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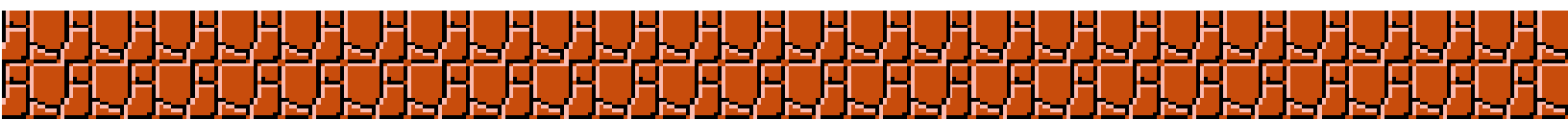


Acknowledgements

Many, many people have given me their time, resources, knowledge, and support throughout this process. Too many to count. However, a special "thank you" goes to the following people, without whom I would be nowhere at all:

NYU Faculty & Leadership

Kimon Keramidas, Thesis Advisor (XE)

Una Chaudhuri, XE Director

Bruce Grant, Dean (Anthropology)

Kathrine E. Fleming, Provost

Clara Fernandez-Vara, Professor (Tisch Game Center)

Dave King, Professor (Gallatin)

Tunku Varadarajan, Adjunct (NYU Journalism Institute)

Bennett Foddy, Professor (Tisch Game Center)

NYU Tel Aviv

XE Program Staff

Nicole Pandolfino

Ariel Looser

XE Alumni

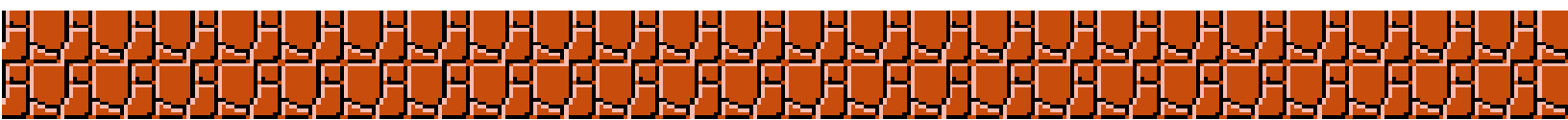
Patrick Bond

Alex Sullivan

James Berry

Friends & Family

My parents, Robert & Deborah



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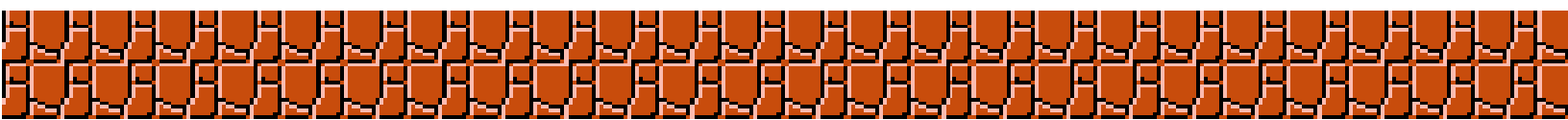
Introduction: Difficulty, Failure, and Interactivity

Difficulty and failure are two things ordinarily avoided, yet both are also necessary components if one wishes to learn and grow. This is nothing new given that "Failure is instructive," is an oft-cited maxim of no less a figure in pedagogy than John Dewey. Less readily digested is that these two entities, difficulty and failure, each so central to the human experience, can be captured, experimented with, and understood through the medium of video games as well as, if not better than, through other, more established forms of media such as film, text, or fine art (*Keramidas, 2010*). Less accepted still (though gaining traction in some circles), is the notion that the aesthetic and technical constraints of video games both define and provide the medium's unique identity founded in its experiential salience. Therefore, although there exists enough variety in the medium of interactive digital experiences (video games) to make drawing any simple conclusions about the topic somewhat fraught, it is clear that video games constitute an emergent art form. This new media is exciting because it lends agency to its players by providing means of interacting with failure and difficulty, thereby providing freedom, community, and triumph to its players in part by way of its insistence on improving them through play.

Certain niches within the gaming community have edified, focused on, and subsequently expressed these principles of *difficulty*, *failure,* and (thereby) *improvement* in their games and manner of play with more purity, fervor, and success than others. Several of these niches in particular— such as low-variance high-difficulty games, experimental games, and the new e-sport known as speedrunning— merit closer examination in an attempt to prove the thesis provided above. In the following chapters, I will be providing a guided tour linking my personal experiences with games to the broader bodies of intellectual theory that inform them through a combination of descriptive vignettes accompanied by analysis. By juggling the academic with the anecdotal and attempting to maintain a bit of character throughout, I hope to tread similar ground to that walked over by Roland Barthes in his classic text on the experiential and aesthetic nature of photography, *Camera Lucida.*

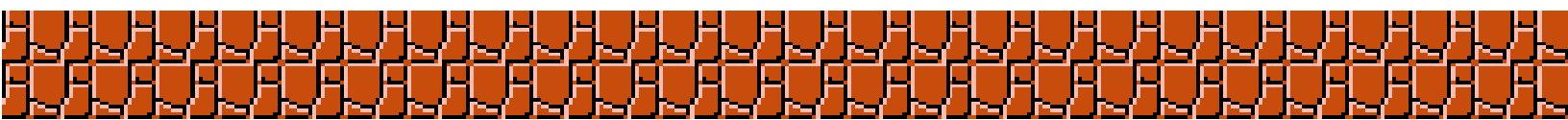


Gaming Today

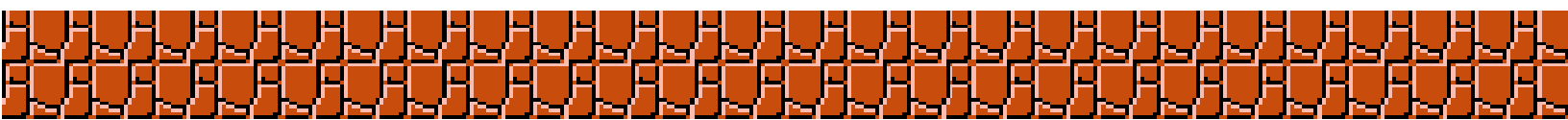
In October of 1958, when my grandfather was working at Brookhaven National Labs, one of his colleagues, physicist William Higinbotham, developed the first ever video game. It was a tennis game, similar in many ways to the classic game '*Pong'* that came around in the 1970's *(Tretkoff, 2008.)* I don't know if Higinbotham and my grandfather ever met, but I've been spending time with the spiritual descendants of Higinbotham's creation ever since I was physically capable of pressing a button or twitching a joystick under my thumb. Since about 1999, I've been playing video games, and as a result I've had the fortune of living through the second phase of one of media's most meteoric rises: in the decades following the 1977 release of the Atari 2600 console (one of the first successful consoles for home play), video games have exploded from an ostracized and primitive basement industry into a global phenomena and economic powerhouse. From the *Tetris* of yesteryear has sprung the *Fortnite* of today, and now the video game industry is one of the largest and most lucrative entertainment sectors in the economy, recently outpacing both film and television (Stewart, 2019). This explosion, fueled in part by the advent of live streaming via services like Twitch.tv and in part the mass dissemination and subsequent popularity of mobile games like *Candy Crush*, *Angry Birds*, and *Farmville*, has also created new ways to engage with games like 'e-sports' and 'speed-running' wherein video games end up occupying the niche of spectator/competitive sporting event. The recent world championship for the video game *League of Legends* reached one hundred million viewers... We might not be in Kansas anymore, is all I'm saying.

The Medium Matures

At the same time as their player-base and general popularity have sky-rocketed, video games themselves have matured into their own distinct form of media replete with their own narrative, aesthetic, and technical tricks, as well as their own benefits and restraints. Beyond more eye-catching graphics, modern games are telling better stories, providing more interesting play, and even moving away from the former norms of the medium (Montfort, 2005). Not all games are about violence or saving princesses or



manipulating geometric shapes. Some are now more concerned with decision-making, morality, parenting, education, politics, and even emotional, philosophical, social, and aesthetic questions. Still, there exists a gap between what most people *actually* understand about video games and what most people *should* understand. Many, many other authors have already begun the useful work of writing about this topic— David Sudnow, Jane McGonigal, Tom Bissel, and James Gee come to mind— from both within and outside the academy, but there is always more work to be done. By contributing some of my own thoughts, perspective, and experiences with games, I hope to help contribute to the broader phenomenological understanding of video games and what they're capable of (and not capable of) as a form of media, a form of narrative, a form of self-improvement, and, occasionally, even a form of entertainment. [Press start to begin.]



I - Freedom

My childhood was spent in the basement. In my defense, it was my family's basement and most of my toys lived there. For the thirteen years between ages four and seventeen, most of my most memorable moments of growth occurred in that basement, tucked away on a sideroad of a historic Boston suburb. Now, it is common knowledge (if rarely acknowledged), that all basements have a smell. Each basement has its own specific smell, though each basement smell is not necessarily unique. Don't believe me? Try it. Imagine the basement of your childhood home, of your current home, of your parent's or aunt's or whoever's home. Isn't it odd that you remember the scent, too? Basement or attic or pantry or cupboard, it doesn't matter, each has their smell. Many people have such olfactory knowledge of their childhood sanctuaries yet never take the time to remember them; the specific scent of their playroom— again, 'specific' rather than 'unique' because I've caught a whiff of my childhood basement plenty of times in the years since my family departed that old house. What does my nose describe? A standard suburban basement smell: the somehow flaky scent of the wiry grey rugs overlaying the cool concrete stench of the poured foundation beneath, these mingling with the shoddy-yet-clean labyrinthine series of saw-dust scented IKEA bookshelves, stuffed to brim with the family library; that prime repository of cheap paperbacks and stuffy academic nonsense all of which reeked of their musty yellow pages. Among this potpourri there is the tinny wafting of strange red poles, those slightly rusted rounded columns that helped hold up the house and between those poles are aligned several aged couches none of which smell bad, per say, but which have become less respectable in the eyes of their family and were thus relegated to the cellar with the books and toys. This, then, was the smell of my basement, a smell I generally smelled for the first time each day as I descended the stairs from the kitchen gripping the untreated pine banister as I went. (Itself scented faintly of shorn wood and cleaning glaze.) After getting home from school each day I'd go down to the basement, and I did my growing there. Why?

For one thing, all my LEGOs were down there—and I had a whole big corner all to myself where I could build whole worlds I populated with characters and armies and romance and intrigue. My best friend and I—whom I live and game with to this day, twenty-two years later—cemented our friendship in that basement over those LEGOs.

In later years, we would gather our other friends together in my basement and have slumber parties and pretend to be classy. We dressed up in suits together. The only suit I had access to was my father's wedding suit. He was married in the 70s. It was pale sky blue and had bell-bottom pants (See fig. 1).

(Figure 1: An unforgettable suit, regardless of how hard I tried.)

A lot of vivid memories in that basement, both good and bad, pleasant and unpleasant, trivial and important. I can remember many memories like these, quite vividly, when I try. I'm surprised, sitting here at my desk about a decade since the last time I was physically present in that basement, how easy it is to

conjure up so many old ghosts just by trying. I don't usually remember these things so easily. It has always been the case that my memories of my past, of my childhood, rarely snap into place so suddenly; they fail to arrive when bidden or are seemingly excited back into relevance only by pure chance or some errant, unidentified stimuli. If I try, if I think hard and carefully, I can find them, these sensory impressions of the past. But as a rule they come only in small numbers and often at random. In general, my memories do not force themselves to be reexperienced; they are content with lingering in the obscurity of my past.

I provide all of this background to make a point based on the following fact: smell is the sense most directly and powerfully tied to memory and recollection. When a person smells a familiar scent—or one associated with a particular thing—it is likely that this association will be strong, vivid, and immediate, more so than is the case (on average) for taste, touch, sight, or sound. One might think, then, that the specific memory one ties most strongly to a smell might be a sort of 'prime memory.' A special memory; a particularly salient moment. This feels like it makes a certain amount of sense. But if that is the case, what are we to make of this:

When I smell the smell of my childhood basement these days; as I did some weeks ago while lugging two over-ripe boxes of paperwork through the immense undercroft of a university library, I am swept up in so visceral a sense memory of one particular moment in that basement that every portion of it appears to me in complete and perfect detail. Yet, the scent did not make me relive my childhood friendships. I didn't think about my family. I didn't even remember my first kiss... Although I know it occurred in that damn basement. No, instead of anything 'real' or 'formative' like that, all I saw—all I ever see—when I smell that specific smell is...

Red.

The color red. The red-colored wood of a small sloop sitting low in liquid sapphire, bobbing atop aquamarine seas. Bright red deck and red siding boards with a white trim running round the top edge

and, atop the bowsprit, an exaggerated carving of a lion's head detailed in gleaming white and yellow. A plain wooden mast of mint-to-seafoam green set with a plain wooden crossbar and hoisting a simple sail tied down by all three corners, its billowing tan canvas so thin as to be transparent but embroidered with a turquoise swirl design in the center and through the shroud of sail I can see the waiting sea beyond. And what a sea! All around the boat such joyous, jewel-tones made the water sing! The water was, of course, rendered simply— in those days the technology didn't exist to do fluid dynamics or currents or ripples convincingly, but the rendering had been done with great care and succeeded in large part by utilizing a graphical technique called 'cel-shading.' Cel-shading allowed the modest processing power of the Nintendo Gamecube Console to render more believably solid and visually appealing universes: that is, places and spaces populated by people and occupied by objects— just by opting for a simpler, more cartoony style. What of it? The water I see through the sail may only be a series of interlocking octagons outlined with blank white and tinted with a few shades of budget cerulean, but the result, as it undulates across the screen, is remarkable, even if it is not 'realistic'— Somehow it is better *than "realistic" water would have been. It's clumsy abstraction is a rarer thing than real; it is somehow truthful.— This sea before me looks nothing like real water, of course, in the same sense that the real ocean isn't* really *blue; if bottled individually by a particularly bored Poseidon, each liter of sea water would appear clear to the naked eye, taken out of context of its broader body, but when the ocean is all there in front of you and you're experiencing the real goddamn thing, the sea is* definitely *blue. It was in this same perverse way that the cartoony, geometric blues of* The Wind Waker's *ocean were, to my childhood mind, better than real water. They have stayed that way. Ironically, the smell of my basement does not yank me back to my first time having fawning intercourse, or my formative friendships— instead, the smell returns me to a stranger, deeper, more essential intimacy: the first time I remember feeling free. And the first time I felt free was in a video game.*

Freedom

What was it about T*he Legend of Zelda: The Wind Waker* that made me feel free? Was it the game world itself? Yes and no: in comparison to modern AAA titles—especially open world games like *Red Dead Redemption* or even the most recent big entry into the Zelda franchise itself, *Breath of the Wild—The Wind Waker's* game world is small and consists mostly of sparsely-populated open ocean with islands of varying size scattered amongst the waves. At their largest, these islands contain a town or smaller settlement, as well as a single dungeon/feature to explore. The starting isle, Outset, contains both the protagonist's home village and the classic fantasy trope of a dangerous forest, but other than that the island is more or less empty. The smallest islands in *The Wind Waker* would not even qualify as an atoll or even a shoal. They are mere outcroppings of rock perhaps two yards to a side and contain nothing more than a lone treasure chest or hopelessly lost NPC. (*See Fig 2.)*

(*Figure 2: Screenshot from* The Legend of Zelda: The Wind Waker.)

However, despite the *actual* small size of the map and relatively few individual locales, *The Wind Waker's* game world *feels* alive and open—free—because of its sparseness and because of the control

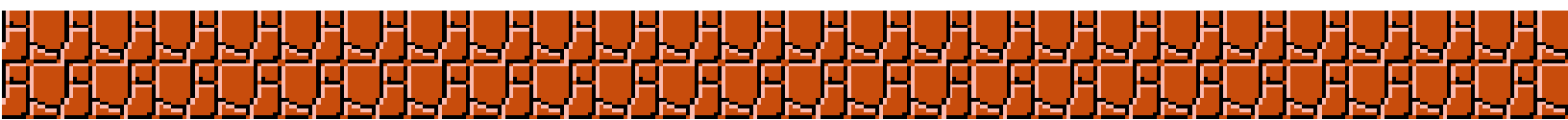
handed over to the player. Early in the game, Link (the protagonist) awakens in the hull of an unfamiliar sloop after failing to save his sister, Aryel, from a pirate stronghold in the northwest. The boat, as it turns out, is sentient—its figurehead, in the form of a red and white and yellow lion's head, can talk. This conversational ship, "King of Red Lions," becomes Link's (and therefore the player's) primary means of exploring the world. As soon as play begins, the player is made aware of the relative vastness of the ocean but also the promise of distant lands—from every island in the game, the black silhouettes of other, far off islands are visible on the horizon, sandwiched between the blue skies and bluer seas and endlessly tantalizing.

At first, these foreign lands are promises held out of reach of the player because, as King of Red Lions informs Link, the former is missing his only sail, which the player must obtain from the nearby town. Once this sail is recovered, the world opens up. The only thing left holding back Link, King of Red Lions and, by proxy, us,from going wherever we want is the whims of the weather itself: if the wind is blowing north, our sail only allows us to make profitable progress by following it. This may seem as though the game is putting us on domineering rails: whenever the game wants us to go to Island A, the wind will blow towards it with unceasing force, thereby precluding visiting anywhere else. However, not much farther into the game, Link receives a mystical instrument—the titular 'Wind Waker'—which is a conductor's baton by which the weather (prevailing winds included) can be controlled through the playing of different songs. Throughout the rest of the game, the player is taught a variety of different melodies—played via a series of directional inputs—each of which has a different magical effect. Thus two elements of experiential freedom are created by the specific implementation of 'The Wind Waker' as a mechanic: First, there is the obvious freedom of control/wish fulfillment—the player is now able to explore the whole open ocean by *literally controlling the weather*, a feat which has been a preeminent human fantasy since time immemorial. Second, there is the particular way songs are played in the game: the majority of *'Wind Waker'* usage occurs at the whim of the player and, most importantly, without any visual reminders of which song you should be playing or how its melody goes. The result of this is that, over the course of

a playthrough, each player necessarily memorizes several of the short tunes in order to employ them more readily as circumstances require. This may seem trivial from a distance—who hasn't memorized the route to the bathroom from their office, for instance, or the three-tone jingle that accompanies the NBC logo?—and yet, at least for one child in the suburbs, there was a felicitous sort of freedom that arose as a result of the triple mastery developed by the game: First, the practical mechanical mastery over individual melodies. Second, the mastery over the weather created as a symptom of the first form of mastery, and then, third, the relative mastery over the game world itself.

It's worth mentioning again the degree to which mystery, rather than sheer photorealistic vividness, can fuel the excitement, engender the freedom, and wrangle the devotion of an interested player. The map—or sea chart— given to the player in the *'Wind Waker'* so they can keep track of their location in the open ocean is a grid of evenly sized squares, each one of which remains featureless until the player locates and bribes a magical fish who resides (somewhere) in that particular square. The fish must be carefully lured to the edge of King of Red Lions via an offering of bait. Once convinced to surface, the fish fills in the details of that sector of the map and also—usually—provides the player with a hint about what treasure/challenge/feature will be present on the island. Through this obfuscation of the map and the foreshadowing provided by your migrant fish guide, *The Wind Waker* presents a world alive with mystery and humming with potential. Whenever I play it—even today, when I know, having read both the walkthrough and the wiki, that there are no secrets left to find—I feel as though there is still something lurking over the horizon, waiting for me to discover it.

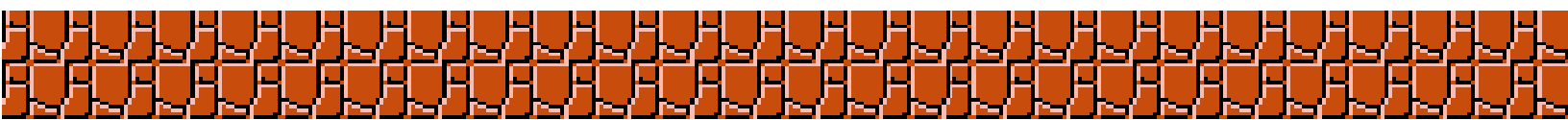
In contrast, modern open world games like the beautiful and well-designed *Red Dead Redemption 2*, fail to accomplish the same thing for me. Although they promise very much a higher level of potentially hidden locations and easter eggs, as well as more advanced dynamic content in the form of random ambient encounters (i.e. passing ruffians on the road, wild animal attacks, sudden storms, or a run in with some angry proselytizer), I find myself disinterested in them. I do not know and cannot say whether this is merely the nostalgia and jadedness of a lifelong gamer; perhaps, like in the case of a lost



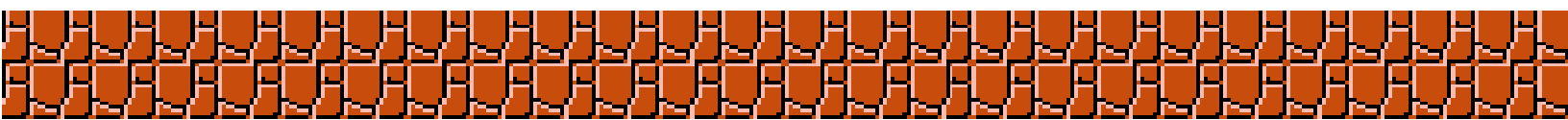
virginity, *The Wind Waker's* world is equal parts mysterious and memorable to me because it was my first. This subjective bias is one of the most damning confounds to be confronted when undertaking a phenomenological/experiential approach to any topic. Yet, at the same time, there is some feeling, some sureness that I cannot shake, some tiny interior feeling which tells me: 'no, this is not rose-colored glasses alone!' Something about *The Wind Waker* comprehended the feeling of 'awe' and of 'freedom' in a more expansive way than many games that came before, and many more that would come after.

Questions still stand, then, regarding the purpose of awe and the use of freedom. What does awe accomplish? Why does the freedom of a video game matter? One explanation for freedom is that it is pleasurable in-and-of itself, or that the experience of freedom is rare, but I favor another: Freedom in video games is *useful*, not solely pleasant or impressive. It is useful because humans are more easily encouraged to experiment and, by way of their experimentation, to fail, and thus, by failing, to learn within a free and open space. Meanwhile, awe is useful because it promotes introspection and consideration, traits which harmonize well with the solving of puzzles and exploring of worlds. Now, *The Wind Waker* is neither a particularly difficult game, nor does it require a great deal of practice to complete. What it does offer, however, is an excellent example of how small choices made by designers in the aesthetic and mechanical design of a game can create environments better suited to the experience of freedom. This experience of freedom, of agency, is a prerequisite for a game to convey if it also wishes to engender healthy and productive interactions with failure.

So the smell of the basement reminds me of video games. Or, rather, the smell of a particular basement teleports me back to a specific point in a specific game, a specific place of specific freedom; a limitless sort of specificity which is only offered within the tight, comforting confines of a video game and all of its associated infrastructure: Games have limits, true, but they also can present an illusion of options and of choice to their players and it is this illusion that is key to unlocking the artform's latent talent for capturing attention and sparking the kind of iterative exploration that leads to learning and growth. The islands and oceans of *The Wind Waker* remain as spatially limited as the meager square-



footage of my childhood basement in comparison to the aquatic expanses of the real world, or even just to the digital worlds available in gaming today, but that hardly matters. What difference did it make if I wasn't *actually* free to go anywhere at all in the game? I felt like I was, and that was enough for me to invest time and energy into experimenting within the game world and learning from it. The scent of that basement becomes more than a memory, then; it becomes a kind of portal back to the first time I felt free, the first time I felt adventure, and the first time I lost myself within a game despite every possible set-back and failure.



II - Failure

I am sitting at my desk at school. A quiz is being returned. I attempt a furtive glance at my score by flipping the sheet over as quick as I can so that other students won't see what I got. It is a 'D.' I have done poorly— there is a lot of red ink and many of the answers are wrong. I do not, frankly, understand why my answers are wrong, I only understand that they most certainly are. I attempt to hide my lackluster success, and, despite the copious careful notes my teacher has written next to each wrong answer, I still leave class feeling dejected and confused. How did this happen? I studied and everything.

Later, I am sitting at my personal desk: a piece of plywood I cut and stained with my father in our garage and then installed in my mostly-unused bedroom closet. (my clothes are on the floor, where they belong, of course.) It is a cramped interior, but I don't mind it. I don't mind much of anything except for the game I am playing. There is a grim tone as the screen goes black and big red block letters appear in bold to declare, "YOU DIED."

(Figure 3: Screenshot of the death screen from Dark Souls.*)*

I have died. Again.

I will have to start over. Again.

There's nothing gauging why I died, no feedback for me to review— the game is content to let me figure it out. And I do: I died because the stupid goddamn giant dragon used its stupid goddamn giant tail to whip me into a stupid goddamn giant pit where I died on some spikes. But unlike this morning in math class, I do not ask myself "how did this happen?" I am not confused. I am frustrated, sure, but I know what happened: I didn't dodge. I was standing in the wrong place. I was dealing enough damage to the dragon to tell that the fight was winnable, and then I lost it. This is not geography. This is not math. This is simply drawing conclusions from the available information: each time I die, the game is the same, the levels are the same, the enemies are the same. The only dynamic variables come from me: the selection, order and timing of the inputs I mash into my controller are the only things left to judge. The game, while viciously hard— I have been stuck on this dragon for two weeks now— is also fair: You are not a failure, the game seems to suggest, you are a triumph in progress.

Types of Failure

Failure is a complicated thing, whether it is experienced as a feeling (*I didn't do well enough!)* or a endured as a fact (*I got an 'F' on this math test),* but media theorist Jesper Juul has done a great deal of work attempting to delineate and organize several different kinds of failure, each with their own particular tastes and consequences. These are especially relevant as they pertain to video games, and the broader realm of 'play' writ large. In his chapter on Attribution Theory in the book *The Art of Failure*, Juul lays out three different dimensional axes of failure:

- *Internal vs External: attributing failure to the user* or *to the test (game).*
- *Stable vs Unstable: whether the user believes failure to be consistent* or *subject to improvement.*
- *Global vs Specific: whether the user attributes failure to general inability* or *inability in this specific task.* (Juul, 51)

Juul's purpose in presenting these dichotomies of failure is to illuminate which dimensions of failure tend to lead subjects towards the phenomenon of 'learned helplessness,' an unfortunate psychological state in which the subject assumes, based on their (possibly cumulative) failures at a certain task, that they are helpless and incapable in the face of future (often quite solvable) problems. Learned helplessness is just about the worst thing that can happen to a person in terms of exploration, growth, or joy during play or work alike. Games can act as catalysts for human growth and learning, but it is instructive to apply Juul's dimensions of failure to the two examples given above: failing a math test and failing to defeat a boss in *Dark Souls*. While all three dimensions are useful to know about, in the case of this analysis it will be the first two which provide the primary argument.

Internal or External?

While it is theoretically possible to claim external causes for failure in both cases (it's easy to imagine a student griping over the unfair or simply unclear wording of the questions on a test, and equally so to conceive of a disgruntled gamer complaining about bad game design), for the sake of discussion I have specifically selected examples which lend themselves more to internal feelings of failure. In the case of the math test, we can assume that I failed because *I did not know the answers and I could not figure them out*. It is a math test— there are rules and numbers involved such that there are, in fact, correct answers to be had. However, in the case of the boss from *Dark Souls*, I fail because *I am not yet good enough at the game*. These are both internal feelings of failure: they are easily summed up by the thought "I am not good enough." According to Juul's dimensions of failure, internal attribution is more likely to lead towards that phenomenon of learned helplessness: when I conclude that I am 'not good enough' at *something*, a common next step is to extrapolate that feeling outward and conclude (if only internally) that I am 'not good enough' at *anything*. (This transitive worthlessness may occur as a facet of one's own anxiety or as a symptom of imposter syndrome.) Still, the repeated deaths, the repeated failures, in *Dark Souls*, did not lead me toward a sense of generalized helplessness. Instead, the failures fueled my desire to

triumph in a manner alien to my experience with mathematics in school. Why? To attempt an understanding of this phenomena we need first to examine the other dimensions of failure.

Stable vs Unstable?

The difference between stable and unstable notions of failure is the key to why one manner of failure excites while another deflates. In this case: For me, a 'failed' math test feels more final and consistent than a "You Died" screen followed by a quick respawn at the same location. (*See Fig. 3.)* Even though one can of course improve at math over time and through practice, there is a finality that comes with the failing of an actual pen and paper test that brings with it an irreversible quality: even if I improve at math tomorrow, this 'F' will always be there in the background, feeling like the eternal stain of shame rather than the transient and triumphant stain of sweat expelled during prodigious effort to improve. In other words, every sensory and aesthetic aspect of a failed math test, from the red pen marks to the alphanumeric value recorded in my (adolescently imagined) permanent record, seemed practically designed to engender a sense of helpless misery in me. I acknowledge that this is not the case for everyone. The death screen in *Dark Souls*, however, offers a moment of reflection followed by the ability to immediately try again–there's no record of your failed attempts to be battered with, just a clean slate and the same test sitting before you, waiting for another attempt to defeat it. When I enter the dragon's lair, too, I can see a stone arch hidden on the other side of the cavern. I can intuit that it leads somewhere, and, by virtue of the implied contract of game play ("this game is possible to complete") I can further intuit that it must be possible to defeat the dragon. It may seem harsh at first, but I think there is a certain honesty and almost softness in the way that a game like *Dark Souls* invites its player to brush off failure–or better yet, to adulate it–by making it so palpably clear that the failure the player is experiencing is, as Juul would say, *unstable:* meaning 'subject to improvement through practice.' It is temporary failure. Again, aesthetics and design decisions play a huge role here: some games throw your repeated failures in your face, yet do so only once you've succeeded, adding to a sense of triumph. In *Super Meat Boy* (a devilishly hard and therefore satisfying platformer), your failures are tallied up and shown to you directly.

The gameplay involves navigating a cube of bruised meat through level after level full of spinning blades, deadly chasms, and other assorted death traps in order to save Meat Boy's main squeeze, Bandage Girl. *(See figure 4.)*

(Figure 4: Screenshot of Super Meat Boy*: At center, Meat Boy. At far right, Bandage Girl.)*

Deaths are frequent, and so are the splatters of red meat goo that your protagonist leaves every time he is eviscerated or blown up. The levels are quite difficult, and eventually the screen ends up an almost indiscernible mess under the deluge of blood and goo your failures have left behind. This would be frustrating, except that in designing the game, Edmund McMillen chose to make death (mostly) painless. There is no reloading time between attempts, no "you died" screen, no life counter ticking down towards an eventual loss of progress via a 'game over' a la most old school platformers— nothing of the sort; the level just restarts, instantly. That's it. Then, upon your final glorious completion of a level, after dozens if not hundreds of attempts and subsequent splattery deaths, the game pauses before the next level starts and then, in a stroke of genius design, shows the player a playback of every attempt they made happening all at once in front of them. Hundreds of Meat Boys all appear at the starting zone and what follows is a disturbingly pleasant reprise of every mistake made: a dozen die immediately, splatting on the first jump. A dozen more make it slightly further, only to be chewed up in the teeth of a marauding buzzsaw. Several make it as far as the missile launcher, only to evaporate under a withering barrage of projectiles but one–

just one–breaks away from the doomed pack and gracefully completes the level, just as you, the player, just did. It is oddly poetic and deeply satisfying, largely because it makes so obvious the improvement which has occurred during play. Thus, the act of failing in a game may lead to an internal feeling of failure, but, if properly designed, that failure can actually be leveraged into something satisfying and encouraging by virtue of being clearly delineated as *unstable failure* subject to improvement through practice.

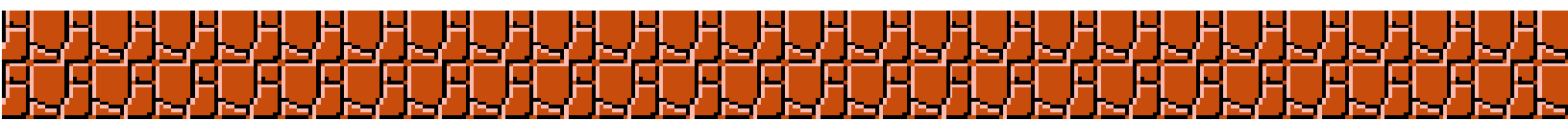
Global vs Specific:

Whether a failure is conceived of by its subject as being 'global' (I burned my eggs because I am generally incapable) or 'specific' (I burned my eggs because I am bad at cooking eggs) is the important factor in whether or not that failure then contributes to feelings of learned helplessness. It is fairly easy to see why— in the first case, the failure is immediately generalized whereas in the second, it is kept compartmentalized; there's no reason why being bad at cooking eggs should imply that one would also fail at, say, understanding epistemology or driving an ice cream truck. However, it is my opinion that the global/specific delineation is the most subjective of the three dimensions laid out by Juul; it is the one most likely to be created by the subjects own conceptions of themselves and their psychology rather than by the task at hand. Juul points out that this is not always the case and offers examples of games that knowingly berate their players, calling them stupid or incapable. He notes that this behavior prompts differing responses depending on the player. Some rise to the ribbing as a challenge to be overcome where others submit to the derision and conclude that they are, themselves, incapable (Juul, 54-55). In other words, although I think there is a great deal of prejudice players bring upon themselves regarding whether or not a failure reflects only a failure of a specific task or a more global inability, games (and more broadly, their principles of design and aesthetic approaches) can be leveraged to create experiences of failure more likely to push a player towards either the global or specific view of their own failures. In this way, a failed math test suffers from the cultural baggage that mathematics carry as a subject— even when I failed a test in geometry, a subsection of mathematics my adolescent mind wrongly categorized as

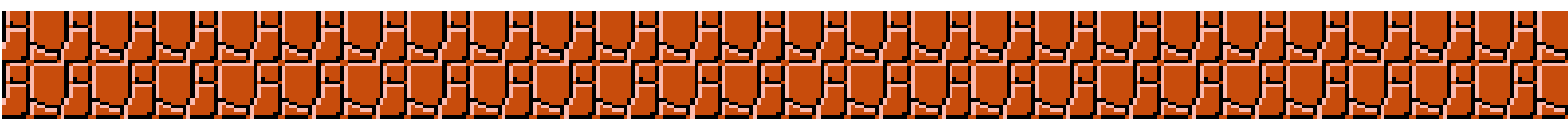
existing somewhere separate from ‘normal math’, I still walked home from school convinced that I was so terrible at math writ large that I was certain I’d never be able to do taxes right. In other words, math tests inflicted upon me a generalized feeling of failure which often transcended the individual sub-genre of mathematics in which I’d actually just failed. Games, on the other hand, gain a valuable ally in the form of our cultural notions of play, which, as Juul points out, allows failure to lose some of its finality and assumed broadness, therefore depriving failure of some of its cruelty and some of its teeth. Juul is also quick to point out, however, the complexity of the issue, and does so far better than I can:

> Games are remarkably similar to other, more “serious” rule-based pursuits such as politics or education. As such, much of the psychology of game playing is closely related to these other activities, but it remains a defining feature of games that their tangible consequences (such as playing for money) are negotiable rather than fixed. What is not fixed, but not purely negotiable either, is how personally valuable we consider it to succeed in a given game. Our emotions towards failure also hinge on a broad and open question with existential implications: the third distinction in the theory of learned helplessness was whether we perceived our failure as local, pertaining only to the specific challenge of a specific game, or as global, a reflection of our general skills and intelligence. This is not the standard question of whether games can teach us useful skills, but the reverse: does the fact that I failed mean that I came to the game lacking skills, intelligence, charm, or any other personal quality? More generally, was this a failure of me being who I want to be? (Juul, 66)

This dual comparison Juul makes by first denoting the similarities between games and pursuits like politics or education and then by inverting the question of whether games teach us if game failure implies personal inequity is an interesting one. Many people tend to ignore the implicit question posed by their own failures while playing games and others feel this inequity in relation to their failures only passingly. Nonetheless, as Juul points out, it is as much how we choose to feel about play and about our performances during play that shapes how well or poorly we feel about those interactions afterwards. In



this way, whether or not failure is positive or negative is very much a question of mindset. This is not surprising information, but it is salient nonetheless: how we play games, and how we feel about the space we enter when we play games, affects whether or not we consider digital (or analog) experiences of play to be ‘real.’



III - Space, Place, and the Reality of Digital Experience.

My four year old nephew has a question:

"Why doesn't the tree fall down when you cut down the bottom part?"

He is watching me 'cut down' trees in Minecraft, which is accomplished by punching them until they break apart block by block. Blocks in Minecraft, by the way, don't fall if there's nothing beneath them. They just float, perfectly still, fixed in space. It's odd even if you aren't four. But I try to explain.

"Because," I begin, "in this game, gravity doesn't work like it does in real life."

"Why?"

"Because the designers who made the game chose not to make gravity work that way in their game."

"Why did they do that?"

I have to pause.

"Because, Oliver, games aren't 'real life' they're like...."

"A make-believe version of real life?"

That answer is closer than most I hear from adults. I nod.

"Why isn't it real life?" Oliver asks.

"Because it is a video game." I reply; the boy is maybe a tad young for discourse on the validity/authenticity of digital vs analog experiences. He is four, however, and will not drop the point:

"It looks like real life, though."

"Does it really?" I prod, "Is everything in real life made of perfectly square blocks?"

Oliver must consider this.

"...No." He finally manages. "But it looks almost like real life kind of!"

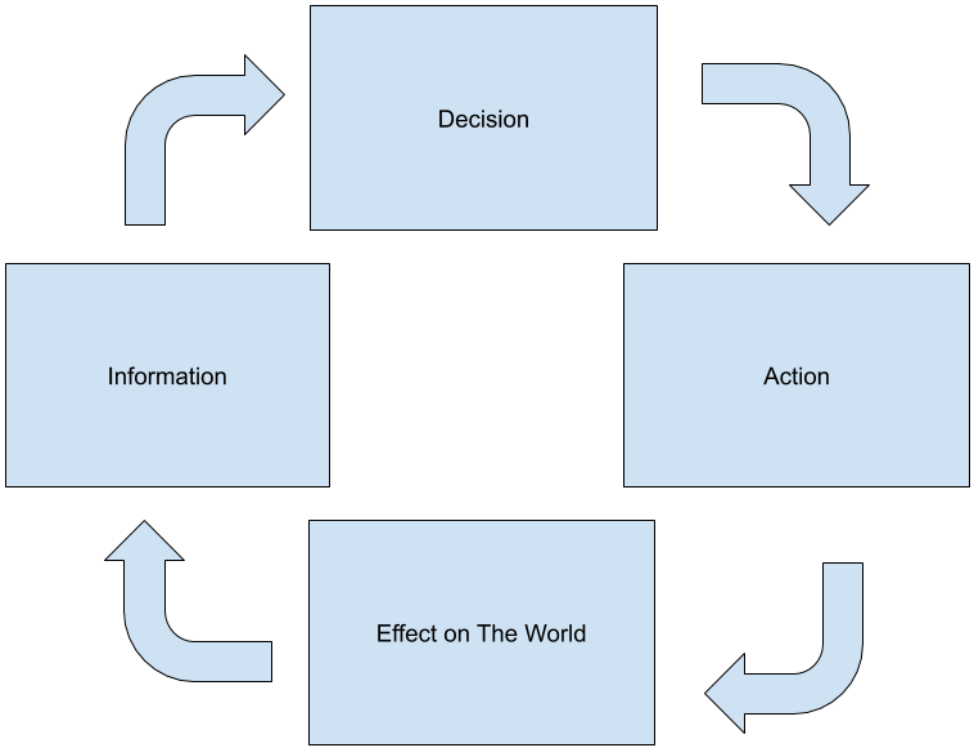
'Almost real life kind of" is also a pretty good definition of video-game spaces.

Calculated Impossibility

For Oliver, the lack of gravity in *Minecraft* constituted a (mild) existential crisis of sorts: confusion mixed in equal part with fascination. (*See fig 5.)* I was glad it did not include crying. It is a familiar existential crisis, one that for me was aroused by games like *Portal*, *The Beginner's Guide*, and, more recently, *Control*. All these games use 'non-Euclidean' geometry in order to create impossible 3-D spaces; rooms that change shape or exist in three places at once. For example: a narrow corridor that leads from the arboretum to the spa if taken running north to south but takes you from the spa to the library if you traverse the same corridor south to north. Escher would have a field day.

Video games allow for interaction with calculated impossibility. They can house the requisite math to mess with normal notions of space and time. More so than the pause, rewind, or fast-forward buttons of a television remote ever could give, the digital worlds and rules within video games provide humanity with a sandbox to act as sterile and insular gods. Sterile because the game worlds are perfect– they are bound by booleans and math, simple truths of numbers and hardware limitations which broadly disallow the sort of nuance and complexity inherent in generating the unpredictability of life. Sure, a secret may be discovered here or there, but these are often more like 'exploits' rather than complex natural laws which govern 'real' life. I say 'insular,' because we only become gods so long as we are interfacing with these digital worlds through our peripherals—monitors, mice, etc—and this sense of control is limited and do not extend into the 'real world,' (for the most part.) The resulting self-centered 'cybernetic loop,' as theorized by Jean Baudrillard in his essay *Xerox and Infinity*, is as pleasant and empowering as it is addicting.

A cybernetic loop is a means of understanding the flow of behavior within a given self-regulating system. In the context of gaming, the cybernetic loop occurs between the player, the controller, and the screen/game. (*See Fig 6.)*



(Figure 6: Visualization of a cybernetic loop and how the steps flow.)

This loop consists of the following four steps:

1. The player notices an obstacle on the screen. (Information is received.)

2. The player decides they need to jump. (A decision is made based on the obstacle.)

3. The player presses the "jump" button on their controller. (An output/action is taken.)

4. The player checks the screen to see whether they made the jump. (The effects of their action on the world are observed.)

This fourth step is essential. Did the player's character make the jump? If so, what does the screen say is coming next? In order to determine what to do, the player will once again look to the screen for information before making their next decision, completing the loop. Cybernetic loops offer a very tight and tidy way to exist within the perfect impossibility of video game worlds.

Humans, however much we pretend to be dynamic and social creatures, seem to rather enjoy the control, the sterility, *and* the insularity of digital worlds. I think there's a strong case to be made regarding

Baudrillard's further notion that, "Thanks to his computer or word processor, Telecomputer Man offers himself the spectacle of his own brain, his own intelligence, at work," (*The Transparency of Evil, 54)* is a sentiment nowhere more manifest than in the realm of computer gaming: by playing games and improving within them, we are allowed to become obsessed with ourselves, sometimes to the point of ignoring, if not altogether sublimating, the 'other.'. But this moral caveat is wandering, slightly, from the broader point I am attempting to make about the dynamics and distinctions between digital space and digital place.

(Figure 5: A floating tree in Minecraft.*)*

Worlds: Spaces Full of Places

The gravity does not work in *Minecraft* like it does in real life. One of the results of this is the occasional appearance of floating continents—entire airborne biomes—that hover above the normal terra firma of the *Minecraft* world utterly motionless. Like the fanciful landscapes in Hayao Miyazaki's *Laputa* or the aerial waterfalls common to modern fantasy art, these impossible islands capture the interest and the imagination of the players that find them. This is not unique to Minecraft, of course. An entire

occupational genre known as world-building has cropped up over the last twenty years as more and more fantasy universes are being made into traversable spaces and recognizable places through digital gaming. Examples include, but certainly are not limited to, the dual continents of Kalimdor and the Eastern Kingdoms which make up *World Of Warcraft's* Azeroth, the manifold planets and space stations of *Mass Effect's* Milky Way, and the sprawling temple complexes of the *Legend of Zelda's* Hyrule. These larger digital worlds consist of smaller units of space and, via the subtle machinations of their myriad developers, senses of individual place. Simplified: a world is a space populated by places. But this answer doesn't *really* help distinguish the difference between a space and a place. An example of how different the two feel may serve better:

The Orcish capital of the world of Azeroth is a city called Orgrimmar. I used to live there, more than part-time. The city itself is nestled to the north of the Durotar peninsula, and sits to the south of the treacherous cliffs of the Azharan coast. It faces the open ocean to the east and is bordered by both the arid Barrens and the verdant, wisteria-toned forests of Ashenvale. Orgrimmar is a place millions of people have passed through, forming and maintaining as they did intense personal relationships not only with each other, but with the architecture and native inhabitants of the city as well. The locals—human players and NPCs alike—call it 'Org.' Like I said, I lived there. I know old madam Gryshka better than I've known most of my real-life landlords. She's good to her word, swift with a billyclub, and cooks a mean roast quail.

I know the streets of Org— I know the bustle of the Valley of Strength where the red and tan buildings are framed in wood and bone and stand tall a short distance off from the two monolithic pikes upon which the heads of certain perennial enemies of the city— the two dragons Onyxia and Nefarian, respectively— are occasionally staked. This occurs from time to time as whatever du jour party of adventurers returns to the city from those great wyrms' lairs victorious. I know, too, the bank and the auction house that sit in the center of the Valley of Strength; they both have high ceilings and are both always crowded, even at three in the morning. Need a lockbox opened? There are always rogues perched atop the crates outside the auction house. If there's another service you're after, it's easy enough to find

the player you need barking their skills and professions from atop the roof of our aforementioned bank. I even know the Cleft of Shadow, that violet-hued and shaded underbelly district of Orgrimmar where the master thieves and murderers dwell. They ply their wares there alongside the occasional demonic consultation expert. I have visited Rekkul, the poison vendor, on more occasions than I can count. The tinctures he sells have saved my avatar's life in tight scrapes.

The Alchemy of Space and Place

Orgrimmar is a place situated within a world of digital space. But how did Orgrimmar (*see Fig. 7)* change from being just another digital space designed by a few level designers, 3-D modelers, and artists, into a place enveloped by some special feeling or meaning? To wit, a 'space' becomes a 'place' when certain elements of human experience are attached to it by individuals; in this way Orgrimmar is every bit as real a city as New York or Beijing. Renowned theorist Yi-Fu Tuan wrote extensively on topics adjacent to this issue, and though he wrote well before the advent of video games, his writing provides clarity both humbling and remarkable. In describing some responsible parties involved in a space's change into a place, Tuan writes:

> Trees are planted for aesthetic effect, deliberately, but their real value may lie as stations for poignant, unplanned human encounters. Highway lamps are functional, yet at sundown their vapor lights can produce colors of dizzying beauty... The trough of dust under the swing and the bare earth packed firm by human feet are not planned but they can be touching. Intimate experiences, not being dressed up, easily escape our attention. At the time we do not say, 'this is it,' as we do when we admit objects of conspicuous or certified beauty. It is only in reflection that we recognize their worth... Humble events can in time build up a strong sentiment of place. (Tuan, 142-143)

I know Orgrimmar better than I ever knew London, Tel Aviv, or New York City, and I feel every bit of nostalgia for this digital city that I ever have for a brick-and-mortar one. Walter Benjamin, spinning

in his grave as I write this, would never have classified me as one of his gentle, listless, poetic *flaneurs* during my brief perambulatory stints in the aforementioned cities. But Orgrimmar? Good old Org? I positively did walk those streets during all hours of the day just to 'feel' the digital dirt beneath my digital feet and to dream my digital dreams of distraction, heroism and home. I had chance encounters with other players, trading with some, dueling others, joking with others still. I met the same NPCs day after day. I saw Orgrimmar during each in-game holiday; I know where the barkers for the faire and the recruiters for the battlefields and the repairmen stand to this day. It was through inhabiting the space that it became a place, and, just as importantly, it was not through any single period of habitation that this feeling became known to me. Instead arriving astride a slow and inauspicious period of germination inherent to the repetitiveness with which I found myself walking those dusty streets. Day after day I needed new poison, or to check the mail-box at the center of town, or to pick up some food. I needed an inn, for another night. There was always this or that to do, so I passed my time in Orgrimmar and in time, Orgrimmar passed into me— It is a very real place, even if I can't find it in an atlas.

(Figure 7: View of Ogrimmar's Valley of Strength, with bank at center.)

IV - Sacred Places

I am on the island, again. Alone. It is an island of many, many colors. There are no other people here, there is barely the sound of my own footsteps to distract me. This is a video game, of course, but a somewhat unusual one: there are no enemies to hound me on this island, there are no plots to be foiled or princesses to be saved, there are no side quests and no story, no real dialogue and no easy-to-identify goal. Instead, the island is filled— not bloated, or chock-full to bursting, but brimming like a bushel of fresh apples— with puzzle boards. These puzzle boards depict mazes— more or less— and my time on this serene, nameless island is spent going from board to board, attempting to solve these little mazes. At first these puzzles are simple, even obvious. An hour in and I am stumped; I remain so for several hours. I find the solution; it was right in front of my face but I wasn't looking for it correctly. Instead of just completing the maze, the puzzle demands that I compare the shape of the maze to the shape of the shadows cast by a nearby trellis: when I position myself correctly the shadow and the maze line up perfectly, and the solution becomes obvious. This pattern repeats: find a new puzzle, get stumped, think outside the box, succeed, next puzzle. I am learning. Every success is a dopamine rush better than any drug. The island is forcing me to grow. This is The Witness, *a game developed by independent gaming's larger-than-life auteur, Johnathan Blow. (See Fig 8.)*

(Figure 8: Screenshot of a shadow maze from The Witness *with solution filled in.)*

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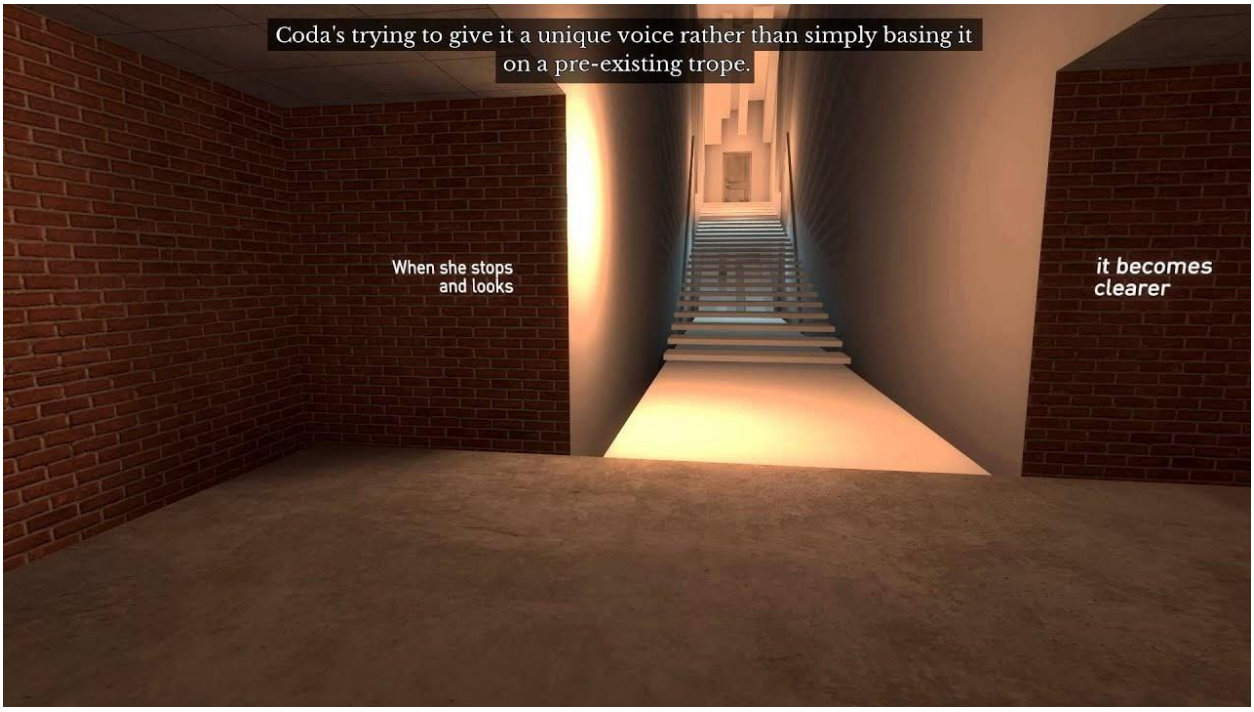
Several years earlier, another unfamiliar place: this one is not an island, it is a brick-walled basement, utterly featureless except for the poorly-rendered red bricks stacked flatly into sheets all around. The floor has no character to speak of and my character, whom I've just attempted to move, appears only capable of moving backwards. Tentatively, I back-pedal through the room as best I can. Text appears on screen, hanging in the air before my eyes. It is a short story about a girl who spent too much time looking back but never looking forward. A voice is explaining the theory behind why the level I'm 'playing' (if what I'm doing can be called 'playing' at all) exists. The voice is insisting on the relative psychological restlessness of this level's creator; apparently the narrator knew him (see Fig 9). I am uncomfortable. This is the third level like this in a row. Each one has a new, unsettling gimmick that pokes at the very nature of a game. In one, I must clean the same room a dozen times. In another, a simple series of corridors and rooms in what appears to be a run-of-the-mill science fiction spacecraft disappear to reveal thousands of miles of inaccessible mazes built all throughout an infinity of open space

surrounding me. This is The Beginner's Guide, *by Davey Wreden, and it is functionally a textbook on the experimental properties of video games and the assumptions we make as players.*



(Figure 9: The 'Backwards" level from The Beginner's Guide *with narrator subtitles at top.)*

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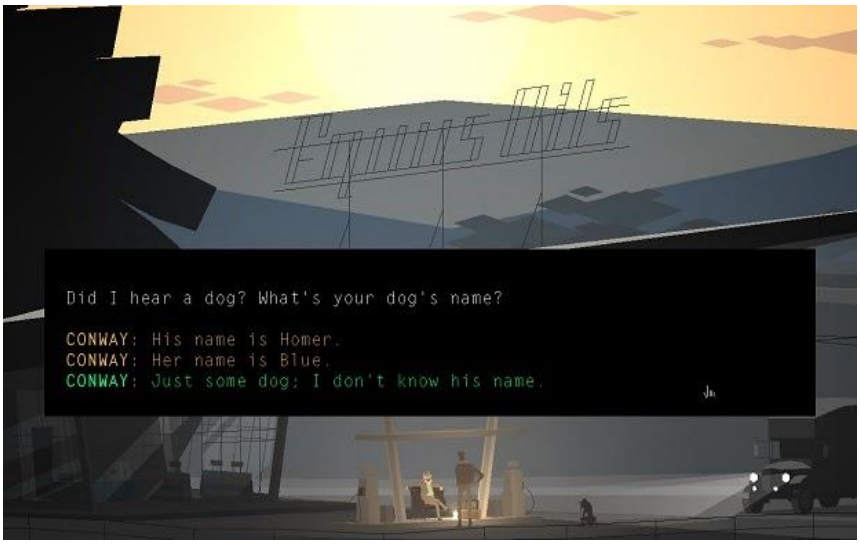
Back in my college dorm and the lights are off. Twangy blue-grass is crackle-singing through the speakers of my whirring laptop. It's raining outside, but this is inaudible compared to the rain sounds coming from the game, accompanied by all the other sounds of a night in rural Kentucky. I have stopped at a gas station to get directions, and my character's dog is waiting patiently beside our truck. I check on him, and the game provides a text box with a description of the pooch. Standard game stuff; next I'll be offered a choice about what to do next. The choice appears, but it includes no options for actions. Instead the game presents me with three optional descriptions of how my character feels about the dog ("You look tired, bud," or "You miss old Mrs. Darcy too, don't you?" or "Hungry again? Ungrateful mutt.") These are not options about what to do, these are ways my character feels. These choices are the freedom

to control not the narrative action or plot of the story but simply the interior emotional truth and cadence of it. (See Fig 10.) The gas station attendant, who is blind, tells me to use his computer to determine the address of the house I need to reach. The game demands I offer a password. Obviously neither I nor my character know the password, but this doesn't seem to matter: the game presents several seemingly disconnected streams of poetry for me to select and, in time, I have generated my own password which works. I have none of the control I've come to expect, and yet, I am too swept away to care. This is Kentucky Route Zero*: a southern-gothic point-and-click adventure; a narrative slow-burn merging surrealism, video game logic, and magical realism into a commanding and resonant tour-de-force that somehow manages to remain restrained and mysterious throughout.*



(Figure 10: Example of descriptive, rather than active, dialogue options offered in Kentucky Route Zero.*)*

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This one appears to be a simple platformer. There is a mountain to be climbed. My avatar appears and it is a cauldron. No, wait, it is a man in a cauldron. He might be naked, I can only see his top half. The other half is inside the cauldron. The man has a sledgehammer. Not climbing picks, not rope. A sledgehammer. I can control his arms, and only his arms, and I can only control his arms clumsily. Smooth jazz has just begun to play as a calming Australian man's voice spouts varyingly encouraging

and frustrating commentary about the trials and tribulations of the artistic process. I am anxious. Climbing is next to impossible, and I fall frequently. (See Fig 11.)

*Often these falls are calamitous, as once cauldron-guy starts tumbling it can be almost impossible to stop him from falling all the way back to the bottom of the mountain. This happens several times. I get frustrated. I try to pause the game. There is no pause. I try to save the game. There is no save feature. The game insists on being finished in a single sitting. It is impossible to die. Falling is only a setback, never a permanent defeat, and all the while there is the taunting of the smooth jazz and the baritone of the man's voice going on about the nature of challenges and productivity and practice and the malaise that comes with facing defeat after defeat. The voice belongs to Bennett Foddy, and this is one of his games, cleverly titled, "*Getting Over It with Bennett Foddy*." It is brutal and it is brilliant and, when I had the distinct pleasure of meeting the illustrious designer himself, I asked him what made him design games like this. He responded by explaining to me that there exists no satisfying definition for the phenomenon of pain; that even the medical centers dedicated to pain research fail to produce any satisfying definitions; that philosophers have defined everything under the sun (and quite a few things which aren't,) but have failed for countless generations to produce just such a definition of pain. He informed me that he made his games in response to this, as part of an on-going philosophical exploration of pain. It's all fun and games, isn't it?*

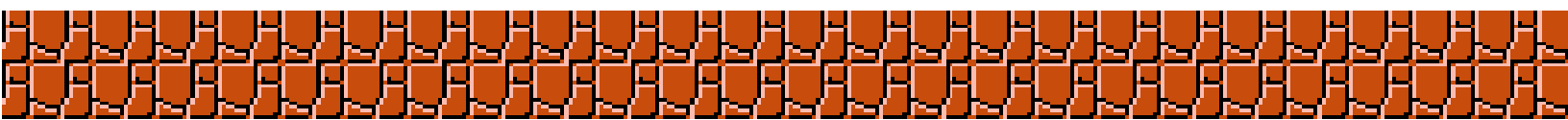
(Figure 11: The protagonist of Getting Over It.*)*

Experimentation & Maturation

These last four games (*The Witness, The Beginner's Guide, Kentucky Route Zero,* and, *Getting Over It with Bennett Foddy*) present experiences which are decidedly not the norm for most video games or their players. They are exciting, strange, confrontational, and divisive games. They are games which require radical new approaches to play; they are games which teach their player how to play them much in the same way that the experimental novels *A Clockwork Orange* by Anthony Burgess and *Pale Fire* by Vladimir Nabokov drop their reader into unfamiliar literary territory before forcibly teaching their reader just how exactly to parse them. These are works so original that they require in-house tutorials in order to be understood. Most games— just like most novels— are not nearly so contentious, but the fact that any examples exist at all which so drastically alter our collective conception of how their entire genre can function or affect us? That is content worth chasing after, even if it is hard to find.

There are some signs that the aesthetic landscape of gaming has changed over the last few decades and that more experimental games are edging up to the forefront. It seems video games and their creators have been engaged in a cultural process known as remediation, by which video games have played with, inverted, tested, and tweaked the fundamental assumptions of their own genre and form, as well as doing the same with assumptions borrowed from other media forms like literature and film. Remediation is a refashioning or refining of the boundaries and powers of media via the materials and aesthetics of the past; it is an act of experimental translation. This process occurs naturally as a new form of media arises and is tinkered with, eventually altering the perceived uses and limitations of that particular form. (*Bolter & Grusin, 1999.)* It's been through this process that some games and some game designers have reached radical frontiers of narrative and experience. One of the major discoveries in the remediation of games is that some of the forms video games can take—as shaped by their particular formal abilities and constraints—seem inherently well-suited to inspiring awe, introspection, iteration, and critical thought. They are also superb, as is frequently brought up by Juul, at getting players to deal with frequent failure and learn from it. Consider the game from the first vignette in this chapter: *The Witness.*

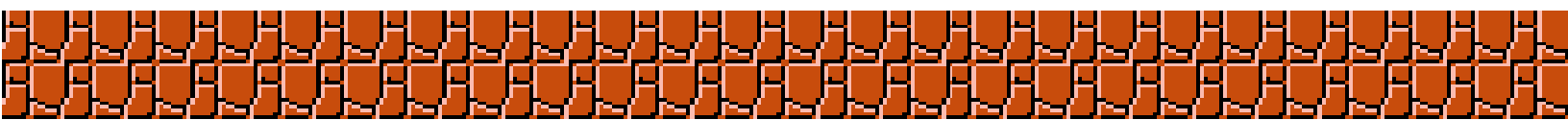
Described by Blow as his thesis in non-verbal communication (the game does a stunning job of teaching you to play and explore without a line of dialogue or instruction) and dynamic thinking, *The Witness* is the triumphant descendant of early immersive and meditative puzzle games like *Myst*. Unlike *Myst*, though, the island of *The Witness* succeeds in eliciting in many players feelings of awe and sacredness: of wonder at the latent energy and well-wrought mystery of Blow's world; of solitude and introspection and a sort of internal resonance more often associated with the interiors of theaters, temples, and meditation rooms than with the blue LCD glow of a modern monitor. There are some screens that are more blue windows than black mirrors, and this is one of them. If anything, *The Witness* is a sort of digital hermitage, one that demands the slow and thoughtful approach of its players. It is not unique among games, but it certainly stands out. Its island is a distinctly sacred place, yet it occupies no physical space at all.



Several games can easily be credited for the deft conveyance of sacred or awe-inspiring space. Beyond *The Witness* there is the charming nautical adventure *ABZU*, the classically sparse and intoxicating *Shadow of the Colossus*, the heart-wrenching wandering beauty *Journey*, and even the slightly less popular but no less impressive *Beginner's Guide* referenced above. There are the non-euclidean brutalist mazes of *Control* and the equally labyrinthine meanderings of superb episodic point-and-click adventure *Kentucky Route Zero* (also referenced above), a game with a story that reads like Flannery O'Connor and William Faulkner gave birth to a depressed vaporwave baby in the post-recession American south.

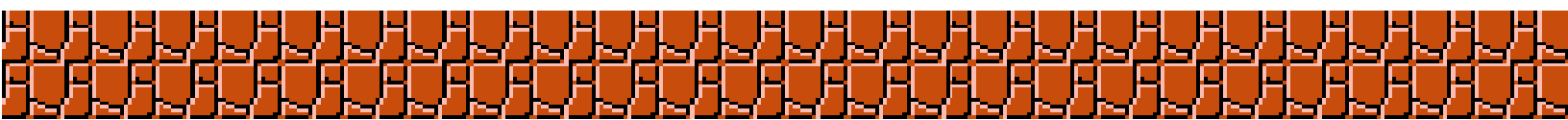
Other games, more concerned with depicting broader swathes of experience (again, think giant adventure games like *World of Warcraft* or *Red Dead Redemption*) still sometimes end up containing sparks of this sacredness. In their most purely aesthetic form, awe and sacredness are on full display in many of the archaeo-action-adventure games like *Tomb Raider* or the *Nathan Drake* franchise, though this is achieved by literally depicting entire ancient temple complexes situated within fantastic geographies rather than by, (as in the case of *The Beginner's Guide)*, presenting game spaces which feel not only uniquely 'game-ish' but also inherently somber and introspective. In other words, although I may have gasped scaling this golden temple or that giant statue in *Tomb Raider*, I didn't give much thought to the role of divine providence or my eternal soul while I played because I was too distracted by the fact that aforementioned awe-inspiring sacred site was currently exploding. The island of *The Witness* doesn't explode. Actually, the island doesn't do much of anything. The island just *is*. The island invites, but it does not titillate. It suggests, but it does not demand, much in the same way a meditation room suggests.

On the other hand, *Getting Over It with Bennett Foddy* is an intentionally maddening experience designed to force its player to breathe deeply and remain calm if they do not wish to throw their controller out of a window after they fall down the mountain *again*. *Getting Over It* isn't the first game to be conniption-inducing in terms of overall difficulty, nor is it the first game to feature counter-intuitive controls. It is, however, one of the few games which makes these ordinarily terrible design choices intentionally in order to glean a specific effect; *Getting Over It* is frustrating on purpose, in roughly the



same way that having a zen master tell you to build a house each day and then knocking it down each night is frustrating on purpose: a key part of many sacred practices is the learning of self-restraint even when under duress or adversity. Thus, even though *Getting Over It* takes a more sadistic approach than the taciturn island of *The Witness* to improving its players, both games *are* about improving their players, in a way that is more reminiscent of religious or meditative trials than they are reminiscent of, say, *Yahtzee*.

These experimental games push boundaries, certainly, but the actual games themselves are only one way of pushing the cultural form. There are others, chief among them for our purposes being the ways we play our games and the ways we watch each other play games.



V - Speedrunning

It's a Saturday night in the summer and I'm staying in.

Instead of meeting friends downtown, I'm at home watching an adult man named Cheese05 *in a Pikachu hat play* Super Mario *in front of a thousand cheering fans. Live fans: they're seated behind his couch where he sits clutching his controller; a commentator's voice can be heard reading out donations.*

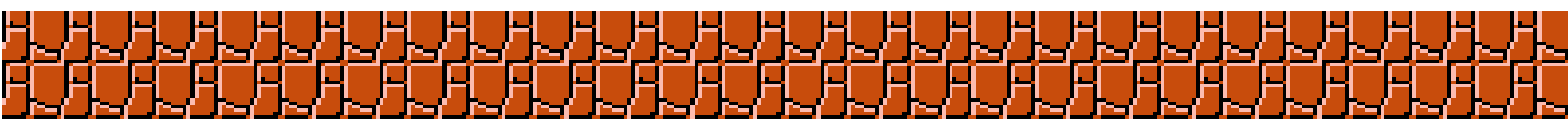
In addition to his Pikachu hat, Cheese05 is wearing an expression of intense concentration. His body barely moves as he lines Mario up to jump into the castle walls; it looks like everybody's favorite plumber is about to get a concussion.

But, when the man presses 'jump,' Mario passes harmlessly through the stone wall. The chatroom embedded in the video feed starts refreshing at an alarming rate; in the bottom right corner of the screen a ticker jumps up to "$3,000,000." The crowd goes berserk; another ticker adjacent to the first informs me that I am only one of the 150,000 people tuned in online...What the Hell?

Twice a year, thousands of people cram themselves into tightly packed rows at a convention center to spend a week watching professional gamers race to beat their favorite games as fast as possible, for charity. This is Games Done Quick (aka GDQ), a biennial speedrunning marathon.

Millions of viewers around the world join in throughout the week via the Amazon-owned ESPN of video games, Twitch.tv. These viewers come to spectate the races, chat with each other, and contribute money. There are special donation goals to unlock challenges for the guest runners; when a certain amount was reached, the audience was treated to a run-through of a boxing video game played blindfolded. Yes, blindfolded. The runner didn't lose a match. Last year, the Summer Games Done Quick marathon raised a whopping $3,039,596 for the international aid group Doctors Without Borders. In a week. I had "Pinball Wizard" stuck in my head for at least a month afterwards.

I remember because I was humming it when I sat down to eat my lunch and watch one of my favorite streamers—GrandpooBear (GPB)— *play a bit of* Super Mario Maker 2.



The game combines a custom level builder with online sharing, so it's possible for people from all over the world to build their own Super Mario levels and share them with one another. Basically, it's Super Mario for the crowd-source enthused; limitless possibilities, thousands and thousands of new levels every day, all the nostalgia (and challenge) a veteran player wants— the thing is a smorgasbord for nerds like me.

So I start eating— and I'm still humming as I open the video player. I just finished humming the bit where Pete Townshend and Roger Daltry sing about supple wrists when the level GPB is running finally loads. I get a good look at it and it looks ugly. GPB thinks so too. Like, even for custom Super Mario levels it looked ugly which, frankly, is impressive given that these things tend to stand visually closer to Picassos' Guernica *than to, say, Monet's water lilies. The runner began attempting to clear the level by scaling the map ledge by ledge but was thwarted continuously by the extreme difficulty of each individual maneuver. Over and over again he fell, his Mario steadfastly ricocheting downward without losing his compunction. Or dying. Oddly, the level didn't seem to include any ways to die: mistakes only forced the player to start over. There was no time limit, either. I was perplexed. So was the runner I was watching. For several minutes I sat, perplexed, watching him while he sat, perplexed, trying over and over to beat the level. This didn't feel like Mario, despite the red bricks and turtle shells and mustachioed plumber. This level felt like a different game. And that's because it was: Neither of us had noticed it yet, but the level GPB had selected was nothing less than a painstaking adaptation of* Getting Over It with Bennet Foddy. *Sure, some of the individual mechanics (like the smooth jazz and philosophical musings) had been omitted because of the technical constraints involved in translating the game from its native environment into Super Mario's, and yet massive swaths of the game were utterly recognizable: the janky, uncomfortable movement. The crushing difficulty. The inability to permanently fail. The intentionally cluttered and visually incoherent layout. There was even a shot-for-shot inclusion of one of* Getting Over It's *most notorious moments: a spring-loaded ledge three-quarters of the way to the top of the mountain which launches unsuspecting players all the way back down. Only, in the* Super Mario Maker *version, the designer had replaced the aforementioned absent jazz and musing with a faithful note-by-note cover of*

*the 2011 viral hit, "*Chocolate Rain*," by Tay Zonday. Oddly enough, this dated meme song conjured the same feeling of defeat, frustration, and semi-familiar discomfort that the actual voice-over had in the original version of* Getting Over It.*. GPB and I, (though I was only watching and not playing at all,) were equally stunned by the depth of quotation, and the diligence, and the creative problem solving employed by whoever made the level before us: we knew we were seeing something strange and unique. This is another side of speedrunning; the wonder and confusion and community and cross-genre dialogue that is engendered by the pure love—bordering on obsession— shared by its participants at every level: the designers, the runners, and the audience members like me who watch from afar, contributing only with our wallets or our keyboards but experiencing the sport all the same.*

What is Speedrunning?

When I try to explain the appeal of speedrunning, or of watching speedrunning, to my parents, friends, professors, flight attendants and strangers on the street I tend to receive the blankest of blank looks followed by the same two questions in rapid succession:

1. "What is 'Speedrunning'?"
2. "Why would anyone want to watch someone else playing video games?"

Although I've answered both of these questions—at least partially—in a Medium article entitled "*What the Hell is Speedrunning? An Introduction for the Rest of Us,*" (from which the first italicized section above is excerpted) I feel it prudent to reiterate these points. Therefore:

1. *Speedrunning* is a competitive form of gaming centered around individual players attempting to complete specific games in the smallest amount of time.
2. People watch other people play video games–specifically speedrunning games–for a multitude of reasons, but chief among them are that speedrunners help lay-players see their beloved games in

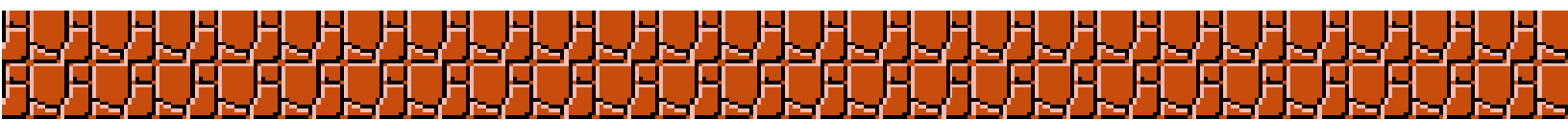
whole new ways, speedrunning is a sport defined as much by the participation of its community as it is by the runs and runners themselves.

Where's the Skill?

Often, speedrunning is compared to traditional sporting events and therefore, by proxy, the people who speedrun (runners) are compared to athletes. Invariably, under this line of reasoning the following question is asked: *Where's the skill?* Or, more plainly: *What's special about a speedrunner? Does anything set them apart from someone who plays videogames 'normally'?*

It's easier, I think, to understand what is special about an exceptional physical athlete because we are all fluent in what it means to move, and to move well or poorly. The average person can watch Usain Bolt sprint and say to themselves "*Ah, look: that man is running so fast. When I run, I cannot run so fast. No one I have ever met can run so fast, and almost everyone I know runs at least a little. Therefore, this Usain Bolt fellow must be quite special."* It's likely harder for that same average person to understand immediately the skill involved in something as esoteric as speedrunning, especially since the sport itself is fairly reliant on the viewer being at least moderately fluent in the mechanics and play of video games writ large, but the skill is there all the same. Speedrunning— let alone speedrunning at a professional or competitive level— is seemingly unattainable to even most seasoned players of video games. A competent runner must not only be utterly fluent in the controls of the system on which their game of choice is played, but they must also know the game itself back to front: every room, every enemy, every puzzle, every wall, every item, everything must be taken into account. The best runners share deep knowledge of the underpinning technological aspects of their sport: it is nearly a requirement that a player interested in speedrunning must have taught themselves enough about the coding which underlies the physics and physicality of the games they play; a fantastic example of this is displayed in Linkus7's 2020 AGDQ run of *The Wind Waker*.

During an early section of the game Linkus7 performs a nuanced trick in order to speed his way across the open seas, bypassing most of the 'necessary' plot and action. To achieve this, Linkus7



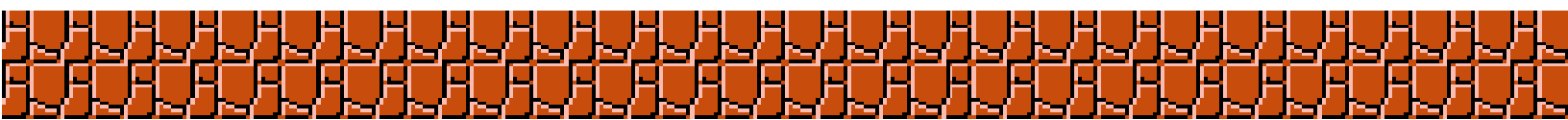
positions his avatar waist-deep in the water against a slope and proceeds to change the direction the avatar is facing at high speed. He explains to the audience that the reason he is doing this maneuver is because whenever his character turns around he gains a tiny amount of backward momentum. Normally, this would be negligible, except that Linkus7 and the other speedrunners of *The Windwaker* have discovered a developer oversight: no one at Nintendo thought to cap backwards momentum the same way that they had carefully limited forward momentum. In other words, it is possible to generate limitless backwards momentum provided the player's avatar is rotated at a rate so fast that Linkus7 is forced to pause-bufferthe game in order to ensure optimal rotations and speed. After about 45 seconds of concerted, precise button-mashing, Linkus7 makes a final adjustment to his avatar's positioning and then releases the controller causing his avatar to rocket, butt-first, across miles of open ocean in about three seconds, skipping several long sequences and saving untold minutes on the total run. (*Linkus7, 5:49-9:48.)* This trick is only possible because Linkus7 has the combination of physical dexterity, spatial awareness, muscle memory, and technical knowledge of the underlying code required to execute it. Examples like this one litter the speedrunning scene, and describing one helps bring attention to just how skill-based and rigorous speedrunning is, as well as why it is entertaining to watch.

Inputs as Mind-Control

When a speedrunner is navigating their game of choice they are basically trying to do the same thing any other gamer is doing when attempting to 'win' a video game: that is, to perform the correct series of inputs on their controller in order to attain their goal. Speedrunners practice, day after day (and sometimes well into the night) the same series of inputs (called a 'route') that has been optimized by the runner, or usually, by the runner in concert with a global community via online chat providers like Discord. They do this practice in order to improve their total time per run, much in the same way a track and field athlete practices specific events or sections of a track over and over again in order to improve their time in each heat. Technically, though, this action is much the same as what a 'normal' player attempting to traverse a video game in the way intended by its designers would: even though the

speedrunner warps through walls, skips the plot and most of the action, both speedrunner and average player alike are simply going through the motions of responding to stimuli (audio/visual/kinetic) provided by the game with whatever inputs they believe the game requires of them. Of course, there are exceptions. Early in the timeline of adoption for a given game, whether it's taken on by a speedrunner or average joe, there will be a subsection of time spent experimenting with the controls in order to learn them by feel. Many games provide tutorials or tutorial levels entirely designed to help expedite this period of experimentation. At the end of the day, though, it's worth noting that speedrunning essentially provides one of the most unadulterated and obvious means to see that video games can (and often do) constitute a sort of audio-visual mind control. Players are shown stimuli in the form of (occasionally abstract) visuals and sounds which provide a mix of warnings and goals to the players (i.e: *don't* step on the spikes, *don't* fall in the hole, *do* reach the kidnapped monarch waiting on the other side of the screen, etc) and then, as nearly conditioned responses to these stimuli, the player in question responds with their own inputs on the controller. In some ways, the interactivity of video games offers what pioneering cyberneticist Norbert Wiener thought of as, "a very hopeful thing," namely, "to make an automatic feedback control apparatus in which the feedback itself was carried out, in large part, by successive switching operations such as one finds either in the nervous system or the brain," (*The New Media Reader, 69.)* These interactive processes, similar to those theorized and described in J. C. R. Licklider's 1960 essay *Man-Computer Symbiosis*, become second nature, and, in this way, when a *Super Mario* designer decides to put a fatal pit between 'here' and 'there', that fatal pit becomes a visual command for the approaching player to press the 'jump' button, which they will do without delay.

This relationship between what's on the screen and how runners/players react is perhaps most easily seen in examination of the complex visual vernacular used in the so-called '*Kaizo' Super Mario* scene; a niche of gamers and hobbyists dedicated to the creation and completion of custom-made *Super Mario* ROMhacks. These *Kaizo* hacks are renowned for their extreme, grueling difficulty, and many gamers consider their completion of certain *Kaizo* games to be some of their greatest achievements. In attempting to watch these games, though, the viewer is immediately inundated with the sheer number of

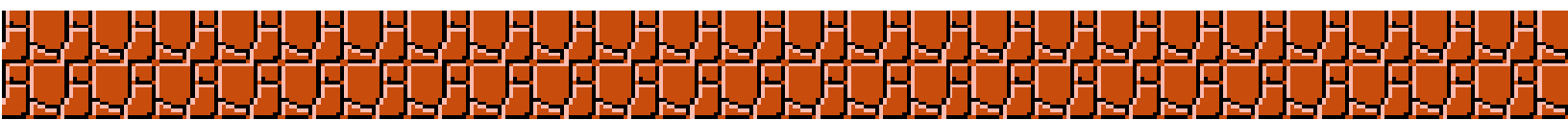


different sprites and textures available for use in the *Super Mario World* engine. It is difficult, if not impossible, for a new viewer personally inexperienced with the source material to derive exactly what input is being demanded via each visual symbol, but for seasoned players it is a symbolic language of exchange that they enter without hesitation or confusion: *See how those spikes are arranged? That 'L" shape they're in means holding down the 'b' button followed by a tap of the 'a' button in order to make it over them without dying. The blue coin next to the jump means it needs to be a spin jump rather than a regular jump. The flying turtle-man at the edge of the screen implies a required follow-up jump to that particular spot; a journey through the air modulated by the player's careful tilting of the joystick.* Once again we see the cybernetic loop in play.

Understanding this is important, in part because understanding the relationship between the game and the player helps unlock one of the appeals of watching a speedrun: being able to observe a player translate the arcane symbolism of the game objects into an express syntax of button presses. To most people, a turtle shell is a turtle shell. To a *Mario* speedrunner, a turtle shell on screen is a command to jump, it is an abstraction of the "A" button on their controller. To the several thousand people watching, this is magic enough, but perhaps even more interesting here is what role this nascent audience for competitive games and streaming plays in how and why games are played.

The Role of the Audience

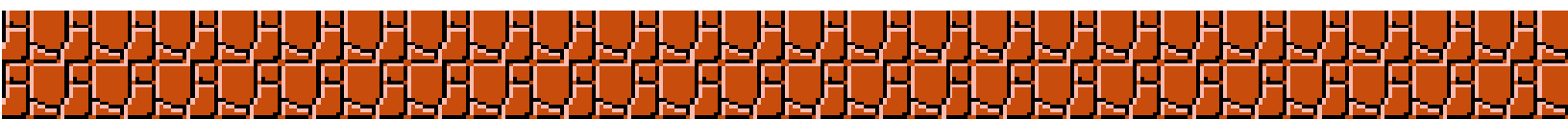
One of the biggest changes to the experience of and culture surrounding video games over the last two decades has been the rise of live-streaming services like Twitch.tv that allow players and fans alike to tune in and watch each other engage in play. Most of these platforms (of which Twitch is the most well-known in the west) include built in chat rooms, as well as other optional forms of interactivity such as donation systems, customizable emotes, and, in some special cases, means for the viewer to transcend the act of passive speciation and become an active participant in the stream, even within the actual game the streamer is playing. An example of this would be the 'Crowd Control' series of mods which allow donors and members of chat to deliberately spawn special items, power-ups, or extra enemies to aid or hamper



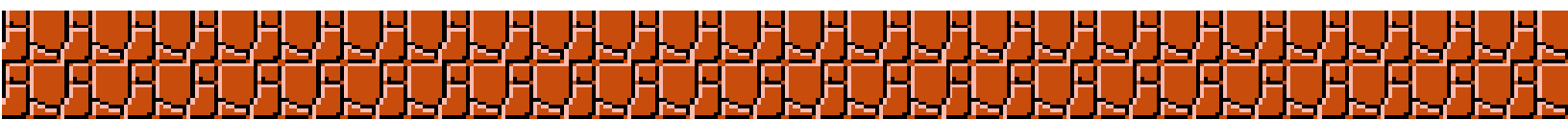
their favorite players in real time (*Lee, 2019*.) This is something traditionally frowned upon in other spectator events. True, plenty of theater has toyed with audience participation or integration (productions like *Shear Madness* and *Sleep No More* come to mind here) but as a general rule an audience member who attempts to hop on stage or suggest extra lines during a performance will be asked to leave, and one need only look at the mid-game footage of wheezing security crews chasing streaking fans across various sporting arenas to know where the needle stands on the issue of audience participation in athletics.

In video games though this prejudice against participation is not as prevalent. In part, this is due to the more social yet simultaneously asymmetrical structure of streaming: While most sports or plays have fewer performers/players/actors on the field or stage than they have concurrent audience members, game streamers primarily operate in a one-to-many relationship with their viewers: they hold most of the attention and power as a single individual. Yet most streaming platforms provide live chatrooms which become a means of participation, commentary and conversation, for all the viewers to engage in at once. Certainly one could say that there is nothing stopping an arena of sports fans from talking to one another during the game and, theoretically, the audience of a play may exchange words during intermission, but with video game live-streaming the chat feature is considered by most an inherent part of the experience. It's worth noting here that there is another ratio at play beyond the performer-to-audience ratio, and that is the audience-to-audience ratio. Due to the social nature of watching live streamed gaming it is quite common for fans of spectator-gaming to watch alone. In other words, there is frequently a 1:1:1:1 (and so on) relationship between the majority of viewers and each other. This is changing— more and more physically present social viewership opportunities have been cropping up, especially with viewing parties for larger streamed events like the *League of Legend* world championships (essentially the pocket-protected equivalent of a Super Bowl party) as well as a new trend of live speedrunning at bars and other venues in entertainment capitals like Las Vegas (*Red Bull Gaming, 2019*.)

Returning for a moment to the world of speedrunning, and again to the specific niche-within-a-niche of *Kaizo*-style *Super Mario* hacks we can find another illustrative example of how the spectator-centric model of Twitch.tv and livestreaming writ large create a more connected and collaborative digital



community. Barbarian, or Barb as he's affectionately known to the *Kaizo* community, designs and develops his levels on livestream. Thousands of fans are constantly watching, constantly offering their ideas and opinions, and constantly alt-tabbing between the stream of Barbarian's efforts to create a level and the streams of the best *Super Mario* runners trying to beat the same levels. Sometimes these runners tune in to watch Barb design. Sometimes Barb tunes in to watch his favorite runners attempt to beat his latest level. However, sometimes this cross-fertilization goes even farther: the *Kaizo* scene is a relatively small one, both in terms of players and level creators. As a result, there is a close-knittedness to the community which is reflected in the design philosophy of their games. It is a tradition, for instance, for new *Super Mario* ROMhacks to be titled after and dedicated to a particular streamer. This is why one of Barb's most recent and most impressive hacks is titled "*Grand Poo World 2,"* as it is the second full hack Barb has put together in honor of his friend and top *Super Mario* runner Grand Poo Bear. GPW2 as it's generally referred to is chock full of references not just to Grand Poo Bear or Super Mario writ large, but also to the broader community surrounding the *Super Mario* scene. Hidden in almost every level is a pixelated portrait of nearly every well-known runner in the scene, as well as many of the most lauded level creators. Barb makes references to the 'help' offered by his loyal chat in a level about avoiding raw sewage. One level quotes a reviled earlier level from an earlier hack Barb put together, while the background tracks for several of GPW2's stages are nothing less than jaunty 8-bit remixes of other famous video game tunes, arduously retrofitted to work in the ancient (by video gaming standards) *Super Mario World* engine. All this just to say that the advent of live streaming has helped spur the development of a new niche in gaming—speedrunning—while at the same time the social aspects of livestreaming have been at least partially responsible for the games themselves, as well as the careers of the respective level designers and runners. It is a messy, strange, and oddly beautiful creative give-and-take; a most peculiar triumph-in-form.

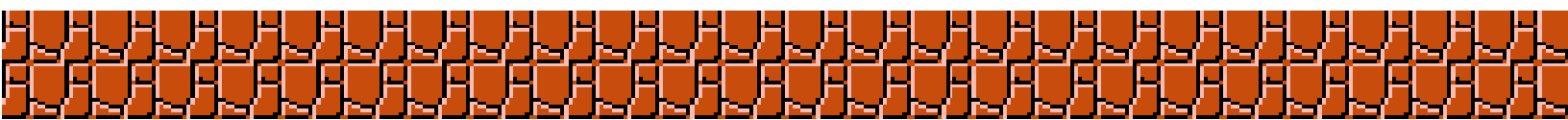


Conclusion: The Triumph of Shared Experience

Play, whether digital or analog, is an essential portion of the human experience because it allows us the agency, and therefore the freedom, to experiment with failure, to take risks, to engage in social competition and collaboration all in the name of improving how we think and how we act while (mostly, hopefully,) enjoying ourselves at least some of the time. However, unlike many analog modes of play, we have seen that video games, due to their particular combination of repeatability, difficulty, immersiveness, and interactivity, constitute a form of art/expression/cultural production that is capable of engendering in a unique way these essential positive experiences of play. Yet, as the medium matures, it has blossomed into something almost wholly new. From the mass participatory spectatorship of Twitch.tv to the hyper-niche, bizarrely collaborative *Kaizo*-style *Super Mario* ROMhack scene, to the radical practice of speedrunning which, with such deft and wild abandon, inverts the traditional relationship between player, designer, and video game, daring experiments pushing the boundaries of gaming over the last decades have produced new ways to watch and to play our favorite games.

Taken together, these factors constitute a marked change in how video games have been played and seen historically in terms of both function and aesthetic: we no longer live in an era in which it is acceptable for a video game to pretend to be a novel, or a film, or for the same game to focus on nothing more than the rescuing of another princess from another far-off castle. The new goal to be striven towards by developers, designers, and players alike, should no longer be the rescuing of princesses at all, but instead to continue constantly searching for every unexplored castle left on the horizon. Our focus should be further experimentation in service of discovering and refining those special traits and properties that in tandem work to set this form of interactive media apart from its fellow means of expression and entertainment.

There are aspects of gaming that have become stale, stagnant, standard, but this is in some way to be expected of any medium as the same has happened in fiction, film, and television. There are players who will always be content to play the digital equivalent of ‘hoop-stick’ for the rest of their natural lives.



But this should not be the norm, because games are capable of so much more. Games induce feelings, real feelings, despite taking place in digital space. They create memorable experiences of events, locations, even sensations. They can leave lasting impressions, just ask me about my basement; perhaps it is time we stop thinking of video games as another thing to do between texting on the train.

Consider, for a moment then, the result of the rise in spectator gaming and how it constitutes a merger between the advantages of play and the advantages of audienceship. Where, before, the strides in skill and feeling of progression earned through the iterative failures of a single player to complete a stage were triumphs generally experienced *only* by that solitary individual and perhaps a single companion watching them from an exiled couch; now the different social arcs of gaming (from World of Warcraft's many-players-one-world style to Speedrunning's one-player-many-viewers model) have transformed these previously private victories into shared experiences. There is an exhilaration and intensity which accompanies this experimental period of redefinition, and in attempting to do the bizarre panoply of gaming as an iterative, growth-driven, and spectator-centric experience justice I am reminded of another speedrun I watched during a recent *Games Done Quick* marathon:

The game Prey *is being run. It is a grim, violent, dystopian thriller set aboard a derelict research station in the expansive vacuum of deep space. In a normal playthrough, the player is asked to guide the protagonist, Morgan Yu, through a harrowing adventure to save the station (and possibly the galaxy) from a sinister, seemingly paranormal alien force of shapeshifters. The game features great sound design, a lovingly-crafted world, and complex combat replete with plenty of options to customize Morgan Yu's offensive abilities to suit each player's personal style. The game also features an excellent, or at least captivating, plot populated by compelling characters. A typical playthrough of* Prey *takes twenty hours. But this is not a normal playthrough, it is a speedrun being done for an audience. It is a performance; it is theater.*

Before the runner, LifeL1ke, starts, the audience behind him is already electric with anticipation. The live chat feed is awash with donations, and commentary; jibes, in-jokes, wagers, memes, emoticons, and other starbursts of digital sociability. I, myself, am comfortably seated in my swivel chair at my desk

and I have made popcorn. I have not actually played Prey *myself, but this doesn't matter, I've played enough games like it. And again this is a speedrun: the rules and intent of the actual game are largely irrelevant to what's about to happen.*

Normally, Prey *opens with Morgan waking up in a simulated version of their penthouse apartment, followed by a brief stint of narration, followed by a helicopter ride, followed by a series of psychological screenings performed on the protagonist by scientists before the actual meat of the game is reached. Usually this would take about twenty minutes. Today, because of the ingenuity and devoted radical experimentation of runners like LifeL1ke collaborating together all over the world, this process will* not *be taking twenty hours. As a final donation (this is still charity marathon after all) is read out by the commentator, the live crowd behind LifeL1ke chants a countdown while those of us tuning in online wait eagerly.. When the crowd reaches zero, the runner mashes the 'select' button to start the game. The crowd applauds for a moment and then is silent.*

The game begins as it always does: Morgan Yu yawns and rises out of the bed in their spacious penthouse apartment. Their phone rings; it's their boss telling them to get ready for another day of work. Already this racket is ignored. No sooner has LifeL1ke been given full control of Morgan's body than the latter is springing across the penthouse's open kitchen/living room combo, one sleek steel chair swiped from the dinner table while Morgan charges deftly into the master bathroom.

Yes, their bathroom.

It's not a space one is supposed to linger in during the main game: it's there to add ambiance and atmosphere while the player listens to the exposition coming over the bedside phone. Lifel1ke, however, did not fly for many hours to attend GDQ in person in order to appreciate the aesthetic nuances of Prey, *and therefore, by the time the third sentence has even crackled forth from the bedroom, Morgan Yu has already hurled the dining room chair they were holding at the top corner of their bathroom, wedging it precisely between the vanity above the sink and the drab ceiling of the room. It floats there, empty, but doesn't remain so for long. Just moments after the chair stops moving Morgan is already in the air after it, jumping first onto the lip of the sink and then up to the edge of the seat; the audience*

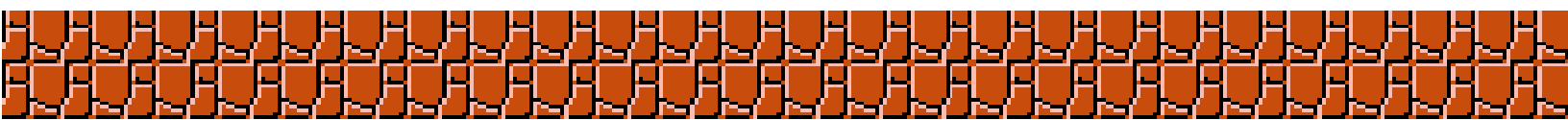
behind LifeL1ke follows suit, skipping the leap to the sink but ending up crouched on the edge of their seats all the same.

The run timer counting seconds on the side of the screen has barely dipped into double-digits. The crowd holds its breath. With Morgan now wedged heinously between the roof, the wall and the floating chair, our runner pauses. Then, Morgan starts to jitter a little, the screen shakes; LifeL1ke is testing the wall, searching for a weakness to exploit. He already knows it's there, of course, but for us the experience of watching him attempt to execute the following trick is still tinged with anticipation. This is happening live, and he could fail.

How would he react? What would happen next?

These questions hanging in the air are quickly replaced by gasps as, with a few more precise button-presses, Morgan Yu stands up against the ceiling and phases directly through, into the void. Morgan Yu is now way out of bounds, literally. LifeL1ke has teased the character into shrugging off the limitations of the game space and now Morgan floats for a beat in emptiness. With the illusory boundaries of the bathroom ceiling dispensed with, the rest of the game's map is revealed; while outside the intended boundaries of the game other ceilings and walls won't load completely, providing player and viewer alike with a stripped-down view of the entire research complex from above. Suddenly visible: the hallway Morgan is supposed to wander down sleepily after the call from their boss ends, the helicopter they're supposed to board, and, farther off, the handful of chambers set aside for the suite of psychological tests the game wants to make us sit through.

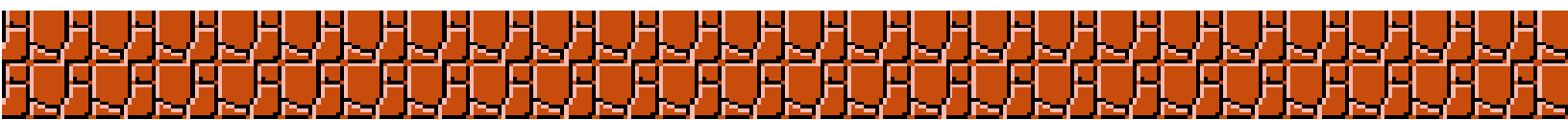
LifeL1ke is having none of this. He pushes Morgan forward into free, open space. Morgan takes a few steps over some invisible threshold and then plummets, phasing through another ceiling and many subsequent floors below until finally landing safely on one just on the other side of the locked door that marks the end of the psychological testing area. The game itself panics for a moment. It freezes. This wasn't supposed to happen, the game is thinking. A loading screen appears then disappears. An achievement pops up on screen informing the thousands of us watching at home that the tutorial has been successfully completed. The crowd goes ballistic. The timer says it has been exactly six seconds.



What did we just watch? The exposition back in Morgan's bedroom had barely begun before LifeL1ke ripped the wheels off the narrative bus so carefully constructed by the game's writing team over a period of years. The rest of the run is a blur: everything that can be skipped is skipped via a dizzying array of glitches, exploits and smooth, practiced movement on the part of the runner. When the final boss is beaten, and the game is completed, the final timer stands at one hour and five minutes and six seconds, approximately 1/20th of the average time to completion.

How? Years of treating Prey *and other games as his own personal dojo has turned LifeL1ke into a Neo-like character: he can see what isn't there and capitalize on it. He knows the game's limitations because he has had the freedom and agency to experiment with them. The route he employs was never intended by the game's designers, it had to be discovered through months, even years, of seemingly fruitless experimentation, failure, and adjustment. What we have all witnessed was the expression of a professional artisan or performer executing a great work, and, just like any of the best sporting events or theatrical performances, their success has become, in some small part, our own success. Why? Because we chose to play along.*

Author's Note: It is my belief that all academic work is an on-going act of collaboration and revision because each of us is a member of the broader mutual community of the mind and none of us generate knowledge alone. In the course of this work I've plucked ideas from throughout an interdisciplinary swath of the humanities in order to help clarify and support my arguments. I am not, and do not pretend to be, an expert in all of these fields. If, after reading, you are left with any questions or concerns not addressed in the index, glossary, or bibliography, or if something has escaped either my direct acknowledgement or my attention altogether, please reach out to me here: nds395@nyu.edu. Any and all feedback helps improve the integrity, accuracy, and value of this text.



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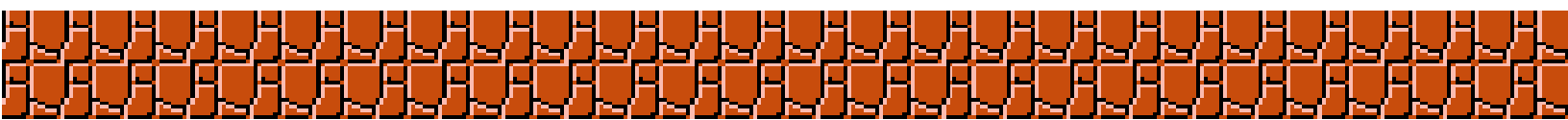

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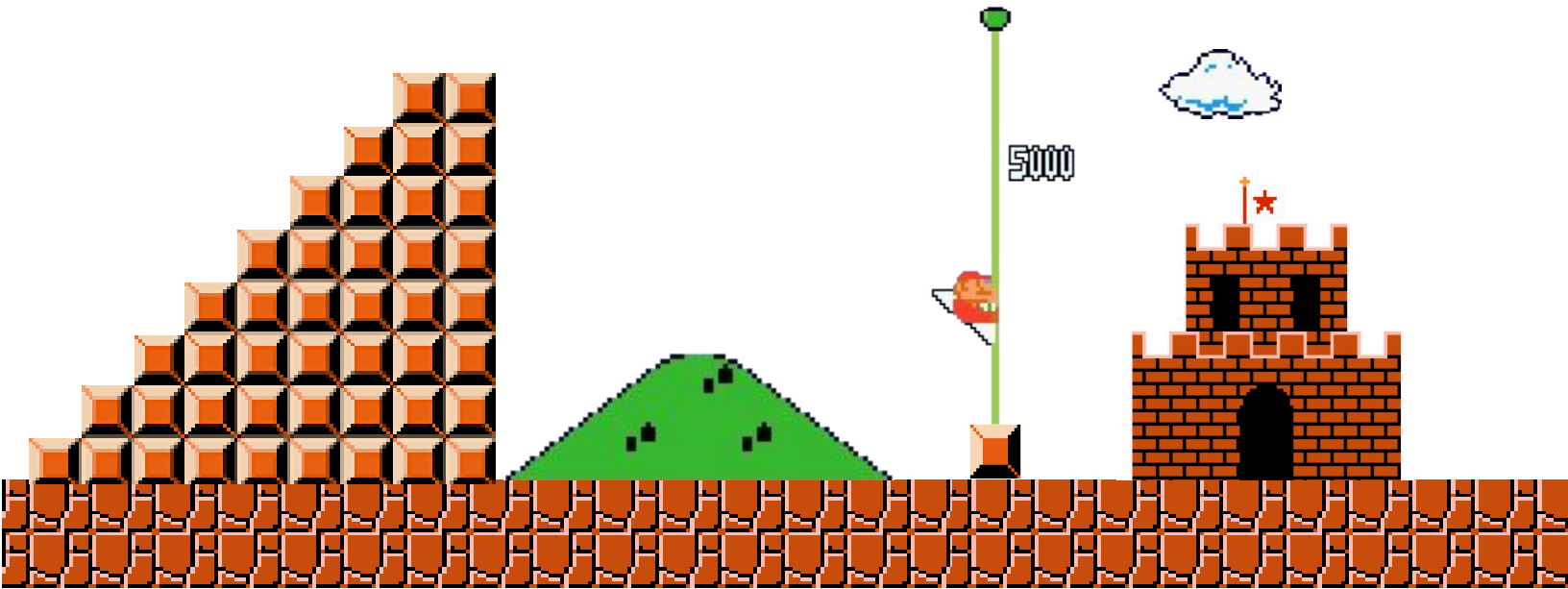
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