

The 3Cs of Banjo-Kazooie

A critical analysis of the 3Cs in Banjo-Kazooie

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Research Material: The original Banjo-Kazooie (1998) for the Nintendo 64, developed by Rare.



Introduction

The 3C's of game design stand for Character, Controls and Camera. It is very important that these aspects work well together, as they have a major impact on the quality of the game and how it will be perceived by the player. The 3Cs determine the way the player interacts through the system into the virtual world that the game offers. If done well, the player will enter a state of flow more easily. But if (one, or more of) the 3Cs has not been worked out well, the player tends to get frustrated quickly, which breaks the flow.

This document contains a critical analysis of the 3Cs in Banjo-Kazooie. A 3D platformer game developed by Rare and published by Nintendo for the Nintendo 64 in 1998. The game was well received and is still praised as one of the best classics of its time. In this critical analysis, I will try to find out why it is so enjoyable and where it might be improved.

C1 – Character

As the first part of the analysis, I will discuss the characters used as protagonists in the game. The player takes control of both Banjo, a male brown honey bear, and Kazooie, a red female bird who resides in Banjo's backpack.

Banjo is polite, relaxed and not too bright, whereas Kazooie is witty, impatient, short-tempered and does not mince her words at all. The two make for a dynamic duo, as they combine their abilities to overcome the obstacles in their path.



Bonding with Characters

It's very important for players to bond with the character they are playing. As a game designer, you want your players to root for your character. You want them to like the character, so they will want to play with them and follow their story. Players get attached to certain characters because of their unique abilities, personalities or appearance and animations.

The creators of Banjo-Kazooie were smart to present two (very different and unique) protagonists to the player. This way, chances of them bonding with (at least one of) the characters were much higher.

I experienced this myself, as I really liked Kazooie for her personality traits and skillset, as opposed to Banjo, who I found rather boring. Kazooie is very witty and likes to be a smart mouth with both allies and enemies, resulting in comic situations.

I particularly like the conversations between Kazooie and Bottles (a friendly mole who teaches Banjo and Kazooie all additional abilities throughout the game). Bottles and Kazooie always try to outsmart and insult each other, even though they are on the same side.

I would not have been as invested with the characters if Banjo was the sole protagonist. I guess the same would go for someone who likes Banjo more than Kazooie.

Another surprisingly likeable character in the game is the antagonist, Gruntilda. Everything she says rhymes, which results in many funny quotes.

For example: *"Golden Feathers you may have twenty, but bruises you'll still get plenty!"*

Whenever Gruntilda said something, I would automatically focus on how it was going to rhyme, as I enjoy the creativity of her lines. This even prevented me from entering a portal for a few seconds, as I wanted her to finish her rhyme (and the loading screen would cut her off).



In conclusion of this part, I think the characters in Banjo-Kazooie are so likeable because they create a lot of funny situations when put together. It's entertaining to watch them interact with each other and that's what makes you want to follow them and see what happens to them next. This is even visible in the character animations, as they are very cartoony and exaggerated. An example of this is the "Beak Barge" animation, where Banjo uses Kazooie as a lance to charge at enemies. The humour that has been put in the game is definitely a very important aspect of the game's 'character'.

Improvements

To me it felt like Kazooie was the main protagonist of the game and Banjo was more or less his personal taxi driver. This is a bit odd since the story is actually about Banjo rescuing his sister.

The player initially starts out by getting to know Banjo and his skillset. However, after a while all additional abilities are learnt by Kazooie. Kazooie's dominant personality also completely overshadows Banjo's character traits and development. This is probably done on purpose, as it is often done in stereotypical comedy duos, where one is small, smart and big mouthed, and the other is big, dumb and polite. Classic examples of these are *Pinky & the Brain* or the burglars of *Home Alone*.

Still, I feel like Banjo deserves a more dominant role in the game and should display more character development. It would help the players bond with him as a character.

Another issue I had with the game characters is the way they communicate throughout the game. Instead of speaking words, each character repeats a sound, unique to their character, while their words are being displayed with subtitles.

I realize that this could have been done to cut the costs of the project by eliminating the need for voice actors. Perhaps it has also been done to preserve memory, but I still found it very annoying. The beginning of the game contains a lot of chatter in particular and the first emotion the player feels from the game should not be annoyance.

I would definitely change these sounds into proper voices, to increase the likeability of the characters.

C2 – Controls

As second part of the analysis, I will discuss the controls through which the player interacts with the game system. The controls enable the player to transfer their actions in the real world to the actions of their avatar in the game system.

A game system is in many ways comparable to the human body. If the avatar in the game world represents the muscles that perform the actions and the player represents the brain that makes the decisions, then the controls most definitely represent the nerve system that connects the two together.

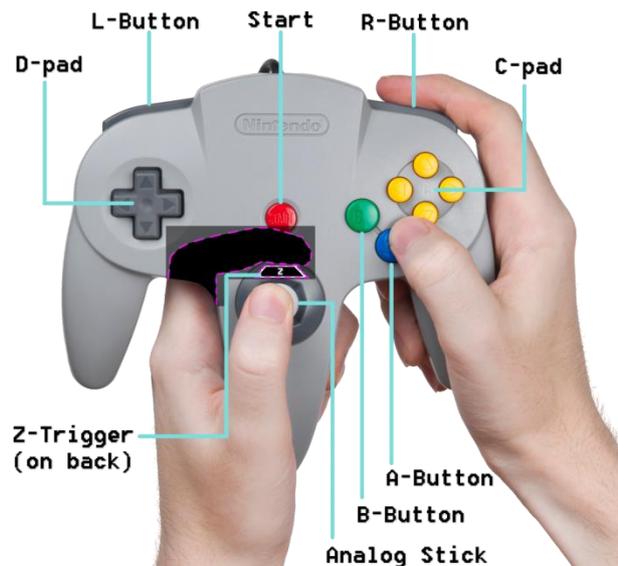
If the controls are badly designed or counterintuitively used in a game, the brain will have trouble communicating its wishes to the muscles. The more ‘seamless’ the controls are integrated in the game design, the more the brain and muscles become one. This is the case when the player enters a state of flow. They almost merge with the avatar they are playing as, resulting in more immersive gameplay and therefore a stronger sense of enjoyment. This is why bad controls have the potential to ruin the entire gameplay experience, no matter how awesome a game may be.

The Controller

The controller is the device that registers player input and translates it to the console. The controller should be easy to hold and use, as you want your player to play with it for as long as possible, without getting annoyed.

The following image illustrates the N64 Controller and the way players are meant to hold it while playing Banjo-Kazooie.

Being used to modern controllers (like the PlayStation 4 controller), I have to say that playing with the N64 controller felt really awkward and counterintuitive to me. The reason for this being that you cannot hold your hands symmetrically in front of you during gameplay, and because half of the controller (with the D-pad and L-Button) is not accessible and is therefore just deadweight on the left.



Although the physical controller itself formed the first obstacle for me to communicate comfortably with the game system, I will not discuss this issue any further, as it has little to do with the design choices for the game.

Button mapping the Abilities

Instead, I will take a closer look into the mapping of abilities to the controller’s buttons. Ideally, the actions that need to be performed many times should be the most accessible to the player, whereas lesser used actions may be mapped on less accessible buttons, or a specific button combination.

The following page displays the buttons used in Banjo-Kazooie, along with their corresponding abilities.

Banjo-Kazooie: Ability chart			
While	Button	Action/Ability	Description
Standing		Movement	<i>Pressure affects speed (full pressure = run)</i>
		Jump	<i>Holding affects height/distance</i>
		Claw Swipe	<i>Banjo swipes his fists in front of him for a short while, moving slightly forward.</i>
		First-person view	-
		Alter camera zoom	<i>Switch between zoom modes</i>
		Move camera	<i>Rotate clockwise</i>
		Move camera	<i>Rotate counter-clockwise</i>
		Centre camera behind Banjo	-
		Crouch	<i>Hold to keep crouching</i>
		Pause game	-
Running		Forward Roll	<i>Banjo rolls forward and attacks enemies he hits</i>
In the air		Adjust direction	-
		Feathery Flap	<i>Kazooie flaps her wings to increase Banjo's jumping distance (hold to increase further)</i>
		Rat-a-tat Rap	<i>Kazooie pecks a few times, attacking enemies in front of Banjo</i>
		Beak Buster	<i>Kazooie pounds the ground with her beak, attacking enemies underneath, activating floor switches or breaking fragile objects</i>
Crouching		Adjust direction	-
		Flap Flip	<i>Kazooie uses her wings to assist Banjo in a high jump backflip</i>
		Beak Barge	<i>Kazooie charges beak first into the distance, attacking enemies</i>
		Fire Eggs	<i>Fires eggs forward</i>
		Bounce Eggs	<i>Drops eggs backward, bouncing away</i>
		Talon Trot	<i>Kazooie carries Banjo, enabling them to walk at higher speeds and up steeper slopes.</i>
		Wonderwing	<i>Invulnerability for 2 seconds at the expense of one golden feather. Colliding with enemies during this short invulnerability kills them as well</i>
Surface swimming		Movement	-
		Jump	-
		Dive	<i>Dive underwater</i>
Under water		Adjust heading	-
		Kick	<i>Hold down to make Banjo kick his feet, slowly moving forward (accurate movement)</i>
		Wing Stroke	<i>Hold down to make Kazooie flap her wings, quickly dashing forward (inaccurate movement)</i>
		Turn sharply	<i>Hold to turn sharply</i>
Climbing		Move up/down	-
		Jump off	-
		Drop down	-
Flying		Aim	-
		Rise	<i>Kazooie flaps her wings to gain elevation at the expense of 1 Red Feather</i>
		Beak Bomb	<i>Kazooie launches herself forward for a short amount of time, attacking enemies in front of her</i>
		Beak Buster	<i>Kazooie pounds the ground with her beak, attacking enemies underneath, activating floor switches or breaking fragile objects</i>
		Turn sharply	<i>Hold to turn sharply</i>

A quick overview of the ability chart shows that the Analog Stick, the A-Button and the B-Button are the most commonly used ones. The Analog Stick is constantly used to move. The A-Button is almost always used to Jump or navigate upwards one way or another, and the B-Button is the standard attacking button. This was definitely a deliberate design decision as these three buttons are the most accessible ones on the controller, directly under the thumbs.

After that, I'd say the R- and Z-Buttons are the next most accessible buttons, as they are always under the index fingers. The R-Button is mostly used to quickly centre the camera behind Banjo, which the player would frequently do to get a clear view of the challenges ahead.

The Z-Button is used to enter crouch mode. Crouching itself has never proved useful to me in the game. The Z-button is really only useful in combination with the button you choose to press afterwards. Any button pressed while holding down the Z-button activates one of Kazooie's abilities. This makes the crouching animation more of a transition mode between Banjo and Kazooie, perhaps designed to indicate to the player that any button press in this mode will activate one of Kazooie's abilities. This makes sense, since the focus of the player is automatically drawn to Banjo's backpack as he crouches. Also, it makes sense to have this button assigned to the trigger on the back of the controller.

An exception to the function of the Z-Button is when the player is in the air before pressing it. Instead of crouching in the air (which would make no sense), it activates the "Beak Buster", a move to pound the ground beneath you. This, again, feels intuitively right, as it makes sense that curling (crouching) into a ball makes your impact on the ground harder (like when performing a 'cannonball dive' into the water)

So far the controls make sense to me and I find them easy to intuitively adapt to. However, I find the C-pad buttons extremely annoying to use. This is not a big problem while playing as Banjo, as the mainly used camera function is activated by the R-Button. However, I have found myself crouching as Banjo, having to look at the controller in order to find and press the right C-pad button afterwards. This broke immersion for me multiple times as you frequently (and often quickly) need to use Kazooie's abilities (like the 'Wonderwing') this way. I failed at this a couple of times which was really frustrating.

However, I suppose (again) the controller itself is to blame on this one, as there are no other buttons to assign these skills to. There are of course several other button combinations possible, but they would all be equally annoying.

Extension of Identity

Another important aspect of controls is if they feel smooth and responsive. The animations of abilities should be fluid upon player input and the buttons and triggers need to respond when expected. These requirements have an immediate impact on the state of flow that a player may or may not be able to enter. For example, the acceleration of the character needs to correspond with the pressure on the Analog Stick. When fully pressed, the character should run at full speed, but the player should also be able to carefully move just an inch further, to make a platform jump easier for example.

Tweaking the controls until they feel just right is a tedious but very rewarding process. It is a continuous loop of testing and iterating. But if you get the controls right, your players will enjoy your game a lot more. If you make it pleasurable to just move, turn and jump with a set of controls in a game, the players are more likely to feel like their avatar is an extension of their identity.

The creators of Banjo-Kazooie have clearly paid a lot of attention to this, as their controls feel very natural, smooth and responsive. Button presses have an immediate response and the animations (and corresponding sound effects) seem to flow seamlessly into one another.

A good example of this is the 'Run & Crouch' manoeuvre. If the player is running at full speed and decides to enter crouch mode, they don't just freeze in crouch mode. Instead, they slide forward while crouched, depending on their momentum. This 'crouch-slide' can be followed with any crouch command, like the 'Flap Flip' jump, which seamlessly flows from the previous animation. The ways in which the controls and animations combine make for very fluid and responsive gameplay. This is extremely important in all games, but perhaps especially in platformer games, where mastery of the controls is the key to overcoming the many navigation challenges.

In my opinion, it is clear how Rare have built the levels of Banjo-Kazooie to fit with these controls. Using the 'Cerny method', they would have first ensured that the character is comfortably fun to control, after which they would build their levels around these controls.

A clear sign of this is that every level has been well thought out. The player needs certain abilities to access certain areas and complete certain challenges, but other than that, they are free to choose the order in which they want to face (or skip) challenges. It is even possible to skip an entire world if the player has collected enough items from the other worlds. It is clear in every level that the area has been fitted to go with the (unlocked) characters abilities. The jumping distances between platforms, the steepness of slopes, or the amount of open space in a level where you can fly are all examples of the Cerny method having been applied well.

Improvements

The only exception in my opinion is the swimming controls. I do not mind how the Up/Down controls are inverted during swimming, as those type of controls are used in many other games where you can free roam into 4 directions as well, like flying in *GTA San Andreas* or diving under water in *Spyro the Dragon*.

What I don't like is the 'Kick' and 'Wing Stroke' abilities that Banjo and Kazooie use to navigate under water. The first is very accurate, but ridiculously slow, where the other is very fast, but ridiculously inaccurate, as the move often launches you forward in a slightly wrong direction or too far away. Both are frustrating to use, and there seems to be no pleasant combination of using them either.

Compared to the nice and fluent gameplay I experienced on dry land, diving really felt disappointing. A quick fix to try and improve this would be to speed up the Kick move and to give the players more control over the Wing Stroke move. This way, navigating under water should be a bit more fluent.

Also, I felt like running out of air comes with a very high punishment, as the player instantly dies. I would change this to be similar to *GTA San Andreas*, where your health slowly decreases after the 'lung capacity' drops to 0. Banjo-Kazooie could easily adopt this system where, instead of the blue honeycombs, the yellow (health bar) honeycombs start to deplete.



C3 – Camera

As the final part of the analysis, I will discuss the use of the camera in Banjo-Kazooie. The camera is the foundation of the player's connection with the game world. It functions as the eyes of the player. The player needs to be able to see anything that is important to them on screen. The player's avatar should never be obstructed and any challenges the player faces should be clearly visible.

Banjo-Kazooie does a decent job with this as they give the player a lot of control over the camera. The player can choose to zoom in or out on the character, rotate left or right, quickly centre the camera behind Banjo and even go into first person perspective mode to check out the surroundings.

Improvements

This works fine for most areas, but definitely not all. In some small (mainly interior) areas, the camera is fixed in a certain position, aimed towards Banjo. This is probably done because the area is too small to have the camera behind Banjo, but it can be very annoying as the controls become mirrored. This is particularly frustrating while also swimming, as the controls for swimming are also inverted. To increase the amount of frustration further, there is a limited amount of time the player can stay under water, before they (instantly) die. On top of all that, it is completely possible in these environments to lose sight of your character altogether (which is apparently a deliberate design decision, as I have often been rewarded with hidden items by exploring areas where my character was not even visible on screen). It is perfectly fine to reward the player for exploring hidden areas, but then at least change the camera perspective once they have found these areas, so that they can actually see their character grab what's been hidden there.

The next image illustrates the annoying camera perspective. At this particular point, the placement of the camera in combination with the controls cause interference between the intent of the player and the results of their actions, making the controls less intuitive for the player.



To fix the camera issue, I would either try changing the fixed camera perspective, based on the player's location, or give the player the option to change the camera into a first person view mode while under water.

Another point of improvement that I feel belongs in the Camera category is the visibility of the items in the world. Banjo has to be in a certain radius to items and enemies before they are rendered on the screen. I understand that this is probably a console memory issue that has been solved this way, but I think it could have been solved better.

I would give collectible items a small sparkle effect that can be seen from far distances to guide the player towards them, just like it's done in *Spyro the Dragon*.

