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Putting the “Pocket” in Pocket Monsters: The Game Boy’s Technical and Ludic Impacts on *Pokémon Red* and *Blue*

Abstract

When *Pokémon Red* and *Blue* (Game Freak, 1998) arrived in North America and Europe, *Pokémon* fever swept across the (gaming) world. However, little scholarly work focuses on how the Game Boy was intrinsic to that success and popularity. This article contributes to the growing field of platform studies through an analysis of the Game Boy as groundbreaking, albeit limited, hardware before examining how those limitations and technical apparatuses defined the ludic and social experience of *Pokémon Red* and *Blue*. The article offers a new perspective on *Pokémon*’s origins that both complicates and complements various approaches from previous scholars, collectively reframes those who engage *Pokémon* as active knowledge-seekers, and more broadly contributes to the growing understanding of our past mediascapes, centred upon the Game Boy’s presence and legacy across the biggest game franchise in the world.

Keywords: *Pokémon*, Game Boy, platform studies, glitch, social gaming

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Introduction

Discussing the Game Boy's catalogue of games, Lewis Parker (2022) exclaims, "*Pokémon* was the silver bullet" (p. 13). When *Pokémon Red* and *Blue* arrived in North America in 1998 and in Europe in 1999, *Pokémon* fever swept across the (gaming) world. Yet, it is important to acknowledge that the Game Boy was intrinsic to that success and popularity. While Parker (2022) explains that "Part of the fun of *Pokémon*" came from the Game Boy allowing "players to connect consoles via link cable" (p. 13), the other part of the fun arose from the Game Boy's mobility and access. As a handheld system, the Game Boy allowed *Pokémon* trainers to traverse the world, digitally and physically; however, there is little scholarly attention on the Game Boy's influence on *Pokémon*'s franchise. To fill this gap, I will analyze how the Game Boy inspired the design of *Pokémon Red* and *Blue* as well as how it influenced players' engagement of the games: moving through the real world with the games and a Game Boy—like a real-world Pokédex—to collect, train, trade, and battle with and alongside fellow players.

Through this analysis, I will illuminate how understanding the technical limitations of the Game Boy is necessary in critiquing the interactivity needed from players to collect, construct, and engage *Pokémon* and their peers in a multitude of ways. This analysis builds upon the frameworks established in platform studies, particularly those focused on Nintendo platforms and consoles (Juul, 2010; Jones & Thiruvathukal, 2012; Tobin, 2013; Altice, 2015; Reynolds, 2016; Arsenault, 2017; Newman, 2019; Custodio, 2020), that first examines the Game Boy as groundbreaking, albeit limited, hardware before discussing how those limitations and technical apparatuses defined the ludic and social experience of *Pokémon Red* and *Blue*. Tracing the Game Boy's influence over *Pokémon*, I analyze how these original games position their players as knowledge-seekers relying on limited or often fallible resources to engage the games. As such, my article will offer a new perspective on *Pokémon*'s origins that both complicates and complements various approaches from previous scholars, collectively reframes those who engage *Pokémon* as active knowledge-seekers, and more broadly contributes to the growing understanding of our past mediascapes, centred upon the Game Boy's presence and legacy across the biggest game franchise in the world.

The Game Boy: Compromised design and unparalleled reception

Released in 1989 in both Japan and North America, and 1990 in Europe, the Game Boy was unprecedented in its popularity and reach, but familiar in its appearance and design. Its success ensured Nintendo's brand recognition and established the company's presence (and later dominance) in the video game handheld market. However, the novelty of the handheld experience was not new—with single play handhelds of Game

and Watch, Mattel, or Coleco—and the Game Boy relied on innovative uses of past technological achievements for both its hardware and software assume its market success. Gunpei Yokoi, one of the original designers along with Takehiro Izushi, Yoshihiro Taki, and Satoru Okada (Gorges, 2024, p. 13), referred to this design philosophy as “lateral thinking of withered technology” (Reynolds, 2016, n.p.), where “Withered technology refers to technology that is older cheaper and well understood and lateral thinking refers to using that old technology in new and innovative ways” (Did You Know Gaming, 2019, 3:33–3:47). With its 1989 and 1990 releases, it arrived at the end of the NES cycle, just before the SNES released in Japan in 1990, North America in 1991, and Europe in 1992. The Game Boy, then, was a redesigned version of the NES at the precipice of the next generation console’s arrival.

Nintendo thus relied on that familiarity on its appearance and design. The button layout mirrors a compact NES controller with a black four-direction pad, grey Select and Start button, and mauve B and A buttons, resulting from designer Shin Kojo ensuring the button layout would follow the Famicom and the NES (Gorges, 2024, p. 75), and the handheld’s light grey body and dark grey and black accents directly reference the NES. The parallels were a direct result of Lance Barr, “also known for having designed the NES and countless other products for the international market” (Gorges, 2024, p. 76). With that structure and layout, the Game Boy was a pocket-sized NES that could be played beyond the living room. Convenience of its size and recognizability of its design offered players an equally novel and well-known experience that reframed the Nintendo gaming experience. As its presentation and design mirrored the NES, so too did its technical specifications. Daniel Reynolds (2016) takes an in-depth analysis of the Game Boy’s hardware: “the device consists of a four-shade LCD screen with a resolution of 160 by 144 pixels and a refresh rate of approximately 60 frames per second, a mono audio speaker and stereo headphone jack, an 8-bit processor running at 4.19 MHz with 8k of internal RAM and 8k of dedicated video RAM” (n.p.). These hardware specifications ensured that “excluding the ability to display colours, the portable console was capable of performing on par with the NES, if not better” (Gorges, 2024, p. 43). In short, the Game Boy was the least technically advanced gaming platform in the late 80s and early 90s, all by design. Its simple, familiar design and reduced hardware allowed the Game Boy to only require four AA batteries and lasted up to 30 hours of gameplay. With 30 hours of portable play, the Game Boy allowed players the choice of how and when they explored their favourite worlds.

Its balance between novelty in experience and familiarity in design meant it was also intuitive to handle during play. The power switch is located at the top of the device and locked cartridges in the clearly designated port at the back of the Game Boy when turned on, making unintended game removal impossible during play and preventing accidental loss of game progression. The battery compartment is located directly under

the cartridge port behind a latched panel. The right side has the volume wheel and the link cable port with the screen contrast wheel on the left. Finally, the headphone port is at the bottom of the device. The Game Boy is 148 mm tall, 90 mm wide, and 32 mm deep, and weighs 220 g without a cartridge or batteries. The entire system weighs approximately 300 g with a cartridge and batteries. It fit in child and adult hands comfortably and easily fit into backpacks, bags, and large pockets. In comparison, the Switch is 102 mm tall, 24 mm wide, and 14 mm deep, and weighs 320 g with Joy-Con controllers attached, but without a cartridge. Portability and power ensured the Game Boy was not only an initial success, but one of the most successful gaming consoles—portable or otherwise—in gaming history. If a player had a reliable light source, they could play the Game Boy anywhere, and, as a late Game Boy TV advertisement promised, with “all the power and excitement of Nintendo right in the palm of your hand.” The world was playing with that power in the palms of their hands. Gorges (2024) explains that “Game Boy had become the best selling console in the history of video games, having outdone the NES/Famicom” (p. 108), and through its entire console life cycle, the Game Boy, with its variants prior to the Game Boy Advance (GBA), surpassed 118 million global sales. The Game Boy redefined portable play and set the foundation for its most popular game at the end of the handheld system’s relevance: *Pokémon*.

***Pokémon*: Player choice and connection**

Like the Game Boy, it is difficult to overstate the immensity and success of *Pokémon* (a portmanteau for the original Japanese *Pocketto Monsutā* [“Pocket Monsters”]). As the Game Boy arrived at the end of the NES cycle, so too did *Pokémon* arrive at the end of the Game Boy cycle. Pocket Monsters Red and Green originally released in Japan in 1996 before receiving a revamped *Blue* version later that same year. *Red* and *Blue* (based on the newer Japanese *Blue*) then released in North America in 1998 and in Europe in 1999—a decade into the Game Boy’s console cycle. While initially slow sales in Japan before the refurbished *Blue*, the immediate success of *Red* and *Blue* in North America and Europe made the generation 1 games commercially and critically acclaimed with over 31 million sales globally, reigniting Game Boy production at the end of the console’s life cycle. As Gorges (2024) reasons, “The *Pokémon* franchise single handedly proved that the success of a console mostly depends on the success of its games” (p. 139) and brought forth what Gorges calls “the ‘golden age’ of the Game Boy” (p. 141).

Pokémon requires multiple levels of player choice and interaction to truly engage its characters and world. Starting with *Red* or *Green* in Japan and *Red* or *Blue* in North America, players immediately had to choose which game to play—the first choice of its kind in games with dual releases—and that choice had important consequences. There are eleven exclusive *Pokémon* in each version. Furthermore, four *Pokémon*

could only evolve into their final forms through trade with another player: Alakazam, Machop, Golem, and Gengar. And perhaps the most explicit choice is the one between the original three starter Pokémon: Bulbasaur, Charmander, and Squirtle. In short, a player with access to only one version could not complete their Pokédex as they did not have the opportunity to catch or acquire twenty-one Pokémon. Players needed to find friends and fellow players who had a different version to trade those exclusive Pokémon to complete all 150 known entries across the Pokédex. Playground discussions, trades, and battles mirrored the experience with the games with children seeking out lucrative trades and exciting battles between one another. Players needed to be strategic not only with which Pokémon they caught and trained but in which version they played, creating local trade networks with peers who could help them fill in the pages of the Pokédex. With a cartridge of *Red* or *Blue* and a Game Boy, players were both the heroes of their own journeys and the NPCs in each other's adventures.

This sense of choice and necessity of social play with trading and battling was a core element for the designers. Satoshi Tajiri, one of the original creators of *Pokémon* (along with founding member Ken Sugimori, as well as composer Junichi Masuda), sought to use the Game Boy's link cable feature to allow battling, and more importantly, trading between players. Shigeru Miyamoto then suggested two versions of the games to further foster that trade and interdependence upon other players rather than competition and battling. Indeed, as Shinichi Nakazawa (2019) argues, “More than anything else, it is trading that most characterizes *Pokémon*” (p. 82). This necessary connection between players, their Pokémon, and other players creates a network within and across the games and play spaces. *Pokémon*'s popularity gave the outdated Game Boy new importance, and Parker (2022) reflects that “it made the Game Boy utterly essential” (p. 13). Yet, as I continue to argue throughout, the Game Boy also made *Pokémon* utterly possible. It was impossible to separate the console from the game(s). With its portability the Game Boy allowed *Pokémon* to become the focal point and connection for players, what Parker (2022) calls “a way to be a part of the conversation and the action, a rallying force that forged friendships through fanaticism” and through that rallying force, “Imaginations were ignited in Kanto, in a uniquely Game Boy way” (p. 13). While Parker (2022) does not fully articulate this “uniquely Game Boy way,” the Game Boy allowed players to access the games in real-time, not having to wait until they arrived home, to show their friends and peers their Pokémon team, their progress, or back-up (or dispute) any seemingly wild claims of the games. This approachability and empowerment showed players that *Pokémon* was easy to learn, but difficult to master, requiring complex and in-depth knowledge largely because the games and hardware were unable to contain all the information necessary to fully display and articulate the entirety of the game world. The Game Boy's storage, or lack thereof, along with the technological constraints of the generation 1 games centred the importance and precariousness of storage on a player's path to Pokémon mastery.

“Technology is incredible!” Storage, limitations, and datafication

Even the first generation games’ 151 creatures put immense strain on the Game Boy’s hardware and software. Data limitations in the 80s and 90s required developers to rely on a technique called “memory banking” where “the game divides the data into smaller sections or banks” (Real Engineering, 2024, 13:30–13:40). Real Engineering (2024) notes that “The Game Boy’s hardware can only read 32 kB of data, but Pokémon Red/Blue has a memory size of 373 kB” so “data had to be divided into 44 banks” with the game switching between banks for necessary data output (13:49–14:06). For example, “When the Pokédex was opened the chip would access ‘Bank 2B’ where all the 151 Pokémon had a 100-character description” or “If the player entered a PokéMart the chip would access Bank 1 to get the prices of each item” (Real Engineering, 2024, 14:14–14:32). In short, Game Freak was able to circumvent the storage limitations of both the Game Boy and a Game Boy cartridge through memory banking, ensuring players could not only see the 151 original Pokémon but also capture, store, and use them in the game. Pokémon, once caught in Pokéballs, become part of the player’s six slot party where they can fight in combat and help navigate the world through special moves called HMs, or they exist in a PC storage system. As the system in Red and Blue, Bill’s PC was the first of its kind and required players to withdraw and deposit their Pokémon in terminals found at any major setting’s Pokémon Center. In Red and Blue, there are twelve boxes, each with the capacity limit of twenty, to store a total of 240 Pokémon, which was useful for players who stockpiled Pokémon for trades or pursued additional challenges like a “living Pokédex” that required having one of every Pokémon.

Collecting Pokémon is the driving force and main game mechanic of the games, fostering both a sense of completion and a sense of connection. Indeed, Sonja Sapach (2017) argues, “postmodern collectors can find pleasure in the ability to choose from large numbers of collectible creatures, deciding which ones to focus their attention on, which ones to gain specialized knowledge about, and which ones to brush aside” (p. 17). The act of going to a Pokémon Center took time and energy from the player’s progress to withdraw a newly captured Pokémon and add it to their party. This choice and time investment would further the conscious decision to use that specific Pokémon in the player’s travels and begin (or continue) that sense of connection. This choice was only further complicated by type advantages to progress through trainer challenges as well as the need to have various Pokémon with specific HMs to progress through the game world. Selecting and maintaining a party offers further choice as players continuously engage with “a fragmented database of collective knowledge” (Sapach, 2017, p. 71). This “fragmented database” on the players’ path to construct that “collective knowledge” operates both in the games and expands to the social act of playing Pokémon on the Game Boy.

The game’s narrative also centres upon this storage mechanic. Allison (2006) explains that the game relies on a process called *detaka*, or “datafication,” where “the reconfiguration of value from a material form (monsters) into data that are storable, portable, and transferable” (p. 221). For Tajiri, this process “is what makes *Pokémon* a kind of play that keeps going beyond the game itself” (Allison, 2006, p. 221). This sense of “datafication” is crucial not only to the games’ worldbuilding but also, as Allison (2006) notes, a core feature of the player-Pokémon connection: “Convertibility from image to data enables them to inhabit *Poke*-balls and, as a portable medium, be traded, accumulated, or communicated by (and between) humans” (p. 266). However, “this *detaka* also animates the pocket monsters, Tajiri believed, by making them more, rather than less, lifelike” (Allison, 2006, p. 266). Nakazawa (2019) discusses a similar understanding of this connection: “This data is nothing more than ones and zeroes. For the people playing the game, though, what is moving through the cable is a thing of great importance” (p. 85). Capturing and battling these creatures, then, purports a stronger sense of companionship than digital subjugation from this perspective. Pokémon caught, trained, and traded from one player to another symbolize the time and commitment to the game experience as well as the willingness to overcome the intentional technological barriers of version exclusives and trade-specific evolutions to ensure friends and fellow trainers acquire the Pokémon they want and need. Players could observe the tangible effects of using different Pokémon in their party with stat boosts, changing move sets, and evolutions. Their choice and effort directly contributed to change in their companions and the knowledge necessary to develop and understand the layered and often obscure information around different Pokémon defined the player’s mastery and knowledge.

From “playing with power” to playing with knowledge...

The limited hardware and software capabilities of the Game Boy and of *Pokémon* meant only a fraction of the game world’s information was readily available and contained in the gameplay. *Pokémon*’s world thus appears larger than it is, giving players the sense that, as Sapach (2017) reasons, “we live in a world of a grand non-narrative where every piece of information seems to be a fragment of a database too large to fully explore or collect” (p. 71). One must collect, catalogue, and control these creatures, often identifying (with) them through the process within and across its database structure and datafication. Alex Custodio (2020) explains that “The Pokédex visually resembles whichever handheld the game is released for” (p. 126). In *Red* and *Blue*, the Pokédex is portrayed-oriented to match the Game Boy, giving players a sense of carrying and using their Pokédex as they move through the day, offering a constant immersion even when not playing the games. In this way, *Pokémon* literally and metaphorically connects players to the virtual world of the games and to each other by

using portable devices to play the games that mirror the portable devices to collect and trade these virtual creatures. Codes become creatures and in-game databases mirror the hardware on which they operate, and, as Allison (2006) argues, by mastering and personalizing these codes/creatures, “children gain a sense of deep attachment to, and control of, this imaginary space” (p. 26). Choice of companions and cohesion of devices further immerses players in the game space, and if a player is carrying a Game Boy with a *Red* or *Blue* cartridge they surrounded by the world of *Pokémon*.

Attachment and control are core mechanics of the games. Allison (2006) explains that “*Pokémon* is a game of strategy, skill, perseverance, training, and knowledge, and the play activities it is said to promote include collecting, competition, pet raising, mastery, adventures, and role-playing” (pp. 192–193). Indeed, Jason Bainbridge (2014) notes that “*Pokémon* was one of the first franchises to make acquisition a central part of its narrative” (p. 404). Players acquired the title and status of Pokémon Master both in-game and in the real world upon completing the Pokédex, and the game further recognizes this accomplishment with an in-game certification that reads, “Player RED Congrats! This diploma certifies that you have completed your POKéDEX” (Game Freak, 1998). Yet, the Game Boy’s limitations define how players choose their paths to become Pokémon Masters. These limitations of the platform required the player’s mind to compensate for the platform’s lack of RAM both in fully imaging how these creatures look and act (for example, in the wild or performing attacks) in the game world as well as how they perform and grow in battle or trade. Memorization and paratexts revolving around the Pokédex’s database was fundamental to the joy and success of playing the games. Players require textual and ludic knowledge of the world to find, battle, and capture different Pokémon with additional layers of knowledge to ensure they are successful in those pursuits. Players must rely on knowledge for every aspect of the game because, as Nakazawa (2019) notes, “The world of Pokémon is a world of classification” (p. 72). Information on typing, effectiveness, learn- and move-sets, evolution requirements, and other crucial components of gameplay existed across publications, hearsay, and player experience. Playgrounds and lunchrooms preceded *GameFAQs* and online forums.

This necessity to share information across physical and, at the time, limited digital space was by design. As Allison (2006) notes, “Tajiri designed his game to promote more interactivity” by “making the game challenging but doable” (p. 203). Yet, as Allison (2006) continues, “Given the surfeit of detail involved in *Pokémon*, however, kids were also encouraged to gather and exchange information with other children, making the game world into something like a language that promotes communication” (p. 203). The Japanese word “*Tsushin*” (meaning “communication”) was “the keyword used by Tajiri and its marketers in the written materials surrounding *Pokémon* in everything from the guidebooks to instructional books that accompany the game” (Allison, 2006, p. 203). Players gathered information in parallel to collecting Pokémon, and Game

Freak encouraged this drive and communication as a necessary and fundamental aspect to players’ success, both individually and collectively. Any information on the creatures and the world they inhabit was valuable for every players’ ascent to Pokémon Master. Fostering that drive, Allison (2006) notes, “Nintendo, the company holding the rights to the *Pokémon* Game Boy games, has published a number of guidebooks and instructional manuals to help players learn and master the game” (p. 207). However, these publications were sometimes difficult to find or expensive, included in gaming magazines like Japan’s *CoroCoro Comic* or the official *Nintendo Power*, including the mini tear-outs of *Pokémon Power* within those monthly issues, as well as Scholastic Books encyclopedias and compendiums. With the obstacles to finding and buying these official sources, players relied on unofficial or even incorrect sources from friends and fellow real-world Pokémon trainers for their information in pursuit of becoming a Pokémon Master.

Not only did this environment foster rumours, but a social gaming experience far beyond arcade and split-screen couch co-op at the time and established the blueprint for contemporary online and networked play of its descendant *Pokémon GO*, as well as the countless websites designated to all aspects of *Pokémon* datafication. Indeed, Carina Assunção, Michelle Brown, and Ross Workman (2017) explain regarding players creating “a significant way in which fans have filled a gap within the market of the original games, and have repurposed websites to fulfil their own needs, creating more places for fans to join together and involve themselves in the social aspect of *Pokémon*” (pp. 20–22). Yet, before complex and all-encompassing websites and wikis like *Bulbapedia*, *Pokémon Database*, or *Serebii* (and the more combat-focused *Smogon University*), among countless others, there was the playground, the park, and other public spaces for children and adults alike. And before everyone had *Pokémon* on their smartphones, everyone had *Pokémon* on their Game Boys—with all its limitations. These limitations—of the Game Boy and of official information outside of the game—created a rich breeding ground for rumours and myths to spread.

...To playing with the uncanny: Rumours, glitches, and rituals

As an inherently portable experience, *Pokémon* on the Game Boy existed in all aspects of a player’s space with and amongst other players to create a unique social gaming experience beyond simply player competition. As discussed earlier, Tajiri had a novel idea for the Game Boy link cable: “for exchanges between players in which the objective would be to barter with, rather than eliminate, an opponent by trading monsters” (Allison, 2006, p. 200). This shift from competitive to collaborative offered the potential for communication centred around a common goal. Sociality brings with it a new paradigm of player interaction where knowledge and prowess forms through literal transference across link cable trade and exchange of information. Parker (2022) remembers

the thrill of such a shift: “Tethering your precious personal devices together had a fantastic sense of novelty, and worked just as intended, encouraging us all to view play as a social activity” (p. 13). Long before *Pokémon GO*, the real and the virtual overlapped as players traded real code and knowledge of abstracted creatures.

Fantasy and novelty turned daily commutes, recess, lunch breaks, and friendly gatherings into an extension of play. Pokémon, as virtual creatures, “border between phantasm (their construction) and everyday life” (Allison, 2006, p. 203). Indeed, as Allison (2006) explains, “Pocket monsters anchor this space as entities that hover between the known and unknown, visible and invisible, real and fantastic” (p. 223). Interestingly the notions of “phantasm” and the gaps between “the known and unknown” work in tandem through the trading of Pokémon, *Pokémon* knowledge, and *Pokémon* rumours. These rumours—some of them quite disturbing—were the prototypical version of the “creepypasta.” A creepypasta is “A portmanteau of ‘creepy’ and ‘coppypasta’ (itself a playful joining of ‘copy’ and ‘paste’), a piece of creepypasta is simply a scary story, usually anonymous, which is spread across message boards and social media sites” (Zawacki, 2024, p. 84). For players during generation 1, when internet access was fledgling, these stories instead manifested as rumours and urban legends. The most poignant rumours during *Red* and *Blue* were the MissingNo. glitch and the in-game existence of the legendary Mew.

For the sake of both scope and connection to the Game Boy’s limitations shaping *Pokémon*, I will offer a specific focus on the MissingNo. glitch and the Mew promotion, legend, and glitch, as more recent urban legends and creepypasta, including “Lavendar Town Syndrome” or “Buried Alive,” did not arise until after generation 1’s release cycle. Glitches are especially important in framing the player’s notions of phantasm and the gaps between the known and unknown because, Alexander J. Zawacki (2024) argues, glitches “establish video games, especially but not only in moments of malfunction, as pre-existing loci of the uncanny, natively eerie media whose unsettling aporia creepypasta seeks to exploit and develop into a full-blown genre of the digital weird: a poetics of the glitch” (p. 84). MissingNo. embodies this poetic of the glitch through both its connection to hardware and software limitations of the time and the word-of-mouth transference of knowledge that both shaped the *Pokémon* experience. Manifesting as a block of corrupted pixels and possessing the water and unfamiliar “bird” type, “MissingNo. defied the normal forms of Pokémon classification” (Zawacki, 2024, p. 87). Consequently, “The existence of this aberrant creature destabilizes *Pokémon*’s narrative” because “Even MissingNo.’s aporetic name (an abbreviation of ‘Missing Number’) points up the fallible artificiality of the game, indicating that Pokémon were made for the Pokédex” rather than “the Pokédex for Pokémon” (Zawacki, 2024, p. 88). Unsurprisingly, Nintendo has officially declared that MissingNo. is “not a real part of the game” (“Nintendo Customer Support”). However, as Zawacki (2024) notes, “What Nintendo seems to mean is that it is not *intended* to be

part of the game. The developers did not intend for it to exist or for the player to find it” (p. 88). Intended or not, MissingNo. is very much part of the game and accessible through a simple sequence of events.

MissingNo. is unique for a glitch—or a bug—because though it may not have been intentional, players can reliably “summon” it with a simple procedure. To encounter and catch MissingNo., a player must perform a series of interactions with in-game NPCs. First, they must go to Viridian City and ask to rewatch the Old Man’s catching tutorial. Next, without going anywhere else or talking to any other NPC, they must Fly to Cinnabar Island and Surf along the right-hand side of the island, atop the border between the walkable island’s tiles and the ocean tiles. Surfing up and down this path will eventually cause a MissingNo. to appear in a regular wild Pokémon confrontation and battle where the player can then catch it. Indeed, “MissingNo. is unambiguously a glitch, one called up through a kind of ritual” (Zawacki, 2024, p. 88). And this ritual disrupts the game’s linear processing and memory banking “In order to conserve computing resources” and reveal “virtual spaces that the player is not meant to see” because they are “frequently left incomplete” (Zawacki, 2024, p. 88). The incompleteness—or, more accurately, limitations—of memory banking makes this glitch possible as the code shared between distinct aspects of the game converge and coalesce into the uncanny amalgamation of MissingNo. It is not meant to be but is a tangible thing, nevertheless.

Mew, on the other hand, was an intended though originally secret glitch that changed *Pokémon*’s trajectory and helped build its legacy. In an official Nintendo *Iwata Asks* segment, Tsunekazu Ishihara, President and CEO of The Pokémon Company, states that “There’s no denying that Mew’s existence played an extremely significant role” in Pokémon’s popularity and success (Iwata Asks, 2009, n.p.). Shigeki Morimoto, the developer who programmed Mew into the game, explains, “We put Mew in right at the very end. The cartridge was really full and there wasn’t room for much more on there. Then the debug features which weren’t going to be included in the final version of the game were removed, creating a miniscule 300 bytes of free space. So we thought that we could slot Mew in there” (Iwata Asks, 2009, n.p.). Without the newly created memory space, Mew would not have existed in the game at all, with Morimoto admitting that “Unless we could think about any good opportunity to do so, the existence of Mew wouldn’t have been revealed to the public” (Iwata Asks, 2009, n.p.). Tajiri, inspired by urban legends around *Space Invaders* and *Xevious*, imagined a Pokémon that was present in the world and lore of the game, but difficult or impossible to encounter and catch. Guided by Tajiri’s vision, Game Freak collectively created Mew with Sugimori designing Mew’s sprite and Morimoto programming it into the game. However, like MissingNo., Mew started to unintentionally appear in player’s games. As Morimoto confesses, “due to an unforeseen bug, Mew ended up appearing in players’ games. It looked like we planned all of this, but that wasn’t the case” (Iwata

Asks, 2009, n.p.). Once Nintendo learned of the unsanctioned use of the debugged memory space and heard the word-of-mouth rumours causing game sales to quickly rise, Nintendo and Game Freak worked with the Japanese CoroCoro Comic to create the limited time “Legendary Pokémon Offer” in the April 1996 issue of the magazine. Based on mailed-in contest forms, twenty entrees could win the chance to mail their game cartridge directly to Nintendo so that developers could directly trade a Mew to it. The contest was widespread with over 78,000 entrees and its official connection to Game Freak and Nintendo only solidified the once tenuous rumours surrounding Mew. Players not lucky enough to receive an official Mew from the contest began to intensify their search for Mew, seeking similar means of altering or scrambling game code to summon Mew as they did with MissingNo.

Inspired by the “Legendary Pokémon Offer” to obtain an official Mew, players sought alternate ways of finding the legendary Pokémon, spreading knowledge and rumours further across the game’s social spaces. The most popular and well-known rumoured means of acquiring Mew was the “Mew Under the Truck” legend. It arose from the unique object sprite of a truck in the Vermillion City harbour near the S.S. Anne cruise ship. With no other vehicles or machinery in the games, this object stood out, and players assumed its unique nature implied importance or secret, hiding a Pokéball that contained Mew. However, once players completed the S.S. Anne area and obtained the HM Cut to enter the third gym, the S.S. Anne sails away and the player can no longer access the harbour and, by extension, the small area on which the truck sits. With access to the truck necessarily closed upon progress, this rumour became difficult to prove or disprove as most players would have moved past this area in the game quickly and new players would not readily have access to the HM Surf to reach the truck or the HM Strength to move it. The rumour could only be disproved by players who acquired a traded Pokémon with Cut, skipped the S.S. Anne area, progressed far enough through the game to acquire both Surf and Strength, and defeat the gyms required to use those HMs outside of battle, before returning to Vermillion City and accessing the truck area to discover they could not move the truck and nothing occurred by interacting with the object. While the “Mew Under the Truck” legend was the most widespread Mew rumour, there were others of varying degrees of difficulty: Mew was the reward for completing the 150 entries in Pokédex from either the Game Freak NPC in Celadon City (instead of the certificate) or from Professor Oak after defeating the Elite Four over 150 times. However, none of them gained the same level of notoriety.

While there were various and often unintended means of encountering Mew through the game, the most consistent method is much more bizarre and difficult to achieve compared to the MissingNo. glitch. Like the process to encounter and catch MissingNo., a player must perform a series of interactions with in-game NPCs and unique Pokémon moves to traverse the game world. After catching an Abra with Teleport, players must engage an NPC near Cerulean City but quickly pause the game

as the battle-indicating exclamation point appears above the NPCs head. The player must Teleport back to the Cerulean City Pokémon Center and immediately travel north of Cerulean City, past the original NPC, to find and battle the Youngster NPC trainer with a Slowpoke. After battling and defeating the Youngster’s Slowpoke, the player must immediately return to Cerulean City and walk down the Nugget Bridge. The Start menu will then automatically open; closing the menu will initiate a battle with a wild level 7 Mew, which they can then catch. Unlike the MissingNo. glitch, which is repeatable, the order of steps cannot change and once one step is complete, there is limited room for error as the player progresses through the bizarre process to encounter Mew. Ironically, this glitch is more difficult and easier to fail than the other rumoured (and false) means to encounter Mew, but its ritualistic process aligns uncannily with the MissingNo. glitch: Mew, as a one-time opportunity with specific movements and little room for error, exists as a ceremony, whereas MissingNo., a repeatable and duplicatable process, functions more so as a ritual that players can share and display across social game spaces.

These ritual and ceremonies create further player presence that existed within and around these games. MissingNo. allowed players to move beyond the limitations and mechanics of the game by maxing Pokémon levels and stats, TM use, Master Ball capacity through the consequential item duplication upon encountering MissingNo.; these game-breaking options allowed for a higher level of competition and social engagement. Players could battle level 100 Pokémon with boosted stats and rare TMs across a party. Mew made rumours real, moving the game beyond its narrative and ludic possibilities, as well as its social and paratextual capitals, and offered players new tiers of accomplishment and recognition. Both simultaneously stratified and balanced the social engagement and player networks around these games. However, a glitch, like a speedrun, “regularly moves away from the ‘model play’ constructed by the ludic work” (Barnabé, 2021, p. 252). Anyone who knew the MissingNo. glitch could remove the difficulty and time commitment of levelling Pokémon, defeating opponents, and catching strong Pokémon. It also made it impossible to compete with those players if someone did not use the glitch. The Mew glitch is not a repeatable event, and players can easily miss or fail the process, giving players who knew it or were willing to reset potentially tens to hundreds of gameplay hours advantage over those who did not or could not.

The presence of MissingNo. and Mew then furthered the legitimacy of other *Pokémon* rumours, convincing players that if something as bizarre as MissingNo. or encountering the legendary Mew was possible, so too must other rumours be possible or at least plausible. With *Pokémon*’s central focus on knowledge and mastery, players who knew—or claimed to know—the next biggest secret or glitch gained status and importance in these social and knowledge networks. As such, exploration of the game world and discussions of the games extended *Red* and *Blue*’s presence and established

a solid foundation for the legacy and continuation of the *Pokémon* series. Furthermore, knowledge of their existence and how to summon the glitches was important to move through the games because they conjure powerful resources (through item duplication through MissingNo. and metaphorically through attaining the impossible 151st Pokémon that immediately attained legendary status), and both require the limitations and accessibility of the Game Boy to exist and function accordingly.

Conclusion: Legacy and evolution of the Game Boy and *Pokémon*

As of this article's writing, *Pokémon* nears its 30th anniversary and continues its title as the highest grossing media franchise. In 2017, The Strong inducted *Pokémon Red* and *Blue* into the World Video Game Hall of Fame, following the Game Boy's 2009 induction into the National Toy Hall of Fame. Like the Game Boy's foundation for Nintendo's handheld consoles, including of course the Switch, the original *Pokémon* games set the groundwork for its present day releases. It is undeniable that both the Game Boy and *Pokémon* have deep, significant impact on gaming and player experience and, as I have argued throughout, the Game Boy's influence and impact on *Pokémon*—and vice versa—have secured both the hardware's and software's legacy. With the Game Boy, people could reframe the way they played games—no longer tethered to an arcade cabinet or TV and home console or single-game handhelds—and players fully embraced it. With *Pokémon*, players could share their game knowledge and resources through social spaces and the link cable, as well as expand the mythos and mystique of the games through discovering uncanny glitches or creating game-changing rumours. The Game Boy's limitations created space for both developers' ingenuity and players' imagination, and *Pokémon*'s design ensured those spaces offered unique and engaging ways to encounter, catch, battle, and trade these creatures across in-game and real world experiences.

While the Game Boy may no longer be in production or circulation, players can feel its effects every time they play one of the countless *Pokémon* games that exist across decades of game platforms. Today, nostalgia and legend as much as innovation affects the continued success of *Pokémon* with Assunção, Brown, and Workman (2017) acknowledging that “the *Pokémon* franchise is so deeply ingrained within the memory of those people who grew up during the 90s that those fans who played from the very start would tend to want to try newer, spin-off titles regardless of their differing nature, simply because of their relation to the *Pokémon* name” (p. 31). At their core *Pokémon* games are meant to span boundaries—real and virtual, language and culture—and the portable and familiar Game Boy ensured *Pokémon* players could take their adventures and companions with them on their journey to become Pokémon Masters.

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