non-existent** read on a player.

Poker biases are strong, usually subconscious, and extremely difficult to recognize and overcome. We believe, we act, and we don’t think twice. With poker, understanding how math affects key decisions can be insightful to overcoming biases. Practice can ingrain good biases that hopefully lead to winning and profitable outcomes.

**1.3 Practice? I Don’t Need No Practice! (20 – 24)**

If available, you can play online micro-stakes (NL2 or NL10) to practice skills, techniques, strategies, and get comfortable playing various poker styles (loose, tight, passive, aggressive). However, don’t be reckless just because it’s micro-stakes. Your goal is to make optimal plays and explore specific strategies, not to make money or have fun.

**Reviewing hands is critical**. Hand histories combined with software like PokerTracker is excellent for analyzing your stats and strategic approaches. After 1K hands, you played 30/5 (VPIP/Raise) and generated a certain profit. You played progressively tighter and more aggressively – 19/6 and 18/8 – over the next two tranches. How did your profitability vary with style? **PT Replayer** can be used to study hand progression from preflop to showdown and to try to put players on a hand and to monitor how your hand reading skills improve with more and more practice.

A corollary of “practice, practice, practice” is good record keeping. It is critical to be disciplined with record keeping because our subjective estimates are rarely accurate.

**1.4 Stack Sizes: Choosing Your Buy-In (25 – 28)**

Stack sizes should be viewed as a multiple of the big blind as opposed to dollars. For instance, $500 in a $1/$2 is a very deep stack (250BB). However, that same $500 in $2/$5 is only deep (100BB) and in $10/$25 is short (20BB).

There are four general stack depths: Deep (> 80BB), Normal (40-80BB), Light (20-40BB), Short (< 20BB). Generally, you have a normal-stack when can get all-in by the river while playing small ball heads-up. A light stack allows you to get all-in earlier. A **short stack allows you to make mathematically correct preflop shoves**.

Your stack size requirement strongly depends on how tight you play. A loose player needs to play a deeper stack due the implied odds associated with a loose style. Another helpful stack size benchmark involves set mining profitability requirements → have enough of a stack to win at least 15× the call you have to make to account for small wins and bad beats (this generally winds up being around 80BB). Note that this assumes you lose your entire preflop bet if you don’t flop a set, however, you may be able to win a small portion of your preflop investment back or conversely go on to lose even more (your destiny here is very skill dependent).

Another factor in your implied odds estimates is the likelihood your opponent will risk his large stack without the nuts. If he is rarely willing to risk his stack, your effective implied odds could be much worse than they appear. So your judgment depends both on the effective stack size and your opponents’ willingness to risk his entire stack in various scenarios.

When you start play live NLH and don’t have a lot of live game experience under you belt, it helps to buy-in with a normal stack. First, normal stacks provide opportunities to manipulate the math against players that call with too wide a range. Second, postflop play is simpler when your stack size is smaller. Third, position is less important when effective stacks are shallow. Fourth, a normal stack provides for less variance. Taking full advantage of a deep stack requires substantial skill to exploit the small marginal value of playing additional speculative hands. For inexperienced players, deep stacks present opportunities to pay a larger price for our mistakes.

* With a normal stack, you can play a hand like aces without much fear. Suppose I reraise to 15BB with AA with 45BB behind. Anyone calling by 10BB reraise needing to flop two pair or better will not be getting sufficient implied odds. You can then bet 20BB into the 30BB flop with only 25BB behind and milk your opponent’s likely second-best hand. You will occasionally lose, but not often enough to counter my wins. With a deep stack, playing aces too strongly postflop can cost a big chunk of money.

**1.5 Choosing Your Seat (29 – 31)**

When choosing a seat, only one thing matters → which seat is the most profitable? Money tends to move clockwise around the table, and this is because the button and its associated position moves clockwise. So more of your profits will come from your right. However situational dynamics drive who you want to be on your left and right.

Who do you want on your right?

* Larger stack since you can win more money with position and mitigate loses with heavy action.
* Aggressive players since you won’t get pushed off your hand as often.
* Loose players since you can raise and reraise them at the proper times. Loose player tend to be losing players.
* Sometimes you want weak-passive players who succumb to fit-or-fold pressure.
* Good short-stack players who know how to manipulate the math with their betting.

Who do you want on your left?

* Players with preloading tells.
* Tight players who you can often raise out of a hand preflop.
* Passive players since it decreases the likelihood that you’ll get raised from behind when you don’t want it.
* Sometimes you want weak-passive players who succumb to fit-or-fold pressure.

**1.6 Poker Math (32 – 37)**

Poker factoids to memorize:

**Hole Card Statistics**

1. 1,326 → distinct two cards
2. 169 → distinct two cards without regards to suit
3. 6 → ways to form a pair [**0.45%**]
4. 12 → ways to form any two unsuited [**0.90%**]
5. 4 → ways to form any two suited [**0.30%**]
6. 936 → non-pair unsuited ⇒ → {**70.6%**} → {**71%**}
7. 312 → non-pair suited ⇒ → {**23.5%**} → {**23%**}
8. 78 → any pair→ {**5.9%**} → {**6%**}

**Drawing Statistics on the Flop**

1. 1,326 → distinct two cards
2. 169 → distinct two cards without regards to suit
3. 6 → ways to form a pair [**0.45%**]
4. 12 → ways to form any two unsuited [**0.90%**]
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**1.7.1 Notes: How to Read a Graph (38 – 39)**

**1.7.2 Detailed Flop Calculations (40 – 45)**

**1.7.3 Game Theory Optimal and Exploitive Poker (46)**

The spirit of GTO decision making is that there is always a strategy that makes you unexploitable. Statistically Optimal Poker (**SOP**) require you to adjust your decision frequencies so that savvy villains cannot exploit your tendencies. The SOP strategy that results from this includes many decisions designed to balance your play. SOP is critical in online games since many opponents will study your stats especially since the savvier opponents are using HUDs to gather statistical insights on their opponents’ tendencies.

However, GTO/SOP adjustments overkill in DG. The big assumption in this analysis is that exploitive poker is the better strategy in games filled with players who don’t pay attention and who are incapable of make correct exploitive adjustments. For example, if a donkey always folds to a CBet when he misses the flop, you should always CBet (at least until your opponent catches on). The parenthetical statement is important since good poker skills require assessing when you’ve crossed this line.

Consequently,

**1.8 Pearls of Wisdom (47)**

DG are filled with donkeys. DGP are not necessarily bad players. However, they are stubborn and predictable and this makes them exploitable.

**Choosing Your Seat**

**Notes**

**How to Read a Graph**

**Detailed Flop Calculations**

**Game Theory Optimal and Exploitive Poker**

**Pearls of Wisdom**

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1. SG strategies are not always optimal for DG. [↑](#footnote-ref-1)
2. TG have little in common with DG although players may appear to make donkey plays. **Survival at this level takes real talent**. [↑](#footnote-ref-2)