

*Monochrome* belongs to the open world puzzle adventure genres.

*The Legend of Zelda: Breath of the Wild* is an open world action and puzzle adventure game. Play as Link to explore the world of Hyrule fighting enemies left behind by Ganon and solving puzzles in shrines that reward you strength. Utilize different weapons and abilities you find to find your way to save princess Zelda from evil.

*Monument Valley* is a mobile puzzle platformer game where the character utilizes the ability to change the map to solve puzzles. The player is capable of altering the platforms of the map in different ways to move the character from start to finish.

*Limbo* is a side scrolling, 2D adventure puzzle game. The player blindly discovers a dark and vague world around them solving puzzles in order to progress and find more information about who they are and what might be going on.

*Rayman Origins* is a 2D adventure game and is playable with up to four local players who may drop in or out at any time, as well as having different costumes available. The players gain different abilities as they progress through the game to assist in solving different puzzles and completing a variety of objectives.

*Bejeweled 3* is a puzzle game. Players aim to swap gemstones with adjacent ones to form chains of at least three same-colored gems.

*Nancy Drew* is a series of point-and-click puzzle adventure games. Take on the role of the amateur sleuth Nancy Drew and solve mysteries with clues, puzzles, and interrogation.

*Baba is You* is a puzzle game. Players must manipulate the rules of the game by pushing around text blocks to make the character reach the win condition.

*Peggle* is a puzzle game. Players must clear the board of orange pegs by shooting a limited supply of balls at them.

One difference in mechanics is the value of life in The Legend of Zelda: Breath of the Wild versus Monument Valley. In The Legend of Zelda, your health is indicated in the UI. It shows how much more damage you can take and whether or not to pursue a risky plan you have in mind. Health is a source of limiting factor when fighting bosses or groups of enemies. The goal is to defeat enemies and bosses while taking as little damage as possible. You are able to take more risks with more health too. In Monument Valley however, the health is not shown in the UI. In fact, there is no health system at all. The puzzle solving is the only purpose, there are no enemies to deal damage nor can the character take damage. With no health, the player is open to experiment more and make risky plays. Overall, The Legend of Zelda promotes a more preservative playstyle, playing safer trying to lose less health while Monument Valley promotes a more experimentative playstyle, testing out whether different plans work out or not regardless of how risky they are.

Another difference in mechanics is the amount of resources you have in both games. In the Legend of Zelda, your weapons and bows have durability. You must also collect arrows to be able to use them. In Monument Valley however, the adjustments to the map are not limited by a number of times you can do something. Rather it is limited to different orientations and positions you can put something in. The point is, there is no punishment in making a change in the map, thus incentivizing heavy amounts of experimentation. To reiterate, given limited resources of weapons, players in The Legend of Zelda are more preservative and have to consider tradeoffs in taking a fight while players in Monument Valley can test different changes in the map with nothing to lose but knowledge to gain.

One final difference in mechanics is the importance of gravity in the games. The gravity system in the Legend of Zelda is similar to the real world where it pulls the player down. In The Legend of Zelda, Link is required to use stamina to move vertically by climbing walls. As Link

jumps from higher heights, gravity pulls him down. It makes the player consider when to pull out the glider which costs stamina. If all stamina is used before Link lands, Link goes into freefall and may take damage or die if still too high in the air. The gravity in Monument Valley however, is over the place. Rotating the block a player is on, rotates the gravity so that the player still stands on the block. Gravity is something the player can use to solve puzzles. Rather than a factor to play around, gravity is a factor players control to solve puzzles. To summarize, there is no punishment for rotating the blocks and playing with different orientations of gravity in Monument Valley, it is all part of understanding the level. In The Legend of Zelda however, the player must play around gravity and its constraints such as causing Link to use stamina to glide and climb walls. This promotes a more conservative gameplay where the player considers for example, “do I have enough stamina and height to make a glide from this mountain to the nearby mountain?”

Limbo doesn't contain any kinds of special ability to the player, who controls the silhouette of a child. This sets the player off in the game with a sense of caution, and with the mysterious aesthetic, it adds another factor into making the player feel a lot more vulnerable. The different puzzles set up in the game Limbo don't rely on the player having incredible movement and special abilities. This is where we see our first game design difference between these two games. The difference here is not in the way that the two player characters both solve puzzles to progress, but in the way that they go about solving these puzzles. The differences between the mechanics for the player cause the puzzles to manifest in completely different forms. For example, in Rayman, the levels are laid out much more fantastically with lots of large gaps between jumps, and many collectibles throughout, with lively dynamic level-additions, etc. In Limbo, we don't find these magical jumps, with collectibles everywhere you go, but instead

the player is given little to work with, unless they resort to searching their surroundings for help. This results in making Rayman much more fast paced, with less consequential decisions due to the player having substantially more mobility compared to Limbo. However, these two games are able to create the right amount of mixture of mobility and puzzle solving to the point where having less or more mobility doesn't break the balance of how difficult the puzzles or objectives must be to maintain engagement from the player.

The second difference between these two games is the way that the games were designed. With Rayman, the player can jog through the levels without much attention to each detail of their environment, and find collectible items that set up high scores for each level, while Limbo revolves around uncovering the mystery of the plot. Clearly, both games contain plots, with "boss" battles, however, Limbo seems to focus completely on the fact that the player is introduced into a mysterious setting with little to no context other than the dark, silhouetted theme of the game. The contrast this creates between the two games can be shown by how Limbo is a much shorter game compared to the full length of the Rayman Origins game. This results in more replayability for the latter game, with the ability to go in and replay previous levels and set new high scores, or maybe walk through and pay attention to the art in the game. In Limbo, once the player completes the story, they already have knowledge of how to complete the different puzzles, and what is awaiting them ahead, but with no incentive to replay. With this linear, storytelling approach, the game Limbo provides a completely contrasting experience compared to the game Rayman Origins.

Finally, Limbo contains one single level, where the player plays through the whole story, whereas in Rayman, the game is laid out in multiple levels, where the player traverses through a hub which has different levels set out as a linear story. This results in also contributing to the level of replayability, with the different levels accessible from one location. If in Limbo, a player

wanted to only complete a puzzle from more towards the end of the game, they obviously must play through the whole game to make it to that certain section. Of course, *Limbo*'s story is something that grasped the attention of a huge number of players, and honestly, its lack of ability to replay in a way similar to *Rayman*, doesn't take away from the overall game's experience in my opinion. Because both games set out to provide different experiences from the start, the way that *Limbo* was designed to be a single playthrough of a story, makes the story much more compelling and something you must invest into (kind of by force), while *Rayman* provides a much more lighthearted, bouncy, and "varying by level" approach.

Each *Nancy Drew* game in the series tackles a different story and mystery that guides the narrative of the game, while there is also an overarching storyline with the main characters -- i.e. Nancy and her gang -- across the series. On the other hand, there is no storyline whatsoever in the *Bejeweled* game series. This difference in game design ties to and supports the nature of the game: Whereas *Nancy Drew* is meant to be more story-driven where the player would speak to NPCs and solve individual puzzles as well as the whole mystery, *Bejeweled* is meant to be a more relaxed and casual time killer. Thus, these two games could attract somewhat different demographics, where someone who has little free time would prefer *Bejeweled* simply for it is straightforward and requires no commitment. Furthermore, by building storylines to the game, the *Nancy Drew* franchise is able to develop "personalities" to the game and its characters, resulting in a very loyal and devoted fanbase. In contrast, although the *Bejeweled* series is also very successful, the lack of a story, a game mascot, and essentially a sentimental value can make the game less memorable.

While *Bejeweled 3* only presents one essential gameplay mechanic of matching three gemstones of the same type, puzzles in *Nancy Drew* vary in both mechanics and the skills they

are testing for. For instance, in the 23rd installment of the game, *Shadow at the Water's Edge*, players are presented with puzzles ranging from the classic sudoku and nonogram, to making the perfect bento boxes with clues given. This helps keep the long gameplay sessions fresh and engaging, especially when the puzzles are usually built around the theme of the mystery itself. However, *Bejeweled 3* also grips its player into longer play sessions by introducing different variations from the core match-three mechanic, such as the incorporation of poker or even a quest system. These new, creative game modes, while staying true to the core game mechanics, provide twists interesting enough to keep the players still engaged and not get bored with mindlessly doing the same thing over and over because they now need to rethink their strategy with each game mode.

Finally, the hint system in *Bejeweled 3* and the lack thereof in *Nancy Drew* games is a huge difference between the two titles. In *Bejeweled 3*, players can click the hint button and the game will indicate a possible move that can be made; this feature will then go into cooldown to prevent players from abusing it and to keep the game challenging. While there is a to-do list that somewhat acts as a guidance for *Nancy Drew* players to progress through the story, if the player is stumped at a puzzle, they would not be able to progress due to the lack of a hint or feedback system. Thus, players will have to resort to a walkthrough from other players in order to bypass a difficult puzzle. Because some of the puzzles can be poorly designed, overly difficult or because the player might have missed an important clue to solve them, the absence of a hint system could hurt the gaming experience.

One difference between *Baba is You* and *Peggle* is the fail condition. In *Baba is You*, the player can never really “fail” a level. If the player ends up creating an unwinnable or a not continuable scenario with the different rule blocks, the player can simply press Z to rewind their

previous move, or press R to restart the game with no repercussions. This leaves less stress on the player to plan their moves to solve the puzzle, and encourages the player to experiment with different rule combinations and moves. This way, the game heavily emphasizes trial and error. In Peggle, the player fails a level if they are unable to clear all the orange pegs before they use up all their balls. This makes the player plan out their moves before executing them, and leaves little room for error from the player. This makes Peggle less of a trial and error game and gives the player more of a measure once, cut twice vibe. It emphasizes execution rather than trial.

The second difference between these games is the randomization of the same levels. In Baba is You, there is no randomization of the same level. Each time you restart, the level is exactly the same as the first time you played it. In Peggle however, each time you restart the same level, the location of the orange pegs that you need to clear are randomized, as well as different power up pegs. This difference makes Baba Is You reward the player for finding the specific, exact solution to the level that the designers intended. Once the player beats a level, they always know the solution to win the level everytime they replay it. In Peggle, the randomization of the win conditions makes it so that a player can have a lucky run where the pegs are in perfect positions to clear. Winning a level once does not mean that the player is guaranteed to win again. Therefore, Baba is You has less replayability or reason to come back to the game after you beat it than Peggle.

The last difference between the two games is the level progression. In Peggle, the player can only advance to the next level if they have beaten the previous level. In Baba is You however, the player has a handful of levels that they can choose to tackle at any point in the game. This design in Baba is You encourages the player to take a mental break from a hard puzzle if they are stuck on it and work on another puzzle. If the players hit a level they can't seem to pass, they can just go to another area of the game and solve different puzzles there.

The player is not punished by not being able to progress for not being able to solve one puzzle. However in Peggle, if the player hits a level they cannot seem to pass, they must keep trying at the level in order to progress. There is no other option for the player other than to replay old levels, or just not play the game. This can lead to frustration from the player for being unable to progress through the game.