I. Playing and Learning
    A. Expectations and Motivation
        1. Why play fighting games?
            a) Fun! Hype!
                (1) In over twenty years of playing video games, fighting games have produced, by far, the most intense and enjoyable moments among the various gaming genres. The sheer depth of skill that can be demonstrated in fighting games, combined with the psychological aspects, produce an experience that can be rivaled by no other genre. Right now, you are watching a set between two Marvel vs. Capcom 2 players, Clockw0rk and Neo, for $15,000. Whether you have experience in fighting games or not, if you are visually drawn to the series of events before you, then this video series is intended for you.
            b) Deep strategy.
            c) Fast strategy.
            d) Competitive 1v1.
            e) Social aspects.
            f) Deepen appreciation.
                (1) If you enjoy the social aspect of video games,
            g)
        2. Learning is slow and painful. (Mewtwo)
            a) Like riding a bike!
            b) Not the best =/= Bad
            c) Anyone can be good with practice (Brolylegs?).
            d) How do you learn? (visual, audio, kinesthetic?)
        3. What do you want to accomplish?
            a) Realistic expectations.
            b) Small goals.
            c) Something you can visualize.
            d) More specific than winning (anti-airing consistently).
        4. Progress Looks Like
            a) Pulling off a new technique
            b) Countering a technique you fall for
            c) An unfamiliar situation becoming familiar
            d) Reacting without having to think about what you need to do
            e) Noticing opportunities you didn't before
            f) Recognize problems, find solutions, implement solutions
            g) Sometimes you move back before going forward, or you forget a technique while implementing a new one
            h) NOT: losing less, or losing by less - these are the results of progress, not progress itself

B. Picking a Game
1. Have a Scene (even online)
   a) GGPO
   b) Locals
   c) General Online Play
2. Cross-play between games.
   a) Skills carry over between games.
   b) Helps you pick up new titles.
3. Game Types:
   a) Footsie, grounded fighter like SF/MKX
   b) Air dash fighters aka anime fighter like GGXrd
   c) Smash
   d) 3d fighter like Tekken
   e) Team based fighter like MvC
   f) Stand fighters.
C. Picking a Character
1. What do you like in a character?
   a) Motivation
      (1) What motivates you to learn a character? Answering this is key to choosing what character to learn. If you want to pick the fiery red-head secret agent that shoots fire out of her legs and knocks people off their feet from anywhere on the screen, practicing the guy in a gi that shoots fireballs may lead to disinterest.
   b) Aesthetics
      (1) If you pick characters based on aesthetics, then the visual and audio aspects of the character are significant to you. You might like moves that feel like they "hit hard" (Bionic Lancer), you might like ninjas (Ryu Hayabusa), or you might like a character you identify with on a deeper level (Poison). This is perfectly fine, and don't let anyone convince you otherwise. This is your character in a game you are choosing to play - no one else's. Even if you just want to stare at a pretty face while you play (MODOK).
   c) Fundamentals
      (1) If you are in it for the long haul, and you aren't drawn to any particular character, it's not a bad idea to pick for fundamentals. Fundamentals are the underlying basics of gameplay that are shared throughout fighting games, but they still change in small ways from game to game. Until you settle on a character, you might want to use a generic "every man" character like Ryu or Mario. Then, when you decide on a character to focus on, you will be able to carry

your fundamentals with you, making the transition smoother for a better learning experience.

    d) Gameplay Type
        (1) Characters all have benefits and weaknesses, and part of choosing a character is adoring particular benefits while accepting particular weaknesses. If you want to keep players out, be prepared to get destroyed if they get in (Dhalsim). If you want to dominate in people's faces, then be prepared for the struggle to close distance (Potemkin). Even though a character may seem as though he or she has it all, this is rarely the case (Seth stunned).

    e) Tier Level (high/low)
        (1) Even if you can't have it all, maybe you just want as much as you can get, regardless of what character it involves (Zero). You want to win, and play the best of the best helps you do that. Alternatively, maybe you want to go the other way around. Maybe you gain additional satisfaction from winning with the worst character in the game - you like the additional challenge this presents, or have a stronger appreciation of the victories you gain under these circumstances (Melee Bowser). Neither of these may apply to you, but you might want to play a character that just isn't bad - in any of these cases, you have a tier preference for your play.

    f) Complexity
        (1) Some characters are simple and straight-forward (Leo), while others require mastering complicated subsystems that are like learning a character within a character - or maybe even two (Carl). By complexity, I mean the amount of systems and components needed to play the character - how much do you need to know? One character may thrive off of a few simple buttons used properly at the right time (Hulk), while another might require specific combos to be used in different situations, or have multiple additional mechanics to consider during play (Hakumen). If you like a character that focuses on the basics, then you probably prefer simpler characters. If you like a character that requires significant time in training mode, then you probably prefer complicated characters.

    g) Depth
        (1) A simple character can be deep, and a complicated character can be shallow. Depth refers to the number of considerations a player has to make at any given time. A

character like Rachel, from BlazBlue, has a wind mechanic that blows her across the screen. You can make the wind blow at any time you have full control of your character, and you can choose how the wind blows. Making the wind blow requires a direction to be held while pushing a single button - it is very easy to do. However, the number of options this mechanic opens up for Rachel players gives her an incredible degree of depth and control that no other character possesses in the game. As Rachel can choose from eight different directions for the wind, you effectively octouple her neutral options at any given time - few characters can boast such a repertoire of options from a single button press. Rachel is a deep, yet simple, character.

(2) A shallow character could have a complicated set of systems to master, but only a few are actually worth using. Vergil, from Ultimate Marvel vs. Capcom 3, has the full set of normal attacks available to him. He also has a full second form, his Devil Trigger, that gives him air dashes, special-cancelable normals, and enhanced special options. On top of this, he can create a set of swords that fire off at each button press, allowing him solo pressure and mix-ups off of his teleports, instant overheads, and unique combo opportunities. Finally, Vergil has a crown of swords he can place over his opponent, which he can then use for unique pressure and combo opportunities and setups.

(3) Unfortunately, despite of these options, Vergil's best option is almost always Spiral Swords, a low-cost move that gives him full control of the screen for a limited period of time. This move is so strong that Vergil can simply walk through a wall of energy for a free attack, and nearly any attack made against him results in getting hit. Not only is Spiral Swords significantly better than Vergil's other options, but it is better than almost every other character's option in the game. To diminish the number of decisions Vergil players have to make, most put him third on a team so two other characters can give him the strength to use Spiral Swords for the duration of the rest of the match. If Vergil kills a character, he gains multiple simple mix-ups that lead to a dead character, further emphasizing the lack of decision-making that exists while playing this character. Vergil is a complicated, yet shallow, character.

h) Execution requirements

(1) Execution is

i) Biography

(1) Personally, I like what developers sometimes call "creature" characters - I don't want to be human in my fighting games, I want to play as a horrific experiment (Painwheel), an otherwordly deity (Dormammu), an unholy demon (Blackheart), a killing machine (MvC2 Sentinel), or even a Pokemon (Mewtwo); if a man is possessed by a demon, that can be good enough for me (Zato, Oni). If a game lacks in creature characters, I won't bother with it - and they can't be gross, either. However, the visual aesthetic is only half of what I want in a character. I prefer villains, and have trouble enjoying heroes. I won't use characters that rely on tools, such as swords or guns. If the character is "goofy", I won't retain interest. My tastes are specific.

(2) Additionally, I have a playstyle I prefer. I like to control space, and I like to control it in such a way that my opponent always feels in danger (Dormammu Purification). I like safe play, but I also like being able to get into an opponent's face if I have "earned" that opportunity. I'm not happy standing in the back throwing projectiles - it becomes tiresome. I need mobility, I need dynamic play. I want to have to think while playing, but I also want guaranteed damage if I make the right decisions. In my mind, I want perfect control of the fight. If every decision I make is perfect, I should never get hit, and I should always win. That is what I find satisfying, and nothing less.

(3) I like depth, but not complexity. I love having an overwhelming number of options to consider, and I like them all to be easy to choose from. I am fine with embracing a complicated character, but it needs to lead to a lot of depth for me to be happy. I do not have strong feelings about execution requirements, but I do like to push buttons frequently. These days, execution is largely a non-factor, though there are motions I have trouble with. In terms of tier placement, my only concern is being able to win if I outplay my opponent, and few characters block off that road completely.

(4) It took me a long time to be okay with saying what I just said. I felt pressured to play "good" characters (Yun), or play a certain kind of style because one is "brave" (T. Hawk) or takes "skill" (DoA/Tekken Stance character?). It

is my hope that by ending this video with a small biography on myself, others that are restrained by these notions will be freed. The most important aspect of choosing my character was having fun with that character, and I have a complex set of requirements that need to be fulfilled for me to truly love a character. If a game lacks that character, I don't play it for very long, or at all. My knowledge of myself has helped me pick up new characters in fighting games, because I know exactly who I want to try on a roster (Glacius). Similarly, it helps me avoid bad purchases, because some games have massive rosters without a single character I want to play.

    D. Practicing
        1. Watch Videos
            a) Tutorials
            b) Top Players
                (1) At the end of 2014, Guilty Gear Xrd came out. I decided that I wanted to learn Zato, whom is often considered among the, if not the, hardest character to play in any fighting game ever. I have never played a Guilty Gear game beyond spamming with Dizzy, I-No, and Testament against the AI as a kid, I have never played a puppet character, and I have never mained a high execution character.

                (2) To expedite my learning process, I asked who the most reknown Zato player is. The response was unanimous: Ogawa. Step 1 of my training was to go into training mode and see what my moves did. Step 2 of my training was to lose about 50 matches because I had no idea what I was doing. Step 3 was watching Ogawa recordings on YouTube.

                (3) For two weeks, I repeated the same process. I would watch a set of Ogawa's play, find *one* thing I didn't know how to do, and watch Ogawa do it over and over until I had the series of visual actions cemented in my head. Then I went into training mode to practice it until I could do it without pressure consistently. Following this, I went online and played people until I did it once in a match - I wasn't even trying to play smart, I just wanted to make my new tech happen in a match.

                (4) After a month of practice, I had a passable Zato. Not great, not terrible, but passable. I could have gotten to a passable Zato without Ogawa, but Ogawa cut the length of

my journey significantly. Now, playing is my primary source of gaining experience, but every month or so I sit down and watch Ogawa play as I fall asleep in bed. The goal is not to copy Ogawa, but to learn from him - including his mistakes.

    c) Matchups
2. Forums
    a) Shoryuken
    b) Eventhubs
    c) NeoGAF
    d) GameFAQs
    e) Dustloop
    f) Smashboards
    g) Testyourmight
3. Feedback
    a) Be Critical
    b) Watch Replays
    c) Ask for help
4. Playing Matches
    a) Play long sets.
        (1) 20 matches against one player is more valuable than 20 matches against 20 different players if you are learning; reducing unknown factors helps you focus on improving your play.
        (2) When you go to a new job, even if you are an expert in the field, you spend your first few weeks learning the environment around you.
        (3) When you go into a new classroom, you have to learn the teacher's procedures and style before really feeling comfortable learning.
        (4) When you are learning a new character or game, you need to feel safe understanding what your opponent can do before you can really explore what you can do.
    b) Try new things.
    c) Learn the player, not the character.
        (1)
    d) Play down, play up.
    e) Locals
        (1) Make Friends
        (2) Find a Scene
    f) Online Play
        (1) Find an online group.
        (2) Ranked is okay, not great.

(3) Wire your connection, or get an electrical adapter.

      g) The AI sucks.

          (1) In UMvC3, armor and spam > AI.

          (2) The AI reads your inputs.

          (3) The AI does the inhuman - perfect shielding in Smash.

5. Training Mode

    a) Have Goals

    b) Remember situations to test.

    c) Practice setups.

    d) Learn setups.

    e) Experiment.

6. Tiers/Matchups

    a) Tiers are compilations of matchups.

    b) No game exists without bad Matchups.

    c) Even top tier characters often have counterpicks.

    d) Character specialist vs. Learning multiple characters.

II. Psychology

  A. Neutral

    1. Spacing

      a) Normals

      b) Projectiles

      c) Anti-airs

    2. Movement

    3. Pokes

      a) Footsies

          (1) Attack Moves

          (2) Placed Moves

          (3) Counterattack Moves

      b) Where is my opponent?

      c) Where will my opponent be?

    4. Openings

    5. Rushing

    6. Predictability

    7. Mindgames/Patience

    8. Baiting

    9. Teching

          (1) Breaking free from a grab. Recovering from hitstun in the air.

  B. Offense

    1. Frame Traps

    2. Option Selects

    3. Mixups

      a) Overheads

b) Lows
          c) Grabs
          d) Tick Throws
          e) Cross-ups
          f) Empty Jumps
    4. Wakeup/Oki
    5. Resets.
    6. Predictability
  C. Defense
    1. Reversals
    2. Blocking
    3. Option Selects
    4. Predictability
III.   Mechanics
  A. Attacks
    1. Hitboxes
          (1) Have you ever felt like an attack should have hit, but it didn't? Or maybe that an attack shouldn't have hit, but it did? From the laymen's perspective, the potential for an attack to hit is determined by its animation. If a sword touches an arm, it better lead to bleeding. However, animations actually bear no relation at all to attacks in fighting games. (Show Metaknight dtilt, Vergil s.H, Guile crouch hit)
          (2) Universally, fighting games use a coding technique called "hitboxes", or "hitspheres" for 3D fighters, that determines whether an attack hits or misses. As each attack is performed, it creates an invisible box on the screen. For each frame of action taking place, the game calculates whether that box interacts with another box currently existing on the screen. If the box comes into contact with another box, various effects can take place such as hitstun, blockstun, clashes, projectile reflection, and so on. It is up to the developer to decide what happens when two boxes of a particular type collide.
          (3) Projectile section (Akuma DP through Dormammu fire, MKX projectiles non-clashing, Mewtwo Shadow Ball passing through Link Boomerang)
    2. Hurtboxes
          (1) "Hurtbox" is the specific name given to hitboxes that belong to a character's vulnerable frame. Often, they are still called "hitboxes", but sometimes it helps to use the more specialized term when aiming to explain a

complicated series of actions. Just as every attack and projectile has a hitbox, or a series of hitboxes, that determines its attack potential, characters have a persistent hurtbox that determines their vulnerability.

      3. Priority
      4. Invincibility
      5. Clashing

  B. Frame Data
      1. Frame Rates
      2. Frame Advantage
      3. Frame Disadvantage
      4. Safe Moves
      5. Unsafe Moves

  C. Resource Management
      1. Screen Position
      2. Health
          a) Chip damage - now vs. later.
      3. Timer
      4. Meter
          a) Daigo doing DPs before ending a match.
      5. Bursts

IV.   Execution
  A. Controllers
  B. Precision vs. Rate vs. Unfamiliarity
  C. Pressure
  D. Notation
  E. Combos
      1. Hitstun
      2. When Combos End (Hitstun Decay vs. Gravity vs. Bursts vs. Breakers)
      3. The BNB.
      4. Hit confirms.
      5. Screen-positioned.
      6. Resource-Expending.
      7. Reset-Prone.
  F. Mastering Execution:
      1. Muscle Memory
          (1) Muscle memory refers to the ability our body has to perform a physical task without conscious control. Despite activities such as walking, throwing objects, and even driving home being physically complicated tasks, with practice, we can perform these tasks without thinking about them. Our body has the non-conscious capacity to

perform complicated activities if they have been done enough times.

(2) Muscle memory is extremely important in fighting games. Regardless of the fighting game you play, your hand will need to perform a variety of precise movements with consistency. Fighting games are not alone in this, but they are undoubtedly the most demanding genre in this regard. Muscle memory helps you remember sequences of buttons, the proper flow of a control stick to make a quarter-circle-forward motion, and, especially the proper timing for these activities.

(3) The only way to gain muscle memory is through repeated practice. Studies have shown that [proper way to study] are the most effective. Never give up mastering muscle memory - it literally is the same process as learning to ride a bike, and your body will never forget it. As a testament to this fact, after taking a year off to focus on Guilty Gear Xrd and Smash 4, I picked up Skullgirls at my locals. After a mere five tries under mid-match pressure, I was back to performing my go-to Painwheel combo flawlessly. Your muscles never forget.

(4) If your life is busy, do not despair. Execution is not something that needs to be practiced for long hours while your life dwindles away. When learning a new technique, I set aside ten minutes a day to practice it. For those ten minutes, I do nothing but practice that technique and situations that utilize it. After three days, I always have it down, though I may not be great at using it during matches. Then, my goal is to go into matches and *make* myself use the technique. Even if the technique isn't advisable under the circumstances of the match, I do it anyway. It needs to become a part of my set of mental options during a match, and sacrificing a dozen matches to foolishness misapplication of a new skill is how I do it. Following this, I practice a new skill, and the process restarts. Every few training days, I practice the skill once or twice if I have not used it in a match recently - perhaps because the opportunity did not present itself.

2. Visual Cues

(1) Muscle memory is essential, but it only helps you string buttons together. You need a cue of some kind to determine what buttons you should be pushing. Most characters have different ideal options based on whether

their attacks hit, miss, or are blocked, and you need to be able to train yourself to react properly to the visual stimuli that let you know what you should be doing.

MORE

3. Audio Cues
4. Chunking

(1) Chunking gets its own section because it really is helpful for mastering long combos, and you may want to learn one at some point. To demonstrate chunking, I am going to show you how I learned a Zato corner combo into an unblockable reset. As the combo plays out, I will display the buttons required for the combo to play out fully:

(2) -K-, j.K, j.[K], -K-, 5D, 6P, -D-, 5H, 22S, jump, fly, j.S, j.K, j.H, j.D, superjump, j.D

(3) If this series of buttons seems easy to you, great - amazing, even. When I first saw this combo, it felt undoable to me, and I shied away from it. This isn't even the best version of this combo, and it used to be so good that Zato could land two unblockable attacks in a row with the proper follow-up. While I am still not consistent on this combo, I did it for this video, so I am on my way. Here is how I did it:

(4) Step One: Break the combo into manageable pieces. Just like memorizing a phone number as two three-digit numbers followed by a four-digit number, turn combos into a chain of familiar events. If none of it looks familiar to you, then practice something more basic until it does. In my case, I broke this combo down into six chunks:
    (a) The double j.K overhead.
    (b) 5D, 6P, 5H, 22D
    (c) The -K- releases, added to the double overhead.
    (d) The -D- release, added to the ground series.
    (e) j.S, j.K, j.H, j.D, superjump j.D

(5) While this combo is unfamiliar to me, I break it down into a series of familiar components. First, I practice the double j.K overhead. Then, entirely separate, I practice the ground series. I do each of these until I am comfortable enough with them that I can do them while having a conversation on the side, or without looking at the screen. I want it to flow out of my hands like a pianist playing Mozart. When I master these on their own, I repeat them, but now with the proper button releases for the shadow. To

practice the aerial series, I release the shadow's drill to prop the enemy up for practice.

   (6) After each section is mastered on its own, I begin mastering the link between them, gluing their parts together to form a cohesive whole. I perform the double j.K overhead with drills, and I attempt to go into 5D. After a few tries, I feel comfortable enough to add the entire ground series. It takes me a few tries to get the -D-release, but it happens. Finally, like icing on the cake, I practice the reset and finisher. Each time, I practice the full first half of the combo to further cement it into memory. Each time, it gets easier. I take a few breaks during the process so I don't fall into errors of habit, but finally, after an hour of practice, I have the setup down.

G. Pressing Buttons With Intention

   (1) Why, right now, are you pushing this button? Do you know? This is partially a psychological question, and partially one for your hand. The psychological aspect has been addressed elsewhere, so here, we are going to talk about your hand. Your lovely, but sometimes stupid, hand, that just wants to mash things out. In other situations, it doesn't want to press anything at all, even though you are telling it to - stupid, stupid hand!

   (2) If you want to teach your hand, you need to force it to learn when it should be doing different things. Here is a video of me trying to play Blanka in Street Fighter. I am not a good Blanka. I do not even like Blanka that much, or Street Fighter. Yet when I do play, I try to train myself, because learning in one game carries over to others. Right now, whenever a fireball comes toward me, my hand goes into the down-back position. I block it, and the game moves on. For some characters, this isn't a terrible idea, but Blanka is the best fireball punisher in the game. I need to expect more of myself than that.

   (3) I am going to play an unusually passive Blanka. I want my opponent to throw fireballs at me, and I want him to be comfortable doing it. I am not going to jump at him, because then he will hesitate in throwing fireballs. I am going to train my opponent to train me by encouraging him to give me the opportunity to practice what I want to. Instead of trying to win, which involves utilizing a set of habits I want to surpass, I am going to focus on achieving

my goal of using df.HP to punish fireballs. This is most of what I am going to do against my opponent.

(4) This is how you develop a new habit. You force yourself into predicaments where that habit is useful, and you go out of your way to utilize the new skill. The sum of your skills determines what you do in various situations of a fighting game. While conscious analysis of your fight is essential for winning the mindgame, the match is not yet won until you push the right buttons at the right time. Training your hand to act with purpose, and to have a set of actions for various situations, is part of winning that fight.

DICTIONARY:
Scrub
Spam
Spacing
Priority
Pressure
Combo
Frame Trap
Noob vs. Newb
Frames
Frame Advantage
Frame Disadvantage
Neutral
Free
Pringles
Mixup
Crossup
Chip Damage
Main
Alternate
Secondary