Fighting games, depth vs. complexity, and how conflation of the two leads to anti-accessibility rhetoric

by Lena Dias

(Image from IndyStar)

Fighting games are…a historically tough genre to get into. Centered around competition, a player who wants to engage with the game beyond just a few casual matches is forced to get steamrolled by other players repeatedly until they muster the dedication to learn their own strategies. They are a genre inherently about self-improvement. Being good at a fighting game often requires specialized knowledge of concepts like frame data, blockstrings, zoning, oki, frame traps, juggles, mixups, crossups...it's a complicated, overwhelming genre to get into. All too often, though, the larger fighting game community assumes that any attempts to make it more accessible is going to "dumb down" the experience, especially when it comes to an element fighting games often make deliberately more complicated than they need to be: input complexity. This arises from a conflation of two concepts; depth and complexity.

What makes a fighting game fun? What keeps players coming back to them time and time again? That is, of course, a broad question, but a common explanation is the metagame. The "metagame" refers to the mental choices being made by the players as they try to outwit each other; it is the game behind the game. Being good at a fighting game, more than anything else, requires getting in your opponent's head; to beat your opponent, you have to more consistently choose the options that beat their chosen options.

Fighting games like Super Smash Bros. operate on a system of rock-paper-scissors style counters. (Image from Polygon)

The *Super Smash Bros.* series is a great example. In *Smash*, shield beats attack, grab beats shield, and attack beats grab. This is, of course, a simplification, but you see the rock-paper-scissors style system fighting games have under the hood.

If you expect that your opponent is going to attack, you want to shield. Similarly, if you expect that your opponent is going to shield, you want to grab. But, what if you expect that your opponent *knows* you will want to grab? Well, perhaps they'll attack to counter your grab, in which case, you should shield. It's very similar to games like chess, where the player who wins is whoever makes the right strategic choices throughout. Just imagine that the chess pieces are buff men throwing fireballs instead.

In a fighting game, this type of thinking ahead—thinking about what you think your opponent will be thinking—is what gives fighting games their **strategic depth**. There's not necessarily a *right* answer for every situation; your opponent could always choose the option that beats yours, so the fun—and challenge—comes from trying to always be one step ahead of them.

But that's just the thing; *depth* is what gives fighting games their metagame of strategic decision-making that makes outsmarting your opponent so fun. Depth is often hard to grasp; you can imagine that trying to get into someone else's head and pick the smartest of your many

options within a split second is very difficult. But the problem arises when we confuse *depth* for *complexity*.

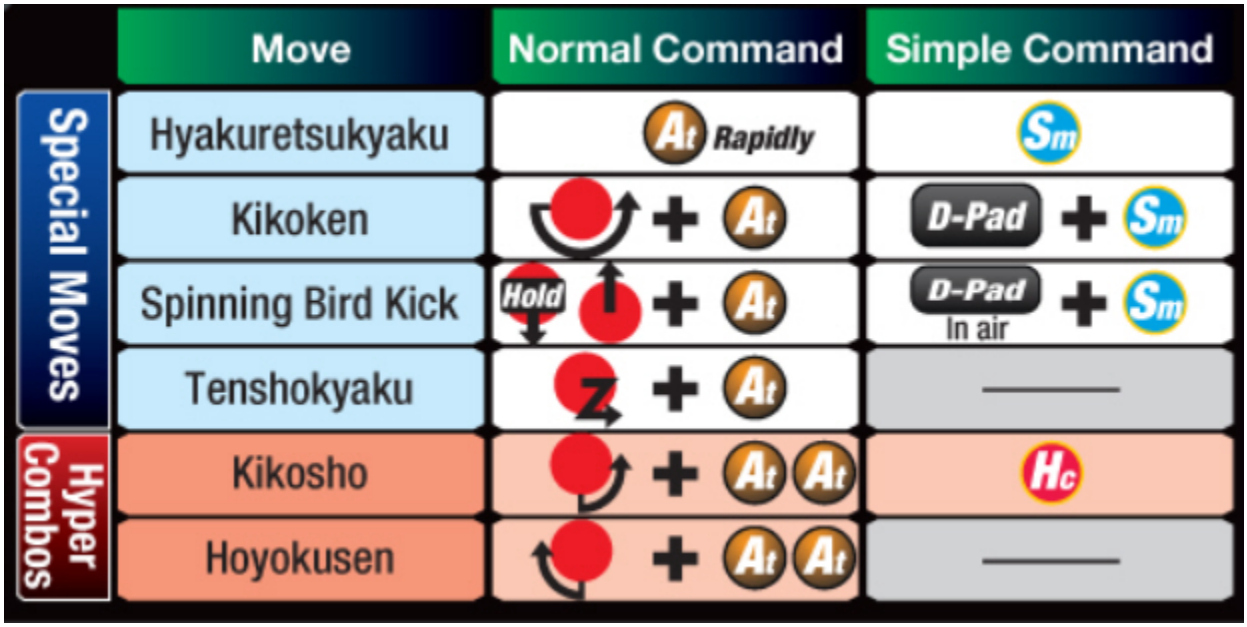
Fighting games often have UI complexity through the presence of various meters onscreen: *Street Fighter V* has a health meter, timer, stun meter, V-Meter, and Critical Meter. (Image from The Library)

Complexity describes...well, how complicated a game is. Complexity makes games difficult to get into and are often elements that require a lot of memorization and rote execution. Complexity might include knowledge of what everything on the UI represents, or what each button does, or what moves a character has. In general, complexity is a necessary evil. UI elements are at first confusing, but are necessary for the player to know what's going on in-game. When our games are more complex, they are often more confusing—what's important is that we only add complexity where doing so allows us to add further depth.

The best games, which often stick around the longest, are low-complexity, high-depth (easy to get into, hard to master). Low-complexity, high depth games not only tend to be the most popular, but rarely sacrifice their strategy to allow newbies to learn how to play the game. Chess is a great example of a game that's incredibly low-complexity, but has incredible depth. Despite it being composed of only a few simple rules, and playing it requiring simply moving a lightweight piece to where you wish, the game is incredibly deep and has persisted for centuries. In game design, we want to minimize complexity, while maximizing depth.

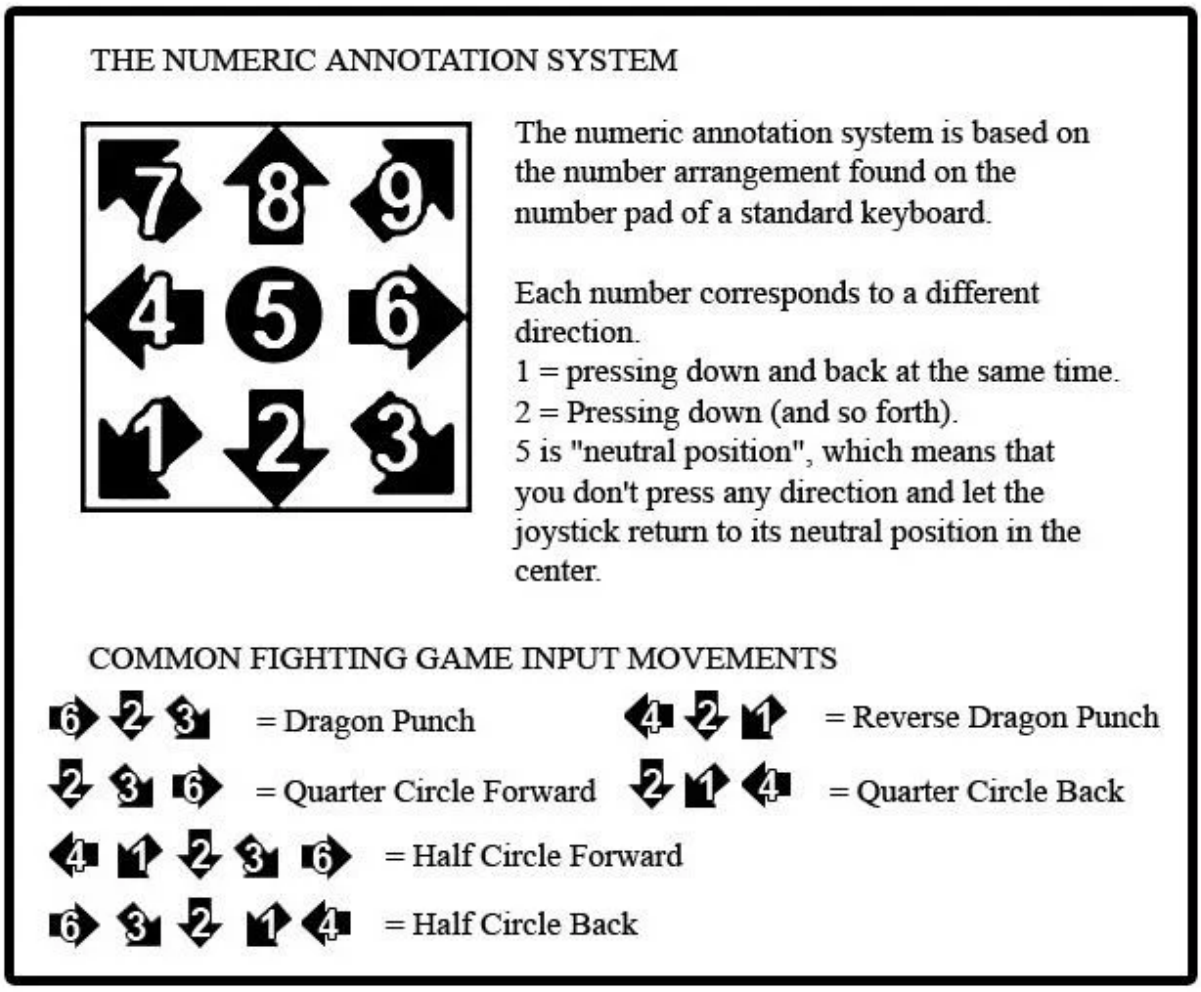
So, why do we confuse the two? Depth is *invisible*, while complexity is not. We can easily see a complex interface on screen, but it's much harder to see what the strategy beneath the surface of

the game is like. Similarly, it's easy to see a person's "skill" when it comes to watching them accurately press buttons on a controller; it's much harder to gauge how skillful they are when it comes to making the right strategic decisions.



Complex inputs for the character Chun-Li from *Street Fighter.* (Image from Nikyle's Two Pence)

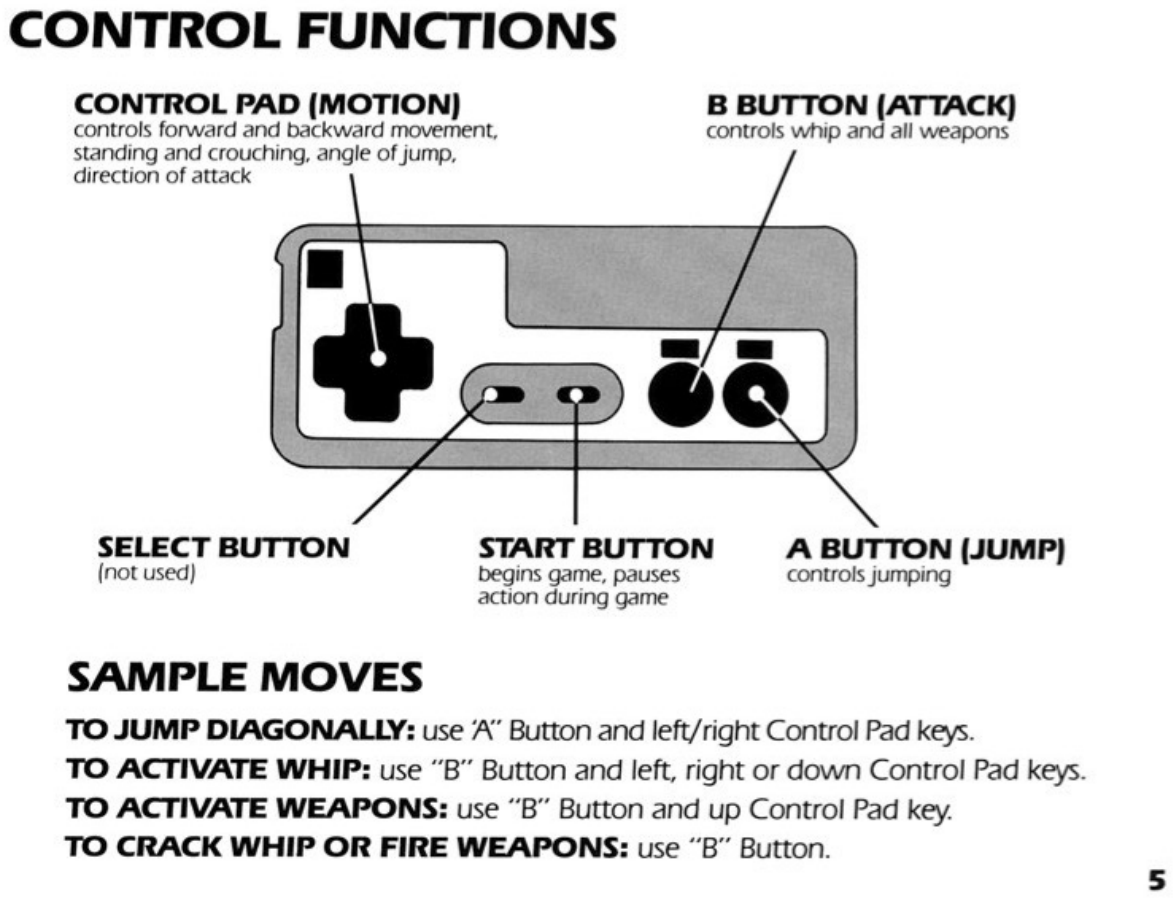
Input complexity is, unfortunately, a form of complexity that is holding the fighting game genre back. If you grew up with fighting games or games in general, you may hardly notice this, but even so, it often keeps new players from getting to experience the depth of fighting games.



Fighting game combos can often require such long and specialized inputs that players have invented a custom numpad notation for them. (Image from Reddit)

You see, the controls for fighting games often tend to be very complex, more than most genres, to the point where arguments over a specialized notation for them are constant. You might think there would simply be a button to press to throw a fireball, or to perform critical moves like an invincible punch, but that isn't the case. Fighting games have very complicated inputs for these moves; oftentimes, players are expected to perform obtuse motions with their joysticks that aren't explained by the game adequately. To throw a fireball, you have to perform a "quarter circle", which involves moving the joystick down, down-right, and right, then pressing attack, That's not too bad, but things get a lot more complicated and physically challenging when you see inputs like dragon punch motions, 360 degree spins, double quarter circles, supers, and more. To top it off, fighting games have long, precise combos that players need to execute within fractions of a second in order to get the best reward out of their moves, or they're essentially playing at a disadvantage. Some inputs are even called "pretzel motions" for how you have to

twist your hands to perform them. Fighting game players are often [forced to buy dedicated controllers](#)to make these motion inputs easier.



Description of controls from the manual for *Castlevania* on the NES. (Image from Nintendo Times)

The addition of button combinations is often used by game developers to provide additional options for the player to select from without having to add more buttons to a controller. For the most part, this is a good thing, and provides the opportunity for games to add strategy. On two-button controllers like the NES, the developers of games like *Castlevania* used the button combination of "up and b" to allow players to throw special weapons. By introducing the special weapons, *Castlevania* allows players to make a meaningful decision between whether they use their strong but short-ranged whip or a weak but long-ranged throwing knife.

A common argument is that complex inputs are necessary to balance the more powerful strategies, but this is not necessary given some smarter design. One powerful strategy in *Street Fighter* games is continuously throwing fireballs, but all the motion input adds is a fraction of a second of time before the motion is complete and the fireball is thrown; the motion input could

be removed and this restriction on the balance of the fireball could still be kept in the game by modifying how long the animation for throwing a fireball takes when inputted.
(Note that this is different from a "charge character", who only has access to certain moves while "charging" them by walking backwards; that is an example of complexity that adds depth, as it forces the player to make a decision between giving up ground and getting to use a charge move, even if charge characters have inputs that could be simplified).

Despite requiring the most inputs, Fox is consistently ranked as the best character in *Super Smash Bros. Melee.* (Image from Amino)

Fox in *Super Smash Bros. Melee*, despite being the most input-complex character in the game, still is considered the best character because the actual strategies available to him are so good; locking powerful moves behind complex inputs does not prevent them from being abused.

Today, however, our controllers have more than enough buttons to simply have a dedicated button for many combination inputs, and where necessary, we can use input combinations. Pretzel motions should be our very last resort. Do we really need the player to twist their joystick when we could make the input "a+b+left" instead?

Super Smash Bros. for 3DS boots up with a "How to Play" tutorial that teaches players how to use the controls. (Image from YouTube)

This is where the *Super Smash Bros*. series succeeds marvelously. For one, *Smash* immediately does better than most fighting games by booting up with a tutorial that helps players learn its controls.

Inputs for Luigi in *Super Smash Bros Ultimate*. Note that all inputs use no more than a combination of a joystick direction and the B button. (Image from Fanbyte)

Beyond that, though, *Smash* characters often have more versatility than most fighting game characters, having incredibly expressive and nuanced movement abilities, and yet, manage to fit all of their moves in a single, consistent, simple control scheme. In *Smash*, aside from the jump button and joystick to move around, the player has 4 buttons: grab, shield, attack, and special. From there, all inputs flow from directional combinations. Every character has an up, down, left, right, and neutral version of each of these moves. Performing them is as simple as holding a direction and pressing a desired button.

Even beyond that simple control scheme, though, you could easily simplify all of these inputs. *Smash*'s control scheme was originally designed for the N64, which means the developers had far fewer buttons to work with.

20 years after release, *Super Smash Bros. Melee* enjoys a thriving competitive scene. (Image from UMSmash)

And yet, *Smash* sacrifices no depth while reducing its complexity. *Smash* is incredibly deep, with expressive player movement and a deep metagame that sees the smartest players at the top. *Smash* players create guides, discuss strategy, theorycraft, and host highly competitive tournaments. *Super Smash Bros. Melee* has, 20 years after its release, continued to develop in terms of player strategy, to the point where professional players are often thinking on entirely

different wavelengths in terms of strategy; that's how deep the game manages to be with its simple inputs. It has enjoyed a long history of competitive play, one that only continues to grow given the ease of access it provides to players.

Smash is proof that complex inputs are not necessary for a game to have incredible strategic depth. In top level play, players almost never think about what they are doing with their controllers; it is pure muscle memory. A good player is distinguished by their ability to outsmart others, not their skill in inputting moves, which only matters in very low-level play. While a player who can perform complicated combos is certainly at an advantage in some ways, they stand little chance unless they outsmart the other player, even if that other player isn't particularly good at combos. There is no strategy to the rote, tedious memorization of motion inputs in training mode, and forcing players to practice such inputs for hours before they are allowed to engage with the game's deeper strategies only turns people away. The only strategic element of inputs is determining whether your opponent is capable of performing said input, which is a niche and unreliable form of faux-strategy. Imagine if in chess, you had to perform 5 cartwheels before moving your piece—would that make your decision of which piece to move and where somehow more strategic? Absolutely not.

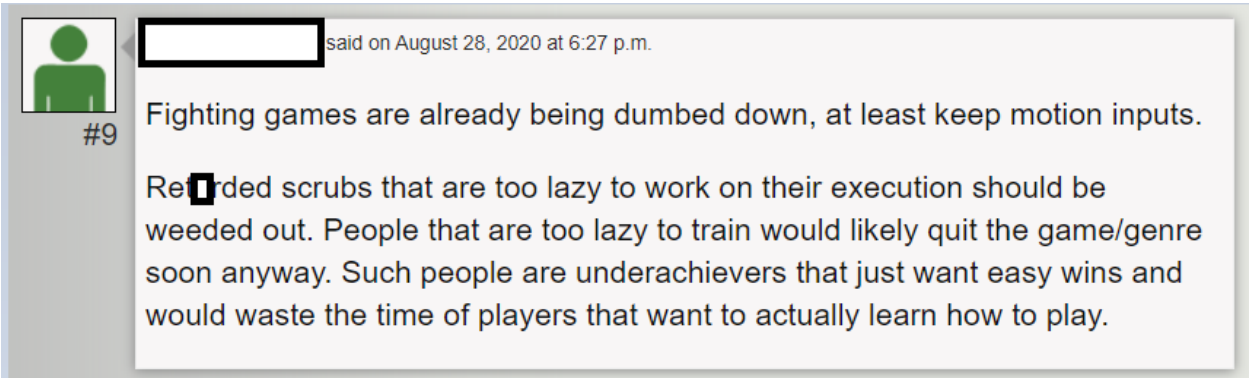
Tilt attack inputs in *Smash* are often confusing enough for players that numerous tutorials have been made to explain how to perform them. (Image from YouTube)

Of course, there are some flaws with *Smash*'s control scheme. "Tilt" and "smash attack", for example, both use a very similar input, both using the attack button and a direction. Whether you get a tilt or a smash is dependent on how you move the analogue stick before pressing the attack button, and the difference is quite subtle. While a seasoned veteran can easily perform both, it's an obtuse concept to a new player, and one that I have personally had to explain quite a bit to those trying to learn the game.

The benefits of *Smash*'s attention to mitigating complexity are evident. *Super Smash Bros*. is the best selling fighting game series of all time; its most recent entry sold 22.85 million copies, more than any fighting game ever made. 6 out of 6 smash bros games show up in the top 16 of the best selling fighting games of all time.

Sales are one thing, but why should, say, a hardcore player care about accessibility? Well, when a game is more accessible, it naturally means that more players will get into the game and dedicate themselves to it. More players is a great boon for a fighting game scene; more people means more opponents to battle, more tournaments, more money going into the game's development, more support with new characters and balance patches, more people creating video content about the game, more people you share a hobby with, more people developing the metagame and pushing each other to become better, and a longer lifespan for the game in general. A scene can have all of these things without compromising high-level play; the *Smash* scene has many tournaments and players known for their superior skill and ability to crush newbies.

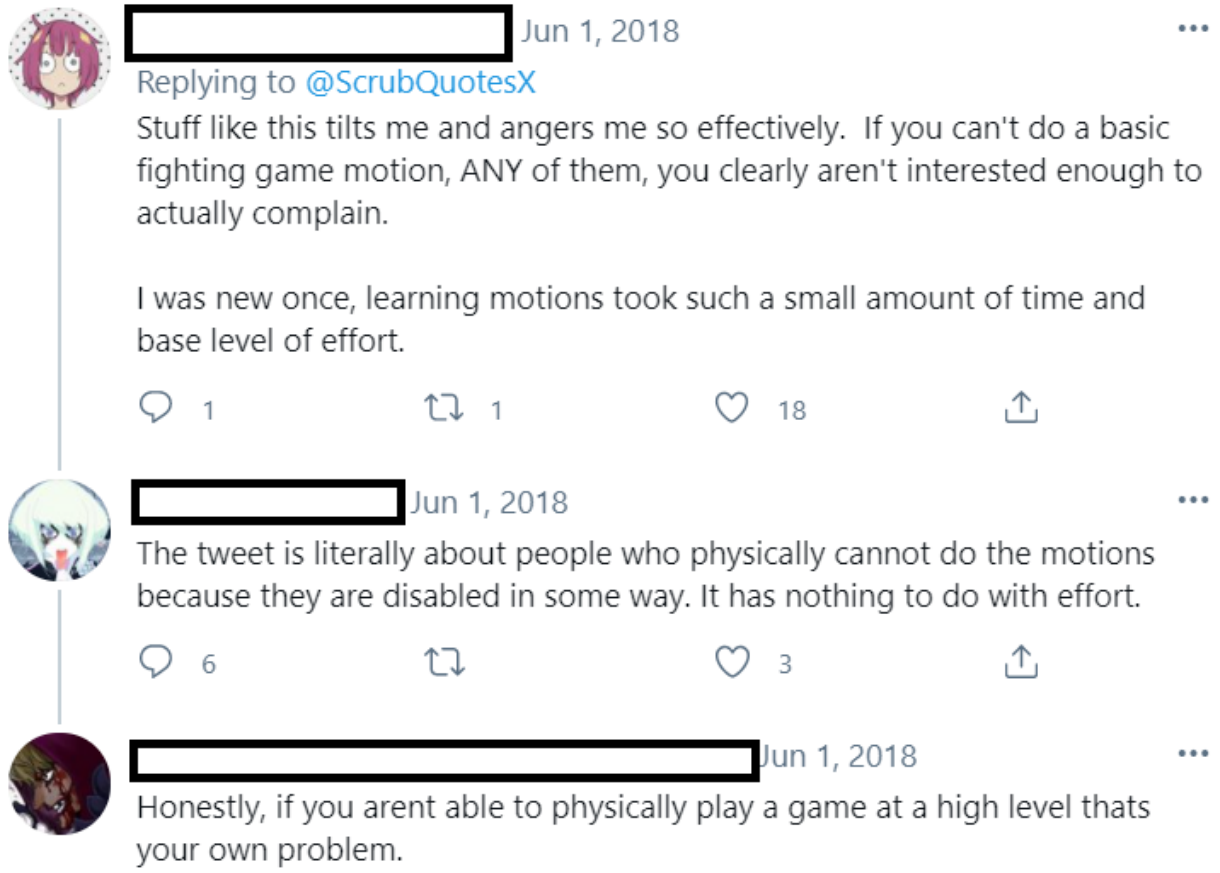
As is, fighting games continue to alienate players. The restriction of who is allowed to play fighting games to the able-bodied continues to shut out players who simply can't use or struggle to use the overcomplicated controls. One of the beautiful parts of video games is that their relatively low bar for physicality allows many different players to participate, unlike sports—do we really want our games to be determined by a genetic lottery? As a leftover vestige of the arcade era designed to empty wallets, complex controls continue to be a legacy problem, often defended by hardcore players in an appeal to tradition.



A comment from an article that considers whether fighting games should continue to implement complex motion inputs. (Screenshot taken from Gamasutra)

Unfortunately, fighting game culture as a whole tends to be incredibly elitist—since players invest so much time into a game that is largely about personal improvement, allowing anyone else to succeed without having to go through the grueling process of practicing complex inputs feels like a sleight to players who have already suffered. Essentially, it is the "I didn't get free college so you shouldn't either" problem, where players feel that their suffering is invalidated if others don't also have to go through it, or if they can't hold it over the heads of other players as a

measure of their “skill”. Fighting game players frequently conflate depth and complexity, so the reduction of needless complexity is often seen as “simplifying the game”, even if strategic depth is maintained. Elitist players often refer to accessibility options as methods of “catering to casuals” or “pandering to noobs” as a result. It speaks to a larger culture of gatekeeping, elitism, and ableism in the gaming community.



Comments from a Twitter thread where a user receives backlash for arguing that fighting games should be more accessible. (Screenshot taken from Twitter)

Little discussion of this topic approaches the idea of accessibility as anything more than an afterthought. Popular fighting game channels that dominate the discussion like Core-A Gaming address accessibility problems through little more than dismissal, arguing that fighting games should only cater to the hardest of the hardcore and reinforcing the common conflation of depth and accessibility, as well as appealing to tradition as a means of dismissal. Twitter accounts like @ScrubQuotesX, which often makes fun of players who blame their losses on any number of excuses, also makes fun of players who tell their stories of how input complexity keeps them out of fighting games, much to the applause of its 78.7K followers. Unfortunately, this attitude of “accessibility as a bonus feature” is a common trend across the games industry. Accessibility is

not only *not* a consideration for fighting game developers, but elitist players argue that it actively *shouldn't* be.

As game designers, we should really only be introducing additional complexity when it allows our games to have further strategic depth, giving those games the opportunity for more engaging decision-making. The question of who is *allowed* to play fighting games is, unfortunately, a topic ruled by the elitist and exclusionary. **Accessibility does not have to come at the cost of gameplay depth.** Not only do fighting game players deserve better, but players who can't get into fighting games due to needlessly complex controls do too.

(If you'd like to know more about this topic, there's an excellent article by Greg Street, the leader of Riot's Creative Development team, called */DEV: On Depth VS. Accessibility*, speaking about how *League of Legends* manages to be deep and minimize some complexity at the same time).