THE FIGHTING GAME RESOURCE COMPENDIUM

VIEWING IN "PRINT LAYOUT" RECOMMENDED!

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(PDF backups on GitHub here, manually updated (occasionally))

Preface

The purpose of this document is to be a convenient reference resource that centralizes and summarizes fighting game knowledge and tips accumulated via various sources.

The focus is not just on teaching people how to PLAY fighting games, but teaching them how to LEARN and UNDERSTAND fighting games.

The goal is to reduce the genre's notorious barriers to entry, encouraging people to get more interested and invested in the genre, ranging from players who personally want to improve, to spectators who just want a deeper understanding of and appreciation for the games that they're watching.

The majority of the content within this document focuses on GENERAL fighting game concepts, NOT the mechanics or characters of specific games.

Examples from specific games will often be used to explain generally applicable concepts, but the concepts themselves will typically not be tied to a specific game. Edge cases and exceptions will be notated accordingly, such as concepts and mechanics mainly associated with specific sub-genres of fighting games.

The intent is to introduce the reader to near-universal concepts and terms that can then be taken and applied in some form to almost ANY fighting game of their choosing.

Additionally, while the document is written in English and primarily targeted at the English-speaking audience, some Japanese terminology has been included in the interest of clarity and specificity, particularly for instances where I feel that the English equivalents are uncommon, vague, less concise, or conflicting with something else.

This document is loosely formatted, with more general and beginner-oriented topics coming first, but I still recommend skimming the outline or searching for specific keywords or topics that you are interested in, so that you don't get overwhelmed by taking in everything at once. **Please treat this document as a jumping-off point for each topic, rather than some kind of comprehensive, standalone textbook.**

Most sections also have links to sources which provide more detailed explanations, and often include videos or other visual aids. Furthermore, many of my write-ups on each topic are largely just consolidated summaries of information taken from those sources that I have cited, **so if you like the information presented, please support the original content creators!**

Additionally, as this is ultimately a compilation of my own personal favorite resources, **I'll only add to or edit it at my own discretion. However, suggestions are welcome!**

You are free to download this document or make a copy of it to personalize any way you like. **However, you are expressly forbidden from monetizing or claiming credit for any of the contents of this document in any way,** as it is built upon the hard work of myself and many other contributors and content creators. *(Also, I'm probably technically not allowed to use these images from Granblue Fantasy, and I don't want CyGames to send their legal team after me, so please don't give them any ideas.)*

Please direct any suggestions, corrections, or other feedback to YoJimbo0321@gmail.com

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Getting Into Fighting Games

The video below presents a simplified introduction to many of the more general concepts and ideas covered in this document, cited from many of the same sources.

If the doc feels too intimidating, or you're just not sure where to start, watch this video first!

As I mentioned in the preface, this document is intended to be a jumping off point for specific topics, not something to sit down and read through all at once. You can always come back to the doc later if you find yourself wanting more specific information on a given topic.

- How to get started with Fighting Games and have a Nice Time [Polygon; Pat Gill]

What Exactly ARE “Fighting Games”?

The video below presents a rough working definition for what fighting games are, and what separates them from other video game genres. While it might seem like semantic hair-splitting, knowing what makes fighting games unique will give you a better basis of understanding when watching or learning how to play them.

- Is Smash Bros. a Fighting Game? [novriltataki]

General Introduction to Some Basic Fighting Game Concepts

The first video below simply explains many core fighting game concepts and terminology such as **neutral, footsies, frame data and its applications (frame advantage, frame traps), and so on.** It’s widely applicable across games, and great for genre newcomers.

The companion video succinctly explains the concept of “input buffers”, an important and often overlooked feature in many modern fighting games, and how input buffers interact with frame data.

The last video shares an additional perspective on frame data, and what it does or doesn’t do in the context of playing and learning fighting games.

- Why Button Mashing Doesn't Work [Core-A Gaming]
- Sidenote: Why Button Mashing Works (Sometimes) [Core-A Gaming]
- Don't be afraid of frame data [Brian_F]

Numpad Notation, Combo Notation, and Fighting Game Terminology

Understanding of basic fighting game terms and notation is often going to be a prerequisite when learning fighting games through community resources, and will also be useful if you ever put together your own character notes with combos and other gameplay tips.

Numpad notation in particular is useful to learn. From the Dustloop Wiki:

“Numpad notation is a system for writing the directional commands used in fighting games in an easy-to-read, easy-to-understand way, even if it may not seem like it at first. The core mechanic of numpad notation is also how it gets its name: **numbers are used in place of directions, according to their position on a keyboard's numpad.”**

Numpad notation is most often used for “anime” airdasher games, but it is applicable across many different fighting games and transcends language barriers, making it very clear and useful. **Certain games, such as Tekken, have their own specialized notation systems that are practically standardized (at least in the West), so those may have to be learned separately for practicality reasons.**

Additional Reading/Watching:

- The Fighting Game Glossary [Infil]
  (Fantastic resource with hundreds of terms and definitions. It has filters for specific games, and even has Japanese translations and video examples for many terms. This should be your first stop when you’re unsure of the meaning of any terminology you come across.)
- Glossary [dustloop Wiki]
- Notation [dustloop Wiki]
- Tekken Notation Legend [Wavu Wiki]
  (Tekken’s unique notation system)

Choosing a Fighting Game to Play

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

While the FGC often tends to try and promote as a united front, in reality the genre is just as diverse and eclectic as many other video game genres, such as FPS games or racing games, for example. **Fighting games may share some core tenets, but they each have distinct aesthetics, gameplay mechanics, and other characteristics** that set them apart and give them different audience appeals. There are 2D games, 3D games, tag/team games, airdasher games, and many other descriptors and subgenres.

As a result, **liking one fighting game doesn't mean that you will like another.** Similarly, **NOT liking one fighting game doesn't necessarily mean that you won't like any at all.** That being said, it is entirely possible that you are genuinely only interested in spectating, or even that the entire genre itself is just totally out of your strike zone, just as someone might not be drawn at all to any racing games, or to any RTS games.

Assuming that you are not completely uninterested in playing fighting games, some of the most basic and important criteria checkboxes you may want to consider in the pursuit of your ideal game include:

- Has a visual style and aesthetic that appeals to you
- Has a game feel and game mechanics that appeal to you
- Has a character or characters you are interested in playing
- Has a large active player base with players at all skill levels
- Has good netcode

Some of these criteria are obviously very subjective and intertwined, and they may require some amount of personal experimentation to verify. For example, character appeal tends to blend both visual/aesthetic appeal and gameplay appeal, while the long-term size of a game's player base is typically at least somewhat dependent on the quality of its netcode.

After finding a game that you are interested in, one of the first things you may want to do is seek out footage of tournament matches, ideally from the bigger ones that feature high levels of play, such as EVO, CEO, Combo Breaker, or the World Tour Finals of individual games. Footage with informative commentary would be great, and even more ideal would be full-on match analysis. **Watching people play and talk about a game at a high level is the best way to get a feel for what it's like without actually playing it yourself.** Of course, certain aspects of game feel and mechanics are best experienced by learning through tutorials and playing firsthand, and this also applies to individual characters as well.

Now, regardless of what you personally value most when it comes to choosing a fighting game, **the single most important factor is finding other people to play with.** Let's say that there is a vibrant local scene for a popular game that you are interested in. Barring, say, *the advent of a global pandemic and subsequent quarantine that completely shuts down all locals and tournaments for the better part of a year, if not longer* (this is a subtle reference to COVID-19), you could almost completely mitigate the drawbacks of a low-quality netplay experience by relying on said local scene. And, in fact, that is basically how the most popular fighting games thrived in the past.

Alternatively, you could also just put in your two weeks' notice, pack your bags, and move to Japan, where the national network infrastructure is good enough that most Japanese fighting game developers barely even bothered trying to improve their games' netcode for years on end, due to perceived lack of appreciable improvements domestically. That way you could just dodge the issue entirely!

If neither of those are particularly viable options for you, then you would probably want to prioritize picking games with good netcode. Even if a game you are interested in is relatively popular and has a large player base, you won't really benefit from that as much if the netcode is mediocre and none of that player base plays locally near you.

Unfortunately, as of the time of writing, there are barely any fighting games that have both a large active player base across all skill levels AND great netcode, let alone games that can also fulfill the other highly subjective criteria (EDIT: As of late 2021, more and more games are finally beginning to implement higher quality netcode solutions, so hopefully this will be less of a concern in the future).

If you can't find a game with both a local scene and high-quality online play, it might still make sense to prioritize picking a game with good netcode, even if it has a smaller player base overall. That way, you could at least find matches more consistently. There are obvious drawbacks, and you would likely find yourself seeking out matches with opponents of disparate skill levels through Discord or other matchmaking communities. The learning process could be rough at the start as well. But, if you are willing to stick it out, **many of these games have passionate communities who are eager to teach and play with you**, both of which are easier to do when the netplay is good.

If your game of choice has little to no local scene near you AND has mediocre netplay, you would probably really struggle, but if you were REALLY passionate about that specific game, you could still go for it. At that point your experience would really depend on your own personal goals and expectations. For instance, you could try seeking out players located relatively close to you to netplay with on Discord. With a good enough connection over a short enough distance, the match quality would hopefully be at least acceptable.

Alternatively, you may not even be interested in playing against others yet. The game could have an engaging enough single-player experience to keep you entertained long enough to get your money's worth, and in the process you could practice, learn, and get a feel for the game, genre, and your own preferences. You could even think about building up your own scene from scratch. After all, you only really need two people to start a locals.

If there isn't a game that you are willing to compromise to this extent for, that's totally fine too. It's ultimately up to developers to provide an experience that players decide is worth paying for, and certain recent events (this is another subtle reference to COVID-19) have undoubtedly alerted said developers to the importance of high quality online experiences, in addition to all of the other important criteria. Hopefully, the genre will soon begin to shift in a way that is truly more accessible for potential newcomers.

Additional Reading/Watching:

- 2D vs 3D [novriltataki]
  (Note: this video compares hypothetical, archetypal 2D and 3D fighting games, and that the differences described are not universally upheld or strictly adhered to in reality. For example, Tekken has a notably high emphasis on movement and spacing compared to the archetypal 3D game described.)
- How to Approach 3D Fighting Games [novriltataki]
- Airdash Academy [novriltataki]
  (Great series of videos that covers some core concepts of the airdasher (sometimes called “anime games”) subgenre of fighting games.)
- How to Approach Team Games [novriltataki]

Choosing a "Main" Character (and Team Building)

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

Character choice in fighting games is a meaningful and personal decision, due to how much it can influence your overall gameplay experience. Once you've decided on a game to play, it's time to look into the characters and pick one to try, assuming that you didn't choose the game because you already had a specific character in mind in the first place. Ideally, you will be drawn to a character who immediately appeals to you in some way or another, whether the nature of that appeal is primarily aesthetic (design, animations, lore, voice actor, etc.), functional (character archetypes, your general preferred playstyle, specific gameplay concepts/gimmicks, etc.), or a mix of both. Ideally, that character would also have well-developed community resources that could help you get started without struggling to figure out what you're supposed to do.

Put simply, you should pick a character who you think you would have fun playing, for any or all of the reasons above. If you have several characters in mind, there's no harm in trying all of them, noting their similarities and differences, and seeing how you like each of them. Though often treated as a taboo act, this could also be a good time to (responsibly) consult up-to-date tier lists and, more importantly, seek out the related character discussions for more insight on which characters fit these criteria. **Remember, your focus should not be on WHERE the characters are placed on a tier list, but on WHY they are placed where they are.**

Another important consideration to keep in mind is that **the level of effort required to learn how to play a given character at a basic level also needs to be acceptable to you.** This is very subjective and dependent upon the specific character, as well as your own current skill and motivation levels. Trying them yourself is often the only way to really gauge this, especially if you don't have much experience with other fighting games and characters.

If you are really having trouble finding a character who clicks with you, or if the character you are most interested in is locked behind DLC that you aren't sure about buying yet, then you may want to look into which characters are considered notably beginner-friendly and/or "standard". These are the characters that do a particularly good job of letting you "focus on the core of the game", as they're typically free of some of the idiosyncrasies that more specialized or difficult characters have. By playing such a character for awhile and seeing what the game and its systems have to offer, you can get the perspective and experience needed to make certain decisions, like whether you want to switch to another character that fits your preferences better, stick with the character that you're now familiar and continue learning the game, or perhaps drop the game entirely after definitively feeling that the game itself isn't for you. Do keep in mind, however, that **the feel of the game can change significantly depending on which character you're playing,** so one bad character experience doesn't necessarily have to rule out the whole game for you, and new character releases for games you've given up on could be worth checking out too.

If you DO have a character in mind that you either already have access to or don't mind paying to unlock right out of the gate, BUT they are particularly unique, technical, or difficult, you may want to make similar considerations. You could, for example, start with a more beginner-friendly character until you feel comfortable enough with the rest of the game to "graduate" to the character you initially wanted to play. However, you may feel that the appeal of that particular character outweighs your attachment to the rest of the game, and that it's either that character or nothing. In that case, there's nothing to do but swing for the fences, give it your best shot, and see how willing you are to push yourself to learn that character. You can always change your mind later if things don't work out.

In the end, it bears repeating that the most important thing is to pick the character that seems the most fun to you. All of the above guidelines are meant to help you make a decision if you're stuck, but none of them should overrule this fundamental rule.

As a side note, if you are specifically playing a team/tag fighting game, and you care at all about playing “seriously”, you may have to compromise somewhat on those guidelines. In many tag games, the overall synergy between your team members can have a significant impact on the overall efficacy of the team (obviously varying depending on the specific game and its mechanics). **Commonly given advice for these types of games is to first choose a single character based purely on personal appeal and any of the guidelines above, then build a “shell” around your first-pick character with other characters who have particularly good synergy with them, and/or who are generically strong team utility picks that can fit into most team compositions.** Of course, if you can manage to do all that while simultaneously still picking all characters that you love, then that’s even better.

Additional Reading/Watching:

- Analysis: How to Pick a Character [Core-A Gaming]
- Sajam Talks Character Choice for New Fighting Game Players [Sajam]
- Sajam Discusses How to Choose a Character in a New Fighting Game [Sajam]
- What character should I start with? [JDCR]
- How to Approach Team Games [novriltataki]
- THREE EASY STEPS to build your Dragon Ball FighterZ team [LordKnight]
- How to build a team for YOUR FAVORITE CHARACTER in Dragon Ball FighterZ [LordKnight]
- Skullgirls team building guide [Patrick Kelly]

Introduction to Character Archetypes

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

For ease of explanation, characters are often categorized into various archetypes based on their move sets, general gameplans, and how they approach the neutral game and what comes after. **However, because a character rarely fits neatly into just one archetype, it's more accurate to describe archetypes as "tags" that can be applied in various combinations to describe a character, rather than mutually exclusive categories.** Even then, describing a character solely through archetypes often won't give a complete picture, so they should be used as a starting point.

Below is a **non-exhaustive** list of example archetypes that are often referenced:

- Some characters are relatively comfortable at most ranges because they have a well-rounded kit of moves, so they may be called **"standard", "all-rounders", "shoto(kan)"/"dougi" characters** (a specific archetype referencing Ryu from Street Fighter), or simply just **"well-rounded".**
- Other characters may want to stay at mid- or long-range because their move set emphasizes zoning and locking the opponent down from a distance or discouraging the opponent from moving in freely, so they may be called **"zoners", "keep-out",** etc.
- Conversely, characters who lack the tools to effectively control space at range and instead want to leverage their mobility or gap-closing moves to "skip the neutral" and begin applying pressure with their close-range moves may be called **"rushdown", "aggressive",** etc.
- While "standard", "zoner", and "rushdown" are arguably the three most basic archetype descriptors, there are of course many others.
- **"Grappler"**, at a base level, simply describes characters whose gameplans largely revolve around getting in close and grabbing/throwing the opponent. However, it's often used to specifically refer to characters who additionally have certain disadvantages in exchange for extra explosive reward on their throws, such as having limited mobility, or being large and easy to hit.
- **"Mix-up"** describes characters who want to get in close to the opponent and break their defense with offense that is difficult to block on reaction or with fuzzy defense.

- **“Okizeme”** or **“setplay”** describes a specific type of mix-up character who aims to set up situations (usually through knockdowns) that lock down the opponent, limiting their options and forcing them to deal with incoming mix-ups.
- **“Gorilla”** is a somewhat vague and imprecise term, but generally tends to refer to characters who enforce oppressive offensive pressure and discourage unwise defensive choices by threatening “haymaker” moves that lead to explosive damage. This can be done through various means, such as rushdown, pressure resets, frame traps, counter hit punishes, and so on.
- **“Turtle”** is also a somewhat vague and imprecise term, but generally tends to refer to characters who have strong defensive and keep-away tools to deter opponents from approaching. In this sense, many turtle characters can be considered zoners as well.

It is also worth noting that general game mechanics can also influence character archetypes and gameplans on a universal level. For example, in a game like Guilty Gear Xrd, most characters’ gameplans involve some amount of okizeme and setplay. In a game like Tekken 7, most characters’ gameplans involve some amount of keep-away and space control. While most modern fighting games have some amount of character homogenization across the cast for the sake of more well-rounded matchups, team games can generally afford to be a little looser with it due to the team-building aspects.

Additional Reading/Watching:

- Why Characters in Team Games are Interesting [TheoryFighter]
- Archetypes in Guilty Gear Xrd Rev 2 [Leon Massey]
- Archetypes in Tekken [That Blasted Salami]

Understanding the Real Value of Tier Lists, and How to Use Them

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

Character tier lists for fighting games can be volatile and highly situational, and are rarely directly useful on their own without context. For example, **a tier list can weigh characters differently depending on whether the list maker is focusing on characters' theoretical strength in long sets with perfect execution of their most powerful strategies, or their overall consistency and ease of use in current tournament meta.**

There are many other intangible factors contributing to character placement on a tier list that the list on its own cannot explain to you, such as how "developed" characters are. **It is not uncommon for perceived character rankings to shift significantly over the course of a major patch cycle, as players make new discoveries and test things out.** Individual player bias and gaps in knowledge can also interfere with the “accuracy” of a tier list.

Furthermore, the common format of simple, single-axis, tier lists that seek to roughly sort an entire cast into their supposed tiers often falls short when it comes to covering things such as individual character matchup spread. For example, it is not uncommon in fighting games for a generally “low tier” character to have value as a strong counter-pick option versus an otherwise “high tier” character.

At a competitive level, these kinds of discrepancies in matchup spread are expressed by the concept of “matchup coverage”. Some ambitious players may choose to prepare multiple characters with the intent of creating as many advantageous matchups as possible in a tournament setting, rather than trying to main a single character. The value of doing so is somewhat subjective and game-dependent, of course, but it does highlight the potential of otherwise low tier or “off meta” characters.

It's also worth noting that the "individually-created tier lists" being discussed in this context are an entirely different resource compared to "aggregate tier lists". Aggregate tier lists include those that average together the opinions of multiple individual tier lists, as well as those based on more "objective" data, such as lists that rank characters based on how many of each character were present in the top X of recent major tournaments. **While aggregate tier lists can present their own valuable data, they are certainly NOT a direct substitute or replacement for individual tier lists (in my opinion).**

Aggregate lists that compile and average multiple individually-created lists can lose a significant amount of nuance due to the various opinions being diluted and blended together. Individually-created tier lists are presented through a very personal lens, formed by disproportionate experience with certain matchups versus others, based on the characters the player specializes in, and influenced by the characters and players who they typically face in-game. The chaotic mess that results from smashing those kinds of lists together can render all but the most unanimously agreed upon placements totally meaningless without that context.

These types of aggregated lists also introduce the issue of deciding whose opinions are "worthy" of inclusion. Should Average Joe's tier list that he posted to Twitter be tossed into the same pot as an established top player's? Surely not. But what about a specific top player who consistently wins events, yet also consistently has tier list opinions that contrast significantly with the majority of other top players'? If their opinions are "wrong", then the aggregated list could be skewed by their "wrong" input being included in the mix.

On the other hand, that player might have a very valid reason for placing a particular character very high or very low on their tier list, such as a critical element to their gameplay that is not yet widely known or acknowledged, but once their tier list is averaged with the 10 other players' lists who have the opposite opinion, their opinion could effectively be drowned out, even if they are "right".

Even aggregate tier lists that are based directly on tournament results do not always give a complete or accurate picture of the character strength in a given game version, despite being sourced from "objective data". For one thing, regional opinions on character strength often correlate with the character representation in tournaments where many strong players from those regions attend.

Because very few tournaments will have significant representation from many different regions (especially from different countries), there is naturally going to be a regional bias in the results that could be reflected in the results-based lists. There have been multiple examples in the past of some regions having contrasting opinions on character strength in a given game versus other regions, naturally leading to online tier list discourse favoring the opinions of the "bigger" or "more established" regions, only for public opinion to shift after consistent showings in international competition that supported the minority opinions.

With all of that in mind, I am of the opinion that subjective, individually-created tier lists, as well as aggregate tier lists based on tournament data can both be very useful resources that present totally different and mutually exclusive perspectives. I don't think there is much value in aggregate lists that mash together individual lists to present as a single "master list", as they strip away nuance and any additional context that may have been provided alongside the actual list.

And, in general, any and all tier lists are best used as a STARTING POINT for discussion of character strengths/weaknesses, rather than a deterministic ranking. Looking into tier lists and -- most importantly -- the context and discussion surrounding their creation (such as tier list making-of streams) can be very helpful, especially if you're looking to find a character who is relatively easy to pick up but still effective and good for learning the game, or if you're worried about picking a character who ends up being way more effort than they're worth for you personally. **In other words, your focus typically shouldn't be on WHERE the characters are placed on a tier list, but rather on WHY they are placed where they are.**

Additional Reading/Watching:

- Understanding Tier Lists [novriltataki]
- Sajam Discusses Bonchan, Moke & Fuudo's SFV Champion Edition Tier List [Sajam]
- Tier Lists Aren't Directly Related to Tournament Results and Don't Matter Much for Most Players [Sajam]
- Avoiding the Podcast - Knee's Tekken 7 Tier Lists [Avoiding The Puddle]
- Lili, the Tournament Top Tier - A Tekken 7 Case Study [Avoiding The Puddle]

Balance and Patch Culture In Competitive Games (Or, “Esports VS Kusoge”)

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

As the fighting game genre has continued to grow and evolve, it has also increasingly joined other video game genres in entering the sphere collectively (and sometimes mockingly) referred to as “esports”. **The term “esports” implies many things, but at its core implies a movement and industry built around the legitimization of certain competitively-oriented video games as a serious competitive activity analogous to “real” sports.** This means tournaments, leagues, and other spectator events that promise monetary rewards to the winners; professional players, teams, and sponsors; and so on.

The pursuit of this “serious” goal therefore equally implies a need for a certain “seriousness” to the developers’ approach of creating, maintaining, and updating their competitive video games to actually BE competitively viable. After all, the moment that people start playing the game with stakes involved, they are more incentivized to push themselves and the game to their respective limits, and figuring out what they can do to win and stand out more than other players. **In games such as (but certainly not limited to) fighting games, discourse regarding character balance and the resulting tier lists are the simplest, most direct example of this pursuit.**

Serious players, especially those with something to gain, will always seek to break down and understand the “meta” of the game, and what options are advantageous or disadvantageous. Players are always discussing and complaining about balance. As a result, developers who actually care about the long-term competitive viability of their games strive to fine-tune them through updates to address any glaring issues or inconsistencies that they feel interfere with the competitive integrity of, their vision for, and/or community perception of their games. **And in that sense, the “esports era” is also deeply tied to the rise of “patch culture”.**

Over time, and with technological advancements, it has become more common and accessible for game developers to push fixes and content updates to players through “patches”, rather than having to periodically release entirely new versions of the game to make any changes. This has undoubtedly made things a lot more convenient for both players and developers, especially for competitive games, as developers can now actively monitor the state of the game and push those fixes and updates that they decide to implement, without players having to wait and pay for a new release each time. **The esports era and patch culture have undoubtedly allowed developers to push and improve their games to a far greater extent than they ever could in the past, so you COULD say that it has been extremely net positive, overall.**

Of course, not everyone is always (or ever) on board with this philosophy. For one thing, there are undeniable issues caused by the rise of patch culture, such as companies feeling free to release rushed and unfinished/buggy games with a “we’ll patch it later” later attitude. There’s also the issue of overly trigger-happy or heavy-handed changes. You may have heard of the Japanese term “kusoge” (lit. “shitty game”). While it may just seem like what it says on the tin, “kusoge” as a term actually has some nuance to it, and is increasingly being adopted into Western discourse as well. Sometimes, kusoge DOES just mean “shitty broken game”, but it is also sometimes used in a sarcastic, endearing way to mean “yeah this game is broken, but that’s also what makes it fun”.

There are many, many examples of “broken” things in games that ended up making the games more flexible and more FUN for some players than they would have otherwise been, if played strictly according to the developers’ vision. This is part of what is referred to as “emergent gameplay”, and heavy-handed patching can directly quash that. In many cases, because new patches directly overwrite the old versions, and old versions are typically not stored or made publicly available, these “fixes” don’t just quash any potential or actualized emergent gameplay, but they actually seek to completely destroy any trace of its existence, by making those versions as inaccessible as possible. And again, that isn’t to say that game devs should never fix those kinds of bugs, either. It’s certainly not always a simple decision.

All of this to say, it's really, really not easy to strike a good balance when it comes to balancing games. There's certainly no one objectively correct approach, but generally speaking, players of modern competitive games should probably at least be holding the developers to SOME kind of standard when it comes to how they approach game balance. And that standard should probably allow for SOME level of variance and emergent gameplay, because it's even harder to make a game PERFECTLY balanced while still actually being fun and interesting. And, in turn, developers should also hopefully have SOME kind of ideal vision for their game that they are pursuing, even if it's practically impossible to completely achieve. After all, in the case of fighting games, I think most players would agree that they would not be nearly as fascinating as they are if the games were completely symmetrical with absolutely no freedom of expression, no matter how "balanced" they were.

Additional Reading/Watching:

- Why modern games seem to lack depth [Brian_F]
  (An excellent introduction into critically thinking about the pros and cons of patch culture and emergent gameplay in video games)
- Valorant - State of the Agents - Sept. 2022
  (Despite not being a fighting game, this dev blog article from the Valorant team is actually one of the best insights I've seen into the considerations that have to be made when balancing a competitive game in general.

  In particular, I appreciate that they directly acknowledge that data from solo queue play, data from pro play, and player perception of balance on social media often directly contradict each other, and that it's up to the devs to sift through all of that and figure out how to reconcile them.

  They also bring up the difficulty of properly conveying the significance of character strength and buffs to players, so as to minimize mismatches between perceived strength and "actual" strength.)

Difficulty and Accessibility in Fighting Games, and the Dynamic of "Brains", "Body", and "Heart"

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

This section is going to be a bit long and rambling because it's such a complicated and opinionated topic, but I personally feel that it is **one of the most important topics to talk about when it comes to teaching and learning fighting games, arguably more so than anything that happens within the games themselves.**

Fighting games have an undeniably notorious reputation for coming off as particularly intimidating and unwelcoming to new players, even compared to some other competitive video game genres. As such, discourse surrounding new player accessibility in fighting games has become a hot topic within the FGC since the mid-2010s, going into 2020 and beyond (at the time of writing).

Lately, many fighting game developers have started announcing and introducing their newer projects as being specifically designed with "new player accessibility in mind". These vague, buzzword-laden statements, and the often controversial game design decisions that accompany them, have led to a lot of ongoing debate within the community about what makes fighting games accessible or inaccessible, and what direction fighting games should go in.

There is endless arguing about whether individual fighting games are too hard or too easy, and whether the games do too little or too much to handhold newcomers and help get them up to speed against experienced players. Should it be possible for a new player to get a lucky win against a seasoned pro? Why is it that people complain about fighting games being hard, but they eagerly play other games in high skill cap genres like FPS and MOBA? Such debates rage on constantly, with no end in sight.

This is ultimately a highly subjective topic (including any of my own opinions and any outside sources linked below), but in order to even begin reasonably forming your own opinions, it is first necessary to at least understand, in relatively objective terms, what exactly constitutes "difficulty" in the context of fighting games, and how that in turn relates to "accessibility".

What determines “difficulty” in the context of fighting games?

- **Difficulty in fighting games can be roughly divided into at least three distinct main components, commonly referred to as: “brains” (tests of game knowledge), “body” (tests of dexterity/execution barriers), and “heart” (tests of empathy/reading your opponent).**
- “Brains”, at a basic level, includes things such as knowing what options your opponent has at a certain range, or knowing the frame data of your and your opponent’s moves.
- “Body”, at a basic level, just refers to how quickly, precisely, and consistently you can execute a given action in a given situation. The two most noteworthy examples would be combos and defensive reaction speed.
- “Heart” primarily refers to **“yomi” (reading your opponent)**, which itself effectively refers to the mind games of predicting your opponent’s next move and responding with the appropriate countermeasure. Yomi inherently incorporates elements of luck and risk-reward, scaling based on how committed you are to a “read”.
- Fighting games that are explicitly designed to be “more accessible” typically focus on lowering the barriers of game knowledge and execution requirements, in order to focus on the yomi elements that players and spectators alike find engaging and exciting. While this is not necessarily a bad thing in and of itself, it is also important to remember that **yomi is ultimately an intangible skill.** On its own, it is an unreliable and inconsistent indicator of what makes one player better than another in a competitive environment, and it is not a skill that can be methodically taught or improved.
- By contrast, **game knowledge and execution are skills that can be tangibly improved with effort,** and are part of what provides the depth that keeps fighting games fun and engaging in the long term for many players. These “brains” and “body” components are what separate fighting games from something like Rock-Paper-Scissors, which is almost all “heart” (high reliance on reads), and isn’t often played for fun.
- That being said, while “improving your reads” is a more nebulous and abstract pursuit than working on your game knowledge and execution, that is NOT to say that yomi is not a critically important skill in its own right. **Correctly reading the situation and predicting your opponent’s next move better than they can predict yours has and always will be a major component of the fighting game genre that plays a huge role in the outcome of matches even, or especially, at the highest level.**

- The nature of yomi as a relatively “unteachable” skill is part of what makes it so impressive, **but what makes a skilled player’s ability to make reads really shine is when it’s backed up by the game knowledge needed to understand a given situation and the relevant possibilities, and the execution necessary to bring out the chosen answer at the right time.**
- At a fundamental level, **all three components of difficulty are integral to making a fighting game function,** and all must be present to some extent.

What is “accessibility” in the context of fighting games?

- Roughly speaking, I would personally and contextually define accessibility as **the way various factors in and out of the game make it easier or harder for players to consistently improve upon and demonstrate their skills in each category of difficulty.**
- First of all, every player has their own preferences, tolerances, and aptitudes for each of the three main components that make up difficulty, and while those can of course change with time and practice, there are also hard upper limits, particularly for “brains” and “body”.
- **Every human being has an upper limit on memorization of information and situations, as well as precision and consistency of execution, even with training.** The more difficult a game is in these categories, the more likely it is for even top level players to be unprepared for certain situations or matchups, or make frustrating input errors. Conversely, this does also mean that the more lax a game is on these requirements, the less a player can “stand out” for having a particularly high aptitude/ceiling for them.
- **The individual levels of and balance between the three components of difficulty influence the reward for “grinding”, the depth and longevity of the game, the severity of potential sources of frustration for new and veteran players alike, and more.**
- Aside from the game design philosophy angle, **the biggest accessibility barriers to fighting games are often not even directly gameplay-related at all.**
- Any base difficulties or challenges one might encounter within the game when trying to improve their game knowledge or game execution skills are also amplified by a lack of well put together in-game tutorials or external community resources. After all, it’s hard to do well when you aren’t even sure what you are supposed to do.

For example, few fighting games can claim to tick all of the following boxes:

- Has engaging and informative in-game tutorials.
- Has well put together community resources and guides.
- Has a good online experience with good netcode (as well as adjustable delay, ping display, and other related features), easy to use online lobbies, satisfying ranked modes, etc.

These are all critical factors to keeping the average player interested enough to form a long-term attachment to the game, arguably more so than the supposed complexity or lack thereof of a game's system mechanics, and unlike major changes to mechanics for the sake of accessibility, **good online infrastructure and good tutorials are never controversial (or at least they shouldn't be) and are always good for the game.**

Furthermore, most popular fighting games do not offer permanent, full-featured free trial versions, AND many require purchasing a lot of paid DLC in succession in order to "catch up" and get access to all of the characters and content, which can turn off potential players before they even seriously consider buying the game, and before any of the other factors even matter.

Lastly, it is also important to consider accessibility from a broader perspective beyond just the gameplay mechanics and networking. There are many factors that affect player experience which cannot as easily be summarized on a checklist. One big example is **visual clarity,** or just the general goal of making things easier to visually distinguish.

Fighting games are a highly visually-dependent genre, and emphasizing visual clarity (along with having options to adjust it) is important not just for the colorblind or deaf/hard of hearing, but for ANY player who cares about consistently being able to see and parse what's going on on screen.

Visual clarity is also really just the tip of the iceberg, the bare minimum when it comes to fighting game accessibility. From adaptive controllers to assist physically handicapped players, to quality sound design which can help blind players play without relying on ANY visuals at all, the potential sources of difficulty and accessibility aids to offset those difficulties extend far beyond the command list.

The concept of designing fighting games (and providing accessibility options) so that as many people as possible can enjoy the game as much as possible might sound like a pretty obvious objective to some, but consider the following real quote:

> “First, regarding the visuals and effects, we received many comments stating that the game looks good, but there are issues with visibility.
>
> In particular, many players encountered issues with characters blending into the background and being difficult to see, as well as losing track of the characters’ positions due to the camera effects.
>
> **With GGST, we’re trying our hand at using effects and visuals that are thought of as taboo when developing fighting games.** The current state of the game is the baseline for our general direction, and we are still working on refining and improving it.”
>
> - Akira Katano (Director of GGST), GUILTY GEAR -STRIVE- Developer’s Backyard, Vol. 5

Clearly, not all fighting game developers are necessarily on board when it comes to improving the accessibility of their games, even for things as seemingly uncontroversial as making it easier to see what’s going on on the screen!

Additional Reading/Watching:

- What makes combos ACTUALLY hard in fighting games? [LordKnight]
- Stop Making Excuses for Fighting Games That Don't Have Good Netcode, UI & Online Lobbies in 2019 [Sajam]
- Stop Making Excuses for Fighting Games Lacking Features Challenge (IMPOSSIBLE DIFFICULTY) [Sajam]
- Why complicated fighting games are weirdly good for beginners [Patrick Miller]
- Why fighting games are hard [Patrick Miller]
- Difference between High-Ranked Players and Low-Ranked Players [Daigo Umehara; FGC Translated]
- Making the Game Easy Doesn’t Benefit Anybody [Momochi; FGC Translated]
- Good and Bad Things about Ultra SFIV [Dogura; FGC Translated]
- Good and Bad Things about SFV [Dogura; FGC Translated]
- What makes combos ACTUALLY hard in fighting games? [LordKnight]
- Discussing Free To Play Fighting Games... [jiyuna]
- GUILTY GEAR -STRIVE- Developer’s Backyard, Vol. 5
- The Xbox adaptive controller helps people with disabilities join in on the fun [PCMag]
- ‘Street Fighter V’ is currently unplayable for blind gamers [NME]

Why “Simplicity” Doesn’t Always Equal An “Easier” Game

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

As mentioned in the section about accessibility, “simplicity” in fighting games is a controversial topic that is always being debated. Factors such as game speed, complexity of inputs, amount of buttons, and so on all contribute to popular perception of how “easy” a given game is. The reality, however, is rarely that simple (no pun intended).

For example, it is a common misconception that Smash is inherently an easier game just because it “has less buttons" and that airdasher games like BlazBlue are inherently harder just because they “have crazy combos". **Smash uses fewer attack buttons than something like Street Fighter, and Street Fighter tends to have shorter and less involved combos compared to most airdasher games, but that doesn't necessarily reflect upon their inherent accessibility or difficulty compared to other fighting games.**

A game that uses fewer buttons but has comparable depth of options relative to other games might require more complex inputs or macros to accommodate all of said actions (ex. short hops in Smash, assigning a button to the Rapid/Roman Cancel macro in BlazBlue or Guilty Gear, etc.). Similarly, shorter combos may accompany stricter execution and hit confirming requirements (tight X frame links vs. generous cancel windows, etc). At more advanced levels, overlapping actions on shared buttons can even have implications for the option select metagame.

Finally, the most important thing to remember is that, as a primarily PvP genre, any and all simplified elements in a fighting game that seemingly make the game “easier” for you also apply to your opponents. Does it seem easier to escape offensive pressure because the game you’re playing has invincible reversal moves with simple inputs? Then that also means that, in equal measure, it will be more difficult to keep the pressure on your opponent, assuming they have the same options available to them. Things like that can significantly affect the balance and metagame of the structure of offense and defense. **Difficulty of execution is just one factor of difficulty in fighting games, and while it certainly is a component, it should not be conflated with the overall difficulty of playing and winning.**

Additional Reading/Watching:

- Misleading Accessibility [novriltataki]
- Misleading Accessibility Part 2 [novriltataki]
- One of the TRUTH'S of fighting games. [LordKnight]
- What people don't get about AUTO COMBOS [LordKnight]
- What makes combos ACTUALLY hard in fighting games? [LordKnight]
- Project L's most controversial mechanic (so far) [LordKnight]

What Is “Netcode”, and Why Is It So Important?

> **“At its core, netcode is simply a method for two or more computers, each trying to play the same game, to talk to each other over the internet.** While local play always ensures that all player inputs arrive and are processed at the same time, **networks are constantly unstable in ways the game cannot control or predict. Information sent to your opponent may be delayed, arrive out of order, or become lost entirely depending on dozens of factors,** including the physical distance to your opponent, if you’re on a WiFi connection, and whether your roommate is watching Netflix.
>
> Online play in games is nothing new, but fighting games have their own set of unique challenges. They tend to involve direct connections to other players, unlike many other popular game genres, and **low, consistent latency is extremely important because muscle memory and reactions are at the core of virtually every fighting game.** As a result, two prominent strategies have emerged for playing fighting games online: **delay-based netcode and rollback netcode.**
>
> There’s been a renewed passion in the fighting game community that rollback is the best choice, and **fighting game developers who choose to use delay-based netcode are preventing the growth of the genre**. While people have been passionate about this topic for many years, frustrations continue to rise as new, otherwise excellent games repeatedly have bad online experiences.”
>
> - Infil, “Netcode”, Fightin’ Words

For more details on rollback netcode, why the hybrid solution of rollback netcode with adjustable delay is widely considered to be the superior implementation, as well as many more details on how it all works, **please check out the rest of the excellent write-up on Fightin’ Words, as well as these other sources.**

Additional Reading/Watching:

- Fightin' Words - Netcode - Explaining how fighting games use delay-based and rollback netcode [Infil]
- Netcode Explained: The GOAT Article for Understanding Fighting Game Netcode Now Exists; Read it [Sajam]
- State of Rollbackia Address: What is One-sided Rollback, KOF Interview, Lobbies & Online Features [Sajam]
- Understanding Fighting Game Networking [mauve; Zinac]
- Analysis: Why Rollback Netcode Is Better [Core-A Gaming]

How To Approach Learning Fighting Games and (Eventually) Develop Your Playstyle

Apart from the generic advice of keeping a positive, progress-oriented mindset and learning in the way that fits you best, a generally safe strategy to follow when learning a new character in a new game is to **first learn the basics of the core universal system mechanics of the game, and learn how they apply to the character.**

After that, build a simple game plan around a few of the character's most important moves (game dependent, but examples include: pokes, throws, anti-airs, a simple blockstring, very basic BnB ("bread and butter") combos to hit-confirm into, etc). It is easy to become too focused on more advanced aspects of a character that can come later, which can be daunting and discouraging.

While most characters can function with a stripped-down, simplified game plan, some are better suited for this than others, and some are highly idiosyncratic and/or technical to the point of being outright beginner-unfriendly. If that is the case for your current character, you may want to consider switching to a more "standard" or beginner-friendly character until you feel more comfortable.

That being said, **it is equally important to approach learning the game in a way that is fun for you, even if that may not be the most efficient way.** There is nothing wrong with spending time learning a cool, flashy combo on a technical character if it makes you feel good, as long as you are aware that it may not necessarily be the fastest or most efficient way to improve your play.

As you play more, pay attention to and look out for deficiencies in your game plan that opponents are exploiting, and begin implementing new tools and/or strategies to cover for them as needed. **Learning a character should be an iterative and looping process of playing games, identifying problems, discovering or researching solutions, and implementing them.**

There are things that are best learned in training mode or through research, and there are things that are best learned by playing real matches against real human beings. Determining how much time to spend on each method is up to you to decide.

It is important to play and learn with a focus on improving in the long-term, rather than winning in the short-term. Progress and improvement do not necessarily translate to immediate win streaks, especially when playing against people who are better than you, and/or in difficult matchups. Excessive reliance on cheap gimmicks or lack of knowledge on your opponent's end just for the sake of chasing wins will only get you so far, and once you get thoroughly "exposed" by more skilled opponents, you will end up having to go back and relearn how to play "correctly" anyway.

As you improve and develop a solid foundation as a player, you may also want to start thinking about what your "playstyle" is, such as whether you tend to play more aggressively or passively, and whether your strengths lie in "brains", "body", or "heart." Identifying and capitalizing on your strengths and preferences can help you to determine how best to utilize your character's strengths, or which character is right for you in the first place.

For emphasis, note again that playstyle is something that only really begins to express itself at higher levels, when players already have a decent foundation across all categories of skills. **It is probably unwise to pigeonhole yourself by using playstyle labels as an excuse when you still have plenty of room to improve across the board.**

Finally, if and when you do lose, **try not to crutch too hard on excuses like blaming everything on tier lists, or giving up and hand-waving your losses to a fatal, unsolvable lack of talent.** Sure, everyone has their upper limits on the kinds of difficulty that they are willing and able to handle, and by nature most fighting games will have asymmetrical matchups, some of which can genuinely test those limits for even the best players. However, the reality is that most struggling players at lower levels are not stuck just because they're exceptionally bad, but often because they haven't put enough effort into learning efficiently (being held back by a lack of guidance and resources can be a fairly valid excuse, though).

Additional Reading/Watching:

- Learning How To Learn [Sajam]
- How Different Learning Styles Can Make Learning a Game Harder [Sajam]
- Don’t Seek Short-Sighted Strategies Because You’ll Get Stuck [Daigo Umehara: FGC Translated]
- Laugh’s Theory on Types of Fighting Game Playstyles [Sajam]
- Why you LOSE (in fighting games) [LordKnight]
- You're not exceptionally bad [Brian_F]
- Airdash Academy ep.01 - Starting Points [novriltataki]
- What’s ACTUALLY Hard About Guilty Gear [LordKnight]

Learning Fighting Games Efficiently, Remaining Motivated, and Addressing "All or Nothing" Thinking

It is very easy to get demotivated by things like constantly losing, lack of progress, lack of time, lack of a local scene, lack of resources, or just being overwhelmed overall.

Some ways to mitigate these issues include:

- Changing up how you play and learn (focusing more on how you play your own character, focusing on specific matchups, actively watching match footage, etc).
- Having clear, realistic goals to work towards and managing your time and expectations to meet them one step at a time.
- Taking a step back to get a different perspective. Maybe try brainstorming and determining specific things that need improvement, or flip your thinking and consider what you SHOULDN'T be doing rather than what you should do.
- Taking a break, whether that means trying other characters, other fighting games, or just taking a break from fighting games overall.
- Re-evaluating the level of dedication and effort that best matches your goals and what is most fun for you in your current state.

These sources cover various angles and are all worth checking out:

- Addressing "All or Nothing" Thinking [novriltataki]
- How Long Does It Take to Get Good? [novriltataki]
- Escaping the Plateau, Part 1 [novriltataki]
- Escaping the Plateau, Part 2 [novriltataki]
- Sajam Talks Plateaus in the Learning Process [Sajam]
- Advanced Learning Technique: Progress Recognition [Sajam]
- How to learn from getting bodied [Patrick Miller]
- Hard Reads: Why Getting Bodied is Good For You [Patrick Miller; Core-A Gaming]
- "I don't have enough time to play fighting games competitively…" [Patrick Miller]
- "How do I stay motivated without a local scene?" [Patrick Miller]
- Developing the training mindset in fighting games [Patrick Miller]
- Constructing an Improvement-Based Mentality [Voltaic]
- Daigo Surprised by This Guile's V-Trigger! "That Was One Effective V-Trigger..." [Daigo Umehara; FGC Translated] (Great advice and perspective from Daigo on learning matchups, and when and how you should start implementing matchup-specific strategies.)

How to Find (or Make) Great Tutorials and Resources

The quality (or even just the presence) of in-game tutorials varies from game to game, but more often than not, as a learning player, you will inevitably find yourself looking to player-created resources for help past a certain point, since it is ultimately up to the player community to work out the intricacies of characters and matchups.

The following guidelines are not comprehensive, but they are a good starting point for both players who want to know how to identify good tutorials and resources, as well as for those looking to create them for others:

- **Pacing is important.** Most tutorials, especially those aimed at complete beginners, don't need to be overly dense or complex to hit most if not all of the important notes for a beginner guide, provided that they are well-structured and avoid unfocused rambling. That being said, **rushing and cutting corners in the interest of time is just as ill-advised.**
- In general, tutorials can benefit from being polished, engaging, funny, and/or lighthearted, but they should also **refrain from overuse of memes and hyperbole that can leave players with an inaccurate or distorted impression of whatever is being taught.** Perpetuating misunderstandings or misinformation for the sake of a joke is typically not worth it.
- Ideally, all character-specific tutorials and resources (whether in-game or community-made) should start off by **giving an overview of the character, highlighting their strengths/weaknesses, and explaining their game plan and approach to neutral game and pressure.**
- After that, they should introduce things like **basic core moves for various situations, simple combos, safe blockstring/pressure enders,** and other tools, as well as how to use them, **all in a way that is easy for new players to understand.** It is also important to **establish how the game's universal system mechanics work in the context of the character,** and how they fit into the character's overall game plan.

- **Once that foundation is established within a character tutorial, it can be built upon with more in-depth and complex strategies, combos and so on**, such that players can progressively implement them as they continue to learn, improve, and begin to develop their personal playstyle. These additional layers should be presented in a clear and sensible order, rather than being scattered haphazardly throughout otherwise beginner-oriented content.
- One thing that a character resource can do to go the extra mile is to **give advice regarding the viability and usefulness of the in-game combo challenge trials** (if they exist). In-game trials tend to be the first place beginners look when seeking combo advice, and while they are helpful for their audiovisual feedback, some tend to be pointlessly impractical for their difficulty. Pointing out which ones are worth doing and which ones can be safely ignored can save a new player time, frustration, and potential discouragement.
- **Know the pros and cons of the various different formats/mediums when creating resources.** A video obviously serves as the best visual aid for conveying certain things, but may not be the best choice for something intended to be frequently referenced, as it can be inconvenient to quickly pull up and skim a video. A document/infographic can be more compact and more convenient to reference than a video, but can have difficulties expressing things that require visual aids (unless you also include images/video links). Wikis that can be freely edited by multiple people can be the most efficient way to collate and present objective information (frame data, combo routes, etc.), but may be too chaotic for more subjective and opinionated information, such as character strategy guides.

It can be difficult for new players to figure out how to get started without the guidance of good resources, and many resources and guides tend dive deep into specifics while neglecting to properly cover the basics, which can be confusing and potentially discouraging for those new players who don't yet have that foundation to build upon.

High quality resources in the form of guides, tutorials, and/or comprehensive wiki pages also reduce the need for beginners to have to go out of their way and directly consult Discords or other communities to seek out frame data or ask commonly repeated questions with simple answers, an exercise that can be frustrating for everyone involved.

Finally, it bears noting that **good resources are not limited to monolithic documents or video tutorials that cover everything themselves.** There can be value in organizing individual, scattered existing resources into user-friendly compilations, such

as this very compendium!

Various Examples of Good Resources:

- The Complete Killer Instinct Guide [Infil]
  (Overwhelmingly comprehensive and polished across multiple categories, this resource covers both the general game mechanics and individual characters.)
- Blazblue Central Fiction: Hibiki Tutorial & Combo Guide [Mechsploit]
  (Well structured video character tutorial, with snappy pacing and clean editing. Additionally, does a great job of intuitively introducing lesser known topics, such as the use of different airborne options to alter momentum and trajectory.)
- "The Best Sin's Lecture Ever" [GGXrd Beginner edition]
  (A silly yet surprisingly practical video character guide, presented in a fun and beginner-friendly way.)
- Skullgirls: Cerebella - Overview [Mizuumi Wiki]
  Skullgirls: Cerebella - Combos - Which in-game trials are useful for a beginner? [Mizuumi Wiki]
  (An excellent community wiki page. In particular, the frame data and move information section is among the best out there, and the beginner-oriented advice regarding combo trials is a great additional detail.)
- GG Strive: Ky Kiske - Strategy [dustloop Wiki]
  (Another good community wiki page.)
- Fullmeter FAT - SFV/Ryu
  (More than just frame data tables (which are very detailed), this site compiles a whole host of additional useful numerical/technical data for each character, such as walk speeds, frame traps, frame kills, block punishes, blockstring interrupters, and so on).
- Learn Tekken 7 in a reasonable and appropriate order [JoeyTCB; various]
  (A YouTube playlist that compiles tutorial videos from various sources and sorts them “in a reasonable and appropriate order” for beginners.)

Additional Reading/Watching:

- How Can Fighting Game Tutorials for New Players Be Improved? [Sajam]
- Tutorial Content Doesn't Have to Be Complex [Sajam]

Learning by “Actively” Watching Match Footage

There is a big difference between casually watching tournament streams and VODs for entertainment, and thoroughly analyzing the footage in order to try and understand the players’ actions and decision making. The latter is called “active watching.” Actively watching match footage of high level players is one of the best ways to learn how certain characters or matchups are played. This is especially true if guided tutorials and resources are lacking.

Because fighting games are so dense with visual information at any given time, it is generally more effective to limit your focus by choosing one specific aspect or action that you want to focus on at a time, and going back and rewatching the footage when you want to switch your focus to something else.

During key moments, you may want to pause the video, and ask yourself some questions about the situation on the screen, depending on your current focus.

Below is a non-exhaustive list of sample questions to consider asking:

- "What does the player do when they secure a knockdown on the opponent or push them to the corner/wall?"
- "How are they opening the opponent up and getting hits?"
- “When does the player choose to move forward or jump?”
- "Which player is controlling the neutral better, and how?"
- “What options are available to either player at X range?”

After you unpause, note their choices and the result, but also compare the players’ “answers” with what you yourself would have chosen to do in the same situation. If there is a discrepancy, question and evaluate it. Did they make a better decision than you would have? If so, make a mental note of it for the future. Did they make a worse decision than you would have? If so, why? Did they simply mess up, were they expecting something else, or did the opponent somehow mislead them?

It's also important to bear in mind that, despite the constant density of visual information in fighting games, not everything that is going on will always be plainly visible on the screen. For example, things such as player adaptations, mind games, and the use of option selects aren't always noticeable for those who don't know what to look for. It's easy to forget when watching a recording of a match, but stress and tension can also be big factors that influence decision-making and reactions/execution, especially in tournaments.

For this reason, good match analysis videos or even archives of tournament matches with good commentary can be great resources if you can find them. It helps a lot to have someone with an experienced eye explaining the context of certain actions, or pointing out things that you may have missed. Match analysis videos not only shed light on that specific match you are watching, but also help teach you what to pay attention to and look out for in general. Nowadays, many strong players also regularly stream their own gameplay, often with opportunities to ask them questions in chat.

Finally, an option you may want to consider if you want very targeted and individually tailored advice is paid coaching. Lately, many notable players have begun offering private coaching, which usually includes reviews of your match footage. If, for example, you were struggling to find resources or footage for a specific matchup that you are having trouble with, you could consider seeking out a known player of your character to see if they offer coaching services directly or through a partnered service.

Examples of Good Match Analysis:

- Tekken 7 Ryan Hart vs Rip Analysis [That Blasted Salami]
- What Fuudo Saw During "Punk vs Bonchan" at VSFighting [Fuudo; FGC Translated]
- Guilty Gear Xrd Match Analysis: EVO Japan 2018 - Omito vs. Machabo [Sajam]
- SFV AE Match Analysis: Kemonomichi II - Daigo vs. Tokido FT10 [Sajam]
- SFV CE Match Analysis: EVO Japan 2020 Top 8 GRAND FINALS - Nauman vs. Mago [Sajam]
- EVO2019: Neji (Mika) vs Kure (Yuzuriha) - UNIST Top 8 Losers [Brett and Fox]
- MATCH OF THE YEAR #JustFrameBreakdown [HiFight]
- Inside the mind of the Beast - Daigo [Brian_F]

Additional Reading/Watching:

- Get good at watching fighting games [Patrick Miller]
- Airdash Academy ep.03 - Learning From Video Footage [novriltataki]
- Escaping The Plateau, Part 1 [novriltataki]
- The Spectator Sharingan Doesn't Translate In-Game [Sajam]
- The Fighting Game spectator dilemma [Brian_F]

The Basics of “Neutral Game”, “Spacing”, and "Footsies”

These terms are thrown around constantly, but they can be perplexing to beginners, or even to experienced players who have an intuitive understanding of the concepts but find them hard to put into words. The English terms on their own also tend to be kind of vague and context-reliant, which doesn’t help. Here is a rough breakdown of what people typically mean when they use these terms, partly compiled from the cited sources, but also largely based on personal thoughts and conversations with friends:

- **Theoretically, “neutral” typically refers to “game states where neither character is in a significantly advantaged or disadvantaged position.”** However, this definition is inherently flawed, as a “true neutral” state or position typically does not exist (outside of same character mirror matches), as the speed and effective range of each character’s tools at a given spacing will always be different.
- **For instance, the archetypal example of a “neutral” state is the classic round start position, at some set distance. However, in most games, one character will almost always have the advantage at that spacing.**
- In particularly egregious cases, the round start advantage can be even more significant, because one character may be able to directly connect with the opponent by using a move as soon as the round starts, while the other cannot do the same to them, forcing them to block or choose a movement option instead (ex. Guilty Gear).
- On the flip side, some games allow passive movement and jockeying for position before the start of the round to alleviate this, allowing for something closer to a truly neutral situation (ex. Melty Blood).
- **Thus, in practical terms, “neutral” instead roughly refers to “game states where both players are free to act from standstill.”**
- Examples of non-neutral states include: when a character is backed up against a corner, wall, or ledge, is facing blockstring pressure, is getting comboed, is in a knockdown/okizeme situation, etc.
- When a non-neutral state ends, the game state can be said to “reset” or “return” to neutral. In other words, **neutral refers to the “default game state” purely in terms of mutual freedom to act,** irrespective of the actual asymmetrical advantage of the situation beneath the surface.

- **“Spacing”** is used as both a noun and a verb. **As a noun, “spacing” refers to your physical in-game position relative to your opponent, and the distance between you (AKA “ma-ai”).**
- **As a verb, “spacing” refers to the act of managing your own positioning while controlling your opponent’s by predicting or leading their movements, and by keeping them in range of your own attacks while avoiding theirs.** In other words, it’s shorthand for “managing your spacing”.
- **"Zoning"** is a related term to spacing that typically specifically refers to **controlling space at mid- to long-range in order to maintain a favorable distance.**
- Broadly speaking, **“neutral game” (AKA “tachi-mawari”) refers to the reactive, back and forth spacing and exchanging of blows that occurs between two players as they compete for advantage in “the neutral”.**
- Finally, **“footsies”** is a term with a particularly loose and vague definition, but **typically refers to spacing (the verb), neutral game/tachi-mawari, or some combination of the two.** A character or player who is “good at footsies” therefore excels at managing their spacing, scoring clean whiff punishes, and consistently winning neutral.
- **Note, however, that while “strong footsies” typically implies “strong neutral”, the opposite is not necessarily true.** A character can, for example, have strong neutral game that doesn’t necessarily revolve around pixel perfect spacing, and instead emphasizes other aspects, like safe pressure or screen coverage.

- The core ideas of neutral game can be described with a rock-paper-scissors analogy built around the following main components (Japanese terminology presented for clarity): **“sashi-komi” (proactive and offensive poking), “oki-waza” (proactive but defensive counter poking, keep-out and zoning), and “sashi-kaeshi” (reactive movement, baiting, and whiff punishing).**
- Alternatively, you could substitute sashi-komi with **“ate-waza” (general aggressive pressure and rushdown).**
- **As a general rule, sashi-komi/ate-waza > sashi-kaeshi > oki-waza > sashi-komi/ate-waza.** In other words, quick/aggressive play beats reactive, wait-and-see play, reactive play beats slower/lingering pre-emptive keep-out moves, and pre-emptive keep-out moves beat excessive aggression.
- **Of course, not all moves and functions fit neatly into this simplified 3-way RPS dynamic.** A classic example is the EWGF in Tekken, a short-ranged but explosive uppercut. Due to its quick startup and recovery, and the threat that it poses, the EWGF blurs the lines between the three categories. It can be used to punish overeager opponents, deter their approach, or even act as an aggressive poke. Another example would be Sol’s f.S in Guilty Gear Strive, a powerful advancing punch. With its frame advantage on block, and built-in forward movement that both gives it good range and allows it to function as an automatic pressure reset when being pushed out on block, Sol’s f.S is a jack-of-all-trades move that can act as almost any of the main categories above, depending on the situation.
- **Additionally, this 3-way RPS only describes the core/basics of GROUNDED neutral game. Most 2D fighting games, for example, also have important aerial components,** such as jumping over projectiles, jump-in attacks, anti-airs, and air-to-airs. The precise nature of how these aerial options fit into the metagame can be very game- and character-specific, so it is out of the scope of this generalized breakdown.
- It is important to learn how to exploit your character's strengths as well as adapt your actions depending on your opponent's strategy, while keeping these three broad categories in mind. **The effectiveness of each strategy and how to employ them varies from character to character and game to game, but the core concepts tend to be generally applicable.**

Additional Reading/Watching:

- The Art of Footsies - Fighting Game Fundamentals [Akshon Esports]
- The Problem With Round Start in Fighting Games [TheoryFighter]
- Redefining Footsies [novriltataki]
- Tekken 7 Ryan Hart vs Rip Analysis [That Blasted Salami]
  (time-stamped to explanation of neutral)
- Tekken 7 - Mix Ups, Turtles & Movement [That Blasted Salami]
  (time-stamped to explanation of how “turtle” characters play the neutral game)
- Guessing is a Part of Neutral + Simple Ground Game Strategies [Sajam]
- Anti-Airs, Neutral, Mind Games, & Decision-Making | Sajam Discusses the Machabo Article [Sajam]
- Guilty Gear Fundamentals – 1. Neutral [Machabo; Shinjin]
- “In Japanese, poke is called "Sashi-komi" ,counter poke is called "Oki-waza" and whiff punish is called "Sashi-kaeshi".” [Densetsu no Otaku]

Offense, Defense, and Learning Matchups

While understanding of neutral game concepts could be said to form the core of most fighting game interactions, the biggest questions a new player will have at the end of the day will still probably be about more specific things, such as:

- “How do I pressure my opponent and open them up once I get in?”
- “How do I defend against my opponent’s pressure and mix-ups?”
- “What am I supposed to do when learning character matchups?”

Unfortunately, questions like these are far too complex, game-specific, and character-specific for this generalized document to thoroughly cover, and, after a certain point, you would be better served by seeking out match footage and tutorials/resources. That being said, there are still broader, generic concepts that can be drawn upon as a foundation for your gameplan. Several examples are linked below.

Additional Reading/Watching:

- Why you LOSE (in fighting games) [LordKnight]
- Building an Offensive Gameplan, The Frame Data Doesn't Tell the Whole Story [Sajam]
- Setting Up Whiff Punishes & Checking Dashes [Sajam]
- Stopping Your Opponent From Mashing - The Structure of Pressure [Sajam]
- What do you do if you can't condition your opponent? [LordKnight]
- A Move With Downsides Doesn't Make it Unusable [Sajam]
- Don't sleep on a move because you don't understand it [Brian_F]
- Why blocking is good in fighting games, actually [Brian_F]
- Inside the mind of the Beast - Daigo [Brian_F]
- Why you shouldn't play TOO fast [LordKnight]
- A deeper dive into defense in Guilty Gear Strive [LordKnight]
- How to deal with pressure in Guilty Gear Strive [LordKnight]
- Fighting Game Tips for Intermediates - Letting Your Opponent Kill Themselves [Avoiding The Puddle]

Introduction to “Option Selects” and “Fuzzy Defense”

"Option select" (abbreviated as OS) is an umbrella term for combinations of inputs that take advantage of a fighting game’s inner mechanics to produce different results depending on what the opponent chooses to do, essentially **covering multiple options at once** (hence the name). Many instances are referred to as **“shikomi”** in Japanese (verb form “shikomu”, meaning “to stock up on”, “to prepare”, or “to insert”, contextually referring to layering one action inside of another).

At higher levels of play in a fighting game, players may appear to be reacting at near-inhuman speeds to certain actions. This can often be attributed to option selects such as “fuzzy” defense options (though sometimes, they’re just that good). **Some option selects are so simple and/or come so intuitively that players might not even realize that they’ve been using them all along.** What specific option selects are available depends entirely on each game, but there are several common examples worth knowing about:

- **Fuzzy throw and throw escape/break/tech option selects** typically work by inputting an attack right before or simultaneously with a throw input, right when you expect to be thrown. A throw or throw escape will come out if you are in the appropriate state, and the attack will come out otherwise. This usually involves taking advantage of blockstun and/or move priority.
- **An alternative version of a fuzzy throw escape option select** involves blocking while delaying a throw escape input such that you can cover both blocking a fast attack and escaping a throw. This involves taking advantage of the overlap between the moment you would expect to block an attack and the window for a successful throw escape.
- **Fuzzy “mashing” (AKA fuzzy “abare”)** means inputting an attack or reversal when you expect a possible gap in blockstring pressure, such that it will not come out if the opponent’s blockstring continues without a gap, due to the continuous blockstun. This effectively prevents some mix-up attempts, if you know when to expect them. “Mashing” is not the best terminology for this since it implies mashing buttons randomly, as opposed to actually knowing what the “correct” time to push buttons is.
- **Fuzzy jumping** means inputting a jump when you expect a possible gap in blockstring pressure, such that it will not come out if the opponent’s blockstring continues without a gap, due to blockstun. This is often useful for evading command throws and blocking overhead/air moves, depending on the game.

- **Fuzzy blocking** means taking advantage of the different startup times of the opponent's options in a high/low mix-up in order to defend against both with timely high/low block switching. For example, against a high/low mix-up where the low would come out faster, you would crouch block until the expected time for the low to come out passes, then switch to standing block to block the high. This effectively nullifies certain "fake" 50-50 mix-up setups if you know when to expect them and how to deal with them (a "true 50-50" setup is therefore one that cannot be fuzzy blocked).
- **Chicken blocking** is a specific type of fuzzy blocking that is mostly associated with airdasher games (specifically those with air blocking). By holding up-back when you expect an incoming jump-in mix-up, you can simplify the situation by avoiding the grounded options and blocking a potential aerial attack.
- There are many other examples of OS's, including some that are intuitive but rarely identified as independent concepts, such as **delaying the input of a move in neutral when you see the opponent move towards you,** in order to OS blocking their faster options and interrupting their slower options with your poke move.

Not all of these examples are present or work the same way in every fighting game, but the general concepts are good to keep in mind. **Option selects can be very strong, but note that informed opponents can typically use them against you, baiting them out by delaying or otherwise changing the timing of their own actions.** However, delaying offensive actions in turn creates a gap that the defensive player can exploit, if they have the right read. This is just another layer of the nuanced mind games between experienced players.

Additional Reading/Watching:

- Fundamentals of GG Xrd [Machabo; Shinjin]
- Option Selects [dustloop Wiki]
- "Reacting to movement with delayed button presses" [BrianF]
- Fuzzy Tech - The Option Select You Don't Even Realize You're Doing [Sajam]

“Buffering” or “Empty Canceling” Special Moves

- **“Buffering”** is a game-specific OS that takes advantage of the way the game’s input buffer and special move cancel systems work in order to **cancel a normal move on hit (or on block) into a special move that would be difficult to hit confirm otherwise.**
- Immediately after throwing out a normal move that can be canceled into a special move on hit/block, you buffer the special move that you want to cancel into by inputting its command. **If done quickly enough, the special move will not come out if the normal move whiffs, due to the whiff recovery period of the normal. However, on hit (good) or on block (typically bad), the normal will cancel into the special move in the input buffer.** For this reason, buffering is also sometimes called **“empty canceling.”**
- Buffering is most common and relevant in games like Street Fighter that don’t typically have gatling move strings which function as both blockstrings and combo starters on hit. It is often used with medium range/speed normals that are used as pokes and/or to control space, and have a reasonable special move cancel window.
- To prevent accidentally canceling into a special move on block and potentially giving the opponent a free block punish opportunity, the idea is typically to only buffer moves at a range where the normal will whiff unless the opponent moves forward or attempts to attack, putting their hurtbox in the path of your attack and guaranteeing a hit. This strategy may in turn expose the player to getting whiff-punished if they are too predictable and spammy.

Additional Reading/Watching:

- Sidenote: Why Button Mashing Works (Sometimes) [Core-A Gaming]
- Having Trouble Buffering? [Fuudo: FGC Translated]
- Buffering & Pokes: Creating a Dangerous Rotation of Neutral Options [Sajam]

“F-shiki” Setups AKA “Fuzzy Overheads” or “Fuzzies”

- The name F-shiki comes from Japanese Guilty Gear player F, who popularized the technique with the character Venom.
- F-shiki, meaning “F-style” or “F-technique”, refers to **offensive setups that involve taking advantage of a game’s blockstun mechanics to briefly lock the opponent in a standing animation even if they switch to crouch blocking,** allowing for fast overhead mix-ups that are very difficult to defend against, as they can hit the opponent’s larger standing hurtbox if the opponent incorrectly blocks low (crouching state but standing hurtbox).
- F-shiki setups are highly game- and character-specific, but can be quite powerful when they are available.
- **F-shiki setups are sometimes called “fuzzies”, which conflicts with “fuzzy defense” option selects and can make things confusing. For this reason, “fuzzy overhead” is the clearer and more specific terminology, and “F-shiki” even more so.**
- Note for Melty Blood players: No, F-shiki setups are not (inherently) related to Shiki Tohno. Or to Shiki Nanaya. Or to Shiki Ryougi.

Additional Reading/Watching:

- Fuzzy Overhead [dustloop Wiki]
- Explanation on /r/GuiltyGear [/u/MerryDingoes]

Improving Your Execution and Maintaining A Consistent Setup

[NOTE: The write-up for this section includes my own subjective thoughts, which may not come directly from any cited sources, and are not presented as fact.]

"Execution" in this context is a catch-all term referring to **your ability to successfully and reliably perform an inputted action or series of actions in a fighting game at the moment that you need to do so.** Once you know in your head what you need to do, you need to be able to execute it with your hands. Execution is influenced by your precision, reaction, dexterity, game knowledge, and the **ergonomics of your play setup** (often overlooked but actually one of the most important factors).

The first step when it comes to execution ergonomics is to pick the right controller for you, whether that's a "pad" (ex. console controller such as a DualShock 4/DualSense), a traditional "fightstick" (ex. consumer arcade sticks), a "leverless" controller (ex. a Hit Box), or whatever it is you want to play on (as long as it's tournament legal!). There are various pros and cons to different input methods, so I'd recommend researching and experimenting on your own to find what fits you best.

Another thing you may want to consider doing is customizing your button layout from the default, based on what buttons you may often need to hit in combination or rapid succession. A game's default layout could be designed around console gamepads while you're using a fightstick, or it could be based on the legacy layouts of arcade cabinets, while you're using a gamepad. **Adjusting your button layout can reduce the need to shift your hand in awkward or uncomfortable ways, and that in turn can really help your execution.** This also applies to the **physical button layout of your stick or controller.** You may want to look into the different physical configurations offered by various makers and the ergonomics of each.

After choosing your peripheral and setting it up how you like it, the most important thing to remember when it comes to execution is that the consistency, speed, and overall dexterity of your execution are all at their best when your shoulders, arms, and hands are **relaxed and ergonomically positioned.** This can be harder to maintain for some more difficult and/or unfamiliar inputs or situations, which will naturally make you tense up, so of course it is also important to **practice whatever is giving you trouble until you have the muscle memory down and can focus on staying loose and limber, decreasing the chances of making a critical mistake in a real match.** This

goes hand in hand with other ways of simplifying your mental stack, which benefits your execution as well as your reaction speed.

It is also important to **keep everything about your playing conditions as comfortable and consistent as you can.** This includes everything from keeping your controller well maintained so that it doesn't suddenly break down or malfunction in the middle of a set, to making sure that your hands are warmed up and ready to go, as cold hands are stiffer and less limber.

If you're seriously looking for an edge in these departments, there are all sorts of things you can try. For example, if you play with your fightstick on your lap, you could get one of those tilt-adjustable lap desks for comfort and to maintain an ergonomic angle (have you ever noticed how a lot of arcade cabinets have the control panel at a downward tilt towards you?). Some players may choose to bring hand warmers to, well, keep their hands warm (especially important for those super chilly air-conditioned tournament venues!), or wear gloves on one or both hands for better grip/control, or even put bandages over their fingers to help them glide over the buttons easier (see example below). One famous moment (see: "The "Tokido Tape" Incident" below) involved a player bringing a tape measure to a tournament to set an optimal viewing distance from the monitor!

This all might seem silly or like complete overkill, but these general guidelines apply to most other fine motor skill tasks as well, especially when they are competitive. If you are having doubts, think about any other high-intensity, execution-reliant competitive activities, like other "esports", or even "real" sports. Many professional players and athletes in those fields understand the importance of choosing their gear carefully and doing everything they can to create an environment where they can consistently perform at their highest level. Packing a tape measure and bandaids in your luggage may make people give you weird looks, and it won't instantly guarantee you a spot on the podium at a high-level tournament, but if it helps, it helps, and these kinds of little steps can add up to something that perceptibly affects your performance.

Finally, apart from the broader ergonomic advice, there are some finer tricks and techniques that you can learn and implement in order to improve your play. Here is a non-exhaustive list of examples:

- Learning what, if any, option selects are commonly used in the game you are playing. **Option selects can be used to cover some offensive or defensive situations where hit-confirming or otherwise reacting could be difficult.**
- Learning what, if any, input shortcuts can be taken advantage of in a particular game. **Depending on how a given game processes inputs, there may be some highly practical shortcuts that make certain sequences significantly easier to execute.**
- A game-specific input shortcut example is the 323 shortcut for 623 (“DP”) motions in Street Fighter V, which makes it easier to cancel into DP input special moves from crouch (ex. 2MK xx 323HP instead of 623HP). If the above looks like complete gibberish to you, see the section on notation and terminology.
- **Another, more general input trick that works in most games is to input 4 (back) before using 236 (“QCF”) input special move right after a dash.** In most fighting games, if you try to use a QCF move right out of a dash, you can sometimes accidentally get a 623 input move instead due to the 6 (forward) input and the game’s input priority systems (6236 prioritizes 623 over 236). Pressing 4 first, effectively making the QCF a 41236 (“HCF”) motion instead, “resets” the input buffer and negates that unwanted forward input.
- Keeping your inputs clean by situationally relying on buffering and hit-confirming when you can instead of mashing, to prevent sloppy inputs from producing unwanted results.
- Learning to default to buffering block inputs whenever you are moving/attacking and don’t have any other direction to input at that exact moment. This helps to minimize instances of getting hit by stray attacks that could have been blocked, and especially helps when playing charge-input characters, because it reduces the amount of time you need to just stand still and charge.
- Learning and implementing the **“double-tapping”** or **“piano”** technique**.** Many strong players with notably good execution tend to lightly hover their hand over their buttons (as opposed to fully resting their fingers on certain buttons) and shift their hand around to quickly double-tap certain inputs with their index and middle fingers as needed. When done quickly and precisely, this can give you an “extra chance of success” on certain sequences where you might otherwise miss the valid window of frames. The bandage trick noted above could be helpful for this if you really wanted to be optimal about it!

Additional Reading/Watching:

- Even Daigo Drops Simple Combos (Learning Takes Time) [Sajam; Daigo Umehara]
- The "Tokido Tape" Incident
- Kedako with the glove/bandages setup @ ArcRevo America 2019
- STOP MASHING. Do this instead. [LordKnight]
- Input tips and tricks for fighting games. [LordKnight]
- How to do charge inputs EASILY in fighting games [LordKnight]
- "What can I do to improve my execution?" [MarlinPie]
- How to Double Tap, Triple Tap, and Rapid Press like a PRO [MarlinPie]
- Daigo's New Button Layout For the Hitbox Revealed Pt2 [Daigo Umehara; FGC Translated]
- Persona 4 Arena/Button Configs [SRK Wiki]
- Panel Layout [slagcoin]

Examples of Double-Tapping from High-Level Players:

- ASMR for the FGC: How I play [MarlinPie]
- 6/11 Sako's Hands Vampire Savior [sako]
- [무릎의철권TV] 취향저격!? 무릎의 철권 ASMR!! 20190617 [knee]
- JDCR handcam is insane [JDCR]

Reflexes, Reaction Speed, and Simplifying Your "Mental Stack"

Firstly, it is important to establish that, **contrary to popular belief, reaction speed in fighting games is based on much more than just one's raw reflexes. In fact, expecting to constantly be able to react on the fly to every single possibility in every single situation is wholly unrealistic.** If it WERE practical to do so in a given fighting game, then that game simply wouldn't function as a fighting game at all. It would inevitably result in a constant stalemate with neither player ever wanting to throw out any of their entirely predictable and punishable options.

The fighting game genre is fundamentally built around the idea that you CAN'T be ready for absolutely everything that could possibly happen at a given moment. The games are designed by humans to be played by humans, with the limits of their capabilities in mind. Not only that, but the idea of having or achieving a base reaction speed that is "fast enough to handle everything" is deeply flawed as well.

Human reaction speed to any given stimulus is very dependent upon the complexity of the stimulus itself as well as of the required response. If you were asked to participate in a simple reflex test where you must press a button labeled "1" as fast as you can when a "1" flashes on a screen, you might do quite well. But what if there were 5 different numbers that could show up on the screen instead, with 5 corresponding buttons to press? 10 options and 10 buttons? What if, instead of pressing just one button, you had to press a unique set sequence of buttons for each number? Clearly, the speed of your response would suffer as the test became increasingly complex.

In fighting games, the situations that players encounter are often far from binary. Considerations such as spacing, timing, and resources available all affect the spread of options that you and your opponent have, and the game state is constantly changing. **With that in mind, what most contributes to "improving your reaction speed" is simplifying your "mental stack", or the list of things you should most be concerned with, from highest to lowest priority.**

The mental stack consists of things such as knowing what options the opponent has and doesn't have access to in a given situation, what the animations of those options look like, knowing ahead of time what your answers to those options are, how consistent your execution is on those responses, and reading your opponent to guess which option they are going to pick.

If you have no clue what your opponent's options are, or you aren't confident in your ability to immediately respond to those options, your response time will suffer accordingly. **Improving your reaction speed therefore largely relies on four things working in tandem: situational awareness, game knowledge, experience, and practice.**

The more you can limit the number of viable options to expect from the opponent, and the more prepared you are to deal with those options, the faster and more consistently you can react to what they choose to do. Doing what you can to restrict your opponent's options while enabling your own is one of the core aspects of neutral game strategy. Even pro players who are renowned for their reaction speeds practice A LOT to become more familiar with the specific situations that they want to be able to react to, and to be able to more efficiently create favorable situations for themselves.

One effective strategy, especially when you are newer to a game or character, is to **actively simplify your own decision trees by limiting your responses,** such as by choosing some especially common situations that you want to focus on, finding an effective response for each of those situations, then drilling those until you are reasonably confident in your ability to execute on demand. This strategy is not only suitable for beginners. In some situations, you may want to focus your mental resources on the most dangerous options, even if that means opening yourself up to smaller damage from less dangerous options. One common example of this is the "take the throw" mentality, which means actively choosing not to focus on breaking throws in order to prioritize watching out for more dangerous/damaging options.

Option selects can also be an important tool for simplifying your mental stack. In many fighting games, there are situations that might appear to be hopelessly unreactable mix-ups at first glance, but can be simplified with defensive option selects such as fuzzy blocking or fuzzy throw teching. By "combining" your responses to cover multiple possibilities, the burden of reaction is reduced. Offensively, buffering can be used as an option select to cover situations that would otherwise be difficult if not impossible to hit-confirm, albeit at the cost of being more committal.

All that being said, it is important to remember that there ARE some situations in fighting games that are truly unreactable, such as true 50-50 mix-ups. Sometimes, getting hit in those situations doesn't necessarily mean that your problem was guessing wrong or reacting too slowly DURING the mix-up, but rather that you got put in the situation in the first place. **In other words, making poor decisions in the neutral game was your mistake, and facing unreactable offensive mix-ups from the opponent was the penalty. Conversely, making good decisions, maintaining ideal spacing, and adapting to your opponent's actions rewards you with more opportunities to pressure the opponent and open them up instead.**

Additional Reading/Watching:

- "My Reactions Aren't Good Enough for Fighting Games" | Prioritizing the Mental Stack [Sajam]
- "Even "Honest" Well Balanced Fighting Games have Strong, Cheap, BS Strategies | An Addendum" [Sajam]
- How fast reflexes can cost you games [Brian_F]
- Tekken 7 Tips For Beginners - Simplify your Decision-Making [Avoiding The Puddle]
- Daigo's Secret Training Routines Revealed! What He Practices Everyday to Get Better. [Daigo Umehara; FGC Translated]
- Why Some Players Fail to Improve in Fighting Games. A Typical Mistake Bad Players Make [Mago; FGC Translated]
- Daigo Talks About Punk and His Reaction. Why Punk's Reaction is More Than Just "FAST" [Daigo Umehara; FGC Translated]
- Mental Stack Discussion by Daigo/Tokido/Fuudo [HiFight]
- Reaction Speeds in Gaming [Kayin]
- "(...) my experience level allows me to better prioritize my mental stack." [Keits]

Tournament Preparation and Mindset

In a tournament environment, a player may benefit from strategically exploiting the format of the tournament to their advantage, such as adjusting their play to capitalize on opponents' gaps in knowledge or bad habits to quickly win short sets. Put simply, it's the difference between playing to LEARN before the tournament, and playing to WIN during the tournament.

Additionally, there are more meta elements that players are responsible for managing outside of just their gameplay. To maximize their chances of winning it all, **a tournament competitor must be able to successfully prevent or minimize the effect of any physical and psychological stressors that could negatively impact them and their performance.**

This also means adequately preparing and packing for the tournament, such as: a jacket and hand warmers, for the chilly air-conditioned venues; snacks, so that you aren't hungry or lacking energy; any medicine you may need; substitute controllers or a maintenance kit and spare parts for your controller(s); and so on.

The following sources go more in-depth on the topic:

- The Pressure Paradox [novriltataki]
- How to Win Through FT2 Tournaments [Tokido; FGC Translated]
- What's in the bag? [Brian_F]

Making Money from Playing Fighting Games

To be blunt, the fighting game industry is not exactly the most lucrative industry out there (at least at the time of writing). However, if you are dead set on making it big yourself, or even if you are just a curious bystander, it is beneficial to understand the general workings of how exactly people DO earn money through fighting games.

Beyond that, there are other related questions that I feel are worth thinking about too, such as:

- How can fighting games healthily and sustainably monetize in order to invest money back into the scene? Season passes? Cosmetic DLC? Sponsorships and tie-ins? Maybe even separate products (mobile games, etc.)? Without expectations for a steady flow of profits stemming from the game, it isn't super realistic to expect devs and sponsors to continue pouring money into a scene indefinitely.
- What exactly defines a "professional fighting game player" in the first place, and what exactly does it mean to make a living off of fighting games? Does that only include sponsored tournament players? What about event services and organizers? Commentators? Streamers, content creators, and influencers?

These kinds of considerations are important for forming informed opinions about how fighting games work as a professional industry beyond just the devs who make the games, and the all-star pro players who win every event that they enter.

Additional Reading/Watching:

- How to actually make money playing fighting games [Brian_F]
- Momochi's Thoughts On The Japan Pro-License System [Momochi; Jiyuna]
- Who Built the JP FGC? Daigo Explaining the Mastermind Behind the Creation of the FGC in Japan [Daigo Umehara; FGC Translated]