Metroidvania Analysis

Locks, Keys and User Guidance

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What is Metroidvania

This is a specific type of game that uses locks and keys to block the player from getting into new areas too soon. The form of these locks can vary since it doesn't have to be a literal lock and key. In this paper, I took a closer look at the 2D Platform Metroidvania game "Hollow Knight". I made a collection of keys, how they are used and how certain elements are placed to guide the player through the game. By describing these elements and their use I want to start a Metroidvania guide that should help leading players in future games.

Hollow Knight Lock and Key Analysis

First two key abilities:
1. Vengeful Spirit (Green key)
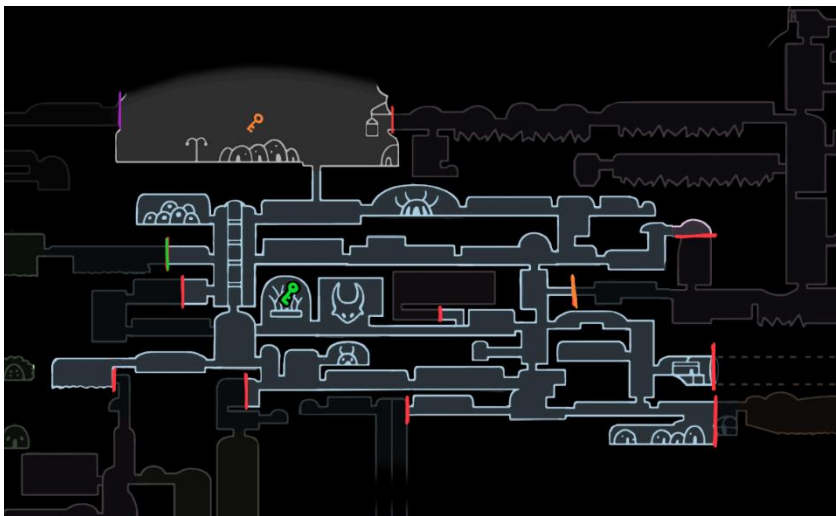
This first key can be found after defeating the first boss in the "Forgotten Crossroads". The "Snail Shaman" gives it to the player in exchange for defeating a monster with it. The monster is also a hint to the first lock.

2. Mothwing Cloak

This ability is a reward for defeating "Hornet". It gives the player the ability to dash forward quickly and overcome small gaps in the floor, in areas where the player can't jump, and increases the length of a jump by using it in the air. This does not just unlock the "Fungal

Waste" but also gives the player access to new parts in the already unlocked areas, like a new dealer in the "Forgotten Crossroads".
The order of these first keys can be changed slightly by using a soft lock (Game Maker's Toolkit 2019).

soft Locks:
Soft locks are hard to achieve but not impossible. It does not guarantee that the player will not go through but increases the probability through the difficulty of the path.
- Expensive Items
- Strong Enemies
- Hard to reach paths

An example of a soft lock in Hollow Knight is the expensive lantern to unlock a part of the Crystal Peak. (Game Maker's Toolkit 2019)
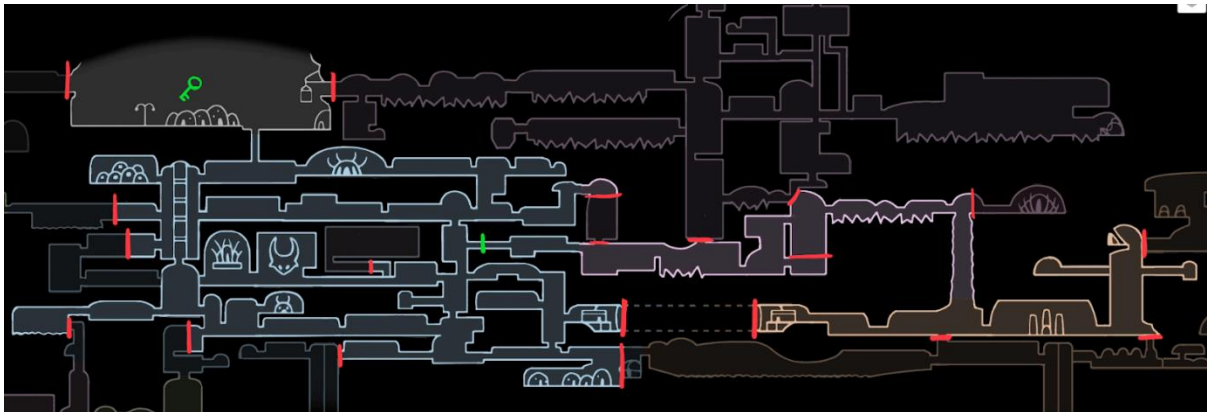
By choosing this path the player can early on acquire the dream nail and find out about the main objective of the game. Other than that, this does not change the two keys the player has to get next. (Game Maker's Toolkit 2019)

What is used as lock or key:
- Health (Lifeblood door)
- Ability (Mothwing Cloak)
- Enemy (Vengeful Spirit, Mantis Lords)
- Aktual Locks and Keys
- Levers

Player Guidance Elements in Hollow knight

Key Usage
The elements placed near an acquired key, that show the player how and where the new key ability can be used. With the first key, this is done by directly confronting the player with the exact same enemy that is blocking the path in a different location. The player eighter realize they've seen this enemy before and can then directly go to unlock the path or they know they can use this ability on it right away, after acquiring the ability beforehand.
For the second key, the player is introduced to different obstacles right after acquiring the key. These obstacles can only be overcome by using this new ability. The player gets first-hand experience by simply using it right away.

Blocking passages
By having one-way doors in the game, the player is sometimes forced to explore another path to then open that door. The player can usually see a lever on the other side of the door, indicating that it can be opened by accessing it from the other side. By designing the lever

similar to the door, the association between the two is strengthened. Once it is open it will stay open and let the player access these areas quicker.

For example, by blocking direct access to the boss in the first area, the player is forced to go all the way around (Game Maker's Toolkit 2019). When facing the block, the player does not have to go back the exact same way but can take an alternative path that leads to the other side of the map. No challenges or important interactions are skipped by choosing this path. This longer path then leads the player past the NPC "Cornifer" a cartographer from whom the first map can be bought.
These one-way blocks are a good method to help the player avoid too dangerous areas at the beginning of the game. Giving alternative paths when faced with such a blockage, avoids frustration of having to go back the same way again. In the example it also leads the player to a rather important interaction with an NPC. It guides the player along a strict trail but without giving the player the feeling of not having any other choice.

Trap Doors
The element of a trap door is used in boss fights and other challenges to lock the player in until the challenge is complete. These traps don't have to look like actual doors. Instead of locking the player in by blocking the path, there can be an ability lock that only allows the player to go in but not get out until the ability is found in that area. It forces the player to explore this part of the map and ensures that the key mechanic is found before leaving.
For example, this tactic is used to make sure the "Mantis Claw" ability is found, that lets the player jump up walls. The ability is important to proceed in the game making it more crucial that the player can find it.

The orange arrows show the paths that the player can only use after acquiring the orange key which is the wall jump ability. The player is only able to leave the area again after getting this ability.
Besides unlocking the rest of the path in this area it also opens multiple locks placed all over the map, granting the player access to the "City of Tears", "Howling Cliffs" and new areas in the "Crystal Peak", provided the lantern to enter the "Crystal Peak" has already been bought.

Marked green are all the locks that can be overcome with the newfound ability, the "Mantis Claw". In these new areas the ability is used more frequently. This isn't a problem since the player must get the ability to entering these paths in the first place.

Unexplored Areas

By buying the feather from the shop in "Dirtmouth", areas that the player visits are drawn on the map. It is updated every time the player sits on a bench. This shows which areas haven't been explored yet and gives the chance to change that and discover every bit of the environment.

Not every secret room, door and ability access is shown on the map. This means the player can reexplore areas with new abilities and find more items than before.

Map Symbols

On the first map that can be bought from "Cornifer", there is a symbol drawn on the boss's room. This suggests that a challenge is located there. The player can then decide to go there directly or to avoid it and explore the rest of the surroundings first.

Later in the game, when the three ghosts reveal the purpose of the game, four new symbols appear on the map. These markings show the locations of the ghosts' physical bodies. They have to be defeated in order to then begin the final battle located at the fourth marking on the map. The symbols are different from the others since they are more prominent and can be seen in areas where the map has not been acquired yet.

Symbols on the map help identify important rooms and challenges. It does not force the player to go there but shows how to proceed to finish the game.

Lights

After defeating the first boss, the player does not get the new ability right away. When proceeding after the fight, the player finds a split path. One is lightened with torches and the other leads back to an area that has already been visited. By following these lights, they then end up at the "Snail Shaman", from whom the key is granted.

The torches on the new path make it more memorable and interesting. The lights on the path differentiate it from other areas and show the player that there is something at the end of it. Players who want to proceed in the game are more likely to follow the torches and get the new ability. By only giving the player an already known area as an option furthers the feeling that this path should be taken to proceed.

Ability Symbols

By setting an object, associated with a skill in an alien environment the player can be given a hint to use that ability there. In "Hollow Knight" this is done at several points. For example, by setting a small crystal in other areas than the "Crystal Peek" the player is told to use the "Crystal Heart" ability there. This can lead to secret rooms or paths that can otherwise not be accessed.

The same thing is done with the health lock in "Hollow Knight". The door in the Abyss is surrounded by blue butterfly-like flowers. These flowers are also placed around the "Lifeblood Cocoons" as well as in "Joni's Repose" where the charm "Joni's Blessing" is acquired. This shows that these elements should be used to pass the door. 15 "Lifeblood Masks" in total are needed to pass this lock. The player can see how many are missing by counting the lights glowing up at the door.
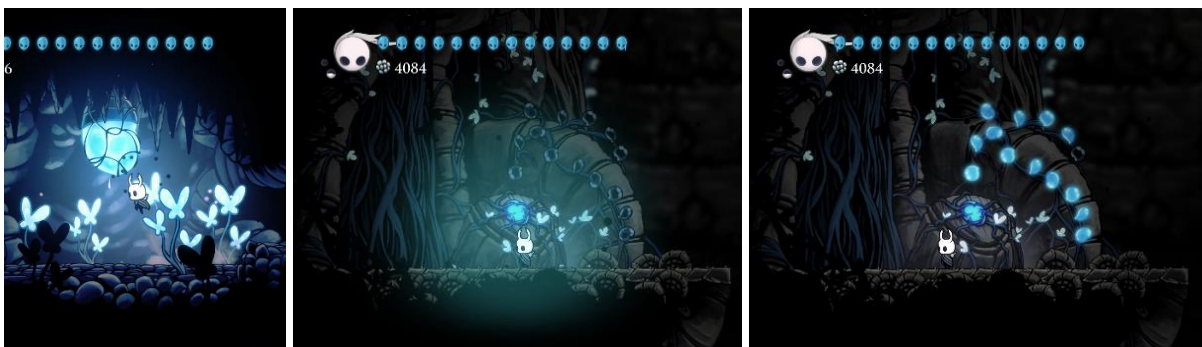
This tactic only works with distinctive symbolics that can be well differentiated from the surroundings. There needs to be some way the player can associate a sign with a skill or item. The "Crystal Heart" ability is not only found between crystals but also visibly builds crystals around the player when it's used. This creates a strong association between these crystal elements and the ability.

Quellenverzeichnis

Game Maker's Toolkit. 2019. *The World Design of Hollow Knight | Boss Keys.* https://www.youtube.com/watch?v=7ITtPPE-pXE (November 21, 2021).