What is "high variance" in poker, and how does it relate to decision-making?

In poker, "high variance" refers to playing a style that involves taking more "marginal" or "close" decisions. These are situations where a player risks a significant amount of money to win a small amount of expected value (EV) in the long term. While such decisions might lead to larger swings in a player's bankroll in the short term, they are considered "plus EV" (expected value) and are designed to be profitable over time. An example is a large bluff on the river with little to no showdown value, where the potential gain is minimal compared to the risk, but the mathematical expectation is positive.

How does "player A" (high variance) differ from "player B" (low variance) in terms of strategy?

Player A, the "Crusher," is a high-variance player who meticulously seeks out and takes every single plus EV spot, no matter how marginal. This means they are willing to risk a lot for even a small long-term gain. Player B, on the other hand, is a more "safe" or "low-variance" player. While still a big winner, Player B opts to pass on some of the close, marginal spots to minimize session-to-session swings, prioritizing stability over maximizing every potential edge.

Can you provide an example of a "marginal" spot in poker?

One example provided involves a player on the button with 7-6 of diamonds, bluffing with a large overbet on the river. Even though the player has "third pair" (7-high), their opponent's range on the river is primarily strong hands (top pair, straights, flushes) that are unlikely to fold to smaller bets. By choosing a medium-sized overbet, the player aims to fold out a significant portion of the opponent's top pair hands, which are the most profitable to get to fold. This play, despite risking $300, has an expected value of only $18.61, making it a very marginal but still profitable decision compared to checking back for $0 EV.

How does standard deviation in live poker compare to online poker, and why is it so much higher?

The standard deviation for live poker is significantly higher than for online poker. While online standard deviation (per 100 hands) typically ranges from 60 to 120 big blinds, live poker shows standard deviations of over 100 big blinds *per hour*, which translates to approximately 200 big blinds per 100 hands given the slower pace of live play (around 33 hands per hour). This higher standard deviation in live poker can be attributed to several factors:

1. **Larger Bet Sizes:** Live poker often involves much larger open and three-bet sizes relative to the blind level (e.g., 4x-5x opens live vs. 2x-2.2x online), leading to bigger pots and thus larger swings.
2. **Deeper Stacks:** Players in live games often play 200+ big blinds deep, as opposed to online where deep stacks are less common. Deeper stacks mean players can win or lose more in a single hand, increasing volatility.

What is the relationship between win rate, standard deviation, and maximum downswings?

Surprisingly, a higher win rate can offset a higher standard deviation, leading to *smaller* expected maximum downswings over the long term. For example, a high-variance player (Player A) winning 13 big blinds per hour with a standard deviation of 114.15 big blinds per hour might expect a maximum downswing of around 4,898 big blinds over 10,000 hours. In contrast, a lower-variance player (Player B) winning only 6 big blinds per hour with a slightly lower standard deviation of 105.6 big blinds per hour could expect a much larger maximum downswing of around 8,023 big blinds over the same period. This counterintuitive finding suggests that the increased profitability from taking marginal spots effectively "flattens" the downswing curve.

How much do these "high variance" spots contribute to a player's overall win rate?

Based on rough calculations, taking high-variance spots, like the examples provided, can add a significant amount to a player's win rate. If a player engages in a high-variance spot in about 10% of the hands they play, and each spot adds between 3 to 6 big blinds in expected value, it can cumulatively add approximately 3 big blinds per hour to their overall win rate. This seemingly small increment per hand or decision translates into a substantial increase in long-term profitability.

Is "high variance" truly riskier for a player's bankroll in the long run?

The sources argue that "high variance" is largely a myth in terms of increased bankroll risk. While it might lead to more dramatic session-to-session swings, the substantial increase in win rate generated by consistently taking these profitable marginal spots more than compensates for the higher volatility. The data suggests that players who embrace a high-variance, high-win-rate strategy are likely to experience *smaller* maximum downswings over extended periods compared to lower-variance players, even if the latter improve their game in other areas but still avoid marginal spots.

What is the ultimate conclusion about playing a "high variance" style in poker?

The ultimate conclusion is that playing a high-variance style, by taking every marginal plus EV spot, is actually *safer* for a player's bankroll in the long term. The increased win rate significantly reduces the probability and magnitude of large downswings. While the ride might be "wilder" in the short term, the substantial increase in earnings means a player reaches a point where they are less concerned about "risk of ruin," as their bankroll grows considerably faster. Therefore, the perceived "extra risk" of high-variance play seems to be largely unfounded when considering long-term profitability.