

Street Fighter III: 3rd Strike Parrying FAQ Final

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The ideas presented in this FAQ is based on the personal experience, observations, opinions, and readings of a SFIII: Third Strike player who has played the original SFIII and SFIII: Second Impact.

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Street Fighter III: Third Strike
Parrying Strategies Analysis FAQ
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I. INTRODUCTION:

Parrying is the trademark game play mechanic of the entire SF III series that was simplified slightly in SFIII: Third Strike. Parrying is a simple addition; by directing the lever forward or down at an appropriate incoming attack at the appropriate time a player is rewarded by taking no damage from the attack at all. Perhaps it is because of its simplicity that it is embraced by some players and despised by others. Nonetheless, despite ones feelings toward the system, its advent does provide a new level of strategy to the game. It is the purpose of this FAQ to discuss some of the complexities behind parrying and its consequences on the players and the game. The material covered is primarily with reference to the parrying system found in Third Strike, but many of the ideas are applicable for the other two SF III titles as well. We'll begin with an overview on the different types of parrying people employ, namely damage prevention and offense creation. The discussion will then move to the theoretical optimal strategy in specific combat situations for both the defender and the aggressor. Finally, the limitations of the theoretical optimal strategies in real game situations will be addressed.

II. PARRYING TYPES:

When one observes players utilising parries, two distinct categories emerge. One class often involves reducing damage and the other for creating an opening. I value call the first class a damage prevention parry (DPP) and the second one an offense creation parry (OCP).

==2.1 DAMAGE PREVENTION PARRYING==

A damage prevention parry (DPP) is simply when a player parries to avoid taking unnecessary damage. For example, say a Ryu player uses a Hadouken from the opposite side of the screen and the defending Hugo player parries it. It is clear that the Hugo player's parry was to simply take no damage. If we examine the Hugo player's damage prevention parry more closely, we see that this is the best move for him or her in this situation because he or she is currently in no position for a counter attack; blocking will result in block damage; and jumping vertically is, as most players soon realise, unreliable. As an added bonus, by performing a DPP, unlike a block, the player maintains his or her position (as Hugo is not pushed back). DPPs are often most noticeable in desperation situations where a player can no longer take block damage and tries to keep the match going as long as possible with the hope that an offensive opportunity will present itself in the future, but not as a direct result of parrying. On rare occasions when time is winding down, a player may use damage prevention parrying to maintain a slight lead over the opponent's vital bar and win with a "time over". The inability to counter attack is a key feature of a DPP; it is entirely defensive with the single goal of taking zero damage.

==2.2 OFFENSE CREATION PARRYING==

In contrast, for the offense creation parry (OCP), a counter attack is not only an available option but is the objective of decision to parry (serendipitous parries where a player suddenly finds him or herself in a retaliatory position are not true offense creation parries, but have the same effect of one). For example, say an Ibuki player, with the intention of parrying, is jumping in on a Dudley player who always retaliates with a standing hard punch. Notice that the Ibuki player's intention is to parry a predictable counter attack from the opponent (players, of course, are not always predictable; the implications of this will be discussed further later). If the Ibuki player is successful with the parry, he or she simultaneously prevents all damage that would be afflicted and most importantly sets up an offensive position for him or herself which was the objective of the jump in. The Ibuki player will follow up with a combo or strong attack. If the Ibuki player simply wanted to prevent damage and he or she knows the Dudley player always defends in a particular manner, the best way to take no damage is to not attack in a fashion that is vulnerable to the defense. The key idea is that an OCP is essentially an attack where one player baits the other in providing an opening for damage dealing. As we will see in the next few sections, it is OCPs that lead to the various optimal strategies involved in certain circumstances when both the defender and aggressor try to create openings.

 III. THEORETICAL OPTIMAL STRATEGIES:

As hinted previously offense creation parries (OCPs) can be utilised by both the defender and the aggressor. The question now is when should the tactic be employed as to gain a maximum payoff? That is when is an OCP an optimal strategy? As in most interesting games, the answer depends on the response of the opponent. Let us look at a common situation in the SFIII, an air-to-ground attack (i.e., a jump in). We will focus on the attacking (i.e., the jumping) player. What options does the attacker have? In SFIII, there are no air blocks which leaves the attacker with a choice between a strike or a parry. The defending player, however, has three options: strike, block, or parry. Let us say for simplicity that if left unscathed each the aggressor and defender each have a value, V. If either party is successful in dealing unblocked damage, they are rewarded with a bonus value B. Also, since the aggressor has fewer options than the defender (cannot block) and we assume that defensive moves have an advantage over offensive ones (think Dragon Punch and consider momentum loss if a move is parried or blocked) then there would be a slight cost to the aggressor for striking which we will call C (this value is less than both V and B, i.e., $C < V$; $C < B$). If we now look at each possible interaction (e.g., both players attack, one attacks the other blocks, etc.) individually, we will be able to derive a basic payoff matrix for each strategy, which is the emphasis of the following sections.

==3.2 AIR-TO-GROUND ANALYSIS==

Let us begin with a situation where both the attacker and defender strike and we will assume that the attacker will make a successful strike half of the time and an unsuccessful one the other half of the time. In other words, the attacker will have his V increased by B half the time ($+ B/2$) and decreased half the time by the same value ($- B/2$). In addition, the aggressor always accrues the C value so the payoff for the attacker when he or she decides to strike and the defender also decides to strike is: $V + B/2 - B/2 - C$. If the attacker strikes and the defender blocks and we assume that the attacker always deals block damage (e.g., with a combo that ends with a special or super move), then the attacker will have his or her V increased by whatever fraction of B that gets through as block damage minus the cost for striking. I'll arbitrarily say $1/5B$ is block damage, so the payoff for striking when the opponent blocks is: $V + 1/5B - C$. If the defender parries the incoming attack, then the aggressor's V amount loses an amount B to the defender (because we'll assume the defender counter attacks fully) plus the usual loss of C, so in symbols: $V - B - C$. What happens if the attacker instead jumps in with an offense creation parry (OCP)? There is no C to an OCP because it does not matter if the defensive move is of higher quality as it will be parried regardless or that there is no block option because the OCP doubles as a block. If the defender strikes, then the attacker has full advantage as the defender's strike is countered and the aggressor can deal full damage. In other words the aggressor is rewarded with $V + B$. If the defender decides to do an OCP or to block, the attacker will just land and the defender will just stand, so both retain their V amount. The following table summarizes what we just did.

| | | Defender | | |
|----------|--------|---------------------|----------------|---------|
| | | Strike | Block | OCP |
| Attacker | Strike | $V + B/2 - B/2 - C$ | $V + 1/5B - C$ | $V - B$ |
| | OCP | $V + B$ | V | V |

CHART 1: Payoff Matrix for an Air-to-Ground Encounter.

We can see then that the best strategy to use depends on what the defender is doing (recall that we are focusing on the aggressor). If the defender always strikes, then an OCP is the obvious choice, for instance. Conversely, if the defender always blocks then striking is the best move. What if the defender randomly performs one of the options available? Still an OCP is the best option as there is no instance where the aggressor would lose a B amount, but the defender will 1/3 of the time and the other 2/3s of the time both players break even. If we switch our attention to the defender, an OCP will be the best option if the aggressor always strikes and blocking or parrying with either type, OCP or DPP (though, from here on in, for simplicity I'll ignore DPPs because I'm going to assume that the sprites are always in a position where a successful OCP will always lead to an opening so there is little reason to use a DPP, but be aware that it is an option) would be best if the aggressor always uses OCPs. If the aggressor uses strikes and OCPs at random, then the best option for the defender is to always use an OCP as he or she will get the + B amount half the time and break even the rest of the time. In short, the best strategy for both parties, when in doubt, is to always use an OCP because at worst each will break even (i.e., both retain their V amount). It may seem that the defender could use a substitute strategy of "always block" for "always parry" and also break even, but this option is not stable because if confronted with an attacker that does not adhere to an "always parry" approach, the defender will give up B amounts; whereas, if the defender persistently

uses OCPs a deviant strategy on the part of the aggressor will result in a loss of B for the aggressor. (Why strong players in real life do parry a lot in these situations but not always will be addressed later).

==3.2 AIR-TO-AIR ANALYSIS==

Similar analysis can be done in different situations such as air-to-air and ground-to-ground. (I will discuss air-to-air only because ground-to-ground interactions are very complicated as we would have to take into consideration low and high blocks, low and high attacks, and low and high parries). However, we will have to modify the options for the defender and aggressor in these situations. For example, in air-to-air confrontations both parties have no block option and there should be no "defensive move" advantage, so we would have to remove the C value for the aggressor and take away the block option for the defender. (However, in ground-to-ground situations both parties will have a block option and we'd also assume no C because there doesn't seem to be any "anti-ground" moves that can give any side an advantage).

In an air-to-air confrontation then, each player has two options: strike or parry. If both strike, then using the same symbols as before, each should get a payoff of $V + B/2 - B/2$ (which, of course, is just V) because, as before, we'll assume a successful strike half the time. If one player uses a strike and the other uses an OCP, then the striking player will lose the B amount and the parrying player gains the B amount; in symbols it is $V - B$ and $V + B$, respectively. Finally, if both players use an OCP (recall we're ignoring DPPs for now), then both players retain their V amounts. The following chart (the focus is on player 1) is a summary.

| | | | |
|----------|--------|-----------------|---------|
| | | Player 2 | |
| | | Strike | OCP |
| Player 1 | Strike | $V + B/2 - B/2$ | $V - B$ |
| | OCP | $V + B$ | V |

CHART 2: Payoff Matrix for an Air-to-Air Encounter.

Parrying is the best move for either players in all situations (only if our assumption of 50% strike success is true, which in real life it isn't; why that is the case will be dealt with later). For example, if someone always strikes, then the opponent should use an OCP (one could also always strike back to break even; more on this option in the next section). If someone always uses an OCP, then the opponent should always use an OCP as well because that way each player will break even. If a player randomly uses strikes and parries, then the opposition should always use an OCP because half the time the parrying player will get a + B while breaking even the rest of the time. In summary, parrying appears to be the best option in air-to-air confrontations, but only under very stringent assumptions (e.g., 100% parrying success).

 IV. DEVIATIONS FROM THEORY:

We'll see in this section that when we consider individual player and character differences plus when we factor in throws we can account for why players don't always parry even though it may seem like the best option available in theory.

==4.1 INDIVIDUAL PLAYER DIFFERENCES==

In order to simplify analysis many assumptions were made that do not necessarily hold true in a real gaming situation. Firstly, there was the assumption that when a player decides to parry he or she has a 100% success rate. Second, if a strike is parried, then the striker is always in a position where the parrying player can take full advantage. Third, we assumed that all strikes can be parried. Lastly, we assumed that all characters are equal (we'll deal with assumptions two through four in the character differences section). Parrying is a skill that takes much practice to perfect. Even the best parrying players can miss a parry due to lack of concentration, error, mood, and a variety of other reasons. In addition, there is natural variability in parrying skill between players. This means that in choosing whether to utilise an offense creation or damage prevention parry or to consider other options the player has to factor in his or her own probability (less than 100% probability, of course) of making a successful parry. Recall in the air-to-air situation where one player (we'll call Tim) confronts another player (we'll call Sue) who always strikes. According to the analysis parrying is the optimal choice, but what if Tim can only successfully parry a hit 5% of the time? Then for Tim's skill level parrying is not the optimal choice and he would benefit more by always striking against Sue because at least he'll break even (theoretically) with her instead of losing B amounts to her. I hinted in an earlier section that strike success is not 50% in real game situations. The reason is because a successful strike depends on various factors such as character difference, speed of move, priority, whether the move can be parried and position. If Tim has better priority say, he might win, for example, air-to-air battles 60% of the time which is better than successfully parrying Sue's attack 5% of the time. In short, individual skill and otherwise the likelihood of making a successful parry will affect the choice to parry. If parrying for the individual has a low success rate, then the alternatives available to an individual player are better than the theoretical optimal choice.

==4.2 CHARACTER DIFFERENCES==

Character differences affects whether strikes can be successfully parried and thus affect player choices in deciding to parry. Stripping away the cosmetics, a character in any fighting game is really simply a set of moves. (More precisely, they are a set animations or properties interpreted by the human player as moves with specific functions. In contrast, the AI, for instance, has no idea that it is using moves with functions as it simply follows a few conditional statements a pre-set routine, which is one factor why the AI is so predictable and sub-optimal in its play). The shape of the character (the sprite) gives players a reference for their determinations of the range of a move and a reference of when to defend and attack and what to defend and what to attack. Not all move sets are created equal because some sets have higher priority, different properties, and range. (interestingly, the sprite often determines how players react to using a

character at first glance; that is, for example, they expect a large sprite like Hugo to be slow and a small one like Ibuki to be fast, but there is nothing from a programming perspective that forbids Hugo to be fast). It is these differences that make up the uniqueness of each character. These individual differences affect a player's play and decision to parry as many fighting game FAQ writers already know (often character FAQs have a "VS specific character" section). A character might, for instance, contain a move that when parried may not produce the desired opening because the move does not set the sprite in the appropriate position (e.g., parrying the very tip of Remy's standing middle punch during a jump in). Perhaps, in such a case a player would rather of traded hits then to have unintentionally performed a damage prevention parry. Some move sets will have examples that can't be parried at all (though, as far as I know there are only 2 non-throw moves that can't be parried: Gill's Sephraic Wing and Gouki/Akuma's Kongou Kokuretsu Zan) or are very difficult to parry, which obviously will affect a player's decision to parry when playing against such move set (character). Player's can use moves (the character) to throw off a parrying player's timing. For example, while performing a chain link combo with a specific character (only some characters can chain) the player could stop chaining early and hope to throw off a parrying attempt. Some character's have moves that can be used to fool a player into performing a damage prevention parry and then attack with a move that must be parried with different timing. An example would be Urien performing an EX Metallic Sphere followed by an EX Chariot Attack. Similarly, Ibuki's Kunai followed by her Yami Shigure, a move that must be parried or blocked low, is yet another trick. Notice that these tricks and tactics are character (or move set) specific. When a parrying player is confronted with one of these characters (or move set) and a player who can perform these tactics (another example of player differences) then his or her playing strategy would change because the theoretical strategies are not optimal in these situations.

Clearly then, given these examples, our assumptions in the previous section that a successful offense creation parry always makes an opening; that all moves can be parried; and all characters are equal are not always true and in the situations where the assumptions are violated, players will call upon different tactics.

==4.3 THROWS==

In order to capitalize on an opening created by an offense creation parry, each sprite must be in close vicinity to each other - which also happens to be the vicinity of throws. Throws are the answer to an "always parry" strategy. Throws can't be parried and will deal damage and shift the momentum of the match. If a player, decides on an "always parry" approach he or she must be wary of throws and prepare to counter ("tech", in SF jargon) the opposition's throw attempt. Individual character differences come into play again as some characters have greater throw range, throw speed, and throw priority (e.g., special throws like Alex's Power Bomb) than others. Consider for instance, a Hugo player with a fully charged Gigas Breaker. This player will likely deter the opposition's decision to jump in with an OCP. Likewise in an air-to-air battle against say, Chun Li, who has an aerial throw, a player would have to decide whether parrying is a good idea. Clever players can attempt to force a damage prevention parry and dash and throw the opponent as they are parrying. For example, using Sean, you throw his basketball and the opponent parries it. You could dash in and try a throw as the opponent parries. The point is the very existence of the gameplay mechanic of throws can make parrying a sub-optimal choice in some situations. However, throws can't be utilised always as the parrying players could deliberately jump in parrying but just out of range of a throw and take advantage of the "missed throw" animation or be prepared to "tech" the throw.

V. CONCLUSION:

It was this author's goal to provide a detailed analysis on parrying and why it can be such an effective tool in the game. In addition, I wanted to suggest, especially in the last few sections, that the game goes beyond than just who can parry best (a common target for many critics of this game). Each player has to consider his or her own skill level, the specific characters in use, and be ready to utilise all resources in the game. In addition, the player has to consider the opposing player's tactics and strategies carefully and hopefully detect a pattern and use an appropriate strategy against it. Although the ideas presented were not meant to improve a person's play, I hope that the information at least paints a clearer picture on why people play the way they do and if that understanding helps players - well, all the better. How successful I was with this FAQ will depend on the feedback I get from readers. Finally, as it is this author's personal belief that Capcom's Street Fighter franchise is coming to a close - I'd like take this time to tip my hat to a wonderful series.