**Portal Gameplay Analysis**

**Introduction**

Portal was originally released in 2007 for windows, Xbox 360 and PlayStation 3. Originally it was only available by purchasing the orange box bundle. The price was originally $49.95 on PC and $59.95 on console (full orange box price). It was then released $9.99 later for PC [1]. It is a single-player first-person puzzle game, set in a sci-fi setting. Its audience is 12+ rated as there are minor showings of blood when being shot at by turrets and for mildly scary scenarios, such as being trapped and falling great distances. As Oxland (2004) states, the puzzle genre was decreasing in size, and moving into adventure games, which is the exact formula of Portal, an adventure puzzle problem solving game. Portal is a worthwhile analysis as its achieved massive financial and critical success and is a predecessor to Portal 2 which follows the same accomplishments.

**Gameplay**

The player begins trapped in a glass room, with a countdown counting down. This immediately creates a suspenseful situation, as the outcome of the countdown is not clear. The player then proceeds to complete many physics-based challenges that are commented on by a what sounds like a voice altered female, who continually mocks the player. The player, however, has no choice but to continue doing as the voice asks and complete the challenges as there is no alternative.

Comparing this game to “The Talos Principle” made by Croteam allows further analysis of Portal. The Talos Principal has many of the same features, such as many puzzle “Rooms” that require certain tools and physics to complete. However, where The Talos Principle differs is that it offers much more freedom. The player has the ability to explore each game world, return to previous game worlds and levels, and the ability to skip certain objectives to continue to the end. The Talos Principle has large open areas (Game worlds) to explore outside of the game levels and dramatic graphical views to accompany the developing story, as well as further story details that can be found by exploring. Portal is unique as it confines the player to small closed game levels, most of which have no room for exploration. The graphics are dull, using mostly white black and blue colours. There are no game worlds and no returning to previous levels without manually reloading the game. Only toward the end do players get a choice on how to succeed at levels, but all players will experience all levels in a certain way, unlike The Talos Principle.

Portal’s player tools create the ability to use portals to transport the player and objects that the player comes across as well as carrying objects by hand. The player slowly develops their skill by using the portals in many different scenarios and gains an upgrade to the portal gun early in the game. These tools allow the player to interact with the entire game level, as they are on the search for surfaces that a portal can be placed on to transport themselves and objects. At the end of the game, the player uses all the skills they have been taught through these tools, such as portal physics to reach higher places, “portaling” enemy objects to redirect to hit the boss and reaching places within time limits. The player can use their previous successes to feel powerful against an enemy that is seemingly omnipotent.

As the game progresses, the difficulty of portal follows a simple but commonplace structure. “*We spend a huge portion of the game introducing a series of gameplay tools, then layering these tools into increasingly difficult puzzles.” — Robin Walker* (Portal, Portal developer commentary). This structure allows the player to gradually familiarise themselves with the environment and tools given to them, such as the turret bots and the portal gun. The game levels progress in difficulty by increasing the use of timing. Timing is used as a pressure to make the player work faster and prepares them for the challenges ahead. The Talos Principle uses a similar structure; however, it makes use of more tools and prefers layering challenges over timed challenges. The enemies in Portal such as the turret gun and rocket gun both have timing elements, as they have a delayed response time, allowing the player to correct themselves when walking in front of them and re-evaluate how to deal with the situation. There is a clear balance that makes the game not too “hardcore”, as the player is not immediately punished by such trials but provides a challenge that requires thought rather than brawn.

Finally, the player experiences many things they cannot learn more about. In the later game when the player escapes the testing rooms, there are many paths the player cannot reach that seem interesting, such as locked doors, tubes that go far into the distance and frosted glass observatory rooms, that all suggest a much wider world just out of reach. These elements create a sense of wonder as the player knows little about the world they are in or why they are there and pushes them to go further to try and understand this lack of knowledge.

**Analysis**

In an interview with Nick Fortugno – the lead designer of titles such as Diner Dash, Fortugno gives this quote. “I think Portal is a casual game. Portal teaches you what is going to happen in the next level. So if you play Portal, you will see that the thing that shoots missiles, that you need to win the boss battle, appears several sequences before the boss battle and the thing you do to beat the boss, you have already done.”[4]. This is contradictory to Eric Zimmerman’s argument: “As a producer of culture, I like to think that my audience can have a deep and meaningful relationship with the works I produce. And the notion of a casual game implies a light and less meaningful relationship to the work.”. Whether Portal is casual or hardcore in terms of Zimmerman’s definition is subjective. The uncertain definitions of casual and hardcore games make it hard to define Portal. Portal provides a good difficulty curve that allows the player to test their problem-solving skills without being bored or frustrated. The limited space in game levels provides a smaller amount of options for the player with portal placement and therefore the player will not spend too much time trying to find the right solution, as well as not serving the answer directly to the player which would be boring. The increase of game level space as the game proceeds allows the player to have more freedom but has taught them the skills to achieve success, and so they will not need as intense restrictions as the beginning of the game to achieve the same result.

“Portal is a problem game set in an interesting world. You solve one specific class of problems with a specific tool but in a world that simulates a real-world environment, one built to enhance and facilitate just such problem solving with just such a tool.” [2]. This quote from James Paul Gee (2008) summarises Portal. The concept of portal is a simple problem-solving puzzle game, using tools that are specifically designed for the job to complete the job. The simplicity is comparable to games such as Thomas Was Alone created by Mike Bithell, where the player controls several objects that climb on each other to get to the end of the level. But put in a world where your actions are dictated by a robotic woman forcing you to be her guinea pig and escaping the bounds of her testing creates an exciting atmosphere for the player to experience.

In the end when the player defies the antagonist GlaDos as the player continues toward escaping it provides a very satisfying experience as the very tools your captor forces you to use are the ones that you use to defeat her and break free. The mechanics are therefore given great meaning and use, and the experience of the whole game comes together at once. One specific aspect that is worth of noting is that the player gets to remove parts of GlaDos and personally throw them into an incinerator, just as GlaDos forces the player to personally incinerate their “companion cube” which helps the player throughout a level. This allows the player to exact a direct revenge for the abuse, both verbal and in the way of endangerment, that the antagonist puts them through.

**Conclusion**

The design of Portal although simple in technique has a narrative that makes the gameplay very meaningful and allows the player to develop their skills without ever explicitly rewarding them (For example through player levels or coin rewards). The player experiences a strange world that they never fully understand but draws them in to further their skills and interest for continuing. The game is unique in its design because it is a narrative driven puzzle game set in a science fiction setting.

The combination of difficulty and restriction compared to exploration and forgiveness is an enjoyable experience for the average player, where the game levels provide a solid structure for the player to progressively get more confident and experienced with the tools and world they face.

**References**

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