MDA Analysis of Spelunky

Jack Rathbone 2282711

Spelunky, first created as a free game by Derek Yu in 2008 and later remade into a commercial title in 2013, is a game that really demonstrates how simple interactions and good use of level design can create a game with depth and complexity that can continue to surprise and challenge players well after they have mastered the basics. *Spelunky* is a 2D platformer game, with the original using charming but very minimal pixel art, which sees the player jumping and climbing their way down through levels and levels of randomly generated areas. While *Spelunky* has a set endpoint and can be finished, there are multiple paths, some more hidden, to reach this end. But with the character permanently dying when their health reaches zero, the game becomes extremely challenging and players usually will have to start from the beginning everytime they make a mistake.

Looking specifically at the original version, which lacks some of the polish and features of the later commercial remake, it is the use of level design in *Spelunky* that really makes the game stand out and work alongside its mechanics of permanent death to create an experience that while challenging is not too frustrating, and keeps the player exploring and mastering the mechanics well into the later game. Using the framework of MDA (mechanics, dynamics and aesthetics) an important thing to note is the very simple controls and rules of *Spelunky* that still give rise to its strong aesthetics. The player at any point is only ever given a few options, from the dynamics of precise movement, and the mechanics of being able to use a few select items which all have different outcomes and effects, with the guiding principle of constantly moving downwards and making it to the level end.

Movement is a very important part of *Spelunky*, levels are full of enemies and traps that must be dodged, jumped over or jumped on top of to destroy. Many items in the game further add to the player movement, such as the ability to stick to walls or fall slowly. Other items usually either give players access to new areas, like bombs that

destroy walls or ropes that allow them to climb upwards. Thus more movement is the main way the player gets ‘stronger’, and traversing the levels themselves stays as the main challenge. All this contributes strongly to an aesthetic of discovery, players are rewarded for good movement with new areas to explore and more ways to get around challenges, and they are rewarded for learning about and mastering the ins and outs of every enemy and trap.

All the systems in *Spelunky* work well together because they are underpinned by the levels themselves and how they are built. While they are randomly generated during each run, so every level is unique, the random generation is actually done using pre designed blocks that are added together to form the entire level. This creates a situation where the levels are basically random and unique, but the chunks they are made out of were specifically designed to work well for the game and its various systems of movement. The generation also creates straight paths from the start to the end of levels but has more difficult to traverse side sections that reward the player with extra gold and items, and more often require items to traverse than the main path. This level generation really works well for reinforcing the challenge and reward system in the game, proving replayable but still deliberately designed levels that are more engaging than if they were simply pre built or completely random.

References

Hunicke, R., Leblanc, M.G., & Zubek, R. (2004). *MDA : A Formal Approach to Game Design and Game Research*.

Spelunky. (2008). Derek Yu.