Subconsciously Guiding Players in Banjo-Kazooie

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Every video game has a level or levels in which the game takes place. Early video games in the 1970's, such as *Pong*, used one screen which functioned as a level for the entire game. Arcade games in the 1980's, like *Pac-Man* and *Street Fighter*, began to make use of multiple levels with different colors or themes. As video games continued to evolve, so did the techniques used to design and develop levels. Level designers have an interesting job because a bad level will ruin any chance of someone enjoying a good game. An ideal level teaches a player how to use a mechanic and then challenges them in interesting and new ways. Level designers leave subtle clues throughout their levels to consciously guide players or communicate parts of the story. Using symbols is one of the most important techniques a level designer can use.

This paper will explore the use of symbols in the game *Banjo-Kazooie*, using the games' 7th level *Freezeezy Peak*. *Banjo-Kazooie* is a game released in 1998 for the *Nintendo 64*. The game is a 3D platforming style of game where the player plays as a bear named Banjo and his friend Kazooie, to save Banjo's sister who was kidnapped by a witch. *Banjo-Kazooie* makes extensive use of symbols, images, colors and lighting to subconsciously lead players through their levels, reveal secrets and avoid players getting lost. All of this is accomplished while maintaining the look and feel of the game, and without breaking the immersion as players play. These techniques will be examined and explained through the lens of formalism, semiotics and iconography.

Examining games from a pure level design perspective is difficult because putting aside the mechanics of the gaming and focusing on the layout of the levels and the challenges they contain removes a core part of the level design. Levels need to work together with their mechanics in a friendly relationship or the designer risks designing a level for a different game. In the Original *Mario Bros.* Mario can run, jump and shoot fireballs (when the player obtains a fire flower). A level involving fighting monsters with a sword, shooting guns or

sneaking around through an enemy hideout to gain information would not only feel out of place and completely at odds with the mechanics of the game; but it would be difficult to assess the merits of the levels because they are unplayable in the game. "Further, it is rare that design decisions made in video game design are afterthought, as each decision will have a cumulative effect on how the experience will be interpreted." (Alexander & Venkatesh, 2016). Following this line of thinking, levels need to be examined from the point of view of pure level design (space layout, storytelling, challenges), along with their mechanics.

As levels evolve from a drawing on a paper to a greybox design and finally to a final project, their overall layout begins to change less, but the art and lighting will take the level and make it apart of the game world. Thus, when examining levels it is also important to consider the semiotic usage of symbols. Neiva & Romano (2007) described this as "these choices lead to paths of gameplay that may or may not satisfy the player's objective". Imagine a game level that takes place in a medieval fantasy game. It is a dark gloomy rainy night and in the distance there is a castle with bright lights. The player will see this castle and realize that is the objective. If they begin traveling there and they find an illuminated path contrasting sharply with the darkness of the world, they will be inclined to take this path; whether this path leads to their objective or not. This is why design decisions relating to the game look, lighting and icons are important.

Iconography is a subset of semiotics in games, but is equally as important. Aristov (2017) said games are "inherently unpredictable: at the time of its creation, the developer cannot predict with certainty the behavior of the game during actual play, as it is dependent on the behavior of the player". Players rarely play games the way the designers intend them and the job of a designer is to guide players to complete their goals and follow the path they created. Icons are a tool designers can use to communicate with players and help with guiding them through the game.

"The much-debated definitions of games can be seen as indicators of why this type of formalism is problematic" (Willumsen 2018). Formalism in game design has multiple competing ideologies, but they center around defining what is the core of the game. Video games are not different from board games or simple games kids play. They are a series of simple rules stacked on top of each other and working together to make complex systems. *Rock, Paper, Scissors* is a simple game children can learn to play. There are three choices and they have a triangle of strength and weakness. Video games use these same simple rules to operate; when the A button is pressed, the player jumps. Inside of these simple rules there are complex systems at work. A character jumping involves a physics simulation for velocity and collisions, a designer needs to determine the right jump height and time. The rules that make up games are often examined and reviewed by other designers for use in their own games or critique. "These systems all focus on game mechanics as the core of a game, and separate out the rules of a game as something that can be studied and understood in isolation of the rest of the game's design." (Cook & Smith, 2015).

The idea of breaking a game down into it's most simple rules and systems to examine is not a consensus, "this way of approaching games may not always be equally useful, and for some games it may be an unnecessarily cumbersome task to describe all structural elements, putting into question the general applicability and value of this approach." (Willumsen 2018). AAA games today have hundreds of hours of gameplay many intertwined systems. Breaking these games down is not only time consuming but also a difficult task. For example, the game *Grand Theft Auto* allows players to customize their character, drive multiple types of vehicles, play sports, rob people, kill people, rob banks and many other actions. Games of this size are increasingly difficult to define as a system of simple rules.

Another way of considering formalism in games involves "prioritizing the game's aesthetics and players emotional response as a first-class concern" (Cook & Smith 2015).

This argument believes the aesthetics and art are equally important, along with the emotion the player will feel when playing the game. "Most current AGD systems make the statement that games are a set of rules from which aesthetics emerge and in which art and music are largely window dressing. The systems typically ignore the play experience and the player, in favour of a formalist, structural, mechanics-privileged approach to game design." (Cook & Smith 2015). The most important goal when making a game is that the game is fun to play. People have different definitions of fun and enjoy different games, but as a developer you want the target audience of the game to enjoy playing it. Art is an important component in this; if *Call of Duty* decided to switch to kid friendly cartoon style graphics, it would conflict with the realistic harsh war style game play. This could potentially alienate the audience and risk the game not selling well.

Semiotics is a field that lends itself well to game design because symbols have been used in games since the beginning. In the original *Mario Bros.* there are different items such as coins, mushrooms and flowers for players to collect. The meaning of each of these items is never explicitly explained to the player, but after interacting with them they can quickly understand their function in the game. Collecting 100 coins gives the player an extra life; the mushroom makes Mario bigger; the flower lets Mario shoot fireballs. These items act as symbols in the game world to communicate meaning to the players. Coins became ubiquitous within the gaming industry as many games featured some type of coin or gem to collect to gain extra lives.

In first person shooter games a white box with a red cross on it is commonly used for a health pick up. The red cross is recognizable because of the Red Cross organization, so players can instantly understand collecting this item will give them more health. One study argued "the interactive exchange of game design, delivery, and immersion made possible through signs circulating between humans (end-users) and computers brings exponential

consequences on the player and the contemporary state of game design" (Alexander & Venkatesh, 2016). These signs are also used to help immerse the player in the game world. Nothing breaks immersion more than a text popup in the middle of an action sequence. As players are focusing and in a state of flow, game designers can use signs to communicate ideas, the next steps to take and dangerous areas without fear of breaking the immersion of the game world.

However misuse of these symbols can also break immersion when they feel out of place or perform an unexpected action. "The delivery of signs follows the classical principle of semiosis. The actual material sign must be considered in relation to what the receiver can interpret. The interpretation of sign, a posterior semiotic action, should embody the intent and express the true resolve of the sender. The sent sign address a receiver, creating in the receiving mind an equivalent of more developed representation." (Alexander & Venkatesh, 2016). If a player in a first person shooter games picks up a white box with a red cross on it and they receive ammo, they may stop and try to understand what happened; as they would expect to receive a health boost. Designers have to be careful to avoid these situations and depending on the culture or country, symbols may be changed to avoid this.

"In games, the expression "the sign is on the wall" is more than a literal statement. Signs are on almost everything" (Alexander & Venkatesh, 2016). As technology has rapidly developed, so has games with it. Games today make use of immense power to display realistic graphics, but also make use of this power to add more colors to the world, put more objects on screen and find creative ways to use symbols to communicate with players. Alexander & Venkatesh (2016) suggest "Signs, cues, and symbols work together in the game and are created to immerse the player in a world". In the game *Super Mario Odyssey*, Mario can throw his hat and if it comes into contact with an enemy, the player takes control of the enemy. The enemy also begins to wear Mario's signature red hat and a mustache is put on

their face. The red hat and mustache are common symbols used by Nintendo to mean Mario. Putting them on enemies shows the player they are now in control of that character, and no longer controlling Mario.

Iconography is also extensively used in video games. Icons are used to represent character experience points, different types of items and skills among other things. "All locations and surroundings should have a purpose in relation to the game, otherwise are they not used by the players." (Güttler & Degn, 2003). When making a video game everything is planned out in advance and through iteration it is refined. Placing a bookshelf in a room and positioning it is the work of an artist on the team. Nothing in a game is there by chance as it requires the work of someone designing it, creating it and putting it in the game.

Icons are not exception to this. When talking about a horror themed game, Güttler & Degn (2003) said "Carefully chosen lights, textures, proportions and modeling etc., create this realistic impression, a realism that only limited is connected to the actual terror-theme of the game". The same thing can be said of icons in games.

"It is correct to state that the rules of video games function as laws" (Neiva & Romano, 2007). This quote by Neiva and Romano sums up one argument of examining video games through a formalist lens. However, when framing a critique or praise of level design simply as a function of laws ignores the most important parts of the level. The atmosphere, lighting and pathing are not functions of the rules in the game, but carefully selected and set up the developers. Therefore, it is vital to include these parts of the game when talking about level design.

"Developers and players approach the game experience from different ends, necessitating the designers to examine their game from both perspectives in order to facilitate the experience they want their players to have with it." (Aristov 2017). Game designers want players to play the game the way they intended, and many times are often frustrated or

surprised when they see someone doing an unintended action. Parts or whole levels may need to be completely remade if players continually get lost because the layout is too complex or even if it is simple, but players cannot figure out where to go. In the respect semiotics and iconography can help tremendously to guide players. As previously started, these elements are carefully chosen for the game and placed in the world for this purpose.

Before looking at a level from *Banjo-Kazooie*, the game needs to be briefly explained to create a basis of knowledge about the game. *Banjo-Kazooie* is a referred to as a "collectathon" because the game revolves around collecting various items. These items unlock new areas in the game, new levels, allow the player to use abilities and let the player transform into a different character. Players have simple abilities like jump and attack, but can learn new abilities in most worlds.

A simple overview of a level in *Banjo-Kazooie* can be described as the following - explore the level to learn 1-2 new abilities, collect all of the music notes, complete small challenges and puzzles to find all 10 jigsaw pieces. The abilities the player learns are then used in the level to access new areas or complete challenges, which in turn lead to more music notes and jigsaw pieces. The music notes act as a gating mechanic in the game. The player needs to collect a fixed number of music notes to advance to the next area. Jigsaw pieces are used to unlock new levels. The core loop of the game can be simplified to

unlock moves -> collect notes -> collect jigsaw pieces -> unlock moves

This cycle repeats throughout the entire game.

The level chosen for this paper is the 7th level in the game *Freezeezy Peak*. It is widely regarded as among the best levels in the entire series for it's level layout, themeing and overall design. The level is a winter Christmas snow themed level in the mountains. There is

a giant snowman in the middle surrounded by different areas including a Christmas town, Christmas tree and a polar bears igloo.

Image 1 Freezeezy Peak Picture

The picture above is the first image of the level the players see in the game. Immediately they are able to understand that it is a snow level from the snowman and snow, but also the northern lights in the night sky add the to atmosphere. The trees surrounding the level also tell players it is a snowy mountain.
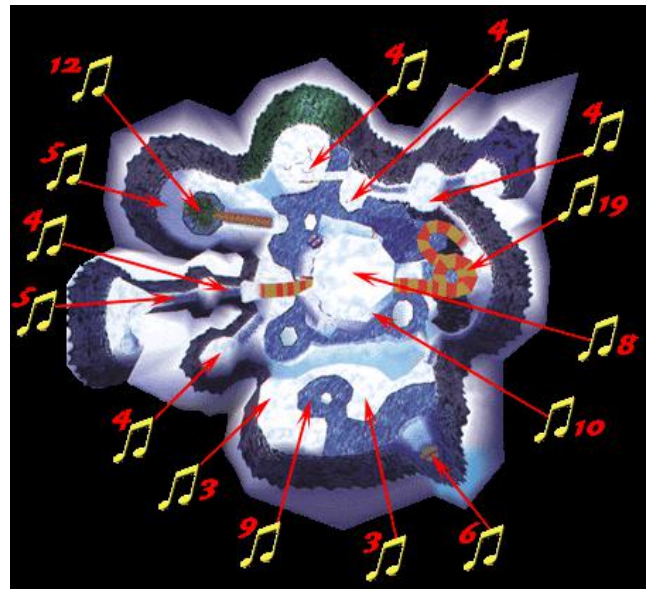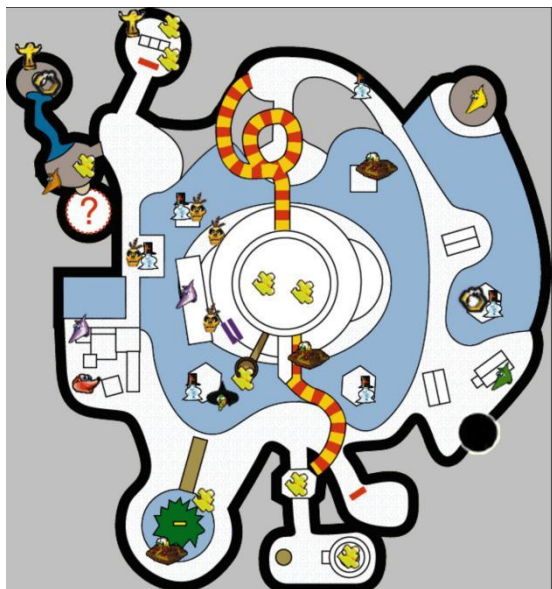

Image 2 Freezeezy Peak Level Map

Looking at the level map above on the left it is clear the level is circular in shape and most collectables on either in the center or on the left side. The right map is a map of where the music notes are in the level. Music notes are more evenly spread around around the perimeter and center. Music notes act as a guide for the player drawing their attention to different areas and showing them where to go. An example of this will be shown further in the paper.

There are two takeaways from these maps before looking at the level in game. The first is the circular design. This is intentional and all levels in the game follow a similar shape. If a player starts the level and chooses to walk right they will eventually loop back around to where they started. The same result will happen if a player goes left or straight. Using a circle players are less likely to get lost as they always end up back at a familiar area. The second is these maps show no sense of vertical scale. *Freezeezy Peak* has a section where the player traverses the giant snowman to reach the top. Using this vertical factor causes the level to feel much bigger than it is and tricks the player into thinking this is a giant world. Tricks like this are carefully chosen by the designers to convey these emotions to players and save time on development costs.

Image 3 Level Start

When the level starts the camera is in front of the player and they cannot see any part of the level. Their only option is to walk forward.
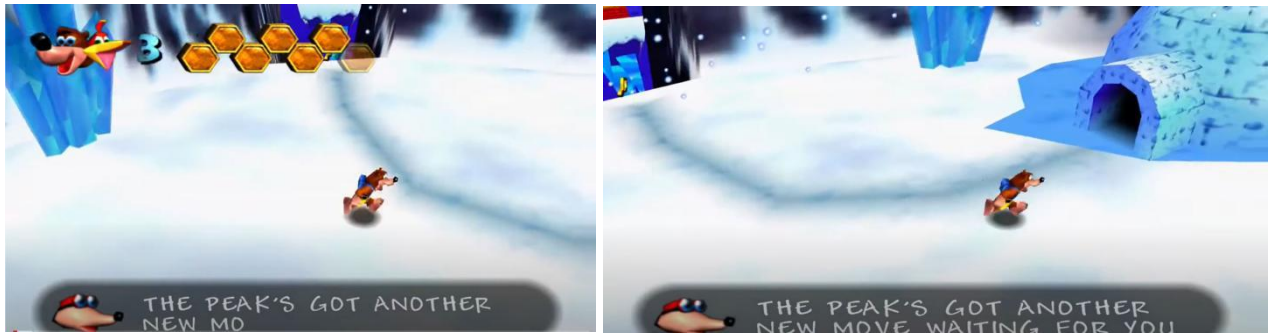
Image 4 After Level Start

As the player walks forward there is a path cutting through the snow toward the top of the screen. The players eye will naturally follow this path and see it leads to an opening between the mountain cliffs and a new place for them to go. The path also has a different color which contrasts to the cliffs. Without an in-game popup or a character telling the player which direction to go, the designers naturally communicate this. The path also leads to the right of the screen almost perfectly in a straight line with the player. This also leads players directly to one of the landmarks in the level; an igloo. As the player follows the path they find the igloo. Landmarks are placed in levels to as a memorable location to avoid players getting lost.

Image 5 First View of Snowman

The player goes down the path and finds a polar bear in the snow who explains he cannot move because he ate too much. The player then is forced to see the central part of the level and it's main landmark the giant snow man. The cliffs on both sides are again used to guide the players eyes towards this area, making sure they do not miss it.

Image 6 The Christmas Tree

The path at then curves to the left drawing players to another landmark the Christmas tree. There is a small challenge here where the player guides lights to the tree to light it up and a wooden runway is used in this challenge. This runway also is used by the designers to guide the player to the tree. Behind the tree are music notes for the player to collect. The runway gets the players attention, the music notes draw the player over.

Image 7 After Tree Notes

After collecting the notes from behind the tree the player turns around and can see enemies in the distance but also on the left side of the screen they can see Christmas presents, and a path from the presents behind the enemies. Again, the designers have communicated to the player where to go through the use of colors and level layout. The enemies also have a red X on their hat. A red ex is used in earlier levels to mean "attack here". This use of iconography also communicates to players how to defeat these enemies. The player will naturally go to the presents next and there they learn a new move which can be used to defeat the enemies in the level. This new moves allows the player to perform a dive attack while flying.

Image 8 The presents

The read feathers on the blue pad are used to tell the player they can fly here. Players can collect red feathers in the game and then use these feathers to fly. The bird character in the game is red, so the choice of red feathers clearly communicates this idea. The player cannot freely fly and must use a flying pad to start. This pad is not only used as an icon to tell players they can fly but it also informs players there is something nearby they can do while flying. As flying is restricted to where flying pads are, designers only place them in areas where they can immediately be used.

The other important point in the picture above are the notes on top of the ledge. The notes tell the player to jump up. When the player jumps up the camera moves and they see a character in the game called a *jinjo*; collecting all 5 of them in a level rewards the player with a puzzle piece. If the notes were not on the ledge, a player might not think to jump up there. They were explicitly placed there as a design decision.

Image 9 After Flying

When the player begins to fly they will see the Christmas tree glowing from the lights they helped reach the tree earlier. There is also a star on top for the player to fly through. Flying through an object is used in an earlier level so the player is familiar with this mechanic at this point. They need to fly through the star 3 times to receive a jigsaw piece. The player will fly towards the tree, go through the star and then turn around. When turning around they will see the snowman's buttons. The buttons stick out of the snowman slightly and are red in the center; just like the snowmen enemies. The player has just learned the dive attack and this gives them a place to learn and practice this new move. The rotation and placement of the snowman here is intentional by designers for this moment. The buttons also contrast with the snowman itself, making it hard to miss for players.
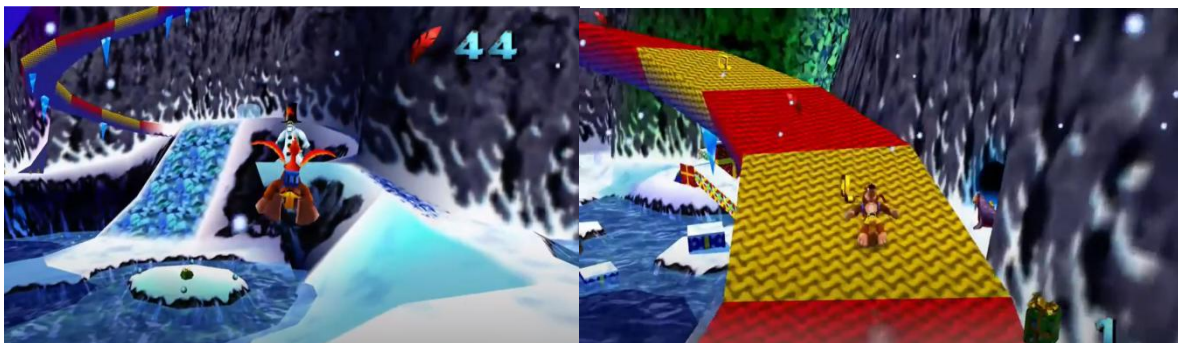

Image 10 Scarf

The player can then continue along the path by the presents or fly around the level. The snowman has a bright red and yellow scarf which is much brighter than the background drawing the players to it. The scarf also has notes and feathers on it for players to collect, again inviting them to explore this part of the level.

There are other parts of the level the player can explore and different techniques used later in the level to guide the player but they are beyond the scope of this paper. *Freezeezy Peak* is beloved by the fan base of *Banjo-Kazooie*. Asking players they may mention the themeing, the characters in the level or challenges, but the real reason players love this level is the care and time the designers took the design it. Everything in the level has been put in

it's place for a specific purpose and all of the elements work together to achieve a common goal of guiding the players to the different items to collect. After seeing how this was achieved it is clear level design is more than a system of rules in a game. Level design takes the rules of the game and experiments with them to craft levels that challenge the player and force them to master the rules of the game. The art used in the levels is another layer on top of this to communicate the design decisions to the players and help them play the level in the intended way.

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