A Level Design analysis of

Batman Arkham Asylum

This article is a deep analysis of pacing, gameplay variation, challenges, enemies and progression of Batman Arkham Asylum.

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Introduction

Batman Arkham Asylum was released in August 2009 and took critics by storm. It scored 90+ on average review ratings and even got a Guinness World Record for 'Most Critically Acclaimed Superhero Game Ever'. What is even more amazing is that according to the credits list only five level designers worked on the title, and it was produced in less than two years.

As I played through the game I was astounded by its quality and started to do some serious research. I read articles, listened to developer podcasts as well as collected data to try to figure out what it really was that made this game stand out from a level designers perspective.

This article will first present a level design overview, in which I present the data I collected and then go through the games level design from various angles such as layout and progression, gameplay variation, challenges, new enemies and so on. In the end I make an attempt to answer the question that made me write this whole article: What is it that makes Batman Arkham Asylum such a good game?

To fully comprehend everything this is presented in this article I strongly advice that you have played through the game at least once.

Overview

To get an in-depth insight in how Rocksteady has made Batman Arkham Asylum I played through the game with a stop-watch timing myself through all the events of the entire game and then put together the chart on the next page. The total playtime when doing this recording was a bit over six hours, which is a bit shorter than most people have reported on the Internet.

The level design overview-chart presents the game where each cell represents one minute of gameplay and the color represents what type of gameplay. The chart is to be read from left to right.

Puzzles
The puzzle areas are areas in which the player had to use Batman's goggles to investigate crime scenes or find trails or clues. Puzzles could also be areas in which the player had to be "clever" in order to progress without using violence.

Movement and dialogue
These are areas in which the player simply moves in key locations, rooms or exploring the island. They usually include lots of dialogue between Batman and the Oracle or any of the games antagonists, but still allowed the player to move freely and have full camera control. These areas often include sporadic combat with less than four enemies involved.

Combat
These were areas in which the player had to fight more than four thugs at a time.

Gargoyle room
The gargoyle rooms, or as Rocksteady calls them, "predator areas", are places in which the player has to sneak by, or kill, a large number of thugs with guns without being noticed. This is being accomplished by using Batman's grappling hook swinging himself between gargoyle-statues situated close to the ceiling.

Cinematic
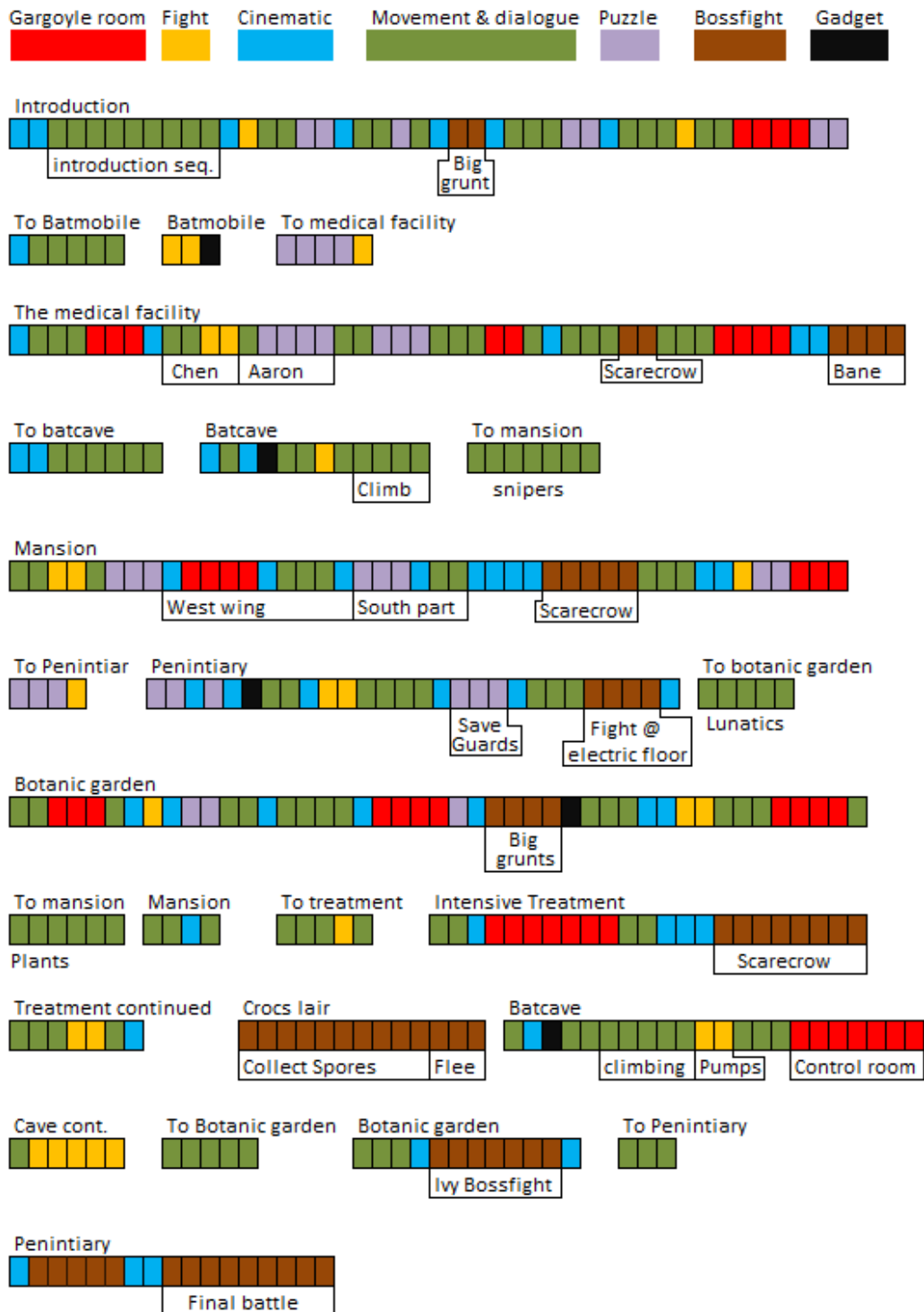Cinematics are those parts were the game presented a cinematic sequence.

Bossfight
Bossfights are areas in which the player is fighting enemies inside arenas which the player cannot leave until she has defeated the boss. Half of these bossfights also include specially designed enemies such as Bane or Ivy.

Overview

Flow chart

Each cell represents one minute of gameplay and the color represents what type of gameplay. The chart is to be read from left to right.

Gargoyle room | Fight | Cinematic | Movement & dialogue | Puzzle | Bossfight | Gadget

Introduction
introduction seq. | Big grunt

To Batmobile | Batmobile | To medical facility

The medical facility
Chen | Aaron | Scarecrow | Bane

To batcave | Batcave | To mansion
Climb | snipers

Mansion
West wing | South part | Scarecrow

To Penintiar | Penintiary | To botanic garden
Save Guards | Fight @ electric floor | Lunatics

Botanic garden
Big grunts

To mansion | Mansion | To treatment | Intensive Treatment
Plants | Scarecrow

Treatment continued | Crocs lair | Batcave
Collect Spores | Flee | climbing | Pumps | Control room

Cave cont. | To Botanic garden | Botanic garden | To Penintiary
Ivy Bossfight

Penintiary
Final battle

Layout and progression

Batman Arkham Asylum at its core is a strictly linear game but has elements of choice and freedom. It takes place on an island with multiple buildings on it. Each building serves somewhat as a chapter in the storyline and the player revisits some of the buildings during the progression of the game to solve new puzzles, find new clues or to defeat a boss. As the player roams the island in between each chapter, or building if you will, s/he is fully free to explore the island.

Objectives

The game itself has a very clear objective that is being presented in the very beginning of the game; defeat the Joker. However to reach that goal the game presents lots of objectives along the way. Each chapter has one or multiple objectives in the same building that needs to be accomplished in order to proceed; however it's never clear how far the player has progressed at a given time.

A picture of the Joker, the goal to defeat him is presented at the very beginning of the game.

Choice

The illusions of choice are also present on some rare occasions as some chapters branches off and gives the player two objectives and s/he can choose which one of them to complete first. This happens for example in the medical facility (where the player has the choice to save Doctor Chen or Aaron first from the thugs but both has to be saved), a similar choice appears in the mansion as well as when Batman is about to leave the Batcave the second time. The question is why player is allowed to make this choice in just a few rare cases. Probably it is to create an illusion of freedom, to make the player believe s/he is not playing just another corridor shooter. However, since these choices really doesn't mean anything other than choosing what objective to complete first and as they are presented so rarely I do believe Rocksteady should have improved on this a lot more, or skipped it entirely.

Layout and progression

The travel between each chapter

The player travels on the island between the buildings nine times during the game. To make this travel time feel more interesting and less repetitive, new gameplay elements are being presented here throughout the game. For example sniper enemies are being presented the second time the player travels the island between the Batcave and the Mansion. Later on as the player leaves the Penitentiary the lunatics inside it has been released by the Joker and spread throughout the island. As Ivy is released the island gets overgrown and many of the buildings change in appearance and places the player revisit has different gameplay as paths are being blocked by huge roots. Since the player spends a total of 60 minutes just traveling through the island, these features makes the island a bit different every time the player travels through, minimizes repetition and invites the player to explore her environments again once it have been transformed.

A shot from the island before the overgroth by Ivy.

Gadgets

The player is awarded with gadgets throughout the game that are spread 60 (+-10) minutes apart. They allow access to new parts of the island and help the character progression throughout the game. This perfect spread cannot be a coincidence and must have been carefully planned during pre-production.

Revisiting locations

The player revisits some of the buildings in the game to achieve new objectives a couple of times after Ivy has been released and the island has been overgrown. The player doesn't revisit very much however, only 30 minutes in total are being spent revisiting old locations.

Variation

The pacing in Batman Arkham Asylum have devoted much time to develop the pacing of the game as the core gameplay has many different mechanics the level designers could play with. As there are bossfights, predator gameplay (the gargoyle rooms), common combat, puzzles, cinematics as well as traveling/climbing, there is enough to keep the game from feeling too repetitive even after 7+ hours. The different mechanics are spread out in such a way that the player very rarely does the same thing for more than five minutes until s/he gets to a new section with new gameplay. This is pretty close to the critically acclaimed first person shooter Half-life 2 episode 1 and 2 which presents new gameplay sections about every five to seven minutes. Perhaps this is a sweet spot to aim for to keep the game feeling varied but still consistent?

 The two things to point out is that the Penitentiary doesn't include a gargoyle room and the first section of the crocs lair is ten minutes long with very little variation and low pace. Other than that there is already great variation in the gameplay and really nothing I could come up with that could be changed.

Challenges and new enemies

New enemies are being presented to the player in a quite linear fashion during the first half of the game. The chart below presents rough timestamps where the player is being introduced to new enemies, bossfights excluded:
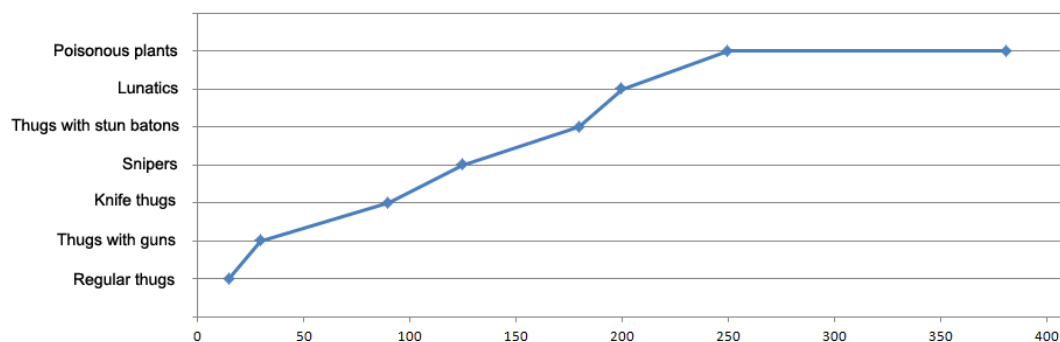
A chart displaying when new enemies are introduced. Y-axis represents what type of enemy and X-axis represents when they appear the first time (in minutes).

Snipers, lunatics and poisonous plants are only present on the island in between the chapters. While being inside the player solely fight regular thugs, thugs with batons, guns or. These four enemy types have already been presented to the player half-through the game. From then on the player faces the same enemies inside the houses over and over again. Adding at a fifth enemy type 2/3 through the game, or spreading out the current ones would help the feeling of progression and increase the challenge for the player.

Variation

The number of enemies increases in a linear fashion throughout the game with more and more enemies per encounter; however I do not have any precise data on this.

Most encounters only include thugs.

The gargoyle rooms evolve once throughout the game. At first the player can take out the armed thugs just by making sure no one else sees Batman while incapacitating the thug, later on the thugs get collars that attracts all the other thugs in the room if a thug get incapacitated. This way the player has to make sure all the other thugs are far away from the pray so that s/he has time to escape when the collar alerts the other thugs.

Some gargoyle rooms have unique features that are not present in other rooms. This includes one room where the gargoyles are rigged and explode as Batman tries to jump on top of them, forcing the player to hunt down the thugs on the ground. In another one the thugs has a hostage and threatens to kill them if they notice Batman. This forces the player to progress through the room without actually incapacitating a thug. These variations to the gameplay are probably 100% scripted in kismet (Unreal engines in-editor scripting tool) and wouldn't put any workload on programmers, which is a great thing. It really proves how easy it can be to put unique flavor to a challenge without too much effort.

A shot from the game as Batman hanging from a gargoyle about to grab an armed thug.

Variation

Bossfights

The bossfights are evenly distributed throughout the game with roughly one boss-fight in each chapter and about 60 minutes in between. Each bossfight presents a unique challenge to the player and ends in most cases with a cinematic, except for encounters with Scarecrow.

A shot from the bossfight with Bane at the end of the medical facility chapter.

There are eight bossfights in the game (if you exclude the Scarecrow encounters) but only four of them includes super villains (Bane, Ivy, Joker and Croc), the other four lets the player fight waves of thugs as well as super-thugs injected with Jokers toxin. Despite of this these four bossfights are still unique in their own way. For example the bossfight in the Penitentiary has three electric floors that kill both the enemies and the player if they are active and someone is standing there. To avoid getting electrified, the player and the thugs has to move back and forth between these floors while fighting. By solving bossfights like this Rocksteady saved both time and money avoiding creating custom content for each bossfight while still giving the player a unique experience each bossfight.

A shot from the final battle with Joker.

Variation

Scarecrow

The scarecrow presents something very unique in the game as the player is being taken to a hellish-dream world the scarecrow controls. The player has to progress through this level without being hit by the Scarecrows gaze. There are three of these encounters that increase in difficulty and length as the player progresses through the game. These sections are not bossfights per say, but creates a clear change of gameplay and fills in the gaps where a typical bossfight should have been.

The interesting thing about this part is that it creates a needed break for the player to be challenged with something totally different. It is common for first person shooters to have vehicle rides or rail-shooter sequences for the same reason, but most of these rarely work well as it is very difficult to make an action game and a fully working car simulator at the same time. Very often the vehicle rides feels unpolished and unresponsive in these titles. In when facing Scarecrow however, they never present anything radically different in terms of character control which helps make these sequences more feel like it is truly a part of the game.

This approach is quite unique in western action games, except for the Max Payne series that had similar sequences in which the player also played through a nightmare-ish drug sequence.

A shot from the game as Batman is trapped inside Scarecrows nightmarish dreamworld

Conclusion

Conclusion

To answer the question I previously asked in the introduction: What is it that makes Batman Arkham Asylum such a good game?

Well, the answer is quite simple when you think about it. There is no single entity or killer mechanic that makes this game, it's a great mix of ideas used from titles before it. The variation of gameplay, level progression, creative thinking around bossfights, and the predator and detective mechanics blends together very well and together create a varied and interesting experience done by the book. Apart from the fact that the game had presented all the enemy thug-types already half-through the game and some minor optimizations in their gameplay variation, it is very difficult to find any flaws in the design. It is the execution that makes this game stand out.

I hope you have found it as exciting as me digging really deep in the effort to find out what exactly made Batman Arkham Asylum such a kickass experience.

A shot from the game.