Theology, Politics and Emergent Interactive Narrative

Two Weeks in the World of ‘Twitch Plays Pokémon’

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Declaration

I declare that the work in this research Paper is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university.

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Abstract

The phenomenon Twitch Plays Pokémon attracted a great deal of attention due to its outlandish concept and the novelty of the idea. From it's humble beginnings as a 'social experiment' it attracted millions of views in days and spawned an elaborate community of people whose imagination it captured and whose imagination propagated a narrative more reminiscent of an epic poem than a *Gameboy* game. Along the way the community created and then forced upon itself deep political divides matched only in their ferocity by the level of worship afforded the deities within the complex religious system it spawned.

While the rest of the world shook their heads and rightfully went back to more sensible things to spend their time on, I threw myself head first in this world in order to find out what it might teach us about how this sort of narrative is created and what it might mean not only for the medium of video games, but of new media forms that are emerging or may be on their way in the near future. I discovered that *Twitch Plays Pokémon* struck upon a couple of key elements that allow for or encourage coherent emergent narratives to form, while also enabling players in this new genre to self-regulate mechanics of the game in innovative ways.

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Introduction

Twitch Plays Pokémon first gained attention as a curiosity. On initial examination it was a chaotic mess, with thousands of players simultaneously launching commands at a single *Gameboy* game with a handful of inputs. The easiest comparison to make, is with the 'infinite monkey theorem' which supposes that a monkey or group of monkeys stuck in a room for an infinitely long time bashing at typewriters must at some point end up typing the complete works of Shakespeare. Could the same be true of a game of *Pokémon*?

After the opening days of the game resulted in a surprising amount of progress and the conquering of some very improbable obstacles, people started to pay more attention. The number of players rose significantly and the discussion turned towards actually completing the game. Even at its lowest ebs over the latter part of the first two weeks of the game there was always at least tens of thousands of players, with that number peaking at over 150,000 at one point. In the fast-moving world of internet trends this lengthy period of fascination sets it apart from everyday fads. By day 14 the game's Twitch page, which was never advertised in any way, had received over 30 million views.[1]

What prompted this research paper, however, was not the surprising success

[1] The lack of commercial intent was reinforced by the decision of its creator to forego significant advertising revenue and leave out ads as the game was 'frustrating enough without interruptions', according to the page itself.

of the players at making their way through the game so much as the rich tapestry of narrative and social elements that have woven together to form the community which surrounds the game. Onlookers who were drawn to the game out of curiosity found themselves overwhelmed by the immense scale of the interaction among the game's audience.[2] Almost all of this was completely emergent and generally only loosely based on the existing *Pokémon* narrative. It appeared to be part spectacle, part challenge and part community-forming. The further I investigated, the more it became apparent that it represented some very unique and interesting developments in gaming, specifically involving emergent narratives. It also showed signs of incorporating elements of other media in novel ways. In this paper I will outline what I believe to be the most significant of these, and examine how they emerged and what it could mean for the future of this and other media.

Because Twitch Plays Pokémon is unique in the world of interactive digital media, it will first be necessary to examine it from a technical viewpoint and give some background and context to its emergence and popularity. I will then investigate recent research up this point on emergent narratives and how they apply to this game, expanding my research to several different media as sources of insight.

[2] For relevant media coverage see Hern (2014) or Suszek (2014)

What is *Twitch Plays Pokémon*?

The game in question is a ROM[3] of *Pokémon Red*, which was released by developer Game Freak in 1998 in North America on the Nintendo *Gameboy* handheld console. Instead of a physical console, the *Gameboy* is being emulated on a personal computer. The emulator being used, *VisualBoyAdvance*, is a programme that allows a ROM of a game to played on a personal computer instead of its original console.

The game features the control inputs standard for the Gameboy: four direction-buttons, 'a', 'b', 'start' and 'select'. In *Pokémon Red* the select button is not used[4]. Most of the game is played in a 2-dimensional top-down manner with the main character moved around the world with the direction-buttons. The a button interacts with objects or characters in the world or confirms selections in menus. The b button generally cancels menu commands or exits menus or submenus. The start button, when used in the main world, opens up a menu wherein the player can view or change the order of their Pokémon, view or use items in their possession and perform other actions such as changing options or saving the game.[5]

[3] A ROM, or 'read-only memory file' is a copy of a game that been taken from the original cartridge and saved to a different computer for use with an emulator. Although the Twitch Stream description initialled claimed the ROM in use was a modified version of the original game, this proved not to be the case. For further explanation see: http://nikitapek.in/twitchplaysPokémon

[4] Except for a 'soft reset'. When all the a, b, start and select buttons were all held it was possible to reboot the game. After this function was somehow used early in the playthrough, it was removed for understandable reasons.

[5] In this context the use of the save function was deprecated as there was no was to exit from the programme. Furthermore the emulator itself made periodic backup 'save states'.

There are several reasons that this game was chosen as the subject of this experiment. One is its simplicity. In *Pokémon* the objective is to acquire 'Pokémon', or 'pocket monsters', which are animal-like creatures with special combat abilities that can be captured within 'pokeballs'. The players carries around up to six of these at a time, and enters them into combat either against other wild Pokémon or other 'trainers' who have Pokémon of their own. The character must travel from town to town within the game's world, defeating the leaders of 8 Pokémon gyms and acquire their badges. Upon collecting all 8, they may challenge the 'Elite Four' to become the Pokémon Champion. This is the ultimate goal of the game, unless a player is taking the completionist route of attempting to capture all of the game's 150 different Pokémon.

The creator used the words "highly forgiving" when describing the game. While in a sense this refers to the fact that the game was, by and large, targeted at a younger audience and was is not among the more difficult video games available, it also refers to how unlikely it is to achieve a fail-state at any point. There is only one way to make any real backwards progress, which is not likely to occur to the average player.[6]

There is relatively little by way of narrative, aside from a handful of recurring friendly and antagonistic characters. The player avatar is a boy whose name can be chosen at the beginning of the game. In this instance the default 'Red' was chosen.

[6] Though, it would ironically become a very real danger in this case due to clumsy menu navigation.

Another reason *Pokémon* suited the experiment was, as the anonymous creator of the experiment confirmed, it is "highly turn-based".[7] That is to say at no point is there a need to react quickly with a control input. The game waits as long as is needed for a command to be entered before another event occurs.

Though it is difficult to confirm, it would seem intuitively the case that another major factor in the game's success was that its massive mainstream success and lasting appeal meant that the majority of those who took part were already familiar with it. This meant that the majority of the game's audience could skip any learning curve involved with following along. Furthermore, the nostalgia felt by people who may not have played the game for well over a decade could conceivably be a significant draw. In the same interview, the creator admitted that one of his own reason for choosing it was that it "has a lot of nostalgia associated with it for a lot of people".

The emulated game is broadcast on a streaming website, Twitch.tv.[8] Twitch offers a streaming service so that players, often e-sport[9] competitors, can broadcast a game as they play it. This steam is accompanied by a chat in which the audience may interact with each other or the player. Because *Twitch Plays Pokémon*, I believe, is at least as much about Twitch as it is *Pokémon*, the site requires further examination as a medium. Here I attempt to build upon

[7] [M0D3Rn] (2014)
[8] At www.twitch.tv/twitchplayspokemon.
[9] Players who compete against other in tournaments of specific games. *Starcraft* would be a prime example of such a game.

the work of Hamilton, Garretson, and Kerne[10], who put forward the claim that Twitch streams form a kind of 'third place', a term coined by Ray Oldenburg, initially to describe venues such as cafés and bars which are between home and work and facilitate free-flowing conversation.[11]

Facilitating this leap is Charles Soukup, who in his 2006 paper[12] puts forward the idea that online communities can form a type of third place. While Twitch is firmly among those online communities that show some very stark contrasts to the type Oldenburg described - he points out that kind of prerequisite knowledge required to meaningfully take part in a discussion in a community of this sort is drastically different from Oldenburg's description of a 'diverse members of a community discussing general topics'[13] - it is essentially a ground for anonymous people to gather and take part in largely meaningless activities. The specialised nature of the communities found is worth mentioning however, as the prerequisite knowledge involved is at the heart of our discussion.

In general Twitch users use the service to watch a single video game player, a 'streamer', play a game while a video of their screen is broadcast on the site. Accompanying this is a chat room running on a modified IRC protocol, in which users can register a username and make comments aimed at either the streamer, the other people watching the stream or both.

[10] Hamilton, Garretson and Kerne (2014)
[11] Oldenburg (1997)
[12] Soukup (2006)
[13] Soukup, 429

In this instance, the chat serves another purpose, in that it allows the audience to take part in the game by entering commands themselves. At the beginning of the experiment, this was done by an IRC bot that monitored the chat for the words ‘up’, ‘down’, ‘left’, ‘up’, ‘a’, ‘b’, ‘start’ or ‘select’. These words are translated into the respective buttons they corresponded to on the *Gameboy* emulator and executed. Because of the the time it takes to stream the game, there is a delay of between 20-40 seconds between commands being entered in chat and the game registering the input.

The number of players grew rapidly, meaning that the number of commands quickly overcame the ability of the game to register each one. That is to say, if up was entered by five consecutive players, it would not result in five consecutive upward movements by the character. Rather, the first movement would be made, followed by a very brief transitional period, as the avatar on screen made the movement animation, before the game was ready to accept another input. If the entry of the commands was over a short enough period, it might only result in one movement, while if the commands were entered far enough apart it could by the same measure result in five movements. For this reason, in practice the game would receive a steady stream of commands, only a few of which would actually register.

The combination of these two elements resulted in a control scheme that is highly randomised. In the vast majority of cases there was no way for players

to predict accurately what the required command would be at the other end of the stream's lag, only some specific situations allowing the time for the players' input to coalesce into immediately recognisable results. The options in the battle mode of the game, for instance, are quite limited and for longer battles it was possible to coordinate more easily, the sheer brute force of the majority entering the same command repeatedly avoiding any interference by erroneous input. In the open world the avatar was able to navigate almost as though he had an invisible guiding hand, and would eventually make his way in the right general direction. A similar result was seen in the Loren Carpenter *Pong* experiment in 1991.[14] However, tasks that required any real accuracy, such as navigating simple menus, devolved into an exercise in chance.

The game is quite simple to beat under normal circumstances for a number of reasons. Firstly, the battle mechanics are set up in rock, paper, scissors fashion. So, for example, a water Pokémon is effective against a fire Pokémon, which is effective against a grass Pokémon, which is effective against a water Pokémon. In general, the other trainers in the game stick to a single type, meaning they are easily overcome with some simple logic. However, with the inability to choose Pokémon or the attacks they use with any real accuracy, this mechanic is all but useless to the players in Twitch Plays Pokémon.

On day 6 of the game, the creator of the experiment implemented a change to

[14] A detailed description can be found in Kelly (1994), Ch. 2.

the control scheme. Rather than all of the commands being directly entered into the game, the total number of each command registered within a 20-second window was recorded and the most-entered command was used. For example, if over the 20 seconds six people entered *a* and 1 person *b*, the *a* command would then be entered. In this system the delay remained, although it was somewhat easier for players to foresee the necessary commands that would soon be needed at least for movement around the world. This update was rescinded after a short time due to the audience's protests which I will examine later. It was reintroduced as one of two possible control schemes that could be implemented at any given time by way of voting. By this time the original control scheme had become known as 'anarchy' and the newer version dubbed 'democracy'. A slider was introduced with the control schemes on either side, and shifted toward either side depending on the number of players 'voting' for them by typing their respective names. Initially a majority of 75% had to be reached in order for a switch to occur to either side, though this was later alter so that in order for democracy to be activated, 80% was needed, and for for anarchy, 50%[15]. An additional element of the democracy control scheme which will become relevant later in the essay was that instead of only single commands being entered at one time, it was possible to stack button-presses. For example, if the string 'down2' won a vote, the *down* button would be pressed twice at the end of the cycle.

What this amounts to, essentially, is a profoundly broken game-playing

[15] This was due to the ability of *anarchy* supporters to disrupt the button entry process in *democracy*.

experience. Yet, within five days, there were well over 100,000 people joining in. [16] While this could be put down to a novelty factor, or simply a viral effect through social media, the fact that another week later there were still well in excess of 50,000 player suggests otherwise. It is for that reason that I felt the need to study the phenomenon further and attempt to explain such a counterintuitive outcome.

In doing so, it is necessary to expand the scope of the study beyond the stream itself and take in the sites that provide a grounds for discourse outside the built-in chat channel. This is where the bulk of the game's meta-narrative arises. As it would be impossible to take the entirety of the game's discussion into account, I have chosen to focus on the Reddit.com 'subreddit' for the game[17]. Primarily this is because it represents a quantifiable link - in the second week of Twitch Plays Pokémon the subreddit had over 80,000 subscribers, with thousands of readers browsing at any given moment - but also because it became probably the most prolific producer of fan-art arising out of Twitch Plays Pokémon.

[16] Peaking at over 120,000 at time of writing. See Sanqui (2014).
[17] www.reddit.com/r/twitchplaysPokémon

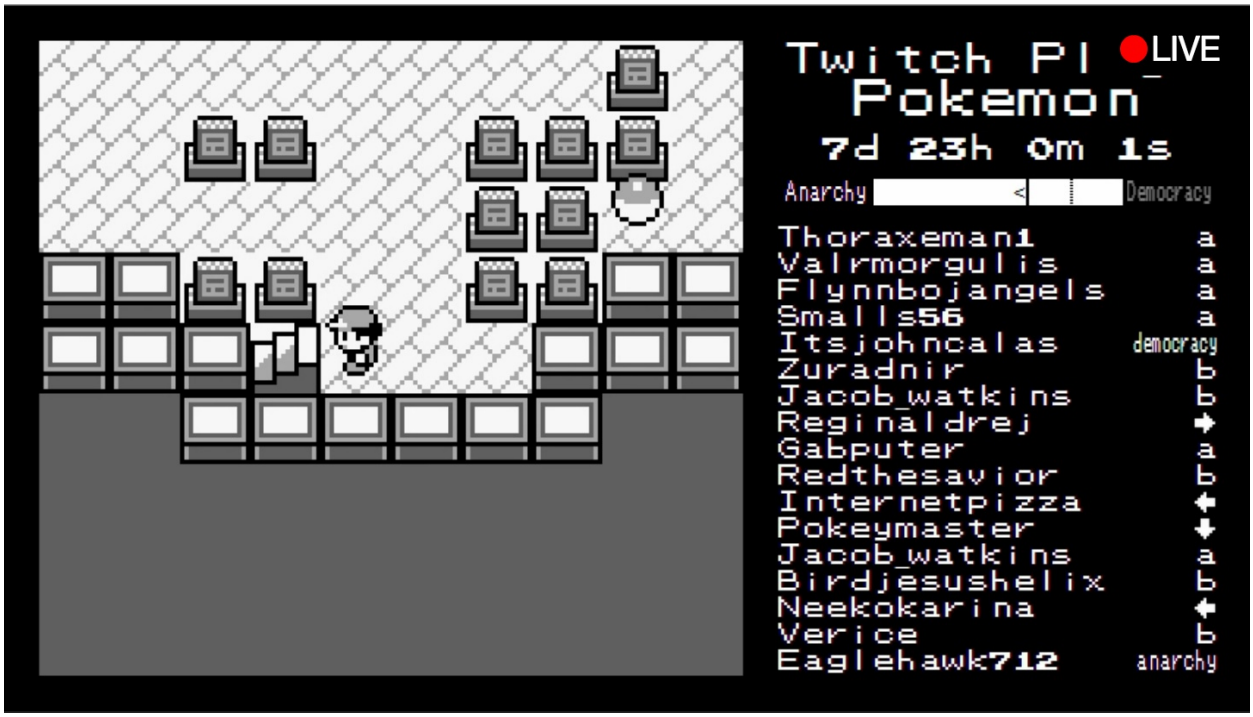

Figure 1: A typical screenshot from the Twitch Plays Pokémon stream.

Twitch.tv and the rise of gaming spectatorship

The game takes place in the medium of Twitch.tv, which is almost exclusively a medium focussed on spectating rather than playing games. As a pioneering service in that regard, it has been, by all accounts, astoundingly successful.[18] The easiest comparison to make is with sports, and hence the emergence of the term *e-sports.* Crucially though, it must be noted that *e-sports* refers exclusively to gaming in which two or more players are competing against each other in the same game. In Cheung and Huang (2011) for example there is no discussion whatsoever of the spectating of single player gaming. In fact, in my research I found the subject widely neglected, and yet everyone who grew up gaming in a largely offline world will likely have memories of watching a friend or family member play a game while they waited their turn.

There are two aspects, I propose, that make watching a single-player game experience different from watching e-sports. Firstly, watching a single-player experience generally involves watching a narrative play out, experiencing the narrative in effectively a similar way as the actual player. Secondly, watching a single player experience entails a different kind of drama and suspense to watching competitive play in that it is based on the ability of the single player to overcome the challenge of the game rather than finding out the winner between two competitors.

[18] See Ewalt (2014)

Twitch is not confined to e-sports, however. Another example of a popular type of stream is of 'speed-runs' wherein a single player will attempt to complete a game in an extraordinarily quick manner, generally far beyond the expectation around which the game was designed. Often the times are recorded and measured against each other in a similar fashion to a tradition 'High Score', and at times even make it into the Guinness Book of World Records. According to a Twitch representative, the number of these types of streams is beginning to rival e-sports.[19] These playthroughs had already been popular on site such as YouTube, but only with the growing popularity of Twitch did they find a live outlet.

The live nature of Twitch streams facilitates an important aspect of the site - the chat interface which accompanies each stream. The feature in itself is hardly revolutionary in the current age, but it facilitates a stream's audience forming a community. In a recent study of Twitch users - both streamers and viewers - Hamilton, Garretson, and Kerne (2014) found several reasons they were attracted to the site, some of which I believe apply in this case and some of which do not. A principle factor they determined was important was that "community members develop an emotional connection through shared history and an identification with other members". In their study, shared history was achieved through jointly spectating a stream and major events within it. In *Twitch Plays Pokémon* this takes a different, more literal, form. While it is reasonable to assume not every participant in the stream is taking part through

[19] Haley (2013)

entering commands, those who do are entering a different sphere of participation to the average Twitch viewer. In the above study there are examples of streamers taking on board advice and other input from players, but it is still moderated by the streamer and they remain a point of separation between the viewer and the game. In Twitch Plays Pokémon the viewers have a shared history in the more immediate sense that they are essentially creating that history themselves as they progress through the game.

Another claim in the study is that the needs of the viewers are fulfilled by the "success of the community". This term is vague in the context of traditional streams and not explained in the paper, but fits easily into this discussion. The success of the community in this case is simply its success at playing the game.

The above approach can examine *Twitch Plays Pokémon* only as a stream rather than a game. There are also several factors arising out of the game itself that present interesting and unique ramifications. Due to nature of the control scheme and the improbability of achieving a coordinated and synchronised input stream, the game's difficulty is extremely high. This I argue, along with the high randomness factor of what is likely to occur mean it shares some interesting traits with a sub-genre of games named Roguelikes. Gavin (2012) examined the appeal of these games and identified three common traits by which they can be distinguished: "permanent avatar death, randomisation of game elements, and turn-based movement." The latter two of these are

obviously analogous to mechanics of Twitch Plays Pokémon. The former is also partly analogous but requires further explanation.

As mentioned, in *Pokémon* the player may carry six of the titular monsters around at any given time, with the ability to store them temporarily elsewhere or even release them permanently. While permanent avatar death, or 'permadeath' is not possible in this case - the main character only battles by proxy, and the Pokémon themselves only 'faint' in battle until they are healed - the release of Pokémon carries the same consequences. In the original game the mechanics were drastically different, in that releasing Pokémon was not a consequence but rather a purely voluntary act. By virtue of the random and, at times, indiscriminate controls of *Twitch Plays Pokémon*, the accidental release of Pokémon became a *de facto* permadeath. Because of the need to have certain Pokémon in the party at certain times and the need to swap-out members through the same menu where the release function was located, navigating said menu became one of the riskiest and most difficult aspects of the game. This re-framing of mechanics or content within the game due to the nature of the controls is a recurring theme.

Twitch Plays Pokémon's major departure from both general Twitch streams and roguelikes or other extremely difficult games is the manner in which the game's players re-appropriated the illogical, and at times ludicrous, actions that their character chose by means of a complex meta-narrative of their own creation.

The Helix Fossil: A God is Born

One of the earliest-formed and probably the most widespread elements of the meta-narrative surrounds an item in the game known as the 'Helix Fossil'. This is an item acquired by *Red* early in the game which cannot be used or disposed of[20] until much later on. Because during the battle sequences there are only four commands in the menu - 'FIGHT, 'PKMN' (which swaps between Pokémon), 'ITEMS' and 'RUN' - the items menu had a high chance of being selected. As one of the first items acquired and one of the few permanent ones, the Helix Fossil ended up being selected a large number of times in each battle, even though it had no function.

This, on paper, is not ideally how one would want a video game to play out - selecting a redundant option over and over by mistake would not generally be considered compelling. However, a narrative soon developed in which the selecting of the Helix Fossil was rebranded as the 'consulting' of the Helix Fossil, in the manner of consulting a religious idol. It was frequently referred to in the chat, where players would suggest consulting the 'Helix'[21] in moments where *Red* appeared to be having difficulty, and it began to spread outside of the game in the form of memes[22].

[20] Similar to the release mechanic, the toss mechanic was not intended to hinder players in the game's original design but was a significant obstacle for Twitch.
[21] [pic of Consult the Helix]
[22] An appropriate definition of which can be found at http://en.wikipedia.org/wiki/Internet_meme

This, in a way, reflects the sort of behaviour that is common in everyday society, where chance events are frequently put down to divine intervention or other similar causes, but this is more nuanced, in that the agent involved in the inexplicable actions here represents the multitude of players involved. This brings us into the realm of what has been referred to as the narrative paradox, which primarily deals with the attempt to reconcile the provision of agency to a user with the formation of a coherent narrative.

This subject is explored in Swartjes (2010). The thesis builds upon the work of Michael Mateas and Andrew Stern who described a 'global agency' thusly:

The player has global agency when the global shape of the experience is determined by player action. In *Façade* this would mean that the final ending of the story, and the particulars of the narrative arc that lead to that ending, are determined in a smooth and continuous fashion by what the player does, and that at the end of the experience the player can understand how her actions led to this storyline. [23]

While oddly their paper, and this definition, is framed within the context of their creating 'Façade', a "first-person, real-time, one-act interactive drama", it can be reverse-engineered to almost perfectly capture the process of the emerging meta-narrative in *Twitch Plays Pokémon*. Because of the inability of the multitude of players to take deliberate actions, they have little by way of actual agency. The *Façade* creators were concerned with creating endings and the narrative arcs that cohered with whatever actions were taken by the player.

[23] Mateas and Sterne, 5.

The meta-narrative of *Twitch Plays Pokémon* is similar, in that it involves shaping a narrative around the variables of performed actions, but so much more different in that it is created ad hoc by the the players themselves to retroactively fit these events.

Swartjes is heavily informed by theater, and interestingly some quite specific aspects are almost directly analogous to Twitch Plays Pokémon. In examining improvisational theatre he refers to the "collaborative emergence of narrative" [24], wherein he notes that in an improvisational setting without a guiding plan or leader a 'dramatic frame' is established collaboratively in which goals, setting and characters are created. This draws on the work of Sawyer (2001) which goes even further to claim that this frame later goes on to *constrain* the actions of the agents involved. This claim will become important when we begin to discuss the political side of the narrative.

Swartjes uses another phrase that almost exactly fits this case, referring to 'retrospective interpretation', where improvised actions only acquire meaning after being performed. This is a useful term to refer to how the random selection of an item could later be given an interpretation fitting into an overall scheme rather than as a result of random selection. This is before he makes the analogy between this sort of improvisation and 'pretend play' in children. Again I believe this is remarkably close in nature to *Twitch Plays Pokémon*. The difference between pretend play and collaborative improvisation in a theater setting is that "where improv actors subtextually negotiate the dramatic frame,

[24] Swartjes (2010), 77

children often step out of character to explicitly propose contributions or modify those of their playmates through metacommunication." While the line between what is out of character or not in the case of Twitch Plays Pokémon is more blurred, the concept of negotiating the dramatic frame through metacommunication fit exactly with what is observed between the *Twitch Plays Pokémon* game itself and the surrounding online community. This negotiation aspect becomes much more significant in the politics and control aspect we will look at next.

This retrospective interpretation is further evidenced by developments in the meta-narrative. Because the player is given a choice of whether to receive the Helix Fossil or another similar item named the 'Dome Fossil', the Dome Fossil was cast as a counterpoint to the Helix. So, when fortuitous events struck in the game, they were attributed to the intervention of Helix, and vice-versa, to that of Dome. When at a critical junction in the game the acquiring of a certain Pokémon causes, indirectly, the release of two longer-held Pokémon, the offending party was labelled an agent of the Dome and became known as the 'False Prophet'.

None of these leaps were prompted by story elements in-game. There is nothing in *Pokémon* to suggest, for example that there is any enmity between the two different fossil items. In this sense the formation of the meta-narrative shows signs of being more than simply reactive but also creative.

There is more to the development of the meta-narrative than simply retrospective interpretation. In this instance we are dealing with a game and not theater or any other sort of more passive media. Any meta-narrative that is created not only contextualises past developments but also frames future events both in the sense that the narrative created tends to be applied to them and that they will add to the narrative. Nonetheless, the comparison between the emergent narrative in *Twitch Plays Pokémon* and the manner in which improvisation occurs on stage is remarkable strong considering the differences between the two media.

Another approach to emergent narrative can be found in the study of emergent narrative authorship, much of which has been led by Ruth Aylett and Sandy Louchart, along with others. This frequently focuses on facilitating emergent narrative through artificial intelligence that works in tandem with the subject and focuses on creating narrative through character interaction.[25] Neither of these approaches resemble the way emergent narrative was instigated in *Twitch Plays Pokémon*, although the approach can be seen elsewhere, such as the popular *Left 4 Dead* video game.[26]

In Aylett (2000), it is claimed that emergent narrative, as well as being identifiable in the context of improvised theatre, exists on the sports field:

Comparing [improv] with a football match we see that there too character is specified (being life, each footballer plays themselves) and relationships are

[25] For example Suttie, Louchart, Aylett & Lim (2013)
[26] See Newell (2008)

also specified: both between teams and within teams. There is also an overall goal in both senses of the word.[27]

Crucially, in both this scenario and the previous one we looked at, there is a goal involved. In improv the actors are tasked with producing a coherent piece of theater, while in sports the competitors are trying to win.

Aylett makes another observation that applies to both scenarios, namely that in both cases the emergent narrative that forms "is essentially physically and temporally contingent" and is confined to a particular time and space. In this case time and space are the setting for both activities and don't apply in the same way to *Twitch Plays Pokémon*. However, an important analogous point can be made in that the emergent narrative of *Twitch Plays Pokémon* is contingent on that particular game of *Pokémon*. Were the same game started again, the characters, motivations and history that formed the meta-narrative would not persist, at least in its original form. We may assume then that there is an element of transience to the process which is essential.

For some examples of artwork from the game's meta-narrative, see the Reddit posts by [Everythingpossible] (2014) or [JohnMarkParker] (2014).

[27] Aylett (2000), 5

The Politics of Control

Some aspects of the narrative's formation are similar to those identified as already having formed among Twitch communities. Hamilton, Garretson and Kerne noted among their observations of Twitch streams that polls are sometimes used by streamers to inform future decisions in-game, while the phenomenon of viewers creating fan-art relating to streams was also common.[28] However, both of these cases rely on a streamer to guide the conversation and the narrative themselves. In Twitch Plays Pokémon this is not the case. Therefore the viewers were not only responsible for controlling the game, but also heavily involved in how the decision-making process occurred. In a word - politics.

The change which implemented an optional 'democracy' control input scheme marked a significant change to the game not only in terms of the mechanics involved, but also to the meta-narrative. To understand the complexity of the choice available, it is necessary to give some more background on the game's events prior to its introduction.

The first major obstacle that prompted a significant shift in the narrative of the game came in the game's 3rd day. The challenge: to walk five steps to the right followed by two steps up. The ledge on an area of the map named 'Route 9' was an innocuous *a-to-b* path in the context of the original game, but in Twitch Plays Pokémon provided a nearly impossible challenge. Do to the nature of the

[28] Hamilton, Garretson & Kerne (2014), 5

control scheme, the players would have to line up Red with the path, have him move to the right five times and then move upwards twice in order to proceed. The problem was that if *down* was input at any point along the way, Red would leap off of a ledge and would have to go back to square one. This was not unlike the menu-related issue discussed earlier in terms of the control scheme re-casting a mundane exercise into a challenging obstacle. In this case there was a short 'reset' time to the challenge in that it was only a few moves to return to the start of the path, and aside from some frustration, there was no risk involved with failing. After a mere 16 hours so the obstacle was overcome through a 'brute-force' approach.

The ordeal caused the community to rethink the rest of the game, bearing in mind again that the majority of the players showed familiarity with the game and had likely played it before. Several upcoming obstacles of a similar nature were identified, with many claiming they would prove unpassable. The first of these reached was an area of the game known as *Rocket Hideout,* which featured a short maze. While in a normal context the maze is requires minimal effort to solve, it does require precision.[29] As expected the puzzle foiled the players for hours, over which no progress was made, and it was during this period the introduction of the *anarchy*/*democracy* mechanic was introduced.

As stated, *democracy* was first introduced as a fix and replaced the original control method. This was met very swiftly with unrest among the players, visible both in the chat and then in game through a protest. By way of protest,

[29] For a demonstration see KoRnFlakes1408 (2009).

players en masse began entering the most counter-productive possible command sequence, ‘start9’, which simply opened up the menu and closed it repeatedly. See Figure 2 for an example of the effect.

The phrase *start9* would from that point take on the mantle of a sort of rallying-cry against the new control scheme and later when *democracy* was in effect *start9* protests continued and were at times effective at slowing progress[30]. Not long into the protest a return was made to the original control scheme and shortly afterwards the *democracy/anarchy* mechanic was introduced. The first successful utilisation of *democracy* was to pass through the maze, and almost immediately afterwards *anarchy* was voted back in.[31]

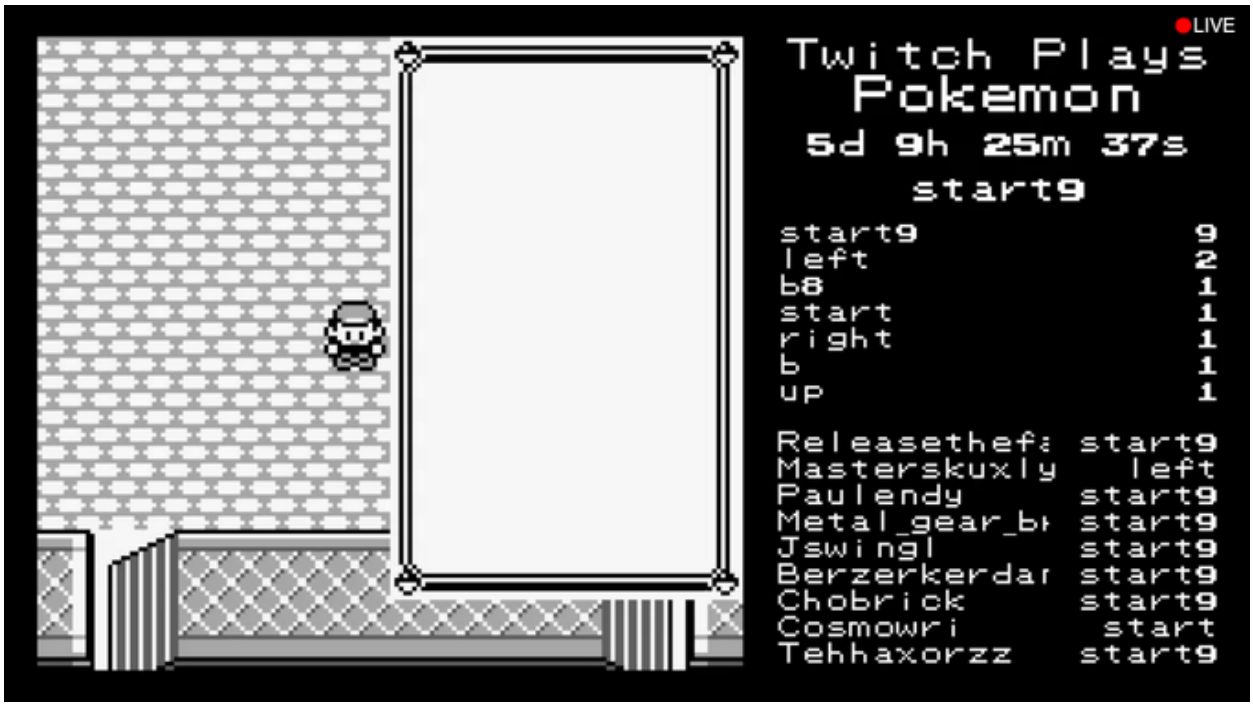

Figure 2: The ‘start9’ protest in action.

[30] pic of start9 with slider
[31] At which point, naturally, Red slipped back to the start of the maze, requiring the cycle to repeat.

These events set the tone for what was to follow, with the community divided over whether or not using *democracy* as a control scheme was acceptable, bringing into the game issues of rule-making. Here I refer to Smith (2004) for terminology in dealing with this kind of conflict in multiplayer games. He sets out two different types of conflict which may occur in these games: intra-mechanical and extra-mechanical[32]. Intra-mechanical conflict refers to the conflicts created by the rules or the game. In this instance these are the elementary obstacles in the game of *Pokémon* itself, and, more significantly, the conflict created by the Twitch Plays Pokémon control scheme wherein lies a battle to try and accurately command the avatar. Extra-mechanical conflicts, "make games relevant in the larger endeavor to understand social behavior in online communities, computer- supported work settings as well as real-life social spaces." That is to say, the emerge out of the attempt to have multiple players coexist in a game. I propose that the conflict that emerges from the *democracy/anarchy* mechanic is a hybrid between these two concepts, in that it is brought to the fore by rules implemented in the game, but also deals with the extra-mechanical coming together of an online community of players.

Smith recognises three types of extra-mechanical conflicts. Firstly there is cheating, which he defines thusly:

Behavior labeled as cheating typically gives the cheater an unfair advantage over opponents and/or runs contrary to the spirit of the game. The terms

[32] Smith (2004), 2

"unfair" and "spirit of the game" are clearly subjective and make cheating an altogether social construction.[33]

Secondly, there is 'local norm violation', in which implicit social rules are broken. A comparison could be made to sports where certain behaviours may not break any of the game's rules but are publicly frowned upon. Finally there is 'grief play', which is the deliberate inflicting of 'stressful disadvantage' on other players. While I believe that these type-definitions are very blurry, it is useful to refer to them here I propose that they each can be applied to aspects of the present discussion.

Grief-play is most easily identified, as Twitch Plays Pokémon is, like most online communities, beset by 'trolls' who wish only to hinder progression or cause frustration.[34] These would players who, in the case of the ledge mentioned previously, for example, would press down only with the intention of disrupting progress.

The line between the first two types in this case is a little unclear, as there is no clear boundary between what the *game* as such constitutes, and where its rules end and the implicit rules of the community begin. This is evidenced by the *start9* protest, which indicated that the players viewed the newer 'fixed' control scheme as contrary to the spirit of the game. The problem becomes even more nuanced when one examines the events of the *Rocket Hideout* maze. In this instance the community appeared to make a compromise. If there was a

[33] Smith (2004), 5

[34] A detailed contemporary explanation of internet trolls and their behaviour can be found in Buckels, Trapnell and Paulhus (2014)

majority in favour of playing the game through *democracy*, which is empirically more effective, it would have become the standard control scheme. Equally, if the majority of the community felt it was completely against the rules, it would not have been resorted to at all. What appears to have occurred based on this and further events of the same nature, is that while extremist portions of the playing population stuck to their guns, there existed a middle demographic of players that, while choosing to play the majority of the game in *anarchy*, chose to resort to *democracy* for the sake of clearing an overwhelmingly difficult or frustrating obstacle. In a sense they made a sort of ideological compromise between staying true to the game and keeping the experience from becoming so frustrating as cease to be entertaining.

Interestingly this would apparently split the players into three groups. The first believe that *anarchy* is the only way to truly play the game, and that the difficulty of overcoming the randomisation of the control scheme is an *intra-mechanical* conflict. The other extreme, those who would choose to play democracy only, do not view the control scheme as factoring into the rules at all. And the middle demographic, it seems, view the control difficulty as an *extra-mechanical* conflict, which results in a game mechanic in itself - that of choosing between two methods aggregating the wishes of the players.

These perspectives are echoed in the game's meta-narrative. *Anarchy*, viewed as the purest and truest control scheme, became associated with the Helix Fossil, while Democracy, viewed as a compromise or an easy way out, was

associated with the Dome Fossil[35]. This is another example of how the narrative serves to both retrospectively interpret and frame future events, in that the Helix cult, if we may call it that, arose out of the randomness of the *anarchy* scheme. Without the nonsensical selection of that redundant option, the narrative would never have started. This implies a certain level of awareness that were *anarchy* to stop there would be lack of similar narrative going forward, and that it needed to be protected. This view is backed up in a survey ran on the *Twitch Plays Pokémon* subreddit, which was claimed to have received over 1,000 responses.[36] In this survey 80% claimed *anarchy* was their favourite mode of play while 47% said 'Following the chaos' was their favourite thing about the game. Narrative-wise, overcoming obstacles with *anarchy* was viewed as a greater victory than overcoming obstacles with *democracy*.

Further insight into the motivations of both sides can be achieved in examining the result of Lorentz (2014), who in her study of *The Sims* investigated the use of cheating among a group of players. She noted the following:

Among our sample of teenagers, I naturally asked if they used cheating codes or not and if yes in which circumstances. They repeatedly said using cheating code for generating big income at the beginning of the game in order to create a comfy house full of fancy items otherwise it would not have been fun playing with the bare minimum. This use of cheating code later in the game was condemned by teenager-gamers as it would pervert the rules of the game they

[35] Conveniently, the two words fit together to form the portmanteau 'Domocracy'.
[36] Matoking (2014)

said. Hence, the common norms such as the statement that cheating for more than getting money at the beginning when building the house is unacceptable has emerged.[37]

It appears the gamers in this study are moderating their behaviour in much the same way as the players of Twitch Plays Pokémon. While playing without cheating would make the overly frustrating, cheating with impunity would take away any challenge and so end the fun. This fits with the Chen (2006) study of 'Flow' in gaming, which proposes a model in which players must be in a sort of sweet spot between frustration and boredom in order to have an optimal gaming experience. If a game is too difficult, Flow is interrupted by frustration; if it is too easy, it's interrupted by boredom. In the case of the Sims this revolves around very fixed concepts of cheating and not-cheating, while in Twitch Plays Pokémon, as we have noted, these definitions are more nuanced.

Interestingly, in his proposals for further study, Chen notes:

The Flow researches have been mainly focused on the relationship between challenge and ability, which naturally assume the interaction. However, Flow-like experiences also exist in passive media like movie, literature and music.[38]

Both of these concepts - the relationship between challenge and ability and move towards passive media - are relevant in the current discussion. In *Twitch Plays Pokémon* it is not merely ability to overcome an obstacle measured

[37] Lorentz (2014), 284
[38] Chen (2006), 19

against the challenge of it that is taken into account when self-evaluating flow, but also the way the game is perceived as being *rightfully* played. Furthermore, *Twitch Plays Pokémon* is not a videogame in the strict sense that the games studied by Chen were, but a sort of hybrid medium which has passive aspects.

Where does *Twitch Plays Pokémon* fit in?

The social dynamics of online multiplayer gaming are far more complex than the body of study so far completed on them would be able to cover. So far in this paper I have mainly looked to areas outside of gaming to explain phenomena found in Twitch Plays Pokémon, or to previously identified aspects of Twitch and video-game streaming that while closely tied to gaming represent a fundamentally different activity. My goal in this section is to identify what aspects of Twitch Plays Pokémon can be traced to purely game-based concepts and how they might offer deeper insight into them.

In Wright, Boria & Breidenbach (2002), they examined the social relations within a very different game, *Counter-Strike,* and sought to show how interactions within the game could lead to the generation of 'interesting and creative innovations' in dialogue. Even in this game, which is short on narrative and viewed as more of a test of skill and tactics, they noted that game performance was "not merely about kills and deaths, but also about the ability to joke, release tension and to express a sense of humor." The idea that performing well in a game in which social interaction is not tied directly to game mechanics could relate to socialising and humour points towards the possibility that this kind of interaction could be a form of emergent gameplay in itself. In this case the meta-narrative is not similar to the kind found in *Twitch Plays Pokémon,* but does in some ways provide a frame of sorts in which the game is played. One of the paper's conclusions was that players "actively create the

meaning of the game through their virtual talk and behavior." This appraisal is startlingly similar to the ideas we came across when looking at the meta-narrative of *Twitch Plays Pokémon*, and if we adopt the view that game performance can be tied to social interaction in itself, we may come to view adding to the meta-narrative as, in a sense, part of gameplay.

In another very different type of game we can find evidence of a different kind of emergent narrative that does not rely on social interaction. The game *Dwarf Fortress* is an example of a *roguelike* as already discussed. It is known for its extremely steep learning curve and minimalist aesthetic principles, relying, in its original format, on ascii graphics and lacking sound. It is part of a genre of simulation games which take place in randomly-generated worlds that are unique to each instance of a new game being created. In *Dwarf Fortress* the player takes control of a small band of dwarves and the goal is simply to survive - there are no other explicit goals provided. Gameplay stems from providing the shelter, food, protection and a myriad of other requirements in order for prolonged existence in a world populated and invaded by various different antagonists such as raiders or monsters. The game is strictly single-player, although it benefits from a very active online community[39].

In this game it has been widely reported that the players establish their own narrative to apply to the game's events. Diaz (2009) found that the game's creators had given players the ability to create their own kinds of 'tellable moments' in the game. 'Tellable moments' he describes as "events which,

[39] See Gavin (2010), 20

because they either create or break expected patterns, are well-suited to use in plots, and serve as resources for storytelling." It is difficult to classify the narrative-provoking events in *Twitch Plays Pokémon* in this way. Firstly in *Twitch Plays Pokémon* these events were not the result of design, and in fact in the majority of cases come from extremely mundane or trivial game elements (such as organising the party). Secondly the process described in *Dwarf Fortress* is solitary venture. The results of the story-creation may go on to be shared between players in a social media location but its creation is generally not collaborative.

The unifying feature of simulation-based games such as *Dwarf Fortress* and *Twitch Plays Pokémon* is that their outcome is not pre-determined to any great extent. The player, or players, therefore have an ownership over the course of events which unfolded in their playthrough of the game. In this sense they are free to interpret said events in whichever manner they please. This harkens back to earlier in our discussion when we considered improv stage-actors or children in pretend play. In all these situations there is no fixed end point. Nor is it clear if there actually is an end point. However, games of this type lack the same drama from a sports event or *Twitch Plays Pokémon*, in that the issue of not achieving the desired outcome is not a significantly undesirable threat.

This is not a phenomenon confined to relatively obscure games such as these, however. Lorentz (2014) found in her study of the Sims, one of the biggest-selling games of all time, that "gamers enjoy living the same

experience in groups."[40] Again, in this case, the game in question was strictly a single-player, offline experience in its design. And yet its players still "savoured the opportunity to talk about the game with others and to share their feelings and impressions."

Massively-multiplayer online games (MMO's) would appear at first glance to provide the perfect backdrop for this kind of interaction, in that they provide an online world for large amounts of players to play together as well and communicate. Yet again these are very different to Twitch Plays Pokémon. Taking the example of the massively successful *World of Warcraft*, we can see that the idea of creating a meta-narrative exists but is not a fundamental part of the game. The servers that players can choose to play on are divided, strictly, between normal servers and role-playing servers.[41] In role-playing servers the interaction between characters through the in-game chat must be coherent with the narrative of the game itself. That is, the player must only communicate in a way the character they control would, and not as a human being controlling a video game character. These role-playing servers are in a minority compared to the normal servers in which players can communicate with each other in whatever manner they wish.

In world of Warcraft the characters and events of the game exist within boundaries set by the game's designers. Players may choose which side to fight for - the *Alliance* or the *Horde* - but have no ownership or agency over

[40] Lorentz (2014), 283
[41] See Copier (2007) for an in depth study of role-playing in *World of Warcraft*.

these ideologies. By contrast, in *Twitch Plays Pokémon*, players had already sided with *Helix* and were later able to incorporate a new concept - *anarchy* - into that ideology. Otherwise, however, there is a similarity between players wanting to role-play in their social interaction in *World of Warcraft* and the players of *Twitch Plays Pokémon* role-playing the part of idol-worshippers.

The state of emergent narrative

The feature, I believe, that has been most overlooked in the literature dealing with emergent narratives, is that a crucial part of buying into an emergent narrative is the possibility of not reaching a perceived goal, or overcoming some central challenge.

Twitch Plays Pokémon began as a social experiment to see *if* it was possible for a multitude of players to complete the game. After two weeks, it was still not clear if that goal was possible. Even if one does assume that through sheer brute force, so long as there remains at least one person playing, it must eventually be overcome, the fact that so many of the game's players have indicated that making progress by way of *anarchy* is the only acceptable way to play the game, it seems as though that would be an unsatisfactory conclusion. The vast majority of games have an ending, or some cases multiple endings, which are designed to be reached, generally without so much frustration as to disrupt the flow of the playing experience. Players in the overwhelming majority of games will not doubt that they will be able to complete it.

The possibility of non-reaching the end *can* be provided in the context of video game spectatorship, where a challenge is set and an attempt made to overcome it. Because *Twitch Plays Pokémon* arose in the context of gaming spectatorship, this aspect was seamlessly integrated.

Closely associated with this concept is another that I feel has been overlooked by the literature, although Aylett (2000) came very close to recognising it. She noted that one of the problems with video games at the time in terms of creating narrative coherence was the ability to 'undo' any amount of behaviour without consequences, adding:

The user may have as little idea by the end of the game of his or her narrative path as a film actor who has appeared in dozens of takes of scenes in various orders but has not seen the final film.[42]

Here lies a great oversight which I believe partly lies with an unfamiliarity with the medium of video games or at least a lack of attention to contemporary works. Many games even before the year 2000 had included, if not total permadeath for the player, partially non-reversible losses. *Final Fantasy Tactics*, which was released in 1998, was one high-profile example in which characters from the group would be permanently lost should they fall in battle.

Today that concept can be traced to games like *DayZ*[43], an upcoming title that has recently been consistently topping the list of best-selling games on the *Steam* software distribution platform despite still being at 'pre-alpha' release stage. A similar game, *Rust*, is also popular. In both, the player is thrown into a hostile environment with survival the only goal, in a somewhat similar vein to *Dwarf Fortress*. *DayZ* and *Rust* are both online multiplayer games however, and in both social interaction is encouraged, be it cooperative or hostile. And in

[42] Aylett (2000), 8
[43] The upcoming release is based on a popular mod by the same name for a game named Arma II.

both we can see emergent narrative. *DayZ* for example, has spawned a vast collection of YouTube videos documenting in-game events[44], and has even been the subject of in-game photojournalism.[45] In both cases, the online nature of the gameplay allows for persistence of time, and therefore the inability to undo mistakes. If your character is injured or killed, or if you lose an item, it is not reversible. Bearing in mind what we have discovered so far about emergent narratives, I think this is the crucial aspect of these survival games that lends them to the formation of emergent narratives.

While in *Pokémon* it is possible to save one's progress and revert to that file in order to undo mistakes or failure, the way *Twitch Plays Pokémon* has been set up excludes the possibility of turning off the console and reloading. It is not readily apparent if this was a deliberate decision by the game's creator, but what we have learned about emergent narratives suggests that it is a key factor in the game's success. Some of the moments that most resonated with the community of the game revolved around Pokémon being lost, either those around whom a narrative had been built or who were deemed crucial to beating the game or both. If this were reversible, I believe it it evident from what we have observed in other studies that the meta-narrative would not have been so significant.

[44] This growing selection may be accessed by searching for the term 'DayZ' at YouTube.com.
[45] Brandom (2012)

Conclusion

Initially it is difficult to make sense of the popularity of *Twitch Plays Pokémon* and how it managed to propagate such a vibrant community so thoroughly drenched in emergent narrative. However, through tracing the origins of emergent narrative in other media and considering the nature of the game as a mixture of two relatively very young media, I think we have at least begun to explain some of the factors that played a part.

Creating an environment in which an emergent narrative can grow requires a persistence of time and place. In the context of a single-player video game, this means a single, uninterrupted playthrough in which all actions are permanent. Although *Twitch Plays Pokémon* is technically multiplayer, in narrative terms it plays out through a single character and therefore needed to fit these criteria, which it did. The fact that the goal of the game was to overcome a challenge that had never before been attempted meant that there was an inherent suspense to the game that is lacking from most gaming experiences. Because this challenge was so great, there was a real risk of the game losing its appeal through becoming overly difficult or even impossible to complete.

The ability of those involved creating the narrative to self-regulate the terms upon which the events took place allowed the players themselves to adjust the difficulty to an acceptable level without compromising the sense of struggle. This occurred through the introduction of a hybrid intra/extra-mechanical

device in which the community chose how they saw the nature of the challenge represented by the game and what constituted beating it in a sufficiently challenging but also achievable way. In doing so, both the threat of outright failure and the possibility of success were maintained as distinct and real possibilities. This uncertainty that lent a dramatic layer to the game's events, and its incorporation into the existing meta-narrative of the game prevented it from hindering immersion. Furthermore, the randomisation of the controls means that enough agency is taken out of the hands of the players that the tragedies of the game's narrative don't feel like personal failures so much as tragedies in the classical sense. As Juul (2013) puts it, "the paradox of failure is unique in that when you fail in a game, it really means that *you* were in some way inadequate." In this game the players need not be so hard on themselves.

Mostly by accident, *Twitch Plays Pokémon* has overcome a long-standing obstacle to creating cohesive emergent narrative in that it essentially offloads the responsibility to the community instead of trying to form it itself. It's unclear whether this is a feat possible for a traditional single player game but a similar approach is becoming more widespread with the emergence of *DayZ* and games of a similar genre.

The fusion of media involved in *Twitch Plays Pokémon* leads to further interesting questions. By mixing the spectatorship normally associated with watching other live events such as sports, the interactivity of a video game and the social interaction of social media, a vibrant community was able to spring up very rapidly and through the wealth of avenues available become

prolific in painting a narrative picture that surpassed the creative capacity of the original game. By adding direct interactivity to a mainly spectator-focussed medium a unique precedent has been set but it remains to be seen if it is the first of many or curiosity not to be repeated.

Because the spectating of video games is rapidly growing in popularity, boosted by the live-viewing capabilities of the hugely popular Twitch.tv, I expect the area will come under more scrutiny in the coming years. The early stages of the medium has shown it to be rich in social interactivity compared to many others, which naturally suggests its potential for forming communities. The concept of allowing multiple players to take part in previously single-player games is an intriguing one and likely to be further explored. Some aspects of *Twitch Plays Pokémon* will be easily replicated - there are many similarly turn-based or nostalgic games available, for instance. However creating the environment for such a robust meta-narrative to emerge will prove a more difficult process.

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