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La Potenzialità Narrativa dei Menu nei Videogiochi

Narrative Potential of Menus in Videogames

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ABSTRACT

Narration of Main Menu Options

The main menu and menu system in videogames are the player's toolbox. In a parallel between a player and his or her game, and a person and his or her physical world, the menu system to a video game is to organizational structures to the physical world. These organizational structures include homes and personal bags. These structures are containers with contents that can be comprehended through lists and diagrams to visually represent use and relationships between the contents. These are tools, but lived with as objects on a plane that is the physical world. The presentation and how tools are used, tells the owner's story of actions and objectives. The visual flow and movement between rooms and containers and the decisions to create relationships among objects support opportunities. A videogame's menu system is like its house that outlines goals and indicates relationships and opportunities. A main menu, found within a menu system can outline the narrative of the menu system as would an index or floorplan. The menu system can anticipate narrative and index interaction with the game-world. It demonstrates the basic controls of the game and the interface's logic, to the player, as important visual and narrative elements. The menu system is what allows the player to understand the game and become immersed in play as if the player has entered another world.

This abstract is related to a final thesis which will explore the idea that menu systems have narratives. Case studies will introduce a method to approach and understand menu systems and include digital games from the *Pokémon* franchise, the saga of *The Legend of Zelda*, *Animal Crossing*, and *Katamari Damacy*. This study hopes to bring awareness to the main menu as more than just an interface, but as an important narrative element and possibly defining structure of a game, similar to a genre.

INTRODUCTION

This dissertation is about narrative aspects of menu systems in videogames. It began with the idea that a menu system has a “main menu,” that together with the menu system, is an essential element to its videogame. Studying menu systems can be a complicated science as its history and current use take inspiration from multiple disciplines and their use has become increasingly complicated. These systems are not universal, but individual to the game, hardware, and target audience. Over time, menu systems in videogames have changed to accommodate newer technology. Additionally, terminology used for menus is not universal across all digital videogames. Some ideas of basic functionality can be understood throughout different videogames, but possibly each with a different name. Games might have only one menu that opens from a click of a button, while others might have multiple menus from multiple buttons with different degrees of submenus and complexity. Commonly used titles for named menus in videogames include main menu, title menus, pause menus, setting menu, and tool bar. It has been up to the game to decide whether or not a main menu is used and how it is used.

The “main menu” of this dissertation is an outline of the main options of the game. It is, in a sense, an index. The idea of the “main menu” in this dissertation is that it is the focal point that all possible decisions of a game can be traced back to. This “main menu’s” form is not always explicitly labeled, displayed in list form, nor available in a simple visual presentation. It might exist in plain sight in the middle of a mess or take some comprehension to consciously identify this “main menu.” Regardless of its form, this “main menu” exists, even if it is only an illusion.

The menu system are the menus that are utilized in a videogame that create a system in which the game’s gameplay can flourish. These menus work together to demonstrate the

understanding of the game. The menu system, figuratively, knows the game and the game world. Hierarchies of menus and options indicate levels of importance and categorization of the opportunities of action that are available. These hierarchies can be understood by where and how options are presented as well as how and the amount of time needed to interact with or locate these options. These menu systems ultimately develop a form that can be based on how action within the game is valued. These forms can be repeated in other games at their basic concepts. A game's genre might anticipate a particular style of menus, but it is the type of action and decision-making that determine what type of menu system that the game utilizes to present its style of gameplay.

Menu systems outline the goals of the game to the player. It accomplishes this by displaying information to the player with a particular structure. The interpretation from the organization of information in groups affects the player's perception of the game and in knowing available actions in the game-world. The accessibility of menus affects time, value, and player experience of actions, decision-making, and goals. The menu system can facilitate actions while adding more value and demonstrating importance. It assists the player in understanding what the game world affords the player, because the menu system is a digital tool. It is the primary source for the player to understand how to move, how to interaction, and how to find out further information while the player is in the game world.

Menus are a part of an interface that connects the player to the videogame. When programming games, the terminology for main menu can be part of the code that connects a game's actions. The "main menu" of this dissertation could have similarities with how a programmer understands the term, but is based in narrative comprehension, rather than a flow of programming code. This "main menu" connects the user to the goals of the games.

Menu structures have their own narrative and aesthetic experience that affects the entire game's narrative and story aesthetic. The main menu is the player's toolbox to understand the game's goals and the game-environment. It answers the question of what the purpose of play in the game is. It provides what information is needed by the player in order to understand who (player character), what, when, where, why, and how he or she is playing. The menu system is what opens the videogame to the player. It must teach the player what to do in order to operate the game. The menus must present themselves in a way that affords comprehension and possibilities to the player either as an environment only or as direct instructions. The main menu is not always explicitly displayed. The idea of the main menu is also an illusion of the tools, objectives, or main idea of the game and its play. The terminology used by some games does not always include "main menu."

The approach to a study on menu systems will keep in mind that the menu system is an independent experience while co-dependent on the game to which it belongs. There are parallels found between videogames and multiple disciplines that can be useful in understanding the feelings and emotions that come from and inspire narratives. The videogame's game-world is like a world, or a life and the main menu is like a toolbox that outlines the purposes and different goals of a person's life. The structures of videogames and their menu systems can be found in forms that are used in the physical world. These structures in either world share a basic structure, purpose, and goals. This dissertation will consider concepts from other disciplines. Case studies will be used as examples of analyzing different menu systems and begin an attempt to categorize their styles.¹

¹ Note: This dissertation was written with an idea that it is interactable and hopefully, referenceable. I have tried to write this in a way that it can be read in any order. If there is some

Part 1 explores several multidisciplinary aspects of videogames. It will provide perspective and serve as a metaphorical environment for the remainder of this dissertation.

Part 2 explores videogame menu systems and its relationship with a videogame's story.

Part 3 explores how to understand and comprehend videogame menu systems.

Part 4 will introduce an approach to examine and analyze a videogame's menu system and narratives, and introduce and apply this to case studies.

Part 5 will summarize the dissertation and discuss possibilities of future research.

information that may be useful with a quick reference while reading another section, it has been placed in a table. I have tried to consider the visual presentation and interpretation of this dissertation while still writing something suitable for a master's thesis. Please do not read the case study citation list until after finishing reading this dissertation.

PART 1: MULTIDISCIPLINARY AREAS OF VIDEOGAMES AS MULTIMEDIA ART

Introduction

This dissertation considers art as something that takes inspiration from the real or physical world, that has a sense of knowing its subject. There are some truths in videogames that are found in the real world. By relating a game-world² to the real world, multidisciplinary research on multimedia art can help apply a real-life perspective to understanding video game menu systems. This comparison between the real world³ and a game-world, to identify their similarities, is one approach to be able to understand the intentions of videogames and subsequently video game menu systems.

The menu system is part of the game's user interface, but it is also a representation and reflection of gameplay and the goals of the game's story⁴. In order to understand the narrative of menu systems, gameplay and the game's narrative must first be understood. The menu system is a representation and reflection of gameplay and the goals of the game. This section will begin by explaining what videogames are, what makes them special, and their philosophical roots. Psychological and ecological concepts are included to deepen the presence of the real world in videogames.

These philosophical, psychological, and ecological areas translate how the world works and functions regarding how we perceive it and interact with it. This is also what makes up aesthetics. Videogames mimic our understanding of and demonstrate an understanding of the

² "Game world" is referring to the reality of a videogame or where game-play takes place.

³ "The real world" is referring to the world in which humans live.

⁴ A game's story is the narrative view of the game's actions and goals. It is what the game is about.

world that we live in at various points in time.⁵ Many design features can be proven to mimic something that already exists in nature- this can include forms such as visual presentation, organizational structure, and logical structure. Within the realm of art, the art of videogames is the art of action and decision; it has the medium of play, action, and decision-making.

Videogames, however, also include stories and narrative. This poses a problem that lies in narratology to explain what narratives are and how these are used in videogames. Any areas that do not come directly from the nature that we live in, come from the human nature, or from art that is then placed in nature—this could make a debate to disqualify some videogames from fully being art, unless all aspects of videogames, together, can be considered as something that fits the definition of art.

This section will end with ideas from the physical world and the digital world: understanding various visual presentations, organizational strategies, and the relationship between the physical and digital world. These could prove to be sources of imitation with the organizational design of video game menu systems.

⁵ A single experience, aesthetic, or event are not limited to a single instance in time, but can be ongoing, or exist in multiple instances of time.

Videogames and Art

How and why are videogames art?

Videogames as Multimedia

Videogames are generally digital games that are played using a controller and displayed on a screen. These games combine a study of play (ludology) and a study of story (narratology), but include digital aspects. Videogames are a multimedia art-form.⁶ A videogame can be easily seen for its visual and audio components, but it includes a variety of other art disciplines such as story, action, decision-making, and learning. An art form generally has a few aspects that distinguishes that art form from other arts, that they work with. The first is the medium, that is the physical aspect of what the art is made up of. The second is the idea, concept, or metaphysical aspect that relates to what makes up that art or what the goals or substance of that art is. This idea goes beyond the physical, visual, nature of what that art is.

Motion pictures, or the arts on the screen as moving images, are (generally) divided into cinema and/or film, and animation. Animation⁷ can be defined as (1) making something that does not have the capability to move itself, (2) a sequence of moving images, or (3) images that are played in a method that it appears that the drawings are moving. Film and cinema generally refer to photographs that move, while animation, despite the same terminology, generally refers to moving drawings. Within these definitions it can be said that film is a category of animation, because film is moving images. A special aspect of animation and film is the ability to play with what is not seen in-between the images. Its aspect is playing with the time and space between images and location. Film and cinema's narrative space focuses on time, place, and danger.

⁶ The goal of this dissertation is not to argue whether videogames are or are not art.

⁷ There is animation as a technique and animation as referring to moving objects that would not normally move on their own.

There can only be one place and time shown at any time, but danger is present on- and off-screen. Film and cinema play with narrative lines within a single space—time and space. There is a relationship between the instances of time that are presented, but within a single timeline that is meant to be watched in a single order.

Still images, such as photography and drawings (including paintings), capture a moment in time. As in motion pictures, there are elements of time and space. The particular aspect of these still images is that they are motionless and stuck in a particular moment in time.

Photography uses light to capture an image at a particular moment in time. Its aspect is an image of a singular moment in time—an instance of the subject during a particular moment of its history in time. A drawing captures an image at a particular time, but includes the painter's visual comprehension of that moment. There can be feelings of anticipation from feeling the emotions of how that moment is presented through a still image. A single image is more than just a moment in time by having a relationship with moments and feelings that are separate from that single image.

Music uses auditory sensory stimuli to create a passage of time and invoke feelings. It can play with frequencies, the qualities of those frequencies or the empty space between those frequencies. It can be approached by what is heard or by what is not heard, the intervals between notes or their inverted intervals. Music plays with time by creating form and story between the relationships of frequencies and their variations. A musical composition can present sequences of events through musical forms and different musical compositions. Musical compositions may also present a single moment in time, or different, disconnected moments in time, in longer or connected sequences. Music may be based in the auditory sense, but shares similar goals as other arts.

Videogames are a form of multimedia that includes elements of cinema, filmmaking, animation, photography, instructional materials, music, and life. Videogames combine the ideas of moving images and music, but adds its own distinguishing feature. It adds own art to a collaboration between other arts. Videogames's distinguishing features are interaction and the art of play. As found in animation, film, and still images, there is a relationship between time and space in videogames. The added element of play to videogames changes the role of the spectator or adds an active participant. The spectator can now watch the game or the participant paying the game. The flow of time in a videogame can be paused, continued, or performed in different orders, potentially infinite, depending on the game. Many possibilities of a recording of gameplay exist. A still art is forever in that single state and animation or film has an explicit and intentional sequential order. A videogame requires user input in order for the entirety of the videogame's visuals to be displayed. The aspects of choice, and decision making, and freedom of movement makes the interactive nature and continuous state of a videogame without a single timeline. The interactive ability causes a videogame to have multiple possibilities as its gameplay is played out. A videogame has the possibility to transform or be played back differently. A still art will always be the same and animation or film will always be the same no matter how many times it is replayed. Cinema and photography present information to the viewers. It is within videogames that players (those who interact with and use videogames) must make decisions. These decisions are not always open-ended,⁸ but is separate from the focus of a videogame's art of decision-making.

⁸ Choices are not completely open-ended, because it is bound by the rules of the game-world.
Part 1: Multidisciplinary Areas of Videogames as Multimedia Art
Videogames and Art
Videogames as Multimedia

Table 1: Special Aspects of Selected Arts

<i>Art</i>	<i>Special aspect(s)</i>	<i>What the art is of:</i>
Photography	Place and time	Capturing a place at a given moment.
Animation	Time between images	Playing with the time between images or what is not present between what is seen.
Film and cinema	Time, space, danger ⁹	Ordering time, space, and danger within a single space with a single timeline.
Music	Audible space and silence	Organizing (audible) frequencies across time.
Videogames	Play	Making decisions and choice.

The aspect of play, in videogames, is studied in ludology. Play, however, is not considered free as it is restricted to what it involves. Play has to do with the act of making choices. Videogames also contain a narrative aspect, studied in narratology. These two aspects work together to define videogames. The art of videogames comes from nature while narratives (potentially) come from human nature (or the creator). Together, these demonstrate a knowledge of humans and human nature within the natural world. Narrative and gameplay are connected to the menu system, which provides a narrative (potentially) with the menu system as a narrator.¹⁰ The player and the videogame can both be narrators. This relationship between play and narrative is what makes up the integrity of a videogame.

Videogames are part of the digital world that takes its expression from the physical world. Videogames start with the world that we see around us and adds aspects that come from digital tools, thus making the digital world. Videogames require knowledge of play and knowledge of the world in which the play is occurring. Its art is also an impression of the world

⁹ (Piva, “Il Coccodrillo Luminoso”)

¹⁰ For more discussion about narratives, please see “Rhythm and Narration” in the “Forms of Presentation Section.

and the living as being a part of the art of play and interaction. Videogames's art includes areas from the world around us such as aesthetics, philosophy, and psychology. The digital world of videogames also includes areas of digital tools such as screens, interfaces, and physicality or physical device as moving (as is a body to a soul in the real world).

To relate this back to the idea of menu systems, it is the menu system that then provides a more explicit understanding of the world that the videogame is portraying or presenting. The menu system is part of the digital interface, that connects the user to the program (or player to videogame). Metaphorically, it has the same awareness or mimicry that art has. The menu system can be a world of itself as we see the digital world or the real world. It is a world of menus and options that are interacted with in respect to their relationships of sequences, matrixes, webs, or networks. Videogames are part of the digital world and represent an understanding of various disciplines and various media of art. These games are now made up of multidisciplinary ideas and multimedia. Videogames explore the ideas and understanding how we, or its creator, comprehends his or her world and acting within it.

Videogames as Art, Art as Nature

Art, or Aristotelian theory of art, is mimicry. Art is considered to be something that is created by humans that imitates nature or something found in nature. Art has a relationship with human nature.¹¹ A painting can be art, but there is also an art of war. Videogames are games that involve a screen to play the game. There are elements of play, interaction, and decision-making in videogames. These elements are all found in nature. Play and decision-making are part of human nature; it is human nature to play in order to learn. Videogames mimic nature. If videogames mimic nature, they are considered art.

Henry Jenkins has been credited for proving that video games are art. Jenkins argues that “games represent a new art [that opens up] new aesthetic experiences” (Bittanti and Quaranta; Jenkins, “1 Games, the New Lively Art”; Jenkins, “Art Form for the Digital Age”). The actions of a videogame occur in the game-world. How the real world¹² is to us, the game-world is to a videogame. In videogames, the player takes control of a character, that which is the object doing the actions. The relationship of the game-world with the character in that videogame is similar to the relationship of the real world with a person. A videogame is the creation of or encompasses a game-world and interaction between the characters and the game-world. The game-world can also be considered a world with inspiration from the real world¹³. The game-world does not have to follow the logic and rules of reality from the real world, but it does follow its own logic and rules.

In the real world there is a relationship between humans, human nature, reality, and the world. If we consider the human to the real world as the playable character is to the game-world,

¹¹ Aristotle considers art to be something that imitates nature in his book, *Physics*.

¹² The real world as we know it, which is also an illusion, just as the digital world is.

¹³ The real world being the physical world that we, humans, live in.

the meaning of life to humans would be to the purpose of play to a player and player character in a videogame. A menu system, as an interface, connects the user to the program. Organizational tools, such as houses, bags, folders, and lists, connect a person to information. The relationship of mimicry that is found between humans, art, and nature can be used to understand the mimicry that is found between players, player characters, and videogames. This mimicry can help to explain relationships and purpose between any of the already mentioned areas.

Art as Knowing

If art is an impression or mimicry of the real world the artist would have to understand and “know” the real world in order to make the art. From this idea, there is a sense of knowing that comes from looking at art, because art contains the understanding of the subject from the creator. Art, as an impression of the real world, physically and ideologically or its representation of the creator (human soul) allows the creator to know oneself better and also to escape the real world. Art can be an illusion or fantasy world that was born from the impressions of the real world. It can also represent what the creator (humans) want the world to be like. Art can be a reality itself. In order to know the art, the one making the art must know the subject. An artwork reveals an essence of its subjects and its creator.

Purpose of Life

The purpose of life is based on goals. In a sense, it is whatever someone decides to do with it. This does not mean that the goal of life has to be something that we consider to be a very big accomplishment, such as inventing flying cars. It can be something simple such as understanding cultivating tomato plants. Life is full of action and decisions. There are many actions and many goals, for example “health is the goal of medicine, a ship is the goal of shipbuilding, [and] victory is the goal of a general’s art”(Aristoteles). It is common that, before

starting something, to decide on what is the desired outcome—the goal. What is set to be accomplished?

Goals, however, can be organized and change throughout a single life. Goals can relate to different areas or “worlds” of a life. A shipbuilder is not always only a shipbuilder. This shipbuilder could also be a husband, a father, or a politician. The different areas of goals of life for a person are like having different areas, or worlds within his life. These worlds within one’s life are illusions for separating ideas and goals as areas that follow their own sense of time, space, and logical structure.

The main idea of the purpose of life is that it is something that the individual decides, and that it is goal-driven. How to live life and how to find goals and select goals defines action and decision-making. Aristotle’s *Nicomachean Ethics* was written as a guide for how to live and answers the question of *how* should one live his or her life. Some ideas from this guide are listed below (Aristoteles):

1. “Goal-directed activity is pervasive in human life.” Aristotle provides a few examples of goals such as health being the goal of medicine, a ship is the goal of a ship-maker, and victory is the goal of the general’s art.
2. If an action has a goal that is for itself and further goals that build upon that rather than something else down the line, the action is more likely to be successful.
3. Human happiness has to do with completing the goal well.
4. Every virtue has two corresponding vices, one of excess and one of deficiency.
5. Character is revealed for what and why people do things.
6. Actions can be ignorant, voluntary, involuntary
7. A person should avoid excess and deficiency and select the mean.

8. “Let us distinguish five dispositions by which the soul grasps the truth in its affirmations and denials. These are art, scientific knowledge, “good judgment, scientific learning, and scientific apprehension. (Supposition and belief, on the other hand, can be false.)”
9. “Every kind of art is about coming into being. It figures out and devises means to bring about something that is capable both of being and of not being, something that originates in the maker, not in the thing made.”
10. In regards to friendship, “the upshot is that friends must have mutual goodwill—for one of the three reasons we mentioned—and they must be aware of that goodwill.”

Aesthetics as Experience and Perception,

Video games have three elements: audio, visual, and interaction. How do we view and experience videogames?

What are Aesthetics?

The Greek word “aesthemi” means perception. Alexander Baumgarten (1714-1762), in his book *Aesthetica*, created “aesthetics” to mean the science of sense cognition (*Baumgarten’s ‘Aesthetica’*). It is not the same as beauty nor philosophy of Art. Aesthetics is not something that can be explained or bound by logical rules. Aesthetics is described as being a little sister to logic, “which will do for perception or sense cognition (*cognitio sensitiva*) what logic does for intellectual cognition” (“Baumgarten’s ‘Aesthetica’”, 2023, p. 358). Another definition of aesthetics is that it can be defined as being “about ways of perceiving the world that are really rewarding and special” (Nanay, 2016, pg. 1). Aesthetics is not something that can be explained by mathematical logic. It can be explained by the senses and experience from perception.

Aesthetics can be seen as a companion to logic. Logic is the science of deductively valid truths and studies a correct or scientific reasoning. Aesthetics is the science of experience, emotion, experience, and possibly intuition. Aesthetics and logic appear to have a relationship similar to science and art. Aesthetics are not something so concrete as, for example, a scientific method. Logic can be as “what is” and aesthetics would then be as “what it feels.” There has often been a division between logic and reasoning, and emotions. A popular example would be from the fictional species called the “Vulcans,” from the *Star Trek* Franchise. The “Vulcans” strive to live a life of logic and reasoning, free from emotion. Aesthetics would be part of emotions and excluded from the “Vulcans’s” goal of living life.

Aesthetic and Perception

Someone who is viewing, someone who is participating, and someone at different points in his or her life (life experiences) are likely to have a different aesthetic to the same event. Additionally, seeing an item and seeing an image of that item are two different perspectives or aesthetics of that item. A single experience can have different aesthetics depending on the approach or the circumstance of the experiencer. Any approach is often directed by where attention is being directed at. Attention is then determined by the person's experience. Experiences and a collection of experiences is what causes, to different people, an identical item invoke different feelings. Context can further create difference in feelings by a single person seeing the same object in different locations.

Aesthetic and Attention

A viewer's attention to a story can "hide details in plain sight." This explains why two people can watch the same film and have different feelings and anticipation to that film's conclusion. The two viewers's attention were focused in different areas that lead some events to be foreshadowed to one viewer and not the other. The development of the story could be done in a way that depending on the perspective and attention that the viewer has, this development could be perceived differently. The story remains the same, but the interpretation varies depending on the viewer's attention.

The aesthetic experience can be explained by where the focus of attention is. Attention can be exercised as either focused or distributed and towards the identity of the object or by the scope of object(s). Objects can be identified by what the object is or its identity as a whole. It can be identified by its attributes or the parts that it is made up of. In the scope of object(s) in an environment of multiple objects, attention can be towards single objects or multiple objects.

Regarding objects, “the two cross-cutting distinctions (between focused versus distributed attention with regards to objects and between focused versus distributed attention with regards to properties) give us four different ways in which we can exercise our attention. Our attention can be (Nanay, 2016, p. 24):

- i. Distributed with regards to objects and focused with regards to properties
- ii. Distributed with regards to objects and distributed with regards to properties
- iii. Focused with regards to objects and focused with regards to properties
- iv. Focused with regards to objects and distributed with regards to properties

Attention can also be understood through focus and zoom. “It is important to emphasize that this difference between focused and distributed attention, as it is used in the empirical literature, concerns the size of the visual field or the number of objects one is attending to” (Nanay, 2016, p. 6). Visual search experiments can provide examples of understanding how attention works. This can be understood by someone who works with things that have small details and large details. How much attention can be placed on small details while maintaining attention to the larger picture? An example of understanding this would be a word-search game. Within the rows and columns of letters, how does the player look through the letters to find the words?

“An example of (i) is the way we exercise our attention in visual search experiments or in tasks where we need to sort through a pile of red and blue socks. In these cases, we are attending to lots of objects, but only to one property of these objects (in this example: their color? whether they are red or blue), In the case of (ii) our attention is all over the place: it is not fixated either on an object or on any given property: it wanders aimlessly. I take this to be a fairly common way of attending: this is what you are likely to do when you have to wait at the doctor’s office

and you forgot to bring anything to read. Another fairly common way of attending is (iii), where we are focusing on a specific property of a specific object: the performance of most perceptually guided actions presupposes attention of this kind. Finally, (iv), which seems much less common to me, is an experience where our attention is focused and distributed at the same time: it is focused inasmuch as we are attending to one object only. But it is distributed across the properties of this object. Our attention to properties is similar to the case of (ii): it is not focused on one property only, but it is also very different from (ii) as this way of attending is always centered on one object only. And (iv) is clearly very different from (iii). If, as I argue, (iv) is a good bet for those who want to understand what disinterested attention is, (iii) would be the prime example of interested attention. And (ii) would be attending characterized by no interest at all. Dickie offered us a choice between (ii) and (iii) and (rightly) pointed out that neither should be taken to be aesthetic attention. But he failed to consider other ways of attending. He failed to consider (iv), attending focused on an object but distributed across its properties.” (Nanay, 2016, pp. 24-25)

Attention can be either focused or distributed and objects can either be perceived as what they are or by their attributes and the scope of objects in an area. These are relationships of the scope and focus of attention with areas of an environment. There are multiple ways to describe how attention is focused on objects, but the basic idea of it has to do with combinations of (1) the scope of objects -- the number of objects that are being focused on: one or many, (2) how much attention is going towards what object: direct or peripheral, and (3) to what the attention is directed towards: the identity of the object or the attributes of the object.

Attention and Neurology

An explanation of how attention works may also be approached from neurology and explained in scientific wording. The hierarchic model of Sohlberg and Mateer, developed in 2001, for the evaluation of attention in regard to neurology outlines five types of attention (Sohlberg and Mateer):

- i. Focused attention: The ability to respond to specific stimuli.
- ii. Sustained attention: The ability to maintain response during continuous activity
- iii. Selective attention: The ability to select a response when there are multiple responses simultaneously occurring.
- iv. Alternating attention: The ability to shift attention between different activities
- v. Divided attention: The ability to respond simultaneously to multiple activities

In Conclusion

Aesthetics are not a logical science. It is a science based in experience that is in-turn affected by attention and perception, which are in-turn affected by experience. Approaching aesthetics and art is not as simple as sciences governed by logic and reason. Aesthetics is a paired opposite to logic. Instead of science-based, it is reason-based and considers emotion and feeling. Aesthetics can explain concepts in an approach that is based in feeling. It can be useful to describe non-logical concepts in a like-wise approach. The approach to understanding different aesthetics explains why there can be multiple interpretations of a single thing. Aesthetics are not universal and restricted to scientific reasoning, but a companion approach to the scientific method for an additional perspective of feeling. Together, aesthetics and logic make the complete picture of the logic and experience of action.

Forms of Presentation

How can information be presented and understood?

Illusion

Illusions have to do with being able to recognize what is represented. This is how one is able to read a picture or interpret an image. This is also how there is an illusion in games. Players can forget that they are in a game-world and that they are playing. The real world could be an illusion. A popular example of a film that explores ideas of illusionary world is *The Matrix (2000)*. In this film, there is the real world, where the physical bodies of humans exist, and the Matrix, where the human's mind may go and "live" while the physical body remains in the real world. These films are based off of the Jean Baudrillard's concept of "simulacra." It is an idea that the human experience is a simulation of reality. Society has masked reality with a new meaning full of symbols, signs, and expectations, making it another illusionary world. The reality in which people live in becomes disconnected to the reality of nature and the physical world.

Another description of illusion is that illusion "refers to the incorrect, distorted interpretation of objective perception. This definition separates illusions from hallucinations and delusions, i.e. pseudo-perceptions of objectively non-existing objects" (Paul, Watzlawick, 1990, p. 1). In a sense, everything can be an illusion. Game worlds, canon, and fictional universes can all be illusionary worlds that exist within themselves, following their own flow of time and logic. An illusion can be a container that brings together its contents in a unifying concept or space.

Visual Presentation

Visual presentation is how information is placed and presented in a visual form. Visual composition relates to how information is placed on a surface with respect to how the information is processed and understood. This presentational method affords relationships, interaction, value, and hierarchy of its contents. A viewer can view a visual presentation from afar, with the ability to see the entire scope of information, or the viewer can be immersed in the presentation, with the need to comprehend the scope of information. There can be visual and physical interactions that can be understood as roads or accumulation of movement. The visual path of a viewer's eyes on a painting is similar to that of hallways in a house. These paths create an accumulation of movement or energy that creates the flow between information. This flow connects the different parts of a visual presentation and creates an experience while indicating relationships and value. There is action and movement between pieces of information.

Photography is an example of an artistic visual composition and technology. As art, photographic composition can be read about in books and explained through math, but the most important aspect of a composition is the photographer. The photographer understands the flow between objects in photographs and imparts his own understanding into these photographs. Photos capture and present visual information as they appear, restricted to how cameras capture image. Information and relationships between objects are presented within a single image, from which information can be understood in basic mathematical categories.

Rhythm and Narration

Theories of what narration is, is often brought up in studying the philosophy of history. The relationship of narration with art has long been debated. One argument for narrative is that narrative qualities come from art and are transferred back to nature. Forms of narration, such as

having a start, middle, and end, are not found in nature nor are they found in experience (Carr, *Time, Narrative and History / David Carr*). There are discontinuities between narrative and nature. An argument could be that narrative, as similar to dance and lyric, contains an element from the human mind. Narrative is art created from within human nature and human life.

Narration has an element of time that then relates to experience and action. Time also has a melodic element that is best balanced between past, present, and future. There can be some sort of delay between time and action. Melodies have distinguishable phases that are arranged in certain temporal order. Narrative configuration, experience, and melodies all have temporal closure that can only be expressed as by having a beginning, a middle, and an end. “A sequence, a series, or a process can theoretically be endless, but an event, an experience, or an action is something that begins and ends.” (Carr, 1986, p. 47) Objections to associating experience with narrative structure relate to the story’s point of view. The distinguishable points of view are “those of storyteller, audience, and characters.” (Carr, 1986, p. 58).

Narrative is a mode of organizing the experience of time. Time is imposed in a structure through narratives. Through a narrative a story is told; a story is not lived. It is an isolated part of a world filled with simultaneously progressing actions and possibilities. The functions of narrative and metaphors are parallel in use and in their problems. The Aristotelian plot is a mimesis of action. Mimesis as being an imitation of something else without trying to be that something else. Within Aristotelian thinking, humans learn through mimicry, and it is mimicry in art that humans are attracted to. It is natural that creations by humans can be understood through metaphors. Stories are found in human nature and reflect our knowing of the limitations and restrictions of human nature.

In narrative, and in motion picture, there is an element of time, space, and suspense. The elements of time and space are bound by beginnings, middles, and end. However, suspense is not. Suspense continues beyond the time and space restrictions and lives on in experience and in time beyond that of the story. The beginning, middle, and end structure is the knowing of events in time as from human nature.

Relationships

Individual things, or items, have relationships between them. These items, as an individual thing or idea, and their relationships are visually understood in various forms. One item could relate to another in different hierarchies of importance (higher, same, or lower). There is also a possibility of sameness and difference or inclusion and exclusion. Familial relationships may also be used to describe some forms of relations. Different forms of collections of items include groups, series, lists, networks, hierarchies, rhythms, maps, and webs.

These forms are visual guides whose contents can be made up of icons, words, or objects. Forms can afford information and opportunity through their indicated relationships of things. Visual forms can vary to emphasize certain aspects or attributes of the items. Five books sitting in a horizontal row is still a list of five books. These five books in a vertical row is still a list of five books, however, the meaning between the books could differ from when these books were in a horizontal row. The basic form that describes the relationship will remain the same even when the items change and the interpretation differs.

Lists

Lists can divide information into easier accessible information through sequential items that are held together by an understanding of having something in-common. Lists can be described as “[at] their most simple, lists are frameworks that hold separate and disparate items together. Lists are plastic, flexible structures in which an array of constituent units coheres through specific relations generated by specific forces of attraction. (2004, 2)” (Belknap)(Von Contzen, 2022, p. 132) (Barton et al., “Introduction”). Von Contzen explains:

“This definition is useful in several respects. Belknap directs our attention to the fact that every list has two dimensions: the immediately recognizable form of the list as a whole, and the individual items that make up the list. The one could not exist without the other. As a fixed form (or framework, as Belknap calls it), the list is static; a container of its items. These items, however, are not random; there is coherence between them. This coherence can be very loose, hence Belknap’s careful phrasing “specific forces of attraction” that hold the items together. What a list is “about” can thus be approached from two different perspectives, one from within, the other from the outside. The frame “shopping list” already defines the items of said list; the individual items cohere because they fall under this heading. On the other hand, it is also possible to find a list that reads “eggs, cheese, 2 bottles of wine, tissues, 1 cucumber” and deduce from that list that it must be a shopping list. In the latter case, the items themselves create coherence by their shared context of what a supermarket has on offer. Importantly, lists do not create coherence in and of themselves—they require a reader, an interpreter, a user to connect the individual items and make sense of them. List-making and dealing with lists are fundamentally cognitive acts. In literary texts, authors can actively factor in their readership’s practical knowledge of lists in the real world and invite them to reflect on the practice of list-

making itself, in other words, the experience of making lists (Von Contzen 2018).”(Barton et al., “Introduction”)

Lists also have non-obvious functions. A list does not need to be directly disclosed in order for a list to be a list. Lists can be found in picture books, poetry, and recipes. A picture book may have an image of a box of fruits, with each fruit having its name labeled next to it. Each line of a poem can be thought of as an item in a list. A recipe can contain multiple ingredients or multiple instructions that form lists.

Lists can have multiple meanings depending on what is part of the list and how these are connected. Their connections may indicate connotations beyond what the items are. Lists can indicate meaning even if there is no title directly stated. A list can vary in use and visual presentation while still being a list.

Series and Networks

Series and networks are structural patterns of media and media formats. Series are to repetition as continuation is to modulation. The parts of a series from one to the next is a modulated repetition. Change within series can mark repetition or a slow development. A series can be a form of a list. These forms continue and shift their meanings; it is an ongoing form. Networks focus on relationships of complexity, creativity, and community. Networks and series can both represent a narration within time. Networks are webs of relationships. It is possible to track relationships on a string as if they were a series. The items within networks can be related in a series of degrees from the starting point. A direct relationship would be the first degree and a relationship with a second item that has one item in-between would be a second degree. These types of relationships demonstrate how one idea can expand to include many other related ideas.

Understanding Possibilities in the Environment

How does something understand what opportunities of action are available and why?

Duality of Objects

Objects have dual identities. Aristotle's theory of Hylomorphism states that every physical thing (ousia) has a potentiality (matter) and immaterial form (act). An object can be the same thing while having different perspectives and descriptions of it. A well-known example is of a marble statue of a man. We can perceive it by its matter: as a chunk of marble and its other attributes or we can perceive the resemblance of the statue to a man. Attention as directed towards the identity of an object or the attributes relates to Aristotle's theory. When trying to describe a thing without knowing what it is, it is common to then describe it based on its attributes.

Information surrounds us and we perceive these through our senses: seeing, hearing, feeling, smelling, and tasting. We use our senses to learn and understand the objects around us. We seek out information; information does not come to us. The qualities of objects are what we use to understand values and meanings of things. Objects make up the environment, but surfaces are what separates substances from the mediums in which things live in. Environments can be artificially made either physically or conceptually.

Affordances

One can understand how to interact with the environment by understanding what is being afforded by the objects and surfaces. Or in other words, what types of actions and consequences are possible. "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (Gibson, p. 119). Affordances can be positive or negative and are relative to the observer. Experience and knowledge affect one's ability to recognize

affordances. For example, a child who has never fallen may not comprehend that a cliff affords the child as a place that one can fall from and become injured.

“An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behavior. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer” (Gibson, *The Ecological Approach to Visual Perception* / James J. Gibson).

Gibson argues that affordances do not classify objects (“The Theory of Affordances”). An object’s affordances can be understood without labeling that object. Affordances are of the environment; what the environment has to offer to the object within the environment. The idea of affordances was created as part of a new language in ecological psychology studies by James J. Gibson (1904-1979). Later ecological psychologists expanded the link between affordances and cognition as having to do with perception and action. One researcher, Heras-Escribano, describes affordances as “the possibilities for action that are available to agents in their environments.” He uses an example of explaining light to argue that perception is best explained with ecological terms. Physics would describe the behavior of light as the “impact of a physical energy in our body from a while” while ecology would explain this behavior as “something that reveals the available affordances for a particular agent, which in turn allow us to engage into a meaningful way with our surroundings.” (Heras-Escribano, 2019).

From the perspective of ecological psychology, there is a difference between perception and sensation, cognitive skills and non-cognitive skills, and amodal perception. Perception relies on physical sensations while sensations rely on specific information that presents how the

environment is full of affordances. Cognitive skills are a reciprocity between an object and its environment such that an object is able to meaningfully engage with the environment. All cognitive skills are psychological. Non-cognitive skills are not direct with the environment and include actions such as guessing and imagining. The amodal perception is that perception can be obtained through multiple agents.

Approaching Environments

Understanding an environment is affected by experience, attention, perception, expectations. The type of approach to any environment can greatly affect how that environment is understood, what affordances are perceived, and where attention is placed. These approaches explain how and why interpretations are made given certain evidences or information. There are multiple areas to consider when understand how an approach is made. Attention, goals, desire, and haste are some examples of conditions that affect how an approach is made. An approach usually has an order in which attention is being applied to objects and their attributes. The senses are particularly useful, but pre-supposed ideas can create illusions that can cause one to not see something or see something in a different way (as in optical illusions). Visual attention tracks eye movements and relates to time and the order in which information is being attended to. The processing of information has a rhythm between identifying, thinking, and concluding. These all affect how a conclusion came to be.

Understanding the approach will be useful in understanding why a conclusion is formed. This information can then be replicated or continued to find conclusions in other environments. It is possible to replicate approaches from one environment to another as an initial approach. Understanding the environment and understanding an approach to a subject affords possibilities

of action and understanding. There is a relationship between the environment and the object within it that explains possibilities of actions.

Organizing in the Physical World

How is meaning found in objects?

Introduction

Organizing as presentation and being useful is a balance between having space and ability to use, with the restrictions of time. The idea of menus and having areas (that have continents) are found in the physical world. The physical world is full of objects and areas that can be grouped together and presented in lists for comprehension. How we organize physical objects demonstrates how the goals of that list are understood. These organizational groupings do not have to have an explicit label, but that the group is understood to have something that brings them together. This understanding or goals that these groups have can have a narration or a story. How items are placed, organized, and categorized is a visual understanding and presentation of some kind of narration. For example, a list could read: “apple, oranges, soap, pencil.” It may not be obvious, but these four items can have something in common. It could be a shopping list or even a list of items that are currently in the car.

Interfaces with the Physical World

Interfaces are connections between a user and an object. A common use of interface is a computer interface, that connects the user to the computer. Technology is an interface that connects a person and his or her goals in life. Technologies are creations that help people to connect with the physical world. Interfaces between people and the physical world are often organizational structures or systems. These can organize items that are used for different areas of

one's life, or for different goals that someone has. Examples include personal bags, tool benches, and homes.

A personal bag, used when leaving the home, is generally filled with items that serve a purpose while the owner is away from home. The list of items can be viewed to demonstrate what actions and goals that the owner might anticipate needing. How the bag is organized and how the bag is used creates the flow of rhythm and movement between viewing and using the contents. The types of bags, including their structure (material) and divisions (compartments) divide and subdivide contents into lists. A personal bag can exemplify how items are chosen and how these items are displayed for the particular events. These contents can easily change while the form (bag) always remains the same.

A tool bench provides options for how to interact with the craft by being a display of tools. Tools can be placed in individual compartments, behind doors or in drawers, or in plain sight and always available. There is a sense of value in ease of use against space by how easy it is to access items or put them away. A tool bench can exemplify how value is chosen and how items are grouped for shared purposes.

A home is a personal living space. The flow between rooms of a house is similar to the flow between menus within a menu system. A house is an organization structure in which the owner is immersed. The floorplan of a house is a diagram, but its rooms are a list. There is a different comprehension between looking at the floorplan and living in it. A house is interacted with: it has doors, rooms, windows, and takes up space. It takes time to travel throughout the house that a house has harmony between time, space, and purpose of supporting action. A house can exemplify movement and relationship between different areas.

The organization of physical objects is an interface system between a person and his or her goals. The cost of having items easily accessible through internal organization is space. Organization and its design is a balance between space and time. These organizational methods are containers of objects and ideas.

Decluttering and Organizing Approaches:

Decluttering and organizing can be understood with a simplification of a trade-off between time and space constraints. Is there time to take things out of their designated spaces and is there enough space to be able to use and return items? Goals are another major element of decluttering: is the item useful or does it provide any mental well-being (does it bring joy or usefulness?).

Two major distinctions of visual organization are between having things easily accessible and visible or neatly hidden from view or stored compactly to take up less space. Generally, divisions and subdivisions take up space. An example can be understood with pencils and stationery. A set of pencils can be displayed in a box that contains one specific space for each pencil or they can be stored in a pouch. The pouch may take up less space, but it takes more time to find the desired pencil.

A common method to start organizing and decluttering is to decide on a goal. For a house, the question could be, “what life do I want to live?” Items related to a common goal are generally placed together. Areas to begin can either be based on importance or frequency of use. A sample highest level structure could be divided into three parts (1) vital records: items to be kept forever (2) items that are important: these are important but may only be kept around for a certain number of years, and (3) “disposable” items, or items that are discarded once the task has been completed.

The KonMari method follows an order designed to start with personal items. She believes in having designated places for items and a personal space. Decluttering, according to Kondo, should always start with the categories of the most used items. It is easier to use the items with the most familiarity to understand and recognize what items are to be kept and what items can be discarded without second thought nor regret. Her order for decluttering is the following (Kondō):

1. Clothing
2. Books
3. Papers
4. Komono
 - a. CDs, DVDc
 - b. Skin care products
 - c. Makeup
 - d. Accessories
 - e. Valuables
 - f. Electric devices
 - g. Household equipment
 - h. Household supplies
 - i. Kitchen good/ food supplies
 - j. Other

The idea of Swedish Death Cleaning also places an importance to the order of decluttering and to organizing within categories. According to this method, one must start with the least sentimental items, recognizing the various categories, and organizing within these categories. After ordering categories in order of sentiment, a second sort method will be to organize these in order of largest to smalls (physical size).

These methods have intention to the order and relationships between each item. It can be interpreted as either as a singular list and a divided list, or a network of areas. As is with Aristotle, the idea of having a clear goal, assists in the sequence of action to achieve it.

Tea

The philosophy of tea can be said to join the ideas of ethics, religion, man, and nature. Tea culture in the Asia, particularly China and Japan, can reflect what the values of society are and what is considered to be important in life. Tea culture involves methods of preparation, what teas are popular, and where and how tea is consumed. There is an art of tea.

Japan's tearoom, the Sukiya, is a simple cottage. "The Sukiya consists of the tea-room proper, designed to accommodate not more than five persons, a number suggestive of the saying "more than the Graces and less than the Muses an anteroom (midsuya) where the tea utensils are washed and arranged before being brought in, a portico (machiai) in which the guests wait until they receive the summons to enter the tea-room, and a garden path (the roji) which connects the machiai with the tea-room" (Kakuzo Okakura, 1906, p. 34). Kakuzo Okakura outlines the tea room as:

1. "The tea-room is made for the tea master not the tea-master for the tea-room" (Kakuzo Okakura, 1906, p. 40)
2. "That the tea-room should be built to suit some individual taste is an enforcement of the principle of vitality in art" (Kakuzo Okakura, 1906, p. 41)
3. "The tea-room is absolutely empty, except for what may be placed there temporarily to satisfy some æsthetic mood." (Kakuzo Okakura, 1906, p. 42)
4. "The absence of symmetry in Japanese art objects has been often commented on by Western critics." (Kakuzo Okakura, 1906, p. 42)
5. "In the tea-room the fear of repetition is a constant presence" (Kakuzo Okakura, 1906, p. 43)

6. “The simplicity of the tea-room and its freedom from vulgarity make it truly a sanctuary from the vexations of the outer world” (Kakuzo Okakura, 1906, p. 44)

The significance of tearooms is their philosophy. The tearoom presents harmony in the narration of how it is organized, how it is used and interacted with, and what items are put inside of it. Philosophical and social ideas can be found within the tea room’s design and decoration. The idea of the owner as an individual and among society and nature is presented by what and how the different rooms and objects of the tea room relate to one another. These philosophical ideas that are found in the tearoom can be applied to form a collection or a list with intentionality and deeper meaning.

The Digital World Saves the Day

Digital tools augment the real world.

Introduction

Computers were initially created to make calculations; later on, computers were used for automating simple, but tedious, tasks. As time passed, computing tasks were adopted for use in archival projects. Digital devices were also eventually adopted for use in communications (e-mails) and organizing one's daily activities (personal digital assistant, PDA). Digital tools have been used in nearly every discipline as another medium to aid people in performing basic tasks. These disciplines include the humanities and sciences.

Screens

Early digital devices utilized basic text and could only accept basic input. It was not until much later that symbols were supported. User interfaces were adopted to make interaction with computers user friendly. The word "interface" usually brings to mind the idea of a "user interface" or the tools that allow input and interaction with a computer. In a broader sense "interface" is a connection between two systems. An "interface" can be considered as a form of visual presentation of information, just as a painting is a presentation of the information of the subject of the painting, or a list is a presentation of a group of items.

Screens and interfaces are the devices that present the digital world to the viewer. User input, through the interface is typically performed with external devices such as keyboards, controllers, sticks, and "mice." With the invention of touch screens, the screens themselves have become a direct interface for user input and user output.

Organizing and Finding Items in a Digital Interface

Many organizational systems include lists and grids, item names and/or icons that represent the item. These items can be interacted with in ways such as sorting order and making shorter lists or folders within an encompassing folder. These items may also be searched for using search terms by searching for text. With (relatively) recent technologies, computers have begun to read images by searching images for specific features.

Physical to Digital: Relationship Between Physical and Digital

Recognizing repetition and mimicry between environments is one way to understand how or why something is. Human creations are made with an understanding of the world as humans understand through mimicry. The digital world has become a representation of an understanding of the physical world, however, limited by human nature. The digital world might not be a single, vast, space like the Earth, but it is an illusion or world in which humans might live in. The digital world is made up of digital code, but presented through a visual interface. This visual interface mimics visual learning and visual understanding. User interfaces add a narrative understanding to the digital world. Narratives, as part of human nature, make it easier to conceptualize, visualize, and understand the digital world. These user interfaces take inspiration from the real world and mimic naturally occurring organization, but with a structure that is found in human nature.

Digital World and Videogames

Game-worlds are part of the digital world. These worlds that videogames are a part of are individual worlds that exist, at least, as an illusion. These worlds take inspiration from how one might organize one's life and goals, but these are not limited to the rules of the reality of our physical world. Each game-world follows its own reality and logic. The presentation and understanding of game-worlds and the digital world are limited to human nature. Video games, like the digital world can critique or express desires of the physical world.

The digital world can be a mental escape in which humans try to make what they wish they could have in the physical world. Videogames can be seen as a reality separate from the physical reality that the mind can thrive in, through the medium of the digital world; videogame worlds are illusions. The mind is free to make up whatever the mind wants in the digital world.

The digital world, however, is limited to the self-understanding of the human nature and the human soul. The human can only truly know oneself before entering a world of relativity. This can explain the relationship between the digital world and the physical world is why the ideas of the physical world can be used to understand the digital world.

The digital world is based on the physical world. This is why the understanding of video games and videogame menu system can be understood by organizational methods and ideas of the physical world. The digital world has also aided humans as a tool and aide. The digital world as organizational tool also expresses an understanding of organization within physical tools. The duality of videogames is expression of action and story. Action utilizes tools. This is how tools are used and how lives are organized within videogames. Stories and plot are the imitation of action, expressed in a way that humans can find meaning and value. Videogames have spectrum in which these two aspects (story and action) are involved in a game's world. Game-worlds could then express the world in a cyclical form between an understanding of nature and an understanding of ourselves.

PART 2: MENU SYSTEMS WITHIN VIDEOGAMES

Introduction

Menu systems certainly have a history within videogames. Before video games, menu systems in videogames were likely influenced from menu systems in computers and other technologies, televisions, and even board games. Print blocks, and other informational printing that had formats for presenting information in a replicable form can also have influence on the creation of a menu system. When handing a lot of information, having a standard format can make it less tiring and less time consuming to locate particular, desired information. Visual presentation generally has some sort of form.

A menu system is another form that builds off of forms that we already know, but in a digital and interactive presentation. The idea of space has become a more valuable resource within digital forms. The element of space is that only one thing can take up space at any time- this space is generally the screen. The presence of things within that space can be felt as layers or as simultaneously existing in different places. This is why the interface allows for menus to come and go as they are needed. These menus can exist within the game world, over the game world, or in its own world. It can operate within gametime or it can also pause gametime. The menu system as an interface also has a place within the stories as a subject and as a narrator. The menus have a place within the story and action in the same way that a character or narrator could have affect a story. The menu system narrates, connects, and provides understanding for its videogame. Part 2 discusses some background for videogames. This includes information about some consoles as these are needed for the player to interact with the game.

Menu Systems as an Interface

The menu system as an interface, forms a relationship between the player and the game-world. The menu system connects the player to the game world. In the real world, there are not exactly menu systems. Games can be a part of a life in the sense that a person can have a home-life, work-life, hobby-life, etc. In the real world, there are several areas of things or places that have possibly been the inspiration for some structure of menu systems. The area of real-life menu systems could be seen in things such as houses and their organization and bags. This dissertation will consider houses and their organization and bags to provide a real-life comparable reference in order to understand how a videogame's menu system provides a companionate narration to the game.

Within menu systems, some options can be grouped in types such as informational, integral to the save files, integral to gameplay mechanics, and integral to the game console. There is a concept of keeping like-things together and reducing redundancy that appears in multiple disciplines such as writing, marketing, and organizing. As we may find in menu systems and in real life organizing systems, it is possible to find redundancy. These complicate the argument and would relate to judging whether or not a system is useful or optimal. The perspectives to decide how to organize objects can vary and depend on the purpose. For example, clothing on racks might be organized by color in a clothing store while in someone's home-closet, clothes might be organized by where on the body that the items are used. The tables found later in this paper may also be used as examples to understand how a different organization of the same information can change the perspective of the information and how it is comprehended.






Handheld Devices

For handheld, or portable gaming, the devices include a screen feature and interactable buttons. These devices are intended to be held and so the form of the device supports the use of both hands. Table three is a chart of handheld devices that includes the available screens and buttons and a brief explanation of major changes. The Gameboy series succeeded one after the other. The Nintendo DS (dual screen) is not a successor of the Gameboy Advance. In a press release Nintendo announced that the Nintendo DS (dual screen) would not be a successor to the Gameboy Advance. Nintendo also announced “that it would continue to use its established franchise characters in new games in the hope of drawing wider audiences and that it would continue to explore the connection between the GameCube and the Game Boy Advance” (IGN Staff). This can potentially confirm possible suspicions of or the similarities between the DS and the Switch, and the design of games (including menu systems) with non-handheld gaming systems.

Coming from a handheld gamer perspective, games for the DS, 3DS, and Switch began looking and feeling like games that were produced for stationary consoles such as the GameCube and the Nintendo Entertainment System. This will be relevant when approaching a game that has been ported from or is part of a series that released games for other consoles. If or as consoles are streamlined for “develop software that is easily accessible for gamers of all ages and for players with no prior experience” (IGN Staff) it would make sense for the console design and game design to have similarities. Nintendo’s games can be easily accessible if there is common logic between the consoles and games. This helps to create a sense of intuition. The historical aspect of streamlining could be important to note in perspectives of those who have only experienced handheld games.

The Gameboys were all one series of handheld gaming console that proceeded one after another. The Gameboy SP is not pictured below; the buttons are the same as all other versions of Gameboy Advance consoles. The SP, however, includes a backlit screen and the device folds in half with the screen on one half and buttons on the other. Collectively, these will be referred to as Gameboy. The Nintendo DS and 3DS proceeded one another. The main differences in controls are that the 3DS adds two sticks and a home button. The 3DS added stereoscopies to create an illusion of a three-dimensional image. The Nintendo Switch is considered a different device as are the DS and 3DS to the Gameboy series consoles.

Table 2 History of Handheld Consoles

Name	Gameboy, Gameboy Color	Gameboy Advance, Gameboy Advance SP	Nintendo DS	Nintendo 3DS	Nintendo Switch
Release Year	1989, 1998	2001, 2003	2004	2011	2017
Image					
Screens	1		2		1
Available Buttons	Directional arrow pad				
				Left Stick	Right Joystick
				Right C stick	
	A and B buttons		A, B, X, Y button pad		
	Start and Select buttons				- and + buttons
				Home button	
				Screenshot button	
	L and R buttons		ZR and ZL buttons		
Simple explanation of changes	(Start)	Adds L and R buttons to the top left and right of the device.	Screen moves up and adds a touch screen.	(1) The top L and R buttons gain secondary buttons ZL and ZR. (2) A home button and two joysticks are added	(1) Removes top screen (2) Adds screenshot button

What is the Main Menu Idea of this Dissertation?

The “main menu” is a top-level view of the hierarchy of menus that are available in the game. This menu allows the player to understand the main functions of the game, but may not be easily available at all times. This “main menu” is not always presented nor in a form that is as interactable as, for example, an index of a book. What makes up this “main menu” can be argued to differ based on options’s importance to play or location. These two areas of importance and location can vary based on the game design’s approach to valuing time and movement. The main options of a videogame that is based on all objectives available in a game and what a player might think are the most important areas could differ. It is possible for a player to comprehend and create his or her own main menu that is built around his or her chosen gameplay. This “main menu” expresses the main ideas of the game based on available options.

Menu System

The menu system is made up of menus that are then made up of options. These options can perform actions or open up menus. It can be understood as folder structures in computers. A menu is like a folder and an action is like an individual item in a folder. These menus are webs of lists with hierarchies and relationships. Menus and options have a relationship between themselves, the main menu as a whole, and to the game-world. Menus and options take up space and are made up of windows or boxes that take up parts of the screen or the entire screen. These are not excluded from the idea of time, space, and suspense that we find in cinema. Menus and options can have their own feeling of being inside of a game-world space, on top of it, or outside of it.

To What is the Option Directed at

A first method of understanding menus is based on what the option is affecting. Options and their menus can be directed towards either (1) the game itself (ex. Save file), (2) the game console (ex. Screen brightness), or (3) for the game-world (ex. Item lists, maps). The direction of menus can provide a useful division of understanding the functions of the game. There could be different emphasis between adjusting settings of the game world and interacting with the game-world. It could be an integral part of play to play with the game-world settings rather than only playing in the game-world.

Visual Presentation

Options can be individual actions or another (sub) menu. There are a few sequences of (lists as) containers inside of containers or containers next to containers. This can also be related to being zoomed-in or zoomed-out. A zoomed-in view can feel like being inside of a house (without a floor plan available to view). This view lacks a centralized list of options, in which all options open new menu spaces (or windows). It could be that the menu as three tabs, but one is always open. The view is zoomed-in, because one menu is open, while the others are off to the side.

A fully zoomed-out view would have options on a single hierarchy available for viewing, similar to an index. These hierarchies indicate levels, and options within a single hierarchy would have the same importance. Some of these hierarchies have like-objects, and some, as well will see in the case studies, do not. It is possible for a menu system to contain combinations of menus being presented at different levels of zoom.

Another possible sequence is in which menus can only be accessed through another menu. The user must open one menu to get to the next menu. This is generally characterized with

a first menu that contains a second menu, that must be traveled through in order to reach a third menu. This idea is similar to a babushka doll, in which one doll is inside of another doll that is also inside of a third doll.

The presentation of options may be text-based or object-based. Options are not restricted to a drop down, interactable list, but may be presented as objects on a plane. Menus can be presented as a list of tabs, similar to a filing drawer, with each option title available for view, but only the options of the selected menu are displayed on the screen. Menus and options can be explicitly simplified and relationships understood through simple visualizations in lists or tree hierarchies, but the visual presentation is not restricted to mathematical presentation.

Menu Worlds

Locations can categorize and group, menus and their options. These locations can share goals based on when, why, or to what the option is intended to be used for. Location areas or categories of options of menu systems can be compared to an area of a life- this is in a sense that a person can have a personal life, a work life, a hobby life, etc. These are in a sense a “world” or “reality.” The different areas of menu systems work in a similar way. These option areas relate to an idea of “universes” or “worlds” within a “universe.” Another example of this concept is the idea of a franchise having multiple stories that sometimes do not follow one after the other. In this sense there is also the concept of “canon.” If we can consider a type of menu systems across a series or franchise to follow a general system, it may be possible to coincide the instances that fit within a canon and the instances that do not fit as not within the canon. To keep it simple, there will simply be notes that a system may be an outlier.

Location can refer to the location within the game, considering the game as a program. The game as a program has a space while the program is running and a space when the game has

booted-up and a space where gameplay occurs. These areas or categories each relate to separate areas or locations within a game. This is the idea of having menu worlds and in-game-world menus. In regard to menu worlds, there are two major worlds and a few areas of each.

- i. **Program World:** this is outside of booting-up the game and is generally the title screen and file select menus or screens.
- ii. **In-game Menu-World:** these are after boot-up, but not within the game-world
 - a. **Introductory or Narrative Menu-World:** this is when there is a series of menus and options to interact with, but it is straight-flowing or linear. Examples of this are the introductory scenes (including news segments) and start-up file option selection. Cut-scenes can only be considered part of this if they are influenced by interactions and decisions on the part of the player.
 - b. **Menu-World:** this is when there is a world of menus to interact with before the player can enter the game-world. Games with menu-worlds typically have gameplay in the game-world accessible through levels or mini-games. The game world is specifically entered and exited while the selections and other options for what part of the game-world to enter are in a world of its own outside of the game-world. Two examples would be *Katamari Damacy* and *Super Mario* (Nintendo, 1985- present).

These locational “world” divisions of menus can provide a useful division of understanding the functions of the game. It can place different emphasis on the directions of actions (towards game-world, game settings, console settings, etc). The action of play does not always have to be immediately towards interaction in the game-world but possible towards

changing the game-world. These world divisions can provide a sense of focus and direction towards different aspects of game-play.

Game-World Menus

Game-world menus can most easily be identified by how and where menus are accessed within the game-world and by what actions. A menu can be interacted with or opened by the player interacting with a button or other part of the hardware or from the player character interacting with game-objects. A primary location-based division can be:

- i. Attached to/ accessible by hardware
- ii. Attached to/ accessible through interacting with a game-world object

Hardware-accessed menus are often accessible at any time during gameplay and appear to be the most important options. These can change if some menus are available depending on the player's location in the game. Menus available through game-world objects generally require the player to travel or play in order to access the menu. This changes that menu's value and importance to the game and play.

The narrative functions and display of value changes based on when menus are accessible, in addition to where and how the menu is accessed. to having certain options available at all time vs within the game-world. The relationship between menu worlds and game-world menus is not always explicit. There are also menus accessible within the game world that can be divided by what the option affects (the game as a program, the game-world, or the console). Sometimes, these can be found in the game-menu world, but when there is no game-menu world, it needs to be somewhere accessible from the game-world. The nature of the game will dictate this.

Reference Chart for Identifying Menu Options, Menu Lists, Visual Presentation and Menu System Types

As mentioned previously, menus can be identified from several different approaches in order to categorize them. These are like micro-categories that can all overlap in many possibilities. A menu is a container of options. Menus can have levels and contain menus within the menus. Some approaches will be outlined below. These approaches can overlap as these lists are not exclusive but represent different points of view.

Table 3 Outline of Approaches to Understanding Menus and Their Functions

<i>Broad Area of Approach</i>	<i>Direction of Function</i>	<i>Sub-Direction of Function (if available)</i>
Location-Based	Hardware-Related	Screen
		Buttons
	Program-Related	In-program, before game boots-up
		In-game, in menu-world, tied to hardware
		In-game, in menu-world, tied to object
		In-game, in game-world, tied to hardware
		In-game, in game-world, tied to game object
	Time-Related	Available within certain points of the game's running time (considering the game as a program)
		Introductory menu-world, at the start of a new save file
	Space in the screen	Layer over the game-world
	Separate space away from the game-world (generally a full-screen view)	
Visual Presentation	Type of Presentation	List
		Table
		Map
		Web
		Plane/ field and objects
	Presentation of Objects	Text-Based
		Object-Based
Direction of Effects	The game as a program	(Game settings)
	Game-world	(Player settings)
	The console	(Console settings)

Purpose	Infographic	(Provides information)
	Setting	(Adjustments of the game)
	Item	(Used for in-game effects)
Accessibility	Always displayed	
	Quick Access	(Usually tied to a button)
	Requires “boot-up”	(Usually takes time for it to load)
Game Time	Pauses game time	
	Does not pause game time	
Sequence of Use or Zoom	Zoomed-Out or an outline	(A menu with a list of menus)
	Fully Zoomed-In or Immersed	(A menu with one option open and the other menus are tabs to switch between)
	Babushka or One-at-a-Time	(A menu that is accessible through another menu- this is not limited to two menus)
Time to Take Effect	Quick Use	(Generally takes little time or few actions)
	Use When Needed	(Generally takes two or more actions)
	Takes Time to Load	(Generally takes time to load)

What does the Menu System Afford?

Affordances have to do with what objects in an environment can afford the animal that is within that environment. Alternatively, affordances have to do with available opportunities in an environment. Objects afford opportunities for other things. Affordances can be understood through mediums, qualities, and even layouts. Menu systems hold information and present information in the menu system’s layout. The information that is in the menu system has its own presentation within itself, and its information from the organization of it and its relationship with other information. That is to say that the information within the menu system both holds up on its own and within the containers that it is placed. The information affords the player opportunities, while the menu system affords the opportunities to the player through presentation and interaction.

The design of the menu system reflects the understanding of how people interact with the world and how people perceive the world in order to learn about the affordances in the world.

The digital screen and the hardware are part of the digital environments of videogames. The menu system is made up of layers and planes, or surfaces, that connect the player to the program and to the game as an interface. How can the player understand what interactions are available and how to interact with the game if the menu systems did not exist?

The menu system can provide the experience needed to help the player with perceiving the game-world environment. The interaction with main menu helps with cognition in perception of the game-world. The main menu presents what sorts of actions can be done in the game-world without having to guess or imagine. An open-ended ability of using items as well as what items can be used and when provides insight to what a player may do.

Basic interactions with menu system are often followed in the game work. For example, in many videogames, the first screen that appears, may simply state “Press [button] to enter.” This affords that button as an action button. Another example, found in *Pokémon*, can be demonstrated by the changes in item usage. In some of the older games, *Pokémon Blue Version* (1998), for example, items cannot be used if there is no effect. The interaction with the game world is fairly restricted and the player cannot fall off cliffs or go to locations that he or she should not be going to. There is a parallel in intentionality. In some of the newer game, *Pokémon Violet* (2022), for example, the player can use up an item to no effect. This parallel’s the player’s ability to fall off objects or get stuck. This is a parallel in the ability to waste or learn by making a mistake rather than simply not being allowed to (by the game).

Animal Crossing (2019) and *The Legend of Zelda: Breath of the Wild* (2017) both have open menu systems—there are multiple lists and the player has the ability to interact as he or see sees fit. The game does not restrict use, which parallels with the game’s notion to let the player figure it out on your own as if you are exploring. *Katamari Damacy Reroll* (2019)’s menu is

interacted in the same idea that the game is played: moving a ball around while using certain movements with the joysticks. This menu is interacted with as a game—it is lighthearted and fun to interact with. This parallel's the game's intention of being fun and simple.

Experience greatly affects how someone can understand or think to check for affordances. Standardization with any element used with a menu system, or menu system types can provide a consistent experience that affects the ability of a player to understand how the game is played. For example, players might understand that a map might be available from certain buttons simply because many other games use the similar button-mapping.

A player continuing one series of games can provide one type of experience which is different than the experience of playing a series of games across platforms. The main series of *Pokémon*, for example, can be seen as having followed a linear path in which the experience of *Pokémon* players can follow. At a later point, the path of how the game world works and how the interface was designed became such that the perception of the main menu can have two very different approaches. Some of the later games (*Pokémon Legends: Arceus* (2022)) could have a challenge of perception by those who have played other games (and not only Pokémon). The perception of someone who has only followed the main Pokémon series is more likely to be confused by the menus found in *Legends: Arceus* (2022) than someone who has played a variety of games with or without a variety of consoles.

An old example of an application being used to teach is with Microsoft's *Solitaire* (1990), and *Minesweeper* (1992) games. These games were intended to help users understand how to interact with a computer. However, for some, the interaction with the computer was learned first and became the experience needed to understand how to interact with those games.

Relationship Between Narrative and Game-Play

Menu systems provide support for narratives and game play. Narrative is tied to an understanding of play, decision-making, and utilizing menus. There are certain degrees of linearity, seriality, and networks within the forms of menus, menu systems, narrative structure of games, and within gameplay. In some videogames, the play within a save file is limited by the narrative. Other times, some games are not restricted by the narrative of the story, or the narrative of the story is open. In regard to gameplay and story, there appear to be two basic ideas of connection between the two.

Table 4 Basic Types of Relationships Between Gameplay and Narratives

Type	Gameplay and Narrative relationship	Sense of Story	Examples
Type 1: Open world/ Open	Gameplay is connected to the game-world; gameplay has to do with the actions of the game or interacting with the game-world	The story is not directly connected to gameplay. There is a story to the game-world or a story that explains what the player is doing. Ultimately, there is not a structured, formal story to work through and complete.	<i>Minecraft (2009)</i> ¹⁴
Type 2: Linear/Sequential Story/Narration	Gameplay is connected to the story/ narrative aspect	Gameplay is progressing through the story. Generally, it involves making decisions and making way through cutscenes and prompts.	<i>Heavy Rain (2010)</i>
Combination	There is a mixture of gameplay being open or restricted to the game world and being restricted by narratives.	There is a mixture or spectrum of the story's connection and restriction of gameplay.	<i>Animal Crossing New Horizons (2020)</i> , <i>Pokémon Violet (2022)</i>

¹⁴ For those who are unfamiliar, think of Minecraft as playing with a basic Lego set. The player is free to their imagination and play, but is restricted to the world created by the Legos.

A purely first type would be something that focuses on gameplay and action and interaction with the game world. An example would be *Minecraft* (2009) and *Minecraft Java* (2009)¹⁵. There is no story attached to gameplay; it is play and interacting with the game-world. A videogame that is purely the second type would be something where once the story is finished, the gameplay is also finished. There is nothing else to do in that save file. The player may choose to create a new file and start all over.

A third type would be when two types work together to create a hybrid. The two basic aspects of pure play or pure story can be combined and appear either as a mixture or as a spectrum. There are creative ways to combine story and action in a sense similar to having a list in either bullet form or written out as a complete sentence. A story can be presented in both ways while still being a story. Examples of this third type could be games in which there is a linear story to be followed, while also including some open world. When the story is complete, the player may continue playing within that save file; it could be simply to become better or continue playing in the multiplayer modes.

Another example would be another type of combination in which the story does not need to be completed in order. The story is present, but the player has freedom to choose when to participate in basic gameplay actions and completing the actions that are directly tied to completing the story. To continue with the third type, gameplay mechanics that are not directly tied to a story could still have a story element to it. An example of this would be in *Animal Crossing: New Horizons* (2020). The story of the game is to complete the island (so that it is no longer deserted, but instead a thriving island-city). The story is, in a sense, over, but the island

¹⁵ Some editions of *Minecraft* now have story modes, however, the original release and its updated release were open worlds without any story modes.

can be continuously maintained through gameplay. The story elements such as daily announcements and calendar-based events continue. An example to contrast this would be Minecraft. The basic mechanics are not tied to a story but go on indefinitely. There is also no finished story as there is in Animal Crossing. The difference is whether or not the basic gameplay mechanics are tied to a story.

Stardew Valley (2016) presents an example where after the story is completed (there is a set amount of game time that the player has to complete certain accomplishments before being “judged”). When the time runs out, the story cannot progress. The main story is limited by game time. Interaction and gameplay mechanics will continue as the game time will also continue. Nothing new will happen regarding the main story and at this point, gameplay becomes repetitive and the goal of the game’s story has already gone away.

Who, or What, is the Narrator?

Of the three points of view (storyteller, audience, and characters) there is also a narrator. Between the NPCs, the player, and the game as a program, who or what is doing the narrating? It is possible that the NPCs narrate the story and gameplay, but it is also possible that the player is responsible for narrating gameplay. It is possible that the game as a program, through the menu system, is narrating the story and gameplay. The menu system provides information to the player about the game as the menu system “understands” the functions of the game. In this way, the menu system provides a point of view and biases just as a narrator would.

A Menu System's Narrative

A menu system and a narrative are both forms of presenting information. The terminology of these two are used in their own disciplines, but contain overlap in regards to what these both aim to accomplish. These are both structures of information that are restricted or finite that applies to sets of information. The display and organization of information is different, but can contain the same information and an identical story can be told both through a menu system and a story.

A narrative can be a story, which is a series of events that are placed in a structure. It is an isolated part of an open world in which many event occur simultaneously. It does not capture all views and all actions that are happening, because it is an isolated space and view and includes information necessary for the story's progress and basic points of action. It provides a prospective to what, why, and how something came to be at a certain point in it. A story can provide only the information needed in order for the action to come to a conclusion.

The menu system tells the story of the goals of play with indications of importance and value. These menus act as the narrator of action and possibilities. Sometimes this narration is A menu system's narrative tells the story of action and possibilities within a game, and outlines the game's goals. It provides meaning and understanding to information and game items by presenting the information in various ways such as menus, lists, and maps. The narrative provides a structure and understanding to the actions, options, and goals of the game. It is a structure that gives meaning and comprehension to play and decision-making.

A menu system and a narrative both contain selection information. These structures are not free and infinite spaces. These put time and space into perspective and relationship from certain viewpoints. Events across time can be placed into a story, which contains structure of

headings and subheadings, introductions, middles, conclusions, etc. These can also be placed into tree hierarchies and lists. Both menu and narrative structures place information about events into a comprehensible form with relativity and relationships. A menu system's narrative then, is a story of the game that it is outlining.

PART 3: ANALYSIS AND INTERACTING WITH MENU SYSTEMS

Introduction

How does a player approach and understand a menu system? It can vary based on knowledge of the game, the game's genre, or even the console that the game was released on. The menu system is an affordance to gameplay. It is a surface within the gameplay's environment for the player to learn what decisions can be made. The interactions with the menu system are repeated in the game's environment.

Menu systems present value to decision making and have their own time-space-action narrative. The menu system is how the player is able to make decisions as it dictates the controls that allow the player to interact with the game. There are two overlapping areas in which the menu system has narrative: (1) interaction and (2) understanding.

Interaction takes time. There is a trade-off between an action and the amount of time or the number of interactions (sequence) to complete an action. There is a harmony between movement within the menu system and movement with the game world. The interactions in the menu system prepare the player for movement in the game world. The amount of time spent in either can add value to the choice. How the interactions are made, how the movement between selections and decisions (in the menu system) often parallel the logic within the game world. The action of movement and button presses can be performed in sequences that make up rhythms. These rhythms support muscle memory in using the menus which can also affect comprehension (and affordances). There is an experience that comes from the physical interaction with the menu system.

Understanding is related to visual presentation and how the information is comprehended. This comprehension also affords the player possibilities within the game world and within other

areas of the menu system. Understanding hierarchies within menu systems provide an understanding of the action within the game. The understanding and presentation are also an aesthetic.

Overall, menu systems can form basic types or categorizations that can be utilized in different genres. These menu systems are relevant to choosing the type of action and game play that is then supported and explained through story. It is then possible to categorize games by menu system rather than genre.

A menu system can be understood with a comparison to a house. When thinking about organizing a house, one of the first things that could be thought about is: what is most important to have inside the house? The rooms of a house and their purposes are like an upper level of menu system and their purposes. For example, Person A might find personal hygiene very important and an experience. He or she wants to have a very bathroom with ample storage and a heated bathtub in addition to the basic amenities. He or she might also eat out a lot and not entertain guests at home and so does not need a large kitchen. Person B might enjoy cooking as a hobby and turn it into a social activity. He or she might want a large kitchen that is set up to accommodate multiple people in that room, simultaneously. Person B might also not be keen on taking baths and only want a small bathroom with basic amenities. The stories of Person A and B have the possibility to be similar, or the same. The approach and the story of how the end goal is achieved is different.

Interacting with Main Menu

The main system is the videogame's toolbox. It connects the player to the goals of the game as a toolbox would connect a person to his craft. The menu system is interacted with at certain points in time (when), from certain locations (where), and from certain actions (how). This interaction has experience and a flow, rhythm, dance, or energy. The menu system is a space in which the user moves around to view and act the story that the menu system supports.

Interaction with a menu system is an experience that is part of gameplay. It is an aesthetic that is separate, but part of the game's story and gameplay. A story is not limited by the menu system, but the gameplay is affected by how it is performed while using the menu system. With interaction, there is a rhythm and a dance to physically using and navigating through the menus. As with narration, there is a start, middle, and end. Menus and their options are organized for the player by being presented in a fixed layout. These are organized by the player if the player is able to make interpretation and organization without titled lists. There is a dance between the eye and the physical movements between the menus. Time (particularly loading time), distance, and depth (layers of menu and the relationship web of menus).

Movement between menus and their options are paths. These are like sidewalks or hallways that the user takes, with eyes, physical interaction, or on-screen cursors, to travel between information (options) and making selections (action). How the menu spaces are felt from visual presentation and how these are interacted with can support or hinder the feelings of performing actions. The ability to make an action is part of the story of actions. These movements that allow the player to make decisions are also decisions and actions that are part of the experience and narrative of using a menu system. Values and relationships of actions are indicated by the movement and order of viewing, processing, and understanding the

opportunities. It is as if a menu and the paths between menus are an environment that affords action, based on what the objects are and how these objects interact with each other.

The menu system is what organizes actions in a game-world. Menu systems have elements of time, experience, and narration within how they organize actions. There is also an experience and an aesthetic to using a menu system. The journey within a menu system tells a story of what items have been selected to present the opportunities available. A menu system is meant to be used- it understands the game and organizes it in ways that the player can comprehend what, why, how, and when, the player is interacting within the game and the console. The action within the menus affords value, relationship, and feeling of energy within the journey that comes before an action is completed.

Visual Understanding of Menus and User-Based Organization

Within videogames, the menu system is a surface or additional layers and spaces. Digital worlds within screens are made up of layers that are seen together, but can be interacted with on a layer or level-basis. The menu system displayed on-screen, over the game world, is another layer of this metaphorical onion. It can either be on top of the game world layers, or within its own space or dimension within the game world. Decisions made within the menu layers do not always affect the menu or the game world. The menus connect user input with the game (as a program).

Menus are visual presentations of data, presented in groups. They can be based on locations and objects that are grouped together in some way. These are often in forms of lists and sub lists or maps. These lists often present their contents as text, icons, combinations of the two and as vertical lists (bullet points and are read up and down) and grids (x-axis and y-axis table that is read up and down and left and right). This list can be presented interactable as a layer over a screen, or it can have a dedicated screen. Videogame menus are not limited to the screen. These do not have to be a straightforward list of words or icons that is seen whole in one view. They can be grouped together within a plane with a close-up view with some options available off-screen.

Invisible Lists

Invisible lists refer to menus that are not explicitly stated. These menus can be formed from comprehension or location. Game-world objects and buttons can be presented as a menu. These invisible lists continue to relate to time and value of options within gameplay and the game's story. The controller's buttons make up a menu.

Distance from the Visual Menu

Menus can be understood on different levels of zoom that can be taken as levels of organization or what can be viewed from the screen. For example, a bag might have 100 items in it. This menu, if zoomed-in on, might have only one list. When zooming out and adding more levels of organization, this menu might have options for submenus or tabs in which these 100 items are organized into smaller lists. The second form of zooming would be if there is only one zoomed-in view that prevents all options from being viewed on the screen. The player must move the list to view the options that are not visible on the screen.

A furthest distance from a menu would be when all options of the same level are viewed the same. For example, I have one menu that can have three menus listed. This would be the furthest distance. A closer distance from a menu is when one option is always opened and viewed. For example, I open the menu and I can view the contents of Option A. Option B and C are listed and their hierarchy is on the same level of Option A. This visual presentation can make it difficult to understand that Option B and C are not actually sub-menus of Option A.

The Dance and Narration of Action

The dance of action is action between options that has distances and locations. This can be based on how the actions or effects from the menus are utilized. The time between locations of menus also indicate value: how much time is being spent moving between options and making decisions. The relationship of time and space could indicate what the player ought to spend most of his or her time doing. The interactions, or dance, is between the need to reference, and the need to use quickly, or the need to have this option available at any time. Menus interacted with from in-game objects have scarcity and contribute to the balance of time between the game world and the menu system. There is movement and energy from the player between options and points of information that creates a dance. This movement is a journey.

The element of time places menu systems in the timeline of game-time. This is particularly relevant when a game has a fixed beginning, middle, and end. Some menus can only be viewed based on what time point in the game that the player is in. Time continues with how long it takes to move between information and how much time is spent in each menu location. The dance with the menu continues as the player moves between layers and the depth of each layer and uses the hardware to make actions within the menus and within the game-world. It takes time to read and understand options and time for the action to take effect.

The dance is physical for both the player in the real world and the player's character inside of the game. Specific option types can Options such as "Save and Continue", and "Save and Quit" features are strongly indicative of beginnings and endings. These enter, pause, and exit the game, but the dance is not yet stopped until the player stops interaction. The inability to quit and need to restart from the beginning loops game-time indefinitely. The flow of time in games can either be based on run-time or game-world time. The menus can be tied to the story, or these can be tied to gameplay.

The dance and narratives of the menu system are simultaneously ongoing and closed, depending on the game. The movement in the menu system, either in the hardware or inside of the screen (and game) are restricted to the programming of the game, but forever continuous with player-input. The dance is a rhythm of movement and time that connects the player's input to the rhythm of actions that take place inside of the game. The movement in the menu system is a game itself that has space, options, decision-making, movement, and time. The dance supports gameplay and the player's physical and mental (decision-making) movements to play the game.

Pre-existing menu systems

Formulas can be applied to the information that is to be put inside of a menu system and to the story that the menu system belongs to. Formulas create predictability and a use of formulas allow for different sets of data to take less time to be comprehended. The repetition of formulas or a slowly changing formula across different games or series of games can affect the usability of a menu system. As perception and what is seen and interpreted (based on expectations) of menus can vastly differ based on the experience of the player, repetition of or slowly evolving menu systems across games can be utilized intentionally, but perceived differently. A re-used menu system, a slightly modified, or vastly different menu system can greatly affect the player's approach, perception, and understanding of the game and how to play it.

Having a common format can help develop a sense of intuition or afford opportunities between games. For example, there are currently two major operating systems for computers. The intuition learned from either operating system do not always translate across operating systems. A player that only plays within one operating system could have a sense of intuition of opportunity from knowing how the logic of that operating system works. This player could possibly guess opportunities based in prior experience, rather than the game telling the player how to play. If a player switches between operating systems, the player might rely on the game more than prior knowledge to understand the game. It takes time to get adjusted to one or the other. Each approach to learning to game takes information from different places.

A slowly changing format and when a player begins to play can be tricky. There can be oppositions between those who are accustomed to something and those who look at something for the first time. Denial and resistance to change can greatly affect the perception of any menu system. The includes pre-supposed ideas and expectations. An example could be between time-

based additions where information is being consistently added and creating something from already having all of the information. A list that reads “A, B, 1, F, 4” could be easily utilized if these items were added one-at-a-time and the player has gotten used to it. The time-based order can be usable to a player who is thinking from the approach of when the option was introduced. If a player is reading this list for the first time, it might not make sense. Muscle memory can make time-based categorization easier compared to viewing the entire list all at once. When viewing the list at all once, it might make sense to have options categorized based on how the options are used, rather than add-ons.

A completely new menu system (to the player) takes a different approach from players than repetition or slowly changing. Players might struggle and want to find similarities with other games. A new system can propose an opportunity to re-start, free of time-based features and see a bigger picture of the system from afar. A new menu system can potentially simplify and change how a system is perceived without pre-conceived expectations. The problem with introducing completely new systems is the time and willingness to learn something new. It might be easier to tack-on a new feature rather than a restructure.

The time it takes to learn a menu system and whether or not menu systems between games are new or completely new will affect the comprehension of the menu and thus the understanding of possibilities inside of the game world. A repeated menu system, between games, can provide the experience to understand the opportunities between games. The knowledge of multiple videogames expands the opportunities of some videogames to videogames as a medium. Understanding the goals of a single videogame could expand to understanding videogames collectively instead of an isolate, self-contained videogame.

Analysis

Forms of visual presentation and how these connect are an integral part of the user interface and menu system. The entry and introduction to the menu system can be considered “immersive.” Menu systems can be introduced slowly, and are not always provided in one, nice, neat, summary, like an index. The comprehension of information does not limit its presentation. The menu system can be understood as simplified in webs or lists of hierarchies as part of comprehension. The same menu system can be presented across spaces and time that affect feeling, aesthetic, experience, and decision-making.

Approaches to understanding a game’s menu system can come from wanting to or already knowing little of the game and how it works. This can be an attempt to learn without interfering biases. This approach can consider the game to be an isolated or self-containing world. A contrasting approach places a game and its menu system with context to other games. This considers the game to be relative and part of a bigger world. An approach or analysis can be summarized below.

Approaching a study of a menu system.

1. What options are available before booting up the game?
 - a. These identify save files and some basic settings related to those save files.
2. Identifying the worlds of menus (game world, menu world, menu that is about the game) with respect to where the player is, or the menu system type
 - a. Stadium- there is a menu world separate from the game world
 - b. Immersed- the menu system is interacted with and referenced during play in the game-world
 - c. Combination

3. After entering the game, what menus and actions are tied to hardware (screen and buttons) and what menus are available inside of the game world?
 - a. What menus directly modify actions/interaction
 - b. What buttons perform actions
 - c. What menus are provided for in-game effects or for modifying actions?
 - d. Where can the player go (between the program and in-game)
4. What is the movement between menus? Are the menus presented as a layer or as a separate space, away from the game world?

A Non-Technical-Analysis or of in Order of Introduction

It is possible to approach the game by simply playing the game and reading the dialogues. The hierarchies, relationships, and understanding of goals do not have to be restricted to an analysis of explicit understanding similar to approaches mentioned earlier. A technical and self-aware approach to understanding games can make it easier to understand the menu systems and therefore how to play the game. The understanding of the menu system and the goals can be approached by experiences in the game and the game's aesthetics or the feelings and actions. The understanding of the game can simply come from playing the game and having a feeling of the goals. An understanding can come from an immersive-ness of playing rather than being occupied or concerned with being completely self-aware.

This dissertation does not explore the menu system from how it is understood with only the knowledge provided in game. This dissertation will explore a categorizing and technical understanding of menu systems to prove that a main menu or index clearly defines the game's goals and narrative. Because there are a variety of games, a single template for organizing the

scheme of menu systems is not ideal. The case studies in this dissertation will begin to form some ideas of a template to analyze menu systems and their narrative to the game.

PART 4: CASE STUDIES

Introduction to the Case Studies

Case Study List Organization

The ideas in this dissertation have potential to be applied to analysis of videogames outside of this dissertation. The selected case studies can be understood and grouped by various criteria as listed below in Table 8.

The Game Introductions section will provide context to the *Pokémon* and *the Legend of Zelda* selections within their respective series. *Pokémon* and *Zelda* selections are examples of two different types of menu system progression over time. The individual game selections provide additional examples of some menu system features that are not found in *Pokémon* nor in *the Legend of Zelda*; some features have the same basic concept, but are used differently.

Table 5 Case Studies Presented in Groups

Game	Points of Similarity	
<i>Pokémon Go!</i> (2016-)	Released for Mobile-Device Gaming	Portable Gaming
<i>Pokémon Leaf Green Version</i> (2004)	Released for Handheld Gaming Device	Part of a Series
<i>Pokémon Violet</i> (2022)		
<i>The Legend of Zelda: Oracle of Ages</i> (2001)	Japanese Games	
<i>The Legend of Zelda: Phantom Hourglass</i> (2007)	Nintendo Games	
<i>The Legend of Zelda: Breath of the Wild</i> (2017)		
<i>Animal Crossing New Horizons</i> (2020)		
<i>Katamari Damacy Reroll</i> (2018)		

Considerations Before Reading Case Studies

A player's perspective, including expectations and knowledge about the game, before starting the game can greatly affect how the menu system is perceived and consequently how the goals of gameplay are perceived. The enjoyment and understanding of the game can differ substantially based on the preconceived information about the game. Game mechanics such as tutorials and information boxes can be used to slowly introduce the menu system to the player. These tools can help new players understand the game's objectives and learn how to operate the game or can also cause confusion and become unnecessarily tedious for experienced players. These informative game mechanics can be considered another area of the menu system and as another narrating character.

Muscle memory likely affects perception of video game menu systems and can pose a problem. This dissertation suggests to try to take an open mind and willing to learn new sequences of physical interaction. Save states¹⁶ and the role of death play a part in the narratives of menu systems. This will not be focused on in this dissertation. The file select screens will be mentioned, however.

A menu system may be more or less confusing if the player expects something from it, distracting the player from objectively understanding the menu system's goals. Starting a game without ever having read information about how the game is played, or very little about the game, may prove to be useful in preventing play biases. The objectivity in the analysis is found

¹⁶ In the case of the Switch, this console can support multiple profiles. This is to accommodate shared devices, but can also be used to start another save file in a game that does not normally allow multiple save files. In the case of *Animal Crossing New Horizons* (2020), there can only be one island (the game-world) per device. Different Profiles will create a new save file, but the new player will be playing in the same world as existing profiles. The role of death is also a narrative in both the story and the menu system.

mainly in the descriptions of the menu systems and how they are interacted with. The subjectivity will be backed up by an approach or perspective to explain how the observations came to be.

These menu systems contain their own narratives. Whether or not these narratives match what the developer intended for the narration of the game and gameplay is something else that not in this dissertation. This dissertation presents an analysis with a perspective that approaches the menu system as being a tool and as a space to be organized. This space has a flow or dance to the movement of interaction within its areas and options. The presentation of and interaction within the menu system is its narrative. This narrative has a relationship with the player and the game. This dissertation will not try to determine what is a good design or bad design, however, a good design is likely something that assists gameplay. The amount of time to learn the menu system is something else.

Reading Order Note

Case studies can be read individually and within the lists that they belong to and generally in any order. It may be possible to follow along based on date of release rather than by game series as it is organized in this dissertation

Pokémon Go is placed by year of release. It may be skipped to, depending on the desired perspective or narration of reading through the case studies. It is possible that the perception and reception of Pokémon Go varies depending on the order and list of Pokémon games that have been played or understood. The release of Pokémon games has spanned 26 years (as of 2023); is increasingly possible that there are a variety of play orders that will likely affect how the games are perceived.

Timeline

This timeline places the selected games in chronological order, along with the full main series list of Pokémon games and the full list of Zelda games that were first released for a handheld device. Selected games will be in boldface font.

Table 6 Timeline of Case Studies, Zelda Series Games Released on Handheld games, and Pokemon Main Series Games

	<i>Animal Crossing New Horizons</i>	<i>Katamari Damacy</i>	<i>Zelda</i>	<i>Pokémon</i>
1993			<i>The Legend of Zelda: Link's Awakening</i>	
1994				
1995				
1996				<i>Red and Blue</i>
1997				
1998				<i>Yellow</i>
1999				<i>Gold and Silver</i>
2000				<i>Crystal</i>
2001			<i>The Legend of Zelda: Oracle of Ages</i>	
			<i>The Legend of Zelda: Oracle of Seasons</i>	
2002			<i>The Legend of Zelda: A Link to the Past & Four Swords</i>	<i>Ruby and Sapphire</i>
2003				
2004			<i>The Legend of Zelda: The Minish Cap</i>	<i>FireRed and LeafGreen</i>
				<i>Emerald</i>
2005				
2006				<i>Diamond and Pearl</i>
2007			<i>The Legend of Zelda: The Phantom Hourglass</i>	
2008		<i>Katamari Damacy</i>		<i>Platinum</i>
2009			<i>The Legend of Zelda: Spirit Tracks</i>	<i>HeartGold and SoulSilver</i>

2010				<i>Black and White</i>
2011				
2012				<i>Black 2 and White 2</i>
2013			<i>The Legend of Zelda: A Link Between Worlds</i>	<i>X and Y</i>
2014				<i>Omega Ruby and Alpha Sapphire</i>
2015			<i>The Legend of Zelda: Triforce Heros</i>	
2016				<i>Sun and Moon</i>
2017			<i>The Legend of Zelda: Breath of the Wild</i>	<i>Ultra Sun and Ultra Moon</i>
2018		<i>Katamari Damacy Reroll</i>		<i>Let's Go, Pikachu! And Let's Go, Eevee!</i>
2019				<i>Sword and Shield</i>
2020	<i>Animal Crossing New Horizons (Released)</i>			
2021	<i>Animal Crossing New Horizons (Finished)</i>			<i>Brilliant Diamond and Shining Pearl</i>
2022				<i>Legends: Arceus</i>
				<i>Scarlet and Violet</i>
2023			<i>The Legend of Zelda: Tears of the Kingdom</i>	

Game Introductions

This section will provide introductions to the selected games along with additional information and analysis to the selected case studies. A recommended reading order is to skip the Game Introductions and read it after reading Part 4.

The Pokémon Franchise

Introduction

Pokémon Leaf Green and *Pokémon Violet* are from the what is considered to be the main series (1996-2022). These games, more or less, have the same story outline and game mechanics, and the same publisher (Game Freak) and developers (Nintendo, the Pokémon Company).

Pokémon Go! (2016-) is not part of the main series, because it is in a different genre (augmented reality or location-based game vs the main series being role playing games), made for mobile devices (rather than handheld game consoles) and published by a different company (Niantic).

Pokémon Go, however, is heavily influenced by The Pokémon Company (a major shareholder and owner of the Pokémon franchise). This dissertation considers the similarities of *Pokémon Go* with the main series games and considers it to have a place in the study of the development of the main series games.

This section will (1) include background information for the main series and (2) introduce and discuss the main series's menu system and its narrative as a whole and as identifiable periods. This section will lastly (3) introduce a brief background of *Pokémon Go*, (4) discuss the relationship between *Pokémon Go*'s development with the *Pokémon* franchise's parent company, The Pokémon Company (TPC), and compare and contrast *Pokémon Go* with the main series games, and (6) address the selected games with context to the main series and as part of the *Pokémon Franchise*.

Main Series Introduction

The main series games in the *Pokémon* franchise are role playing games set in the world of Pokémon. Pokémon and humans live together in harmony. Pokémon can be pets, friends, or trained and used for battles. The world of Pokémon has towns and gym leaders, and forests, caves, and routes filled with wild Pokémon and trainers to battle. It is an adventure in which the player learns to care for and train their Pokémon.

This series can be considered a game of adventure and growing up. It is a game that encourages friendship, hard work, and not giving up. As the series developed, features have come and gone while continuously developing the main game mechanics. The stories have either adapted to the social era in which they were released or grown with the player. The menu systems have also adapted to the changes in game console.

The game-world of Pokémon currently has nine regions. In order of appearance, these are: Kanto, Jhoto, Hoenn, Sinnoh/ Hisui, Unova, Kalos, Alola, Galar, and Paldea. Each region has its own named Pokédex and together they make up the NationalDex. Games are grouped in generations that follow the different regions.

Table 7 Pokémon Main Series Generations, Regions, and Regional Pokédex

Generation	Region	Regional Pokédex
1	Kanto	Kanto Pokédex
2	Jhoto	Jhoto Pokédex
3	Hoenn	Hoenn Pokédex
4	Sinnoh/ Hisui	Sinnoh/ Hisui Pokédex
5	Unova	Unova Pokédex
6	Kalos	Kalos Pokédex
7	Alola	Alola Pokédex
8	Galar	Galar Pokédex
9	Paldea	Paldea Pokédex

Initial games, main games, are created in pairs (with the exception being *Legends: Arceus* (2022)) that contain version differences. Most pairs currently have a third edition, sometimes known as an upper version. The first three generations had a third game to the main two games. This third edition game usually incorporates elements from the main two games or adds something new to make it feel like a “fuller” version. For example, *Pokémon Yellow Version* (1998) allowed the player to obtain a Pikachu as the starter Pokémon and obtain all three starter Pokémon within the game’s story. *Sun* and *Moon*’s third edition was released as a pair that retained version differences (that is unlike previous third editions) and were titled *Ultra Sun* and *Ultra Moon*. These were set in an alternate universe.

The idea of the third game has seemingly been replaced by the addition of DLCs. The first four generations have had their two main games re-made and enhanced with better graphics and minor updates such as dialogue changes. The fifth and seventh generations received sequels. *Legends: Arcus* (2022) is an odd-one-out because it is a prequel and it is a standalone game.

The games can be organized and/or sorted in groups according to system, generation, region, remakes, and from a chronological story progression. The following chart is a summary of main series titles. It points out what system it was created for, which generation of game it is, if it is a third edition game, remake, sequel or prequel to the story. As the series progresses, new stories are created while remakes are given updates to areas including the user interface, visual appeal, and menu system. The story mostly remains the same.

Table 8 Pokémon Main Series Game Summary¹⁷

System	Generation	Main Games	Third Title(s)	Remakes
Gameboy	1st	Red, Blue 1996	Yellow 1998	
Gameboy Color	2nd	Gold, Silver 1999	Crystal 2000	
Gameboy Advance	3rd	Ruby, Sapphire 2002	Emerald 2004	Fire Red, Leaf Green 2004
Nintendo DS	4th	Diamond, Pearl 2006	Platinum 2008	Heart Gold, Soul Silver 2009
	5th	Black, White 2010	Black 2, White 2 2012	
Nintendo 3DS	6th	X, Y 2013		Omega Ruby, Alpha Sapphire 2014
	7th	Sun, Moon 2016	Ultra Sun, Ultra Moon 2017	
Nintendo Switch	7th			Let's Go, Pikachu!, Let's Go, Eevee! 2018
	8th	Sword, Shield 2019		Brilliant Diamond, Shining Pearl 2021
	8th	Legends, Arceus 2022		
	9th	Scarlet, Violet 2022		

¹⁷ Table 7 can be viewed with a chronological order, starting at the top and reading left to right, top to bottom. Gaps are to place the games within their respective generation, system, and designation as either a main title, a third title(s) or a remake. An emphasis on the progression of games by system can be read by paying attention to the horizontal lines. The remakes can be emphasized or separated from the main titles and third title(s) with the vertical line. Original and remake games are highlighted in pairs.

General Story and Gameplay

The player begins the story as having arrived in a new town. The local professor asks the player to complete the Pokédex and become a Pokémon trainer. There is always a rival or friend NPC that helps the player navigate the stories and game-play mechanics. The main characters are generally (1) the player, (2) the player's mother, (3) regional professor, and (4) rival(s) and friends. In the earlier games there was only one rival, but as the games change, the single rival may have been joined by a friend or divided into multiple rivals and friends. The idea of the rival is to have another Pokémon trainer as NPC who is also going on a journey and helps the player to progress in the game.

The main story objective of the main series Pokémon games are to (1) Complete the Pokédex by catching all available Pokémon, (2) Become the Champion by battling and defeating the region's gym leaders, elite four, and your rival, and (3) Battle and defeat the opposing gang.

Gameplay mechanics of these games generally centers around (1) collecting Pokémon, by catching, trading, and making and hatching Pokémon eggs, (2) training and battling Pokémon, and (3) taking care of Pokémon. How these three mechanics are completed have changed over time as the focus of the games change. There have consistently been additional, optional, features, such as Pokémon contests.

Menu Systems and Divisions

The menu systems of Pokémon have typically all centered around a menu button menu and various game world objects. There has typically always been some sort of extra gameplay that is not integral to the main idea of the game. The menu system has slowly developed across the series, seemingly with respect to the console's development, that there are no clear menu system formats. This dissertation will divide the games into eras, according to the general idea of the menu systems. These divisions are speculative based on playing the games and not from any

official statements by any of the developers. These divisions take into consideration changes in consoles (hardware functions) and the presence of remakes. The games have shown to balance between remakes staying true to their story and availability of features and further advancement in menu system. Changes have been seen to be gradual. The divisions are placed in key points that indicate when the main idea of the menu system has changed.

Table 9 Pokémon Games By Generation and Menu System Era Division

Generation	Game	Division
1 st	<i>Red, Blue, Yellow</i>	First Era
2 nd	<i>Gold, Silver, Crystal</i>	
3 rd	<i>Ruby, Sapphire, Emerald</i>	
3 rd	<i>Fire Red, Leaf Green</i>	
4 th	<i>Diamond, Pearl</i>	
4 th	<i>Heart Gold, Soul Silver</i>	
5 th	<i>Black, White</i>	Second Era
5 th	<i>Black 2, White 2</i>	
6 th	<i>X/Y</i>	
6 th	<i>Omega Ruby/ Alpha Sapphire</i>	
7 th	<i>Sun/ Moon</i>	Third Era
7 th	<i>Ultra Sun/ Ultra Moon</i>	
	<i>Go!</i>	N/A
7 th	<i>Let's Go Pikachu/ Eevee</i>	Third Era
8 th	<i>Sword/ Shield</i>	
8 th	<i>Brilliant Diamond/ Shining Pearl</i>	
8 th	<i>Legends: Arceus</i>	Fourth Era
9 th	<i>Scarlet, Violet</i>	

First Era

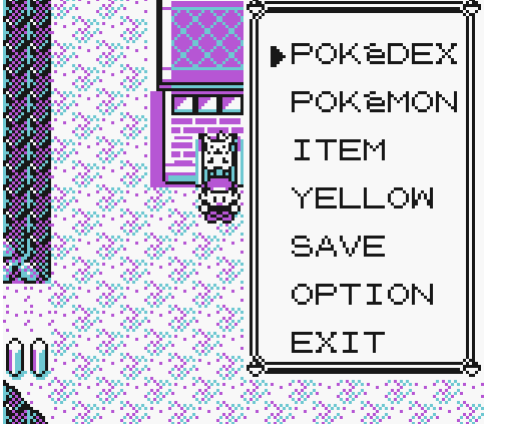
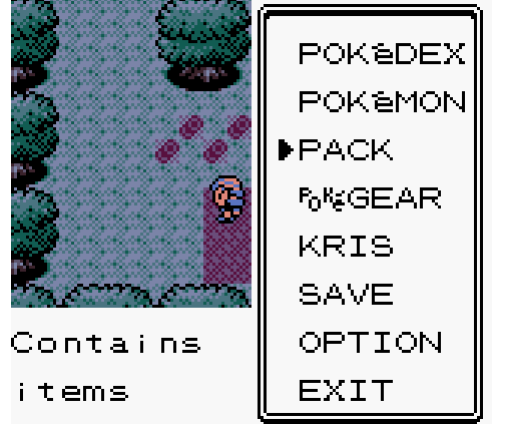
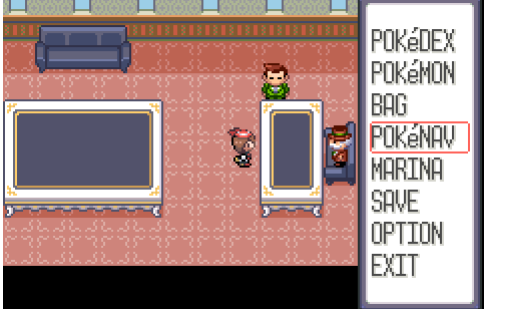
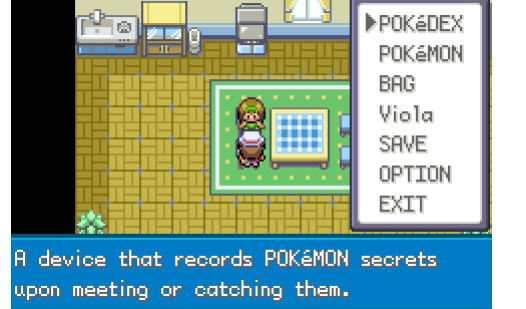

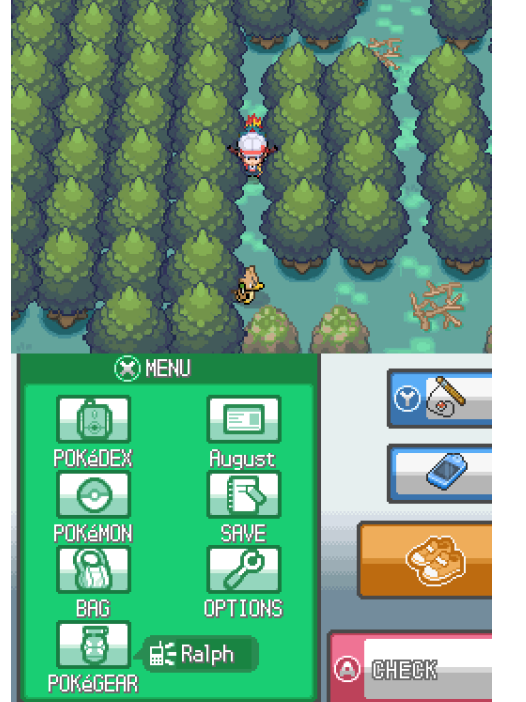
The first era is more easily identified than the second and third eras. The defining feature of the first period is that the in-game menus are centered around the main menu. There is generally one quick-access button and a key item that either appears in the main menu or in the touch screen. The later games appear to use the touch screen as an extension of the main menu. The menu systems of first era of games centers around a single menu with all options as the same level of importance. The display of the key item has varied, but its function has remained the same. This main menu contains all of the most important options that the player can access from anywhere, anytime. The in-game objects's menus add features and affect the time and value of making decisions. The player can focus on interacting with the game world rather than playing in the menus. Visually, this main menu is overlay, over the game-world.¹⁸

Table 10 First Era Pokémon Menu Options

Device	Gameboy Color	Gameboy Color	Gameboy Advance	Gameboy Advance	Nintendo DS	Nintendo DS	
Game Titles	Red Blue Yellow	Gold Silver Crystal	Ruby, Sapphire, Emerald	Fire Red Leaf Green	Diamond Pearl Platinum	Heart Gold Soul Silver	
Generation	1 st	2 nd	3 rd	3 rd	4 th	4 th	
Menu Options	Pokédex						
	Pokémon						
	Items[2]						
		Key Item				[Key Item on touch screen]	
	Player info						
	Save						
	Option						
	Exit						

¹⁸ With the exception of *Heart Gold*, *Soul Silver*. This is seen as a transition game as the menu is placed on the touch screen. Other than this, it is fundamentally part of the first era.

Table 11 First era Pokémon Main Menu Screenshots

Title	Yellow	Crystal
Screen Capture		
Title	Sapphire	Leaf Green
Console: Game Boy Advance		
Title	Pearl (needs fixing)	Heart Gold
Screen Capture		

Second era

The second era begins with *Black, White*. The defining feature is its focus on the main menu and the touch screen as additional features or game mechanics. This second era develops the touch screen as its own features, additional to the main menu.

The experience of interacting with the game, including muscle memory from physically using the console, and grid style of the first era is gone. *Black, White* begins the game-world's departure from a grid structure and top-down view, and additional social features in the game's stories. The most notable change is in the menu system is the order of main menu options—the Pokédex is now second and the Pokémon party option is now first. Visually, this menu is now a two-column list that appears in the bottom screen that extends into the game world screen.¹⁹

Table 12 Second Era Pokémon Menus

Device	Nintendo DS		Nintendo 3DS	
Game Titles	Black White	Black 2 White 2	X Y	Omega Ruby Omega Sapphire
Generation	5 th	5 th	6 th	6 th
Main Menu Options	Pokédex			
	Pokémon			
	Items			
	Player Info			
	Save			
	Option			
	Exit			
Touch Screen Menus	X-Transceiver		I Amie	Play Nav ²⁰
			Super Training	
			Player Search System (PSS)	
				Area Nav
				Dex Nav
			Buzz Nav	

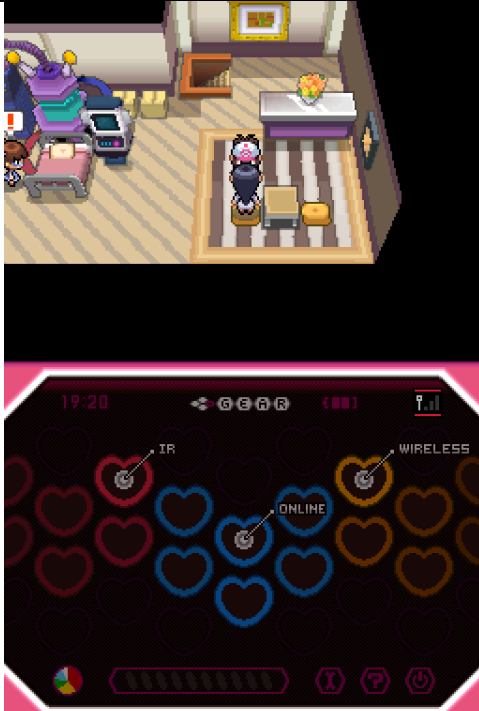


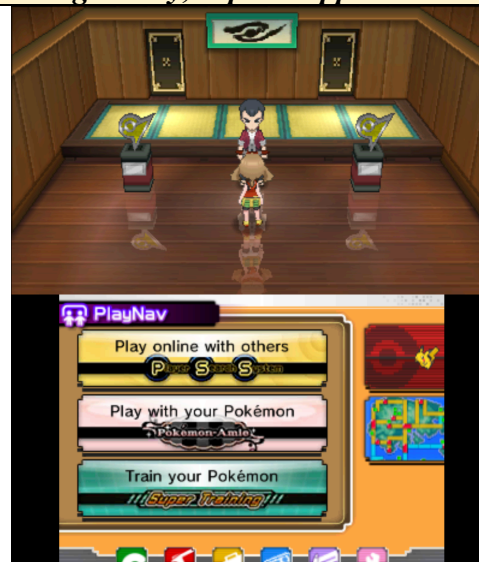
¹⁹ The touch screen can be considered to be a dedicated menu screen and the top screen focused on the game world.

²⁰ Play Nav contains the same three touch screen menus found in *X, Y*

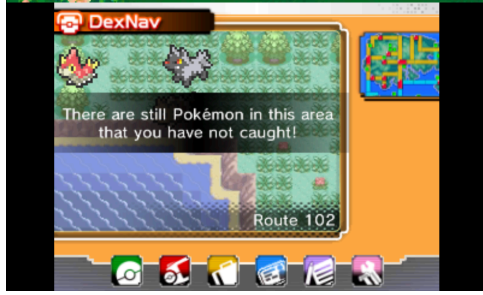
Table 13 Second Era Pokémon Main Menus by Game

Title	<i>Black</i>	<i>Black 2</i>
Screen Capture		
Title	<i>X and Y</i>	<i>Omega Ruby and Alpha Sapphire</i>
Screen Capture		

Table 14 Second Era Pokémon Touch Screen Menus

<p><i>Title</i></p> <p><i>Screen Capture (top and bottom screens)</i></p>	<p>Black</p> 	<p>Black 2</p> 
<p><i>Title</i></p> <p><i>Screen Capture (top and bottom screens)</i></p>	<p>X, Y</p> 	<p>Omega Ruby, Alpha Sapphire</p> 

Screen
Capture
(other
bottom
screens)



Third Era

The third era is possibly a continuation of the second in the sense that it is fundamentally the same. The menu system focuses around the main menu and additional applications, except that the main menu and additional applications are all in the main menu. The difference is the importance of the map. This could be foreshadowing the fourth era's relationship with the map and a transition to a single screen. *Omega Ruby* and *Alpha Sapphire* presents a gradual change before the third era starts, by adding a map to the touch screen's menus.

Table 15 Third Era Pokémon Menu System

Device	Nintendo 3DS		Nintendo Switch		
<i>Game Titles</i>	<i>Sun</i> <i>Moon</i>	<i>Ultra Sun</i> <i>Ultra-Moon</i>	<i>Let's go Pikachu</i> <i>Let's Go Eevee</i>	<i>Sword</i> <i>Shield</i>	<i>Brilliant Diamond</i> <i>Shining Pearl</i>
<i>Generation</i>	7 th	7 th	7 th	8 th	8 th
<i>Menu Options</i>	Pokémon		Pokédex	Pokedex	Pokedex
	Pokédex		Bag	Pokemon	Pokemon
	Items		Pokémon	Items	Items
	Save		Communicate	Player Info	
	Quick Link		Save	Save	Trainer Card
	Festival Plaza			Town Map	Town Map
	Player Info			Pokémon Camp	Ball Capsules
	Poké Pelago	Options		Mystery Gift	Options
	Pokémon Refresh			VS	Town Map
	QR Scanner			Options	Save
	Battle Video				
	Options	Poké Pelago			
<i>Touch Screen Menu</i>	Rotom Pokédex	Rotom Pokédex			Poketch ²¹

²¹ This was originally in a touch screen menu, however since the Nintendo Switch does not have a touch screen, it is now a picture in picture screen.




Table 16 Third Era Pokémon Main Menus by Game (Nintendo 3DS)

Title	<i>Sun, Moon</i>	<i>Ultra Sun, Ultra Moon</i>
Screen Capture (top and bottom screens)		
Screen Capture (second page of menu, bottom screen)		

Table 17 Third Era Pokémon Main Menus by Game (Nintendo Switch)

Title	<i>Let's go Pikachu and Let's go Eevee</i>	<i>Sword and Shield</i>
Screen Capture		
Title	Brilliant Diamond and Brilliant Pearl	
Screen Capture		

Table 18 Third Era Pokémon Second Screen (or Picture in Picture) by Game

Title	<i>Sun and Moon</i>	<i>Ultra Sun and Ultra Moon</i>
Screen Capture (top and bottom screens)		
Title	<i>Brilliant Diamond, Shining Pearl</i>	
Screen Capture (Picture-in-picture)	 <p data-bbox="906 1451 1386 1556">(Note: this is a small selection of Pokétech screens that are available in-game)</p>	

Fourth Era

It appears as if the fourth area begins with *Legends: Arceus*. The menu systems here focus on dividing up the main menu across multiple buttons, and adding additional action buttons. By changing the hierarchy of the menu options, the entire narrative of the menu system has changed. The map, the Pokédex, the list of Pokémon, and an “other,” or all of the remaining options that were found in the original main menu, are all on the same hierarchy. Each option is not equal in the sense that how these are grouped and routed to move between menus are not simple paths, but multiple paths that can vary depending on the player’s focus on gameplay.

The change in console to the Switch changed the feeling of operation to that of stationary gaming consoles. There is no longer the simple console with few buttons. There are also on-screen infographics and pop-ups.

Table 19 Fourth Era Pokémon Menu System by game

<i>Game Titles</i>	<i>Legends Arceus</i>	<i>Scarlet Violet</i>
<i>Generation</i>	8 th	9 th
<i>Individual Menus</i>	Pokémon	Pokémon
	Pokédex	Pokédex
	Map	Map
<i>Main Menu</i>	Items (Satchel + Pokémon)	Items
	Save	Boxes
	Communications	Picnic
	Help	Poke Portal
		Options
	Save	

Table 20 Fourth Era Pokémon Main Menu by Game

Title	Legends: Arceus	Scarlet and Violet
Screen Capture		

Menu System Divisions and Narrative

In regards to the narratives of the menu systems, the first era is simple. The first era is simple and straightforward, just like the game's story. There is not much interference from the NPCs and the story that gets in the way of gameplay. The player can focus on playing and making decisions. As the menu system becomes less attached to a grid and lists of options, the graphics, narrative, and scripts have become less straightforward and more embellished. This is evident in the inclusion of cut scenes and visual presentation of menus.

The second era, adds more features, and while it adds complexity, it adds more depth to the story. The NPCs have more depth to their character and the story has more "fluff" to it. It is not so straightforward and is enhanced for more details. The third era tries to break the simple lists and makes the list more complicated, but is still essentially of the same ideas as the second era.

The fourth era adds further gameplay and customization. This is paralleled in the menu system in the sense that the menu system has a different hierarchy. This new hierarchy gives the player more freedom to choose which options are more important rather than having all of the options together, in the same level of importance. The dialogue has become more colloquial rather than simple and straightforward.

The simplicity of the game's narrative and the menu system's narrative in the first era leaves room for the player to use his or her imagination to fill in gaps. AS the game began to embellish the story's narrative, the menu system followed. There is less room for imagination as the menu system becomes detailed.

Pokémon Go Introduction and Menu System

Pokémon Go is an augmented reality game created for mobile devices and uses Google Maps for information that it places a layer of virtual reality over. This game makes it appear as if Pokémon exist in the real world. It was released in 2016, but is continuously adding new features. *Pokémon Go* is created by Niantic, a different company than the main series games. Instead of handheld gaming console, it is for a mobile device. Accessibility of mobile devices is different than handheld gaming as is the audience who is likely to play the game. This is relevant to the game's perception.

The platform of Pokémon go is still a form of handheld gaming even if it requires the internet and is used on a mobile device as part of mobile gaming. It contains basic game mechanics of the Pokémon series and basic elements of the main story: catching, trading, and hatching Pokémon to fill the Pokédex, taking care of Pokémon, battling Pokémon, defeating gyms, and defeating the opposing gang.

The menu system is similar to the menu system of *Pokémon Violet* in the sense that it appears to be based off of the original main menu design, except that it was divided up and replaced in different hierarchies. Due to the console, the menu system must adapt. There are other game elements that are present between this game and main series games that are not mentioned.

Pokémon Go's Relationship with the Pokémon Company and the Pokémon Main Series Games

The Pokémon Company is a major shareholder in Niantic. Niantic must also gain approval from TPC before implementing any changes. (*Pokemon Go and Beyond!*) It is without doubt that there is a relationship between this mobile game and the main series games. Because of this relationship, it is possible to place this within the timeline of the evolution of the series and its menu system.

Pokémon Games Selected

Leaf Green was selected as a representation of the first era of Pokémon games, because it is the latest of games that were for a single screen. It is able to capture the essence of the first era menu system, but is before additions were made to the menu system to introduce the inclusion of a second screen when the console shifted to the Nintendo DS.

The second era, is not included for potential redundancy. The menu system here mainly follows the first era in its simplicity, but includes menu and hard-ware based menus and game mechanics that are utilized from the menu button's menu and from within the touch screen. The switch games that proceed it, learned to attach the extra items to hardware buttons, however, split up the menu button's options over buttons. It allows multi-narratives in the sequences of menu selections, just as the game's main stories can be completed in any order. In a way, the third generation is continuing to expand dividing up the menus for information and actions so that the player can spend more game-time on battling.

Pokémon Go can be considered to have continued a few game mechanics that were found in *Sun, Moon* and *Ultra Sun, Ultra Moon*. One example is the idea of, essentially, "powering up" a Pokémon during battle so that that Pokémon has a temporary new form and more powerful attacks (as well as additional animations that extend play time during battle). Because this game

is on a mobile device, it is able to introduce game mechanics that cannot be done on the previous handheld devices (at the time of release). The game mechanic of catching Pokémon has been developed to include more interactivity rather than button pressing and leaving it up to chance. Some basic ideas of this, that is found in *Pokémon Go*, are found in Nintendo Switch games that were released after *Pokémon Go*'s initial release. Some other concepts that are found in succeeding games for Nintendo Switch, including mechanics from multiplayer battles and additional in-game battle opportunities appear to be improvements and modification from those found in *Pokémon Go*.

Violet is chosen for a representation of the third era because of a new focus on multiplayer and the new menu button's set-up. This game continues to build off designs from the existing Nintendo 3DS and Nintendo Switch games. It has departed far enough from the first era games, but still contains enough direct similarities with these second era and third era games. Gameplay has changed since the first era, and it appears that the focus is now on an open world concept, rather than the original top-down camera view and action that follows a grid. In this game, the player may send the first Pokémon in the Pokémon party to pick up items, and battle wild Pokémon, without further input from the player. There is an open world concept, with three storylines that may be completed in any order.

The Legend of Zelda Series

The Legend of Zelda series appears to have been made upon the idea of sequels, prequels, and alternate universes. The story and gameplay has some freedom to change as it wants to. For selecting games from *The Legend of Zelda* series, the initial criteria is that the game must have been originally released for a handheld device. The menu systems of the games in this list were then analyzed and placed into groups based on the similarities of the menu system.

The selections from the *Zelda* series are the titles that were originally released for a handheld console. The perspective to approaching these games will primarily come from a handheld-game only timeline. This represents an example of a game that has been originally released for handheld and stationary consoles. This section



*Figure 1 Sony
Playstation Controller*

will provide background information for the games and a brief comparison of the menu systems if it were to be categorized.

Zelda Introduction

The first game, titled *The Legend of Zelda*, was released in 1986 for the Famicom Disk System. A second title, *The Adventure of Link*, was released in 1987 for the Famicom Disk System and the Nintendo Entertainment System (NES). Until 1989, the series, that started as 2D games designed for the Famicom Disk System later included the Nintendo Entertainment System and the Super Nintendo Entertainment System. Games featured top-down and side-scrolling camera views. From 1989 until 2005, the games's graphics switched to three dimensional and solidified a top-down view. Later games focused on a multiplayer gameplay mechanic. Games during this period were created for the Nintendo 64, GameCube, Gameboy, and Gameboy Color.

Games created during 2006-2016 were released for the newer game consoles, the Nintendo DS and Nintendo Wii. The new technologies from these consoles allowed for and

began a new focus on motion controls and an open world concept. From 2017, with the newly released Nintendo Switch, games have continued an emphasis on motion control and an open world concept. The Zelda series started as two-dimensional games with either side-scrolling or top-down views. New releases followed the development of gaming consoles to provide and update the emphasis of the experience and possibilities of gameplay. The most recent games focus on an immersive view and interaction (through motion controls) inside of an open world.

Although the series started off being made for a stationary game console, the focus appears to be shifting to handheld gaming. When considering the availability of consoles that Nintendo has made,²² as time passed, Nintendo seems to have combined the complexity of buttons and controls and the availability and ease of play with portable gaming. This series, then, appears to have a relationship with where the latest Nintendo technology is headed. These games take advantage of this to provide the latest gaming experience.

Of the main series:

- *The Wind Waker*, *Twilight Princess*, and *Four Swords Adventure* are the only games unavailable on any handheld system.
- *Link's Awakening* is the only one remade for Switch, was remade from GBC
- *Ocarina of Time* is the first 3D Zelda game
- *The Minish Cap* is the only game available on Switch from the library of another handheld device; the other games that were also made for handheld devices are available on the Switch from libraries of stationary consoles (SNES, NES, N64)

²² With the exception of Famicom, Zelda games have always been released for Nintendo gaming consoles.

Handheld game releases

Table 21 “The Legend of Zelda” Table of Games Released for Handheld Devices in Chronological Order.

Year	Title	Original release platform
1993	<i>The Legend of Zelda: Link’s Awakening</i>	Gameboy
2001	<i>The Legend of Zelda: Oracle of Ages</i>	Gameboy Color
2001	<i>The Legend of Zelda: Oracle of Seasons</i>	Gameboy Color
2002	<i>The Legend of Zelda: A Link to the Past</i> ²³ & <i>Four Swords</i>	Gameboy Advanced
2004	<i>The Legend of Zelda: The Minish Cap</i>	Gameboy Advanced
2007	<i>The Legend of Zelda: The Phantom Hourglass</i>	DS
2009	<i>The Legend of Zelda: Spirit Tracks</i>	DS
2013	<i>The Legend of Zelda: A Link Between Worlds</i>	3DS
2015	<i>The Legend of Zelda: Triforce Heros</i>	3DS
2017	<i>The Legend of Zelda: Breath of the Wild</i>	Switch
2013	<i>The Legend of Zelda: Tears of the Kingdom</i>	Switch

Game releases by original platforms

Table 22 “The Legend of Zelda” Games by Year and Platform

Year	Title	Original release platform	Notes
1986	<i>The Legend of Zelda</i>	Famicom Disk System and Nintendo Entertainment System ²⁴	
1987	<i>Zelda II: The Adventure of Link</i>	Famicom Disk System, Nintendo Entertainment System ²⁵	Direct Sequel to previous
1991	<i>The Legend of Zelda: A Link to the Past</i>	Super Nintendo Entertainment System	
1993	<i>The Legend of Zelda: Link’s Awakening</i>	Gameboy	
1998	<i>The Legend of Zelda: Ocarina of Time</i>	Nintendo 64	
2000	<i>The Legend of Zelda: Majora’s Mask</i>	Nintendo 64	Story takes place after <i>Ocarina of Time</i>
2001	<i>The Legend of Zelda: Oracle of Ages</i>	Gameboy Color	
2001	<i>The Legend of Zelda: Oracle of Seasons</i>	Gameboy Color	
2002	<i>The Legend of Zelda: A Link to the Past</i> ²⁶ & <i>Four Swords</i>	Gameboy Advanced	
2002	<i>The Legend of Zelda: The Wind Waker</i>	GameCube	
2004	<i>The Legend of Zelda: Four Swords Adventures</i>	GameCube	
2004	<i>The Legend of Zelda: The Minish Cap</i>	Gameboy Advanced	
2006	<i>The Legend of Zelda: Twilight Princess</i>	GameCube and Wii	

²³ These are two titles packaged in one, *The Legend of Zelda: A Link to the Past* was transferred to the Gameboy Advanced.

²⁴ For release outside of Japan.

²⁵ For release outside of Japan.

²⁶ These are two titles packaged in one, *The Legend of Zelda: A Link to the Past* was transferred to the Gameboy Advanced.

2007	<i>The Legend of Zelda: The Phantom Hourglass</i>	DS	
2009	<i>The Legend of Zelda: Spirit Tracks</i>	DS	
2011	<i>The Legend of Zelda: Skyward Sword</i>	Wii	
2013	<i>The Legend of Zelda: A Link Between Worlds</i>	3DS	
2015	<i>The Legend of Zelda: Triforce Heros</i>	3DS	
2017	<i>The Legend of Zelda: Breath of the Wild</i>	Switch	
2023	<i>The Legend of Zelda: Tears of the Kingdom</i>	Switch	

Titles Originally released for handheld consoles and their distinctions

Table 23 “The Legend of Zelda” Games Released for Handheld Devices with Design Distinctions

Year	Title	Original release platform	Menu System Distinction
1993	<i>The Legend of Zelda: Link’s Awakening</i>	Gameboy	Menu toolbar overlays the game-world and pause menu expands the toolbar
2001	<i>The Legend of Zelda: Oracle of Ages</i>	Gameboy Color	
2001	<i>The Legend of Zelda: Oracle of Seasons</i>	Gameboy Color	
2002	<i>The Legend of Zelda: A Link to the Past²⁷ & Four Swords</i>	Gameboy Advanced	
2004	<i>The Legend of Zelda: The Minish Cap</i>	Gameboy Advanced	
2007	<i>The Legend of Zelda: The Phantom Hourglass</i>	DS	Touch screen to interact with the world
2009	<i>The Legend of Zelda: Spirit Tracks</i>	DS	
2013	<i>The Legend of Zelda: A Link Between Worlds</i>	3DS	Multiplayer
2015	<i>The Legend of Zelda: Triforce Heros</i>	3DS	
2017	<i>The Legend of Zelda: Breath of the Wild</i>	Switch	Open-world focus
2023	<i>The Legend of Zelda: Tears of the Kingdom</i>	Switch	

²⁷ These are two titles packaged in one, *The Legend of Zelda: A Link to the Past* was transferred to the Gameboy Advanced.

Zelda's Menu System

There are primarily two types of menu systems across the handheld Zelda games. The first is found in games released for the Gameboy, and Nintendo DS and 3DS. There is one menu²⁸ and limited buttons for action. Any modifications for the actions are found inside of the menu. During the games on the Gameboy, etc. the menus are focused to assist the player interact with the environment/ game world. It is within the game world that the player finds the information needed to play the game. The on-screen menu is referred to as the main menu, while the second screen is referred to as the sub-menu or the pause menu. These games follow a menu system of having an overlay with information and an additional menu accessible by a button click.

The second type of menu is primarily found in games created for stationary consoles and the games for Nintendo Switch. These consoles all have controllers with multiple buttons. It takes the focus of the first type, but adds quick-access infographics and menus to modify the available actions that the player has with the world. This menu system is simultaneously a guidebook, reference, settings, and the toolbox. The additional actions include the ability to view smaller, on-screen menus, such as a list of weapons and quickly changing it while in the middle of the battle. This reduces the need for the pause in space when the full-screen menu comes up.

Link's Awakening, *Oracle of Ages*, and *Oracle of Seasons* appear to have solidified the menu systems that we see from the earlier games that were released for stationary consoles. *Oracle of Ages/ Seasons* include a few sideways scrolling features that make an ode to the original three games for stationary consoles. *Four Swords* and *The Minish Cap*, feel like transitional games that started to take the system systems a bit further with the inclusion of

²⁸ This considers the on-screen menu bar and the menu button menu to be one button.

multiplayer focus. *The Phantom Hourglass* and *Spirit Tracks* take advantage of the Nintendo DS's touch screen to provide a new immersive and interactive experience. *A Link Between Worlds*

Table 24 "The Legend of Zelda" Handheld Game Summary

Year	Title	Original release platform	Distinction
1993	<i>The Legend of Zelda: Link's Awakening</i>	Gameboy	Solidified the menu systems that we see in the first three games of the series.
2001	<i>The Legend of Zelda: Oracle of Ages</i>	Gameboy Color	
2001	<i>The Legend of Zelda: Oracle of Seasons</i>	Gameboy Color	
2002	<i>The Legend of Zelda: A Link to the Past</i> ²⁹ & <i>Four Swords</i>	Gameboy Advanced	<i>Four Swords</i> begins a visual change and slight changes as it introduces a focus on multiplayer. <i>The Minish Cap</i> continues with the updated graphics and slight changes to the menu system
2004	<i>The Legend of Zelda: The Minish Cap</i>	Gameboy Advanced	
2007	<i>The Legend of Zelda: The Phantom Hourglass</i>	DS	Deviation in interactivity to be similar to the Wii games with the touch screen to interact with the world
2009	<i>The Legend of Zelda: Spirit Tracks</i>	DS	
2013	<i>The Legend of Zelda: A Link Between Worlds</i>	3DS	Dropped the idea of using the touch screen for interactivity and uses the touch screen for maps and menus; more or less the same main ideas from previous 2 games
2015	<i>The Legend of Zelda: Triforce Heros</i>	3DS	
2017	<i>The Legend of Zelda: Breath of the Wild</i>	Switch	Open-world focus; feels a lot like the games for the stationary consoles, but brought to handheld gaming
2023	<i>The Legend of Zelda: Tears of the Kingdom</i>	Switch	

²⁹ These are two titles packaged in one, *The Legend of Zelda: A Link to the Past* was transferred to the Gameboy Advanced.

The menu systems found in the games created for a handheld device can be divided into two types. The first is found in the games created for Gameboy and Nintendo DS and the second is found in the games created for the Nintendo Switch. The first focuses around the top menu bar and the pull-down menu. The contents of the pull-down menu are not fully customizable and can represent the player's progress. The second, follows in the first's footsteps, however there is an emphasis on additional on-screen information, such as the map, and some menus are much more customizable. The rigidity of the first system parallels the rigidity of gameplay while the fluidity of the second system parallels the open world concept, where the player has more freedom to make decisions and make mistakes (such as the new ability of falling off cliffs and dying).

Zelda Games Selected

Oracle of Ages is selected to represent the first system. *The Phantom Hourglass* presents an example of the first system being used with touch-based action. *Breath of the Wild* presents an example of the second system.

Katamari Damacy Reroll

Katamari Damacy Reroll (2018) is a third-person puzzle-action game, ported and updated from *Katamari Damacy* (2004). *Katamari* (2004) Was originally released for Playstation 2. The controller for the Playstation 2 is similar to the Switch's controls. This game represents an example that was originally created for a stationary console that was ported to a handheld gaming device. It is also an example of a game with an in-game menu-world.

Katamari Damacy Reroll is reminiscent of arcade games in its simplicity. The game consists of two main characters and one task to roll up objects. The requirements for rolling the objects vary, such as roll as many objects as possible in a given time, roll as close to a specific size, do not roll up any of a specified object or roll up only a specified object. There is a corresponding story told through cut-scenes as the player completes the levels.

There is a multiplayer option available for a local multiplayer game-mode. It requires an additional controller. This mode adds the Prince's cousins as possible playable characters.

Easy to control, fun to play!

Play is controlled with the analog sticks only. No buttons to press. No combos to cause distress. Featuring ball-rolling and object-collecting gameplay mechanics of mesmerizing

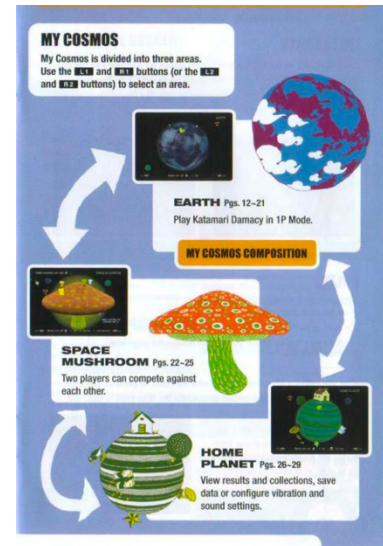


Figure 2 The Three Areas of the Cosmos: Earth, Space Mushroom, and Home Planet. (Namco, 2012)



Figure 3 Excerpt Instructions for How to Roll the Katamari Ball (Namco, 2012)

fluidity, reduced to Pac-Man simplicity, through pure absurdity.

Unique features for the Nintendo Switch!

Players will be able to take Katamari Damacy REROLL on the go with their Nintendo Switch! Using the joy-cons, control the katamari using the gyro controls to turn and shake the joy-cons to perform the Prince Dash when in table-top mode. Players can also play on multiplayer mode with a friend by using the two Joy-cons on the Switch.

(“KATAMARI DAMACY REROLL”)

Animal Crossing New Horizons

Animal Crossing New Horizons (2020) is a social simulation game and the fifth major game in the *Animal Crossing* series. It been made for stationary and handheld devices. It represents an example of a game with an immersive game-world. The first game, *Animal Crossing* (2001) was made for the Nintendo 64 and GameCube consoles. The second game, *Animal Crossing Wild World* (2005) was made for Nintendo DS console. This is a departure from a stationary console and the first game for a handheld console. The third game, *Animal Crossing City Folk* (2008) returned to a stationary console as it was made for the Nintendo Wii. The fourth game, *Animal Crossing New Leaf* (2012) returned to a handheld console as it was related for the newer Nintendo 3DS.

Animal Crossing New Horizons (2020) had several updates between its release and its last major update in November 2021. During these updates, the player's game-play and menu experience likely varies, depending on when the player started the game. For example, if a player had already completed the story, a new game mechanic would be introduced after the story was completed. If the player had just begun at the time of the new game mechanic, that new game mechanic could be been introduced before the story was finished. There are two visitable islands and diving.

New Horizon's main story is that player's character moves to a deserted island with the overall goal of developing the island into a flourishing island-town with a five-star rating. The tasks to complete the main story of the game are tied to the basic game-mechanics. The tasks that can contribute to achieving a five-star rating include inviting more villagers to live on the island, build and update four island buildings: the player's home, Resident Services, Nook's Cranny, Abel Sister's Shop, and the Museum. The player must also pay attention to the appearance of the

island that includes statistics based on types and number of items placed on the island. This includes activities such as pulling weeds, picking up dropped items, and placing items. There are two in-game currencies and the player must also pay off any loans. There are multiple methods of completing the main story and can vary with the player's play-style. When the story is complete, there is an ending credits scene that is also available for re-viewing from certain in-game events.

There is a DLC that adds an additional island to visit through an in-game-building-object and interaction with NPCs. When the DLC is being played, it operates similarly to a game within a game or as another area of the game-world. There are currently four other similarly functioning areas in the game: Harv's Island, Mystery Islands accessed through the airport, Mystery Islands accessed through the island's dock, and other player islands. The DLC and these additional islands are not being included in this dissertation as this dissertation will focus on the player's island.

The story continues within basic gameplay mechanics. The gameplay itself is a story and can continue indefinitely. There are also many achievements based in the basic gameplay mechanics that the player can complete. In this game, there is always something that can be interacted with and always a decision to be made. Gameplay includes crafting mechanics, tools, and resource gathering, social interactions with NPCs, and customization. There are also multiplayer options in which the player may visit other players' islands or receive other players as visitors. Basic gameplay includes interacting with the environment and NPCs, with and without items and tools. There are some NPCs³⁰ that are always present on the island and some

³⁰ A list of NPCs will be included under in-game object menus.

that appear randomly and/or for specific events. The date and time are a limiting factor because in-game opportunities are determined by the time of day.

The game was not originally released with instructions. It was designed for the player to learn by interacting and playing the game, including reading the dialogue with NPCs, and not by reading instructions. This intended to encourage exploration and experimentation. By the latest update, however, the menu system now provides players, information about specific opportunities in game play. These menus can be considered tutorials for how to play the game and provide an additional narrative character.

How to Read the Case Studies

The recommendation, and method used in this dissertation, for studying the narratives of menu systems in case studies is to first, play the game with little knowledge about it. While playing the game, pay attention to the interactions and animations of the visual presentation of menus and their options. These visual provide an aesthetic experience. Think about the interpretation of the menus through playing the game. After looking at where menus are located, what they are used for, and why, look at these individually and together. While putting the pieces together, it is possible to create an index or summary of the menu system based on a style of game play. It is now possible to identify the menu system's narrative. After understanding the menu system's narratives, learn about the game and the developer's intentions for the game.

It is recommended to the reader, to wait until after the case studies are read, to pay attention to the citations and to read the Game Introductions section. For this reason, citations are included at the end, right before the bibliography and the game introductions are provided after the case studies. The case studies may be read in any order. The index at the beginning of the dissertation may provide a useful index of each game's menu system.

Each case study will begin with an introduction of the menu system, starting with the title screen and file selection screens. It will then introduce menus that are available through the hardware buttons, sticks, and screens (when available). This will mimic as if the game is being entered for the first time without too much prior knowledge. It introduces the basic information needed to understand the structure of the menu system. After hardware-based menus, menus from game-objects will be described. This list of game-object menus is not exhaustive; it is a selection of menus that are considered important to either playing the game or understanding

how the game is played. These game objects are found inside of the game world and can only be interacted with through interaction in the game world.

If introductory process and tutorial scenes are relevant, it will be mentioned. Otherwise, this dissertation skips the game's (sometime lengthy) process of introducing the menus. This dissertation will introduce the completed forms of the menus, after all options have been made available to the player. Each game's process of introducing its menu system to the player has a narrative and an effect on the overall menu system's perception. However, it is not a focus on this dissertation.

Images will be described within the text and act as an aid, making it is possible to only read the dissertation without looking at the images. It is strongly advised for the reader to examine the extra images in the Additional Images by Case Study section. The sequence of images and selected image provide an additional interpretation. It can only act as a substitute for playing the game in order to understand the menu system. Videogames cannot be quoted as easily as a book or a film. It is safer to provide an image in case there are possibilities of customization. These images cannot replicate the feeling and experience of actually playing the game.

After the introduction of what menus make up the menu system and their location, an analysis of the types and forms of menus as well as its relationship with gameplay will be discussed. The analysis will explain the narratives of the menu system through explanation of:

- (1) What hierarchies and lists of menus are present in the menu system are present. This is an outline of menus that exists within a player's comprehension of the game.
- (2) What goals and actions that this menu system promotes within gameplay and the game's story. This includes the relevance of time (and rhythm) in utilizing the menu and

parallels between how the menu system is interreacted with and how the game is played.

This also includes how the menu system affords to the player possibilities inside of the game world.

This is a generalization of what to expect from the analyses of each game. The analyses will highlight notable points for each game, rather than a standard format.

List of Case Studies and Their Abbreviations

As stated earlier, full game citations will be provided in the Game Citation List section, located before the bibliography. A game list is provided below, in the same order as in the index, with their abbreviation.

Table 25 Case Studies in Order of Presentation, with Abbreviations

Game	Abbreviation(s)
<i>Pokémon Leaf Green Version</i> (2004)	<i>Pokémon Leaf Green, Leaf Green</i> (2004)
<i>Pokémon Go!</i> (2016-)	<i>Go</i> (2016-)
<i>Pokémon Violet</i> (2022)	<i>Violet</i> (2022)
<i>The Legend of Zelda: Oracle of Ages</i> (2001)	<i>Zelda Oracle of Ages</i> (2001)
<i>The Legend of Zelda: Phantom Hourglass</i> (2007)	<i>Zelda Phantom Hourglass</i> (2007)
<i>The Legend of Zelda: Breath of the Wild</i> (2017)	<i>Zelda BotW</i> (2017)
<i>Animal Crossing New Horizons</i> (2020)	<i>AC New Horizons</i> (2020)
<i>Katamari Damacy Reroll</i> (2018)	<i>Katamari DR</i> (2018)

A second recommended reading order can follow these games in their chronological order. This can follow the development of console. This would be:

Table 26 Case Studies in Chronological Order

Game
<i>The Legend of Zelda: Oracle of Ages</i> (2001)
<i>Pokémon Leaf Green Version</i> (2004)
<i>The Legend of Zelda: Phantom Hourglass</i> (2007)
<i>Pokémon Go!</i> (2016-)
<i>The Legend of Zelda: Breath of the Wild</i> (2017)
<i>Katamari Damacy Reroll</i> (2018)
<i>Animal Crossing New Horizons</i> (2020)
<i>Pokémon Violet</i> (2022)

Identification Index

As mentioned in the “How to Read the Case Studies,” Menu systems will be listed and available for reference in the index. This format is outlined and explained as:

<p>[Game Title (Year)]</p> <p>Subtitle: Console</p>
<ul style="list-style-type: none"> • Title Screen and File Select (This is included to continue the mimicry of booting up a game, as well as the opportunities that it provides to the player) • In-Game Menus (these are the menus that are found after the game is booted up)

The in-game menus will be labeled, in parenthesis, with basic identifying terms that refers to what it is and where it is found. The follow is a list of identifications and a brief description.

Table 27 Menu Option Type Key

Term	Description
Button	Menu is opened from a button found in the game console.
Building	Menu is presented as a building. This building contains NPCs and, or game objects that provide options to the player.
Location	Locations are made up of some or all of buildings, NPCs, and Game Objects. As a whole, locations present a menu of options to the player.
Icon	An on-screen button.
Game-Object	An object that the player can interact with to access a menu of options.
Screen	This indicates that the menu is located on the screen.
Infographic	This indicates that the icon displays continuously updating information.
Narrative Menu	A blank screen that sometimes contains information.

Useful Terminology

Table 28 Useful Videogame Terminology

Term	Description
Full-screen window/ menu	This menu takes up the entire screen
NPC, Non-Playable Character	Characters in a game that the player cannot control.
Game-world	The area of the game in which play occurs.
Menu world	The world in which menus exist and is outside of the game-world.
In-game	This refers to the area of the game, after the game has booted-up.
Game-object	A technical term that refers to an entity that exists inside of a game
Player character, player's character	The character that the player controls
Game time	The clock that exists within the game world
Play time	The amount of time that the player has spent playing the game, or the amount of time that the game, as a program has run for
Pull-down menu	A menu that appears through a pull-down animation, from a particular point, usually an icon or tab.
Single Player	The game can be played by only a single player at any time, meaning, there is only one player character available.
Multiplayer	The game can be played by more than one player, each able to control a different player character.
Cut-Scene	A video montage in which the player has no control over a character.
In-game effects, game effects	Effects that happen inside of the the game
Save state	A player's progress can be saved, or paused, to be resumed at a later time.
Interact, Interact Button, Action Button	This is what performs or executes an action in a game.

Menu Routing

In the case of describing menu locations, it will be written similar to folder structures found in a computer operating system. Example: Option A that is found by scrolling in the A tab, under the Menu 4, will be written as: Menu 4> A tab> (scroll down to) Option A.

Pokémon Leaf Green (2004)

Console: Game Boy Advance

Title Screen and File Select

After turning on the console with the game cartridge inserted, an introductory sequence is played, and then the title screen is displayed with the instructions “Press Start.” After the player presses the Start button, the game presents the File Select screen, which contains the options to either (1) “Continue” (this displays basic information about the save data and helps the player to quickly identify the progress within the game or (2) start a “New Game” (this erases the previous file to start a new file).



Figure 4 “Pokémon Leaf Green” Title Screen



Figure 5 “Pokémon Leaf Green” File Select Screen

After re-starting the game from a previous save, there is a narrative sequence of some previous gameplay that reminds the player of what he or she did during the last play session. This feature can be turned off in the settings and will not be discussed in this dissertation, because it is not typical of the Pokémon games when this game was released.

In-Game Menus

Start Button Menu (Button)

The start button opens up a menu with seven options. With the exception of the “Exit” option, the menu will return to the menu window. If the player wants to return to the game-world, he or she will have to exit the menu. The seven options are explained below with two accompanying images, one with its location in the menu (as expressed with the selection arrow) and one with the opening window.

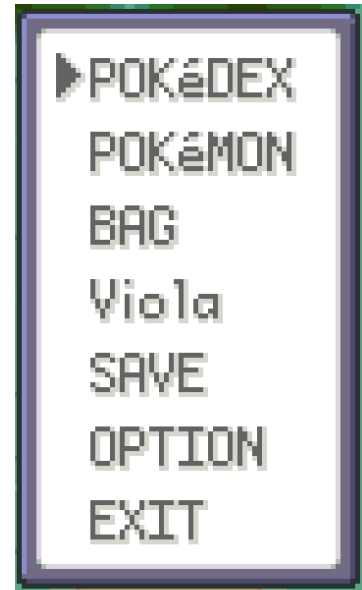


Figure 6 “Pokémon Leaf Green” Start Button Menu

Pokédex

The Pokédex, short for Pokémon index, is the index of Pokémon. It is a list of all Pokémon and is searchable and interactable with different search terms. Basic database information is given for each Pokémon that has been seen. If a player has held that Pokémon in inventory at least once, the information will be completed.

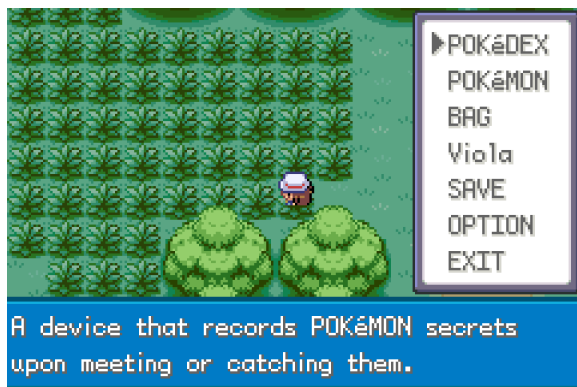


Figure 7 “Pokémon Leaf Green” Pokédex Option Location

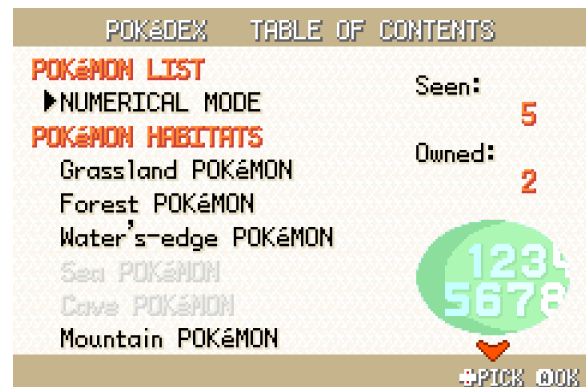


Figure 8 “Pokémon Leaf Green” Pokédex Entry Screen

Pokémon

This is a menu of the player's Pokémon, known as the player's party. Up to six Pokémon may be held at any time. The first Pokémon in the lineup (to the left) will be the first to be sent out when in battle. Each Pokémon may be selected to view information about each Pokémon.

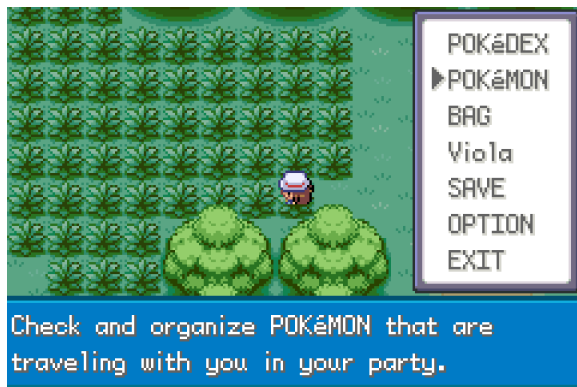


Figure 9 "Pokémon Leaf Green" Pokémon Option Location



Figure 10 "Pokémon Leaf Green" Pokémon Party Menu

Items

Items are used by the player to interact with Pokémon and the game-world. This menu is divided into three tabs (or areas): (1) Items, (2) Poké Balls, and (3) Key Items. While switching between tabs, it is not possible to loop through all three options. These options are interactable left to right and right to left.

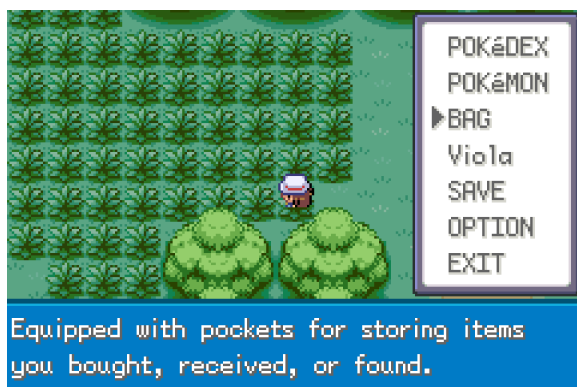


Figure 11 "Pokémon Leaf Green" Bag Option Location.

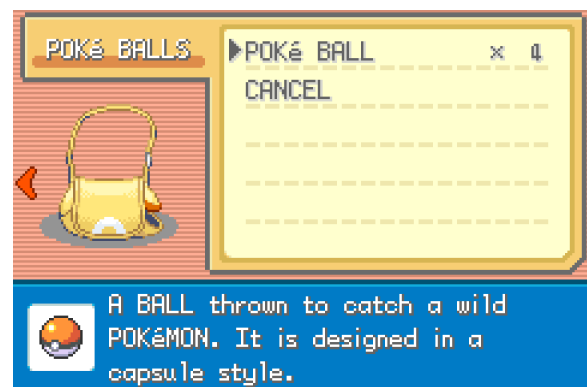


Figure 12 "Pokémon Leaf Green" Bag Option, Poké Balls Tab

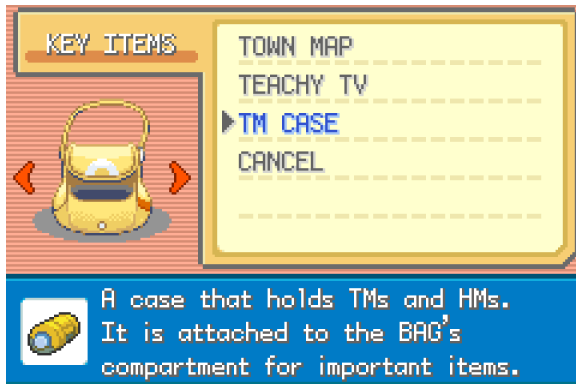


Figure 13 "Pokémon Leaf Green" Bag Option, Key Items Tab

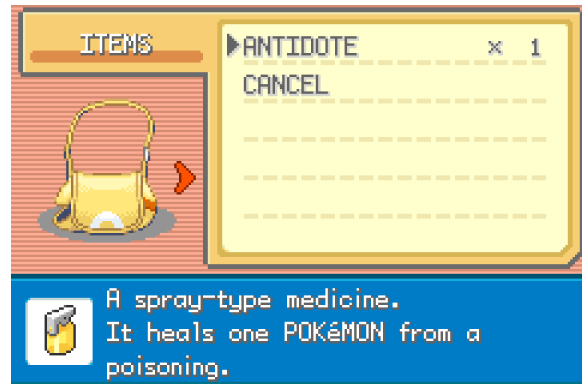


Figure 14 "Pokémon Leaf Green" Bag Option, Items Tab

[Player name]

This full-screen menu displays the player's basic information and progress, presented as an ID card. The front displays the player's name, time played, money held, and what badges are obtained. The player can reference this page to view at what point in the game he is at and how much money he has available to purchase items.

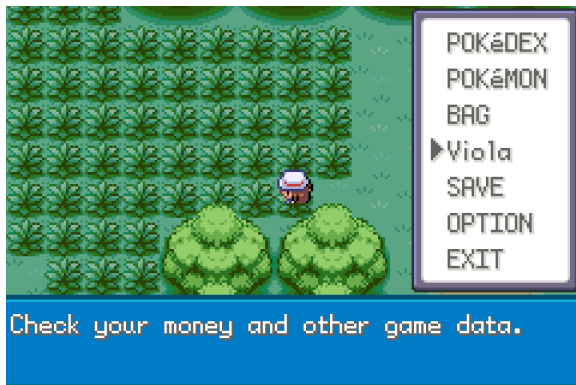


Figure 15 "Pokémon Leaf Green" Trainer Card Option Location



Figure 16 "Pokémon Leaf Green" Trainer Card, Front



Figure 17 "Pokémon Leaf Green" Trainer Card, Back

Save

The Save option appears as a few windows over the overworld, and it provides prompts for the player to save and quit the game. The game will return to the introduction video sequence as when the player has turned on the console.



Figure 18 “Pokémon Leaf Green” Save Option Location



Figure 19 “Pokémon Leaf Green” Save Option

Options

These are basic interface settings that relate to text speed and size, battle animation and style, and mono and stereo audio settings. The button mode turns off the “Help” features. These features include an index (menu) of information that is available by pressing the R button, and the blue description text boxes that describe menu options (visible in the screenshots).

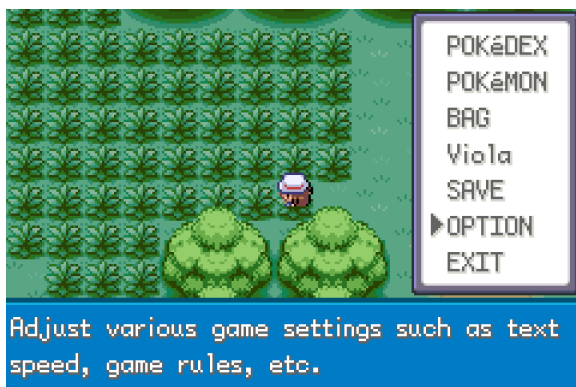


Figure 20 “Pokémon Leaf Green” Option, Option Location

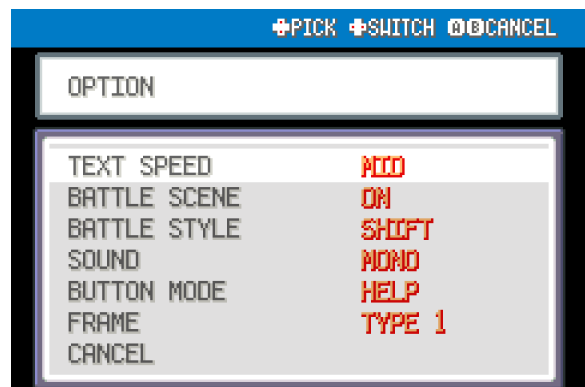


Figure 21 “Pokémon Leaf Green” Option Menu

Exit

Exits the menu and returns to the game-world.

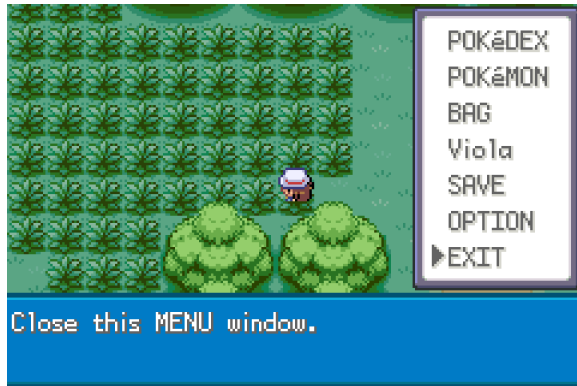


Figure 22 "Pokémon Leaf Green" Exit Option Location



Figure 23 "Pokémon Leaf Green" Return to Game World After Exiting the Start Button Menu

Pokémon Mart (Building)

The Pokémart is a building where the player can speak to NPCs in order to sell or purchase items.

Pokémon Center (Building)

The Pokémon Center is a building where the player can speak to NPCs to heal his or her Pokémon. There are also NPCs related to multiplayer connections for battling or trading Pokémon with other players.

PC (Game-World Object)

The PC is a game-world object that is most frequently located in the Pokémon Center. This is where the player may interact with his or her inventory of Pokémon.

Day Care (Building)

The Day Care is a building where the player may interact with an NPC to place up to two Pokémon. These two Pokémon will gain experience points (part of the training and battle mechanics that are integral to the game) and may make Pokémon eggs. This is the only way that a player may make eggs.

Battle Frontier (Location)

The Battle Frontier is an additional game-mechanic that adds game-time outside of completing the main story. It is a battle competition against NPCs.

Wild Pokémon Encounters and Pokémon Battles (Game World Objects)

These are encountered when the player is walking in grass (game world objects) or an NPC (game world objects) “lock eyes with” the player. The menus provided during a wild Pokémon encounter and a Pokémon battle are identical. This menu contains four options on a two-by-two grid: (1) Fight, (2) Pokémon, (3) Items, and (4) Run. The items option here displays the same windows that we see while viewing the Items menu from the start button menu. The difference between a wild Pokémon encounter and a Pokémon battle is that during a Pokémon battle, the player may not throw balls and may not “Run” from the battle (the player cannot intentionally end the battle).

Interpreting the Menu System

The menu system focuses on the Start Button Menu. The additional game-object menus expand possibilities of gameplay, but are placed at certain points in time within gameplay and the game's narrative. The player must advance in the game in order to utilize these game mechanics and menus. The menu button's menu is a constant in action and in time as it is always available to the player with the click of a button. The interaction with this menu goes in circles between this menu—the menu is in the middle of interaction between the overworld and the options of the menu. The player must go through this menu when the player wants to open its options or return to the overworld. While this menu is open, the player is half in and half out of the game-world and the menu system. There may be a feeling of “one-at-a-time” as each option in the menu button's menu can only be utilized one-at-a-time. Using this menu is built around movement with the arrow pad, and clicks with the action button. This is the same in the game-world: the player moves around in the game world and clicks on objects to interact with them. There continues to be a sense of circling, in that certain buildings can be found in every city. When the player enters a new city, the player knows the look for the same style building in order to find the same menus.

The player's dance with the menu system can be calm and steady from the rhythm of the button clicks, the movement of the player and the movement within menus. Each movement with an interaction button from the hardware is one beat. Movements, both in the game-world and in the menu system, are on a grid. New option prompts are predictably in the same area of the screen or appears within the same relative distance from the existing menu. This dance supports muscle memory in its repetitive nature that makes movement easy. The player's focus can now safely be placed in playing the game, rather than playing with the controls.

The in-game objects present further organization of time within the narrative of actions. The amount of time that the player has to battle with his or her Pokémon is limited to the amount of HP that the Pokémon has as well as the locations in which the player can heal the Pokémon, and how quickly Pokémon can be healed.³¹

The narratives of this game are mainly told through NPCs. The menu system, mainly the start button menu, enforces and creates a narration through the order and usability of the items in its lists. There are some technological restrictions that can be considered, but within the context of the game, the stresses of importance on certain menus remain. The two approaches to considering the intentionality of the menu options are hierarchy, and the usability and relationships between the options.

The most important could be the first item, but it is also possible that the most important is towards the middle. To recall the order of the menu options: (1) Pokédex, (2) Pokémon, (3) Items, (4) [Player ID], (5) Save, (6) Options, (7) Exit.

(1) The Pokédex, as an encyclopedia of Pokémon, is integral to what the game is. The idea that makes this game and this world so special is the existence of Pokémon creatures. It is the core informative item in the game, even if it is not frequently referenced. This is supported in the story during the introduction scene and during the beginning of gameplay that collecting Pokémon is important.

³¹ Pokémon can either be healed by traveling in the overworld to a Pokémon center or by using items. Depending on the level of the Pokémon and how much progress the player has made in the game, it could take longer to heal the Pokémon's health. Other status changes may require other specific items, so to heal a Pokémon to the same status effects as in a Pokémon center, it could take a lot longer to heal the Pokémon with items. It is a trade-off between time- the time it takes to travel or the time it takes to use multiple items.

(2) The trainer's party of Pokémon is the main list of "items" that the player uses to advance in the game- gameplay is built around the care and development of these "creatures."

(3) Items are the next important list of items being used in the game.

The menu is ordered with respect to importance and to what it is directed at. The first three options in the menu are the most important. Pokédex ranks as integral and cannot be discarded. It is directly tied to one of the three main goals of the game: collect Pokémon and fill the Pokédex. The Pokédex is the index of all available Pokémon and provides information about where and how to obtain Pokémon, as well as if it has been obtained. It is followed by Pokémon, and then items, which are in order of frequency of use. The Pokémon option is integral to the second main goal of the game: training and battling Pokémon. This option is the list of the player's party Pokémon, that is limited to six Pokémon. These can be exchanged only when the player visits a PC. Items are integral to a third goal of Pokémon: taking care of Pokémon. This however, is also an important feature to completing actions in the game. The items option, provides a menu of items that the player can use on his or her Pokémon, tools for use while catching and battling Pokémon, tools for healing and status effects of the player's Pokémon, and within the game world for various game-effects.

There is one other idea to the intentionality of this order: the items and the Pokédex are not used together. The player's use is most likely going to switch between viewing his or her list of Pokémon and the encyclopedia, and then between his or her list of Pokémon and the items that are to be used with the Pokémon.

This idea of placing options that are used together can be continued in the list with Player ID, Save, Options, and Exit. The player ID's information is related back to, and assists, the

action of saving, or to reference the player's currency when looking at the items. As we move down the list to the Player ID, the Player ID is towards the informative category. [Player ID] this helps track progress and informs the player of in-game currency, which can be related to the items (as currency is needed to purchase items)

Save is related to the ID because the player can review progress and then decide to save and quit the game. This option is also part of the game's settings related to the save file. Save acts as a divider before the options, and marks the following two options, Options, and Exit as being options that relate to the game. Options changes game (as a program) settings and Exit closes the menu and returns the player to the game world.

All decisions within the menu and closure of the secondary menus will return to the menu's home screen (with the exception of save). The exit can serve as a reminder or an intentional decision to leave the menu if the player does not choose to press the B button.

The visual presentation of the secondary menu has a sense of time and a sense of space. (1) Pokédex, (2) Pokémon, (3) Items, (4) [Player ID] and (6) Settings take up the entire screen and it feels like a pause from the overworld. The player can focus on preparing his "belongings" before getting back into exploring the game-world and making decisions. The (5) Save option is a layer over the overworld and the player can still see parts of the overworld. The action of saving and quitting transitions the player to leaving the game and returning the player's attention to the outside of the game.

It is possible to play the game without using the in-game object menus for the game mechanics that these provide. There are some player-made narratives that involve limiting menu usage, such as, (1) never visiting a Pokémon Center, (2) nicknaming all Pokémon and releasing any Pokémon that have fainted in battle, and (3) never looking at a map. These all relate to how

the player chooses to interact with the environment by using the menu system, while completing the main story's objectives.

The menu system lacks unnecessary repetition. There may be different places or sequences of actions to achieve the same effect, but these represent trade-offs in decision-making. The visual presentation and animations provide a feeling that the menu is supportive. The Start Button Menu assists and helps the player. Movement between all of the menus is predictable and easy to follow. This movement translates in the game-world such that the player is able to have a sense of what actions could be possible within the game-world. The menu system, with its focus on the Start Button Menu, is able to present the goals of the game as an outline. It is accomplished in a way that neatly presents higher-level opportunities clearly and all in one place, while placing secondary opportunity within gameplay. The player is able to easily access information in a way that supports gameplay by being visually supportive and providing a base logic for how the player could interact with the environment.

Pokémon Go! (2016-)

Title Screen and Log-in

The title screen provides options to create a new “file” or to log-in and continue a previous “file.” This game does not operate with “files” but user accounts that allow the “file” to be easily accessed from different devices. After logging-in, there is a loading screen. To use the game, a GPS signal and wifi are required.

Game-World Menus

The console and screen for this game started as a mobile phone and its screen. Sometime after its introduction, the game added availability for mobile tablet devices. All menus are accessible through interaction with the screen through touch. This includes in-game objects.

Figure 21 divides the screen-menu layer into three areas, labeled A (green box to the top), B (yellow box to the right), and C (purple box to the bottom). These are based on what area of the screen that it is on and will be referenced later. Options are then numbered one through nine, top to bottom, left to right. Box A is the mobile device’s menu bar. This game places it over the game-world in order to extend the visual space of the game.

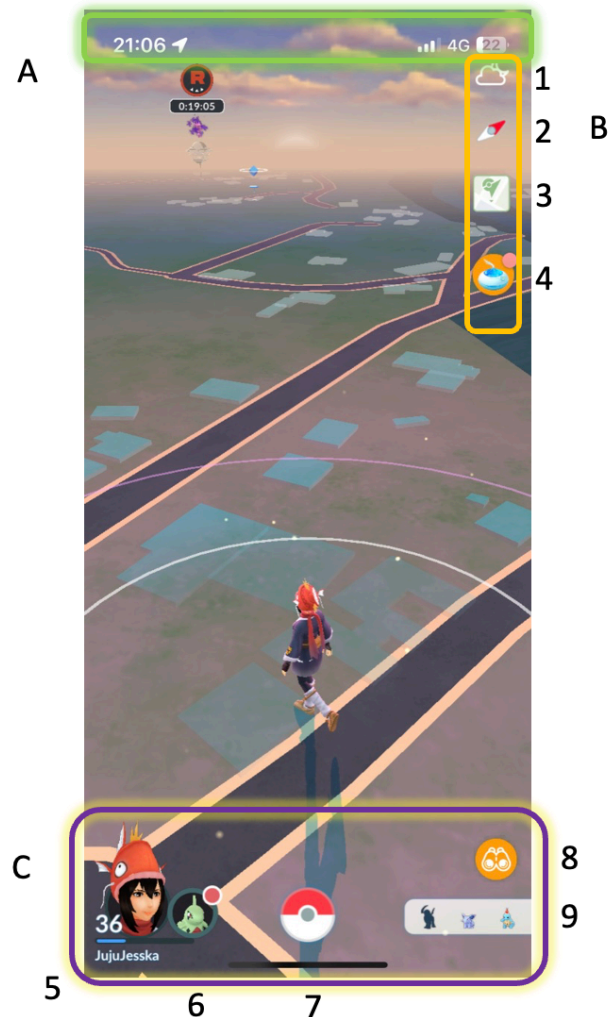


Figure 24 “Pokémon Go Game World and On-Screen Menu

Weather (Icon)

The Weather Icon opens up a borderless, full-screen menu that displays current weather and relevant information for in-game effects.

Compass (Icon, Action)

The compass, when pressed, will move the game world so that north direction is oriented to the top of the screen.

Routes (Icon)

Pressing the Routes button opens up a drop-down window with

setting related to the “Routes” game mechanic. There are two tabs: one is for making a “team” or a group of players to follow a path together. The second tab displays the game-world from a further distance.

Daily Adventure Incense (Icon, Action)

The daily incense is an in-game effect that can easily be activated from the screen’s menu.

Player Icon, Level, Name (Icon, Infographic)

The Player icon menu is a bordered, full-screen menu. It has numerous headings with either player settings or player statistics.



Figure 26 “Pokémon Go” Daily Adventure Incense Menu

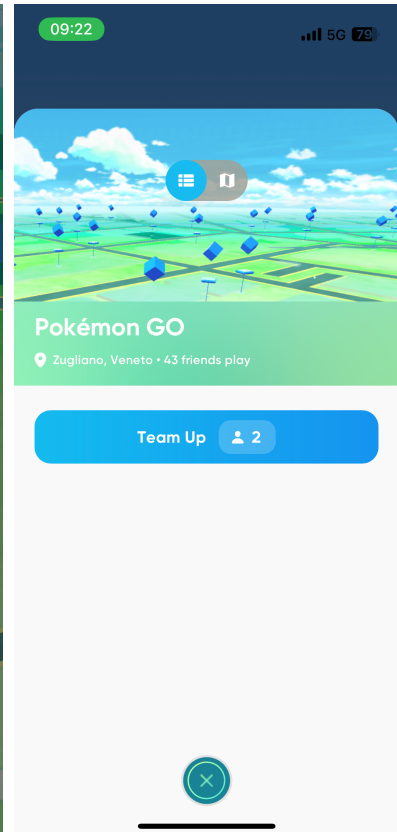


Figure 25 “Pokémon Go” Routes Menu

There is a second tab dedicated to the “friends” game-mechanic. This allows the player to perform actions related to the game mechanic of interacting with other players, directly from a menu.

Buddy (Icon)

The Buddy Icon opens the buddy game mechanic menu.

There is an option to open up another area of the game-world in which the player can interact in the game, using the buddy game-mechanic.

Binoculars (Icon)

The Binoculars Menu³² consists of three tabs: (1) Today, (2) Field, and (3) Special. The menu will open to the tab that the player last left open, however, defaults to the Field tab.

Collectively, these tabs are dedicated to tracking and viewing possible tasks for the player to perform either in the game-world or in the menu-world.

- Today: Lists of present and future seasonal tasks that are presented by the game’s creators. Includes informational status: (1) total earned PokéCoins (in-game currency) for the day, (2) list of Pokémon currently left behind in gyms, and (3) current streak of daily Pokémon catch and PokéStop spins
- Field: List of current possible field research and field research stamps (only one stamp may be earned each day for a bonus reward after the player completes seven field research tasks)



Figure 27 “Pokémon Go” Player Icon Menu

³² Name is specific to this Dissertation

- Special: List of drop-down menus of tasks given by NPCs. Each task has three activities to complete and various pages of tasks before the player may receive the grand reward. Each page completed will also grant the player a reward.

Pokémon (Icons)

Three icons of three nearby Pokémon are listed as an infographic button. This is the Nearby Menu; it consists of three tabs: (1) Pokémon, (2) Raid, and (3) Route.

- Pokémon: a three-by-three grid list of nearby Pokémon and a glimpse of where that Pokémon may be found. Pressing an option will open up the map to show the player where he or she may find that Pokémon.
- Raid: Will also display a notification bubble of the number of active nearby raids. There is an option to “browse campfire” that turns out to be the same drop-down menu as the Routes Icon’s menu.
- Route: Shows a map of the player’s current location and options to either (1) see a list of nearby routes or (2) learn more about the Routes game mechanic. As of August 2023, the Routes feature appears to still be in development.

Pokéball (Icon)

The Pokéball icon opens up a menu with options placed in two groups. This is the only menu from the screen that opens up only, lists of other options. These two groups are (1) located in the top right of the screen that consists of (a) Settings, (b) News, and (3) Events, and (2) located in the bottom half of the screen (a) Pokédex (b) Battle (c) Shop (d) Pokémon, and (e) Items. Closing any menu returns the player to the game-world.

Group 1 contains game-related settings, in-game notifications, and notifications from the game (the same as the future events section found in Binoculars>Today>(scroll down to)

“Upcoming.” The “Events” option will open up the producer’s webpage in the device’s web-browser. Group 2 contains a list of basic options and game-mechanics.

Gyms (Game Object)

Gyms are in-game objects that are collectively part of the Gyms game-mechanic. Gyms have their own portion of the game-world that is the same reoccurring landscape with changing Pokémon and actions based on the varying gyms and battles. This area of the game-world is only accessible through interacting with a gym while gym activities are in-play.

Pokéstops (Game Object)

Pokéstops are menus with a swipe interaction for the player to receive in-game effects. There is one other variety of Pokéstop where an NPC (Team Rocket Grunt) wants to battle the player. This will open up the portion of the game-world in which the player can battle.

Team Rocket Balloons (Game Object)

Team Rocket Balloons are other in-game objects in which the player has the opportunity to enter the battle area of the game-world to participate in a Pokémon battle.

Gift Balloon (Game Object)

Occasionally, a gift balloon will appear in the game-world for the player to interact with, by poking it. These gift-balloons provide the player with in-game items. The player is not able to exit the menu until all item bubbles are interacted with or popped. The items appear in bubbles and receiving the items is available in a form of interacting with the items by touching them.

Pop-up and Notification Icons (Infographics)

There may be notifications from the game that scroll-in from the top of the screen. These notifications may also be found in Pokéball > News > (Notifications). Touching a notifications bar will open up the Pokéball > News > (Notifications) menu. If there is new information in a menu, there will be a red dot next to the menu’s icon or title.

Interpreting the Menu System

The menu system appears to focus around different game mechanics: (1) managing Pokémon, items, and shop, (2) game world information, (3) player and multiplayer, (4) Pokémon Buddy Mechanic, (5) finding Pokémon, spinning stops, and Pokémon raids, (6) Routes, and (7) completing tasks. The different icons on the screen can also be placed in a few areas of game play:

1. Related to Pokémon, including Pokédex, items, etc.
2. Related to the Player and multiplayer, including the buddy
3. Quick-use for game effects
4. Those related to the map and exploring the game world (layer), including tasks

Coincidentally, demonstrated in Image 24, these line up with the different areas of the screen.

The settings for the game, news, and notifications are also found in the first area: a menu with a list of options. These settings are located in the top right-hand corner of the screen, while the options related to Pokémon are on the bottom third of the screen.

The sequences and relationships that the player can take to navigate the options can be confusing and long. Additional game mechanics outside of the basic exploring, catching, and battling Pokémon, are all found inside of menus, not directly accessed from the main screen.

The game-world of this game is a sphere and made up of layers and areas. First, the main area of the game-world is made up of two layers while the screen is made up of three layers. (1) There is a representation of the real world as both a simple caricature (as seen in the game world) or the real world through a camera (as seen in the VR Camera mode). (2) There is a second layer over the first layer (presentation of the real world) that contains game-objects. (3) A third layer (relative to the game screen) represents the menu world. There are areas of game-play that occur

in either the game-world through the camera or in areas within objects. These areas of the game-world can be a little tricky when there are options for the presentation of the real world to either be in a representative view or seen through the camera.

Game-world areas:

- Map
- Mobile Device's Camera³³
- Battle space within a gym
- Battle space (for all other battle encounters)

The menus are represented as a layer in the screen, but the menus are lists, information, and interaction. The menus have mechanics to be interacted with and decisions to be made that affect the game-world. In some ways, the menu world has a few dedicated areas as well. There are (1) lists of information (2) referential information and (3) interaction areas.

The player's character, as a game-object is always in the center of the screen. The player's character has some movements but stays in the center of the screen while the game-world moves by. The game-world is based on Google Maps and is essentially Google Maps in a simple view (objects are simple and are different colors to represent the different terrains) with some objects placed on top. The game world moves as the player's (the device's) real-world location moves.

The separation between menu-world and game-world is merged. Possible actions are found in the game-world and follow an intuition based on touching objects. Game-play actions are found within menus and not directly from the game-world.

³³ Not to be confused with the in-game camera.

The player moves around in the game-world by moving around, physically, in the real world. Or moving the device. Menus are moved around by touch on the touch screen. These menus are often very long and involve a lot of “scrolling” or include a lot of pop-ups. Physical interaction is by poking or pressing, and moving the finger around the screen. There is interference from the phone itself.

In the initial version of the game, there were very few menus from the screen. The development of this game has continuously added options rather than moving options. Due to this, there is some redundancy in searching for a feature. Some options provide shortcuts to other areas of the game, but this is mainly when the player has an opportunity to spend real-life money on in-game effects.

The notification system follows interaction with a mobile device and other mobile device applications. There is some intuition for interacting with these menus that is found in game-mechanics, such as battle. It can be unclear if the modes of interaction to play the game are the affordances for the menu system, or if prior knowledge of mobile device operating systems are the affordance to this menu system.

There are also push-notifications from this game when the player is not playing. The menus in this game may match the notification styles of mobile devices, but these pop-ups pose interference with game-time. Additional pop-ups from the device itself and other applications within the device interfere with the game. The game is also sensitive to accidental button presses or accidentally changing the size of the screen (pushing the entire screen down). This game is something that is continuously on-going, in spite of certain tasks that are limited to time or tasks that can be completed.

The interaction with the lists in this game have kept up with computer search functions. The complexity of interacting with menus includes lots of scrolling, lots of subdivisions, and lots of information being presented under smaller categories.

Saving is automatic and instead of file saves, the user creates an account and the information is stored in a server, somewhere—the point is that the save data is not locally stored on the player’s device.

In the game-world of *Pokémon Go*, the screen is the primary (or main?) menu that connects all menus. The way that the menus are set up appear to allow for different areas of play and the ability for the player to choose what game mechanics he or she prefers to use. However, there are some mechanics and menus that are built for certain intentions outside of play. This game, as an application relies on making revenue through in-game purchases. The presence and push towards spending real world money gives the menus a consumerist and capitalist narrative. It is not truly focused on the fun of having Pokémon in a virtual reality (or layer) over the physical world. Technology and hardware-based mechanics are limited by the device and as this game continues adding new features, it can potentially go on infinitely. The narration of this game through its menus is linked to the development of mobile devices. The narration of the menu system is that of something that consistently has features added.

Pokémon Violet (2022)

Title Screen and File Select

After game turns on, the title screen appears with the instructions “Press A [button].”

After the A button is pressed, the save file and game boots-up.

In-Game Menus

On-Screen Menu (Icons, Widgets)

Map (Widget)

A small widget with a top-down view of the game-world’s map is always available in the bottom, right-hand corner. The player’s location is marked with a yellow circle with the player’s facing direction indicated with a yellow arrow and cone.

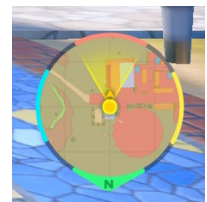


Figure 28
“Pokémon Violet”
Map Widget

Notifications (Icons)

Notification boxes may drop-in or pop-up (animation styles) from the top, left, and right, of the screen. These notifications provide information about status changes, items that the player’s Pokémon has picked up, achievements, and newly available tasks.



Figure 29 “Pokémon Violet” Notification Boxes

X Button Menu (Button)

The X Button Menu, opened by pressing the X button, is a layer over the game-world. It contains the list of the player’s Pokémon (party) to the left, the Main Menu to the right, a notification of online/offline status in the top right. Along the bottom, a list of button-activated shortcuts, that varies depending on what options are currently highlighted. To the left is

displayed. Miridon, a Pokémon also functions as a tool, and appears below the player's Pokémon party list.

[Pokémon Party]

The X Button Menu has the list of party Pokémon members listed directly in the menu. The list of Pokémon can be interacted with directly from this screen by moving the left stick. This list view may appear as a pop-up notification or in a simpler form, inside of other menus.



Figure 30 "Pokémon Violet" X Button Menu List of Party Pokémon

Main Menu

Bag (Menu Option)

The bag is the menu option that contains all items that the player may need to use for in-game effects. It is subdivided into ten categories and displays a list of the party Pokémon to the left. The icons of the party Pokémon change according to the list that the player is currently viewing. The information provided is relevant to using items in that category. For example, when viewing the "Medicines" tab, the Pokémon's health status will be displayed. This makes it easier to decide if the player would like to use an item. The categories are interactable in a scrolling loop. In a top menu bar, the menu name appears adjusted left, and the in-game currencies are adjusted right.

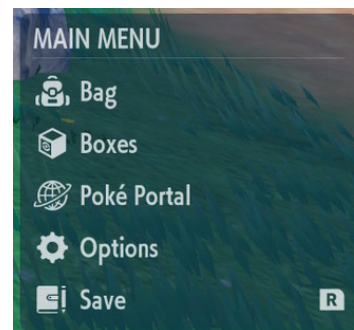


Figure 31 "Pokémon Violet" Main Menu

Boxes

The player may interact with all Pokémon that are stored in the Pokémon computer. This includes swapping out Pokémon from the party.

Picnic (Menu Option, game mechanic)

The picnic feature is possible when the player is currently on a suitable open area. This feature allows the player to interact with his or her Pokémon for in-game effects. This is also where the Pokémon egg creation feature is located. The list of Pokémon is presented as game-objects while an on-screen list of available interactions and their controls is available on the left-hand side of the screen.

Poké Portal

This is the menu to find all online services and features that require an internet connection.

Options

Provides the options for the player to adjust game and console settings.

Save

To save the game, the player can select this option with the A interaction button or by pressing the R button.

Infographics

When the X menu is open, there are a few notifications and other infographics. (1) In the top right corner, the save status will appear as a notification. (2) In the top right, the player can check internet status (online or offline). (3) Bottom left displays Miraidon's³⁴ status and (4) bottom right displays some options with the controls. The controls for Auto Heal (-) and Make Lead Pokémon (Y) are not available if the console is not connected to the internet.

Map (Button)

Opened using the Y button

The opening animation opens up the map as a pop-up window over the game-world blurred in the background. There are a few zooms and a mini menu with three options (1) Map,

³⁴ Miradon has functions as in-game object, a character, and a Pokémon

(2) Pokédex, and (3) Profile. The closing animation of the menu minimizes and transforms the box into the map widget that is seen in the on-screen information layer. Closing any of these windows returns the view to the game-world. In this sense, there is no “homepage.” Each zoom feels like a separate space despite being the same map.

The map includes functions such as setting destinations, zoom, and selecting markers to fly towards. It also indicates whether or not the player has visited certain areas.

In the furthest zoomed-out view, the player can view his or her progress in the three main story lines. It is indicated as a number completed out of a total number. The x-button menu does not appear.

Map

This closes the map’s menu of options and returns to the map view.

Pokédex

This opens the Pokédex. The Map’s menu is now understood as a tab menu to switch between the Map, Pokédex, and trainer ID.

Profile

This opens the player’s trainer profile. The profile can only be opened through either the Map or the Pokédex buttons and utilizing the menu to switch to the Profile.

Pokédex (Button)

Opened using the – button

The Pokédex also has the tabs to switch between the Pokédex, map, and profile options. There are two ways to open the Pokédex: either by pressing the – button, or pressing the Y button to open the map and then switching to the Pokédex.

Map

The map is opened.

Pokédex

This returns the view to the Pokédex.

Profile

The profile is opened.

Reactions (Button)

The up arrow button opens a menu of reactions the player's character can perform.

Outfit (Button)

The left arrow button opens a menu of options for the player's character's outfits.

Camera (Button)

The down arrow button opens up the camera game mechanic that allows the player to take screenshots of the game at various camera angles that may be different from the camera angles used during game play.

Notices (Button)

The right arrow button opens a pull-out menu from the right side, with transparency

Catching Pokémon and Pokémon Battle Menu (Game Objects)

The items reset after each use and not only between battles; the items menu always opens to the medicines tab

Pokémon Center (Objects)

The Pokémon center NPCs accessible directly from the game-world. There are NPCs for (1) healing, (2) purchasing and selling items, and (3) making and purchasing TMs. There is also an area for multiplayer communications that is found in the X button menu as *Poké Portal*.

Loading Screen (Narrative Menu)

When certain points in the game require a bit of time to load, a loading screen will be displayed.

Completion Screen (Narrative Menu)

When a task is completed, there will be a completion screen and an opportunity for the player to take a “selfie” or a screenshot to share the completion as a certificate.

Interpreting the Menu System

The main options for menus are divided among different buttons and view. The Pokémon menu and the Main Menu appear in the same hierarchy in the menu button's menu. In a second sense, the list of Pokémon is something that is constantly referenced. It constantly shows up on the screen when anything affecting it occurs in-game. The overall menu system can be considered to revolve around the following areas as the top-level hierarchy:

1. The list of Pokémon
2. The Main Menu
3. The Map
4. Pokédex
5. Extra features (menus that are opened from using the arrow buttons)
6. Infographics

During gameplay, there are almost always infographics popping up on the screen from player interactions. The player is always in the know of any new items obtains, new objects, status, and status changes. These on-screen notifications have a strong presence over the game world. Movement within the game and the menu system constantly returns to the list of party Pokémon and the constant notifications of game effects. There is a strong presence of the menu system, and it seems to all revolve around the list of Pokémon and the icon of the lead Pokémon.

The menus from the hardware are focused around the map, the X button menu, and action buttons. There is a second menu of options, separate from the X button menu (including the Main Menu), that has three options. There is no option to open only this menu, but the player must open one of the three, and then use this menu as a shortcut to interact with the other two

options. However, one option does not have a button press assigned to it. This menu is menu that links the Map, Pokédex, and Player Card as one category.

Attention and rhythm of action and using menus is chaotic. There are many options and many possibilities to perform an action on accident. Examples include using medicines on Pokémon when it provides no effect, and accidentally leaving the nickname menu by pressing the B button too many times. There are also menus with different views and different options that appear under different circumstances. Two examples are found with the map (the furthest zoom-out has a new menu of information) and the X Menu button (the location of the selected option changes the available options that are indicated at the bottom of the screen). It can be tricky to follow the options in the menu system as there are several differences in options, depending on what options are highlighted.³⁵ There are different paths to viewing certain areas of the menu system. This is parallel to the game's main stories—these are intertwined and “open” to play order. There are multiple paths to navigate the menu system as there are multiple patch to complete the game's main stories.

The menu system is expanded from the hardware through the NPCs. In regard to the story, the menu system appears to be focused on marking off achievements and “landmarks” of progress. Loading screens between locations adds time and value to locations as well as some idea of how much time to spend in these areas. For example, to get to the library in the school, the player must travel to the school, enter the school, interact with a NPC, interact with a menu, and then after a loading screen, the player arrives at the library. Entering the library may be a place for the player to spend a fair amount of time, double that of the time it takes to enter and

³⁵ Highlighted, as in, what option is currently being selected, before the player presses the X button to open that option.

exit the library. (2) It takes a long time for the game to load or compared with all of the features in the game, the player is not expected to go there often.

There are some options within menu selections, primarily when interacting with NPCs, that changes some NPC dialogue. This is present when the player has a few options to reply to NPCs. The result of these actions remains the same, however, the dialogue of the NPC will differ. This changes the player's experience by adding further customization to the experience of the game as well as an illusion of choice.

The delegation of time and what the game wants the player to experience in time is strongly reflected within the menu system and where game mechanics are found in these menu systems. The menu system appears to be focused around the Pokémon party and being aware of every status change or item-pickup, and list of tasks. It is full of notifications and infographics that change depending on how and from where certain menus are accessed. The menu system appears to be a part of gameplay as views of the game-world and menu screens are connected through the reoccurring menu of the player's Pokémon.

The Legend of Zelda: Oracle of Ages and Oracle of Seasons

Console: Gameboy Color

Title Screen and File Select

After an introduction scene, a title screen is first displayed with the instructions “Press Start). After the player presses the start button, and file select screen appears. The file select screen allows options to copy a save file or erase it. The player chooses his or her own character name and this name will be used as the name of the file.



Figure 32 “Zelda Oracle of Ages” Title Screen



Figure 33 “Zelda Oracle of Ages” File Select

Game-World Menus

Information Bar (Screen)

There is an information bar located in the top area of the screen. It provides the player with basic information: the A and B button actions with their assigned tools (changeable from the Start Button Menu), amount of Rupees (in-game currency), and total number of heart containers and current health status. This bar is always available, except when a map screen is displayed or during cut-scenes.



Figure 34 “Zelda Oracle of Ages” Information Bar

Part 4: Case Studies

The Legend of Zelda: Oracle of Ages and Oracle of Seasons
Title Screen and File Select

Start Button Menu (Button)

The start button opens up the player's inventory while the select button allows the player to cycle (left and right) between the three screens. Arrow, A, and B buttons allow the player to move around and interact with the menu. Interaction follows a grid. Opening this menu also pauses the game.

Holdable Items



Figure 35 "Zelda Oracle of Ages" Start Button Menu, Holdable Items

Additional Items



Figure 36 "Zelda Oracle of Ages" Start Button Menu, Additional Items

Progress Check and Save

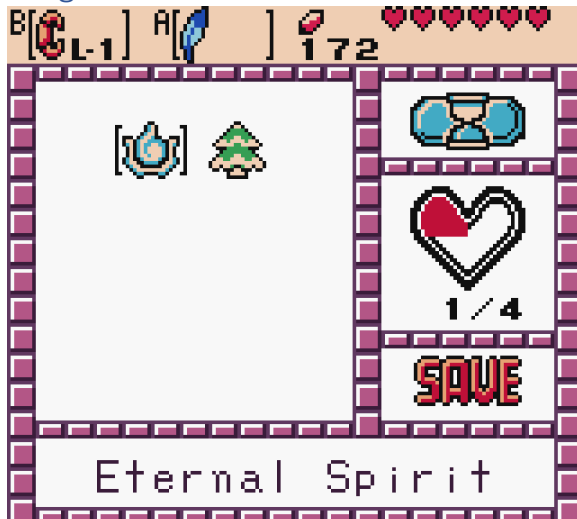


Figure 37 "The Legend of Zelda Oracle of Ages" Start Button Menu, Progress Check and Save

Map (Button)

The map button will display the map as a full-screen menu of the player's location within the game-world. There are three available locations: Hyrule during the present time, Hyrule in the past, and dungeons. Each dungeon will display its own map. In either map of Hyrule, map locations will fill-in as the player visits all screens that make up the game-world. In dungeons, the dungeon map and compass are findable items that help to fill-in that dungeon's map information.



Figure 38 "Zelda Oracle of Ages" Map of Hyrule, Present Age



Figure 39 "Zelda Oracle of Ages" Dungeon Map

Save Menu (Button)

The Save menu is a full-screen menu that is accessible by either (1) pressing the start and select buttons simultaneously or (2) through the inventory. There are three options that allow the player to either exit the screen (Continue), save and exit the screen to return to the game-world (Save & Cont.) or save and return to the title screen (Save & Quit).



Figure 40 “Zelda Oracle of Ages” Save Menu

Maku Tree (Game-Object)

The Maku Tree is both a character and an informative menu option that the player can interact with in order to look for the next task (in the game’s story). It is a narrative character that provides information to the character that is needed to progress through the game’s story. This character provides information either through direct interaction or through dialogue.

Shop (Building)

The shop is a building where the player can buy items. Purchasable items are game objects that are displayed in a row, while appearing to be on a wall. To purchase an item, the player interacts with it by picking it up, bringing it to the shop’s NPC, and then interacting with this NPC.

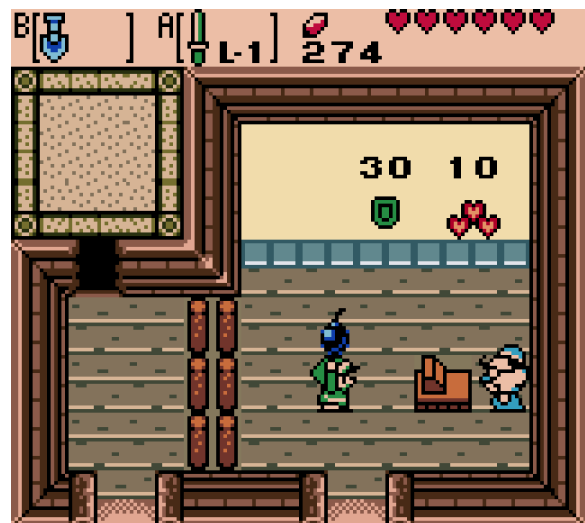


Figure 41 “Zelda Oracle of Ages” Shop, Player Holding an Item for Purchase

Know-it-All-Birds' Hut (Building)

The Know-it-All-Birds are NPCs that all remain inside of a building, known as the Know-it-All-Birds' Hut. The building is a menu container and the birds are a list of options. This menu is where the player can learn about how the menu system and some game mechanics work.

Trees, Chests, Grass (Game-Object)

Trees, Chests, and Grass are all game-objects that the player can interact with in order to obtain items with in-game effects.



Figure 42 "Zelda Oracle of Ages" Know-it-All-Birds' Topic Dialogue



Figure 43 "Zelda Oracle of Ages" Know-it-All-Birds, Yes or No Prompt

Interpreting the Menu System

This game has a top-down view where objects are placed on and movement follows a grid. The menu system centers around the (1) on-screen information, (2) menu button menu, and (3) Map, and (4) in-game objects and locations.

The Start Button Menu is likely the most frequently used menu in the game, and is the same button that starts the game. This menu feels like an extension of the on-screen menu due to its appearance. There is a connection between this menu and the game world due to the common display of the information bar. This menu might also look as if the player as pulled open a drawer. There is a connection and a dance of continuation between interacting and changing settings, while switching between this menu and pausing the game. The menus are felt as if it is a layer over the game-world. The animation between the screens mimics the animation and method of the player moving between the screens of the overworld. This could provide an affordance to the player for how to move in the overworld.

Saving the game can be found in the Save Menu, that can be opened from two different locations. The ease of finding the save menu directly from hardware buttons indicates an importance of saving. There is some freedom and self-awareness in being able to save and continue playing versus saving and quitting. These ideas relate to repetition, restarting, and game lives. It provides a sense of being able to start all over from a previous save state or continuing with the player's current status. The player can choose to continue the game with the actions that have already been completed or go to a previous point in time of the save file to redo actions for the alternative effect.

The game-world is built of many screens that the player can move around in. Each square on the map represents one screen or portion of the game world. Each screen has a scrolling

transition when the player moves between them. Each screen “resets” when the player moves between them. The menu button’s transition is a white-out. The menu bar that we see over the game-world remains the same. Each screen provides a feeling of space separate and connected, similar to squares in a quilt. There is a contrasted feeling of small and focused, and the bigger picture of the entire game world. This is present within the menu system, particularly the Start Button Menu and the presence of dungeons as being an isolated puzzle and part of a larger puzzle. The movement within the screens of the menu sets the rhythm that is found while interacting in the screens of the game-world.

Game menus appear to be focused on interacting with objects rather than reading texts (menus as lists of information). This is demonstrated with the Know-it-all-bird Hut and the Maku Tree. These are all NPCs that provide information. It is further demonstrated with the method of purchasing items as picking up the item and bringing it to an NPC. The basic interactions with the NPCs in the Know-it-All-Birds’ Hut and the Shop are repeated during gameplay and necessary to complete the different puzzles in the game. The actions of gameplay are repeated in the menu system.

This game has three top-level spaces for the screen to be in at any given time: (1) game-world (2) pause menu or (3) map. It is relatively simple and fuss-free. The two other menus both pause the game and are both reliable. It is like a safety net or a chapter marker. In the pause menu, there are certain items that track where the player is in the game’s story. This also makes the pause menu as an important bookmarker within gametime. The rhythm is steady, but spaced out in regards to button clicks. There is a rhythm in movement in the game world and the logic of puzzles follows the types of menus found in the shops and buttons. The menu system helps the player to keep track of accomplishments and milestones through the presence of obtaining

objects. Relevant information is provided for the player to be aware of certain information while he or she is playing. The player can focus on gameplay as the menu system is assisting.

The Legend of Zelda: The Phantom Hourglass and Spirit Tracks

Console: Nintendo DS

Title Screen and File Select

After an introduction scene, the title screen appears with the instruction to “Touch the Screen.”

After the player touches the screen, the file select appears. There are options to select a save file, followed by secondary options to choose between playing the game’s story as single player (Adventure) or play the game in a multiplayer mode (Battle).

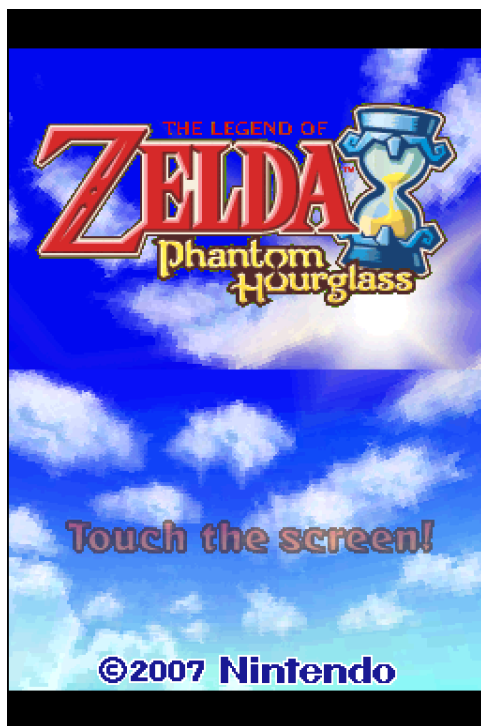


Figure 44 “Zelda Phantom Hourglass” Title Screen



Figure 45 “Zelda Phantom Hourglass” File Select

Game-World Menus

The game-world, during gameplay, appears in the bottom touch-screen. Its basic interactions are primarily by touching the screen (using either a finger or a stylus).

On-Screen Information (Screen)

Health status (1, Figure 46) is located in the top left corner. (2, Figure 48) Rupees (in-game currency) indicator will appear momentarily when rupees are obtained and always available when the menu is opened. The menu icon (3, Figure 46) is displayed in the bottom left corner of the over-world. Navi (4, Figure 46) is an NPC who guides the player and indicates what point the player is touching.

Map (Screen)

During gameplay, the map is always available in the top screen. It can be shifted down, for interaction, either by (1) pressing the bottom arrow, (2) pressing the B button from the over-world, or (3) by going through the menu.



Figure 46 “Zelda Phantom Hourglass” Gameworld, During Gameplay

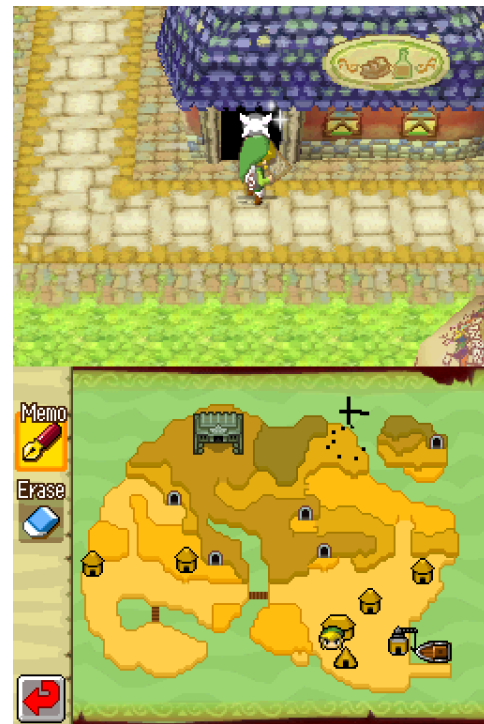


Figure 47 “Zelda Phantom Hourglass” Map Selection

Menu (Screen)

The menu button can be accessed by pressing the on-screen menu button or by pressing the left arrow button. There are three options: Save, Collection, and Map. Closing any menu option returns the player to the game world.

Save

Saves the game and returns the player to the game-world.

Collection

The collection menu takes up both screens and pauses the game. This is where the player may interact with his or her items and to interpret progress in the game's story.

Map

Selecting the map, returns the player to the map. It is the same view as if selecting the map from the game world.

Save (Buttons)

The Save menu can also be opened by simultaneously pressing the start and shift buttons



Figure 48 "Zelda Phantom Hourglass" Menu

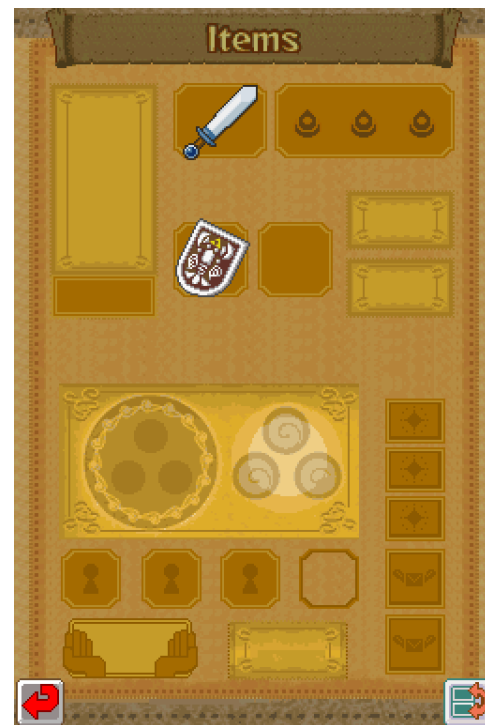


Figure 49 "Zelda Phantom Hourglass" Collection Menu

Shop (Building)

The shop is where the player can purchase items (using in-game currency). The available items are on display, but in order to purchase anything, the player must interact with the NPC first. The screens change and the purchasable items are available, as game objects or icons, on the touch screen.

Interpreting the Menu System

Zelda The Phantom Hourglass has a top-down view and utilizes the touch screen as the controls to move and interact with the game world. Its menu system revolves around the touch screen and its on-screen icons, and the top-screen.



Figure 50 "Zelda Phantom Hourglass" Shop Menu

The idea of the information bar and Start Button Menu from *Zelda Oracle of Ages* are present in this game, but rearranged due to the touch screen being used as the source of interaction with the game-world. The information bar has been re-oriented to the left side of the screen. The player's current amount of in-game currency (Rupees), however, does not remain static on the screen during game play. The menu button now shows the only two options that are previously available: the sub menu and the map. The menus that summarize gameplay are the menus that are visible during gameplay: the map (on the top screen) and the game world, including the on-screen icons (touch screen).

The top screen acts as an informative screen, rather than being where the action takes place. The player interacts directly over the game world. The menus can be swapped between the top and bottom screen to write notes and interact with the menu. The menu sometimes takes up both screens and pauses the game. Menus are interactable and are the same movements as what the player uses to move around in the game. The top screen and touch screen pair-up to provide a space for reference information and a space for action.

The feeling of immersiveness through the touch controls extends to the menus. The menu spaces can feel as if they are part of the game-world rather than layers or spaces away from this game-world. This is a feeling of being inside the game, rather than being outside of it and looking down through a window. The direction of visual attention follows the game world from one location to the next. The layer of icons (as the menu) is another object within the world, except, always available in the same place. Moving the game-world to the top screen, while a menu is being interacted with indicates that the player has not left the space of the game-world. The menu system is aiding the player while feeling as if it is part of the game world.

The rhythm of movement within the menus will likely match the rhythm that the player follows while moving inside of the game world. The interaction with the game and the environment is based on the player's touch movement. The movement between the menus while navigating the menu system and while navigating the game are the same. The stylus has become a wand that performs a dance as the player plays the game.

The menu system revolves around the top screen and touch-screen, while the hierarchy of menu system revolves around the map and the pause menu. The game-world and its layer of icons have become a menu. Both the menu and gameplay are interacted with, using the same movement and action inputs of using the touch screen and share the same space. How the player

interacts with the touch screen remains the same as how objects in the game world are interacted with. This allows the player to understand how to interact with the game world as he or she is interacting with the menu system. The touch-based interaction of the player and presentation of menu system and game-world through two screens have connected the menu system and game world to feel as if it is a single space. The menu system's main ideas of the game are provided on-screen and within the game-world as it is being played.

The Legend of Zelda: Breath of the Wild

Console: Nintendo Switch

Title Screen and File Select

The title screen provides options to boot-up the game (Continue), start a new game (New Game), and options relevant to the game and console (Options, Amiibo, and Downloadable Content). There is no file name.

In-Game Menus

On-Screen Menu (Screen)

There are several on-screen infographics, listed below.

Health Indicator (Infographic)

Displays the player's max health and current health. This remains on-screen when the Pause Menu is opened

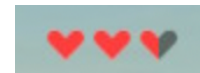


Figure 51 "Zelda Breath of the Wild" Health Indicator Infographic

Tool Selection "Wheel" (Button)

Located underneath the health indicator, there are four available options with a visual presentation of the corresponding hardware button.

These are the up, down, left, and right arrow buttons. The up arrow opens a Runes menu, the right arrow opens the hand-held weapon menu, left arrow opens the shield menu, and the down arrow is the player whistling, that calls for the horse.

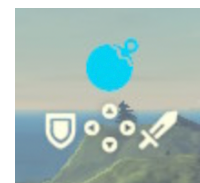


Figure 52 "Zelda Breath of the Wild" Tool Selection Infographic

Shrine Indicator (Infographic)

An icon that makes an attention-grabbing animation and noise when a shrine (game world building) is nearby.

Temperature Indicator (Infographic)

Different areas of the game world have varying temperatures. These temperatures provide varying in-game effects.

Sound Indicator (Infographic)

As the player character moves in the game world, the player can make sounds. These sounds provide varying in-game effects.

Time of Day and Weather Indicator (Infographic)

The game-world has time and current weather conditions that provide varying in-game effects.

Map (Widget)

A miniature-size map provides the player with a top-down view of the game-world map with the player's position available in real-game-time. This map also indicates the direction that the player is currently looking in, and relative directions of other game-world destinations.

Pause Menu (Button)

As described in the game's controls menu, this button opens the Pause Menu and initially opens up to the inventory menu. This is a full-screen menu. The health indicator in the top left of the screen remains constant from the on-screen menu (infographics). The in-game currency (Rupees) is listed in the top right of the screen.



Figure 53 "The Legend of Zelda Breath of the Wild" (Top to bottom) Shrine, Temperature, Sound, and Time of Day and Weather Indicators



Figure 54 "The Legend of Zelda Breath of the Wild" Map indicator

Inventory

A list of the player character's items that are presented in one long list. Tabbed divisions allow the player to skip through the item list as these items are placed in categories and then placed in order of acquisition.

Adventure Log

This provides the player with the list of tasks, divided by type of story. These are titled Main Quest, Shrine Quests, Side Quests, and Memories.

System

Provides the player with the diagram of controls (basic controls) and a list of options. One option expands the list of controls (Ability Controls) and the other options (Save, Load, Options, DLC, and Return to the Title Screen) provide the options that are related to the game as a program and to the game console

Sheikah Slate (Button)

The Sheikah Slate is a game object and a menu attached to a button. It initially opens up to the Map and is a full-screen menu.

Map

The map of the game-world (Hyrule) is displayed. It is interactable: it can be zoomed in and out, and markers may be placed, as well as destinations.

Runes

A list of Runes, or tools, that the player can use to manipulate the game world. This menu includes a brief description of each Rune.

???

There is currently an empty tab.

Interpreting the Menu System

In this open-world based game, the top-level hierarchy of the menu system appears to be the Shekiah Slate (and its three tabs), the Pause Menu (and its three tabs), and the interaction buttons on the controller, along with infographics. The menu system appears to focus on the map, inventory menu, and infographics. The map is the opening menu of the Shekiah Slate, while the inventory is the opening menu of the Pause Menu. These three focuses seem to present the game's focus on exploration and problem solving.

The interaction between the menus is fluid and open as these menus can be opened when needed and without too much distraction or feeling of leaving the game-world space. There is a degree of improvisation within the menu system that is found in game-play. How and what the options within the menu system look like are determined by the player. This refers to the customization of the map (through the ability to place markers) and the list of objectives that the player can achieve (these are not always available in the same order and are available in the order in which the player finds them during game-play). Additionally, within game mechanics, such as crafting, and cooking, it is possible to create different products through different recipes. These all point towards an open and varied interpretation and interaction that is found in both the menu system and in the game-world. The interactions within the menu system and what it looks like will likely vary as it depends on the player's play.

The Shekiah Slate's options are related to the game's stories and where to achieve this in the game world. Tasks and player-created markers appear on the map and provide the tasks as a list, within the context of their locations. To the left of the map, the player may view and read about available runes, or abilities, that is always available to the player. The use of these is not limited to the number of uses, but the frequency of use. The Pause Menu and infographics,

together, present the limitations of the player's character in playing the game. Limitations include statuses of the player and of the environment, items, save state, and health. There is a lot of information at hand for the player to think about when making decisions. It is a complicated thought process before making decisions. The on-screen information is for when the player needs to make quick decisions, and the pause menu allows the player to continue, but without needing to worrying about what is in the game world. It is also where tasks that take longer time to accomplish are located.

The Sheikah Slate feels like a separate space than the pause menu. It is a game object, but it also does not share exact information that is seen in the on-screen infographics menu. The pause menu, however, vaguely feels like an extension of that infographics menu due to the health indicator remaining in the exact same place. The Sheikah Slate, then, can be seen as either zooming into the game world (because it is a game object that hangs off of the player's belt) or a separate space. The pause menu feels like an extension of the menu layers.

The interactions with items, through the infographic screen may show some parallels with how items from the item menu can be interacted with as well as other game mechanics. The amount of freedom to drop items, pick-up items, and the limit of space in the inventory may give hint to what interactions are possible in the game world. These give hints about how the player may be able to interact with other objects, while using the same logic of button-presses.

In menus mentioned earlier, it is notable that menus have labels for what button to press to select that option. This goes to show that not all menus, of those attached to buttons, are interacted with by using arrows and a selection button. The map is also interactable in a free-form (not limited to a grid). This game focuses on a dance between all of the buttons on the controller. If approaching this game from the perspective of following the games created for

handheld devices, this main menu is different. The buttons of the Switch console and what options are available pose an invisible menu. The actions and modifications of actions within this game are on a menu within the controls, beyond the basic movement buttons and basic interaction and cancel button (the A and B button purpose of a Gameboy)

When approaching the menu while knowing nothing about the game it, at a first glance, can be confusing. After understanding what, why, and how the items are interacted, it is possible for the player to understand what the game is about. The game offers freedom and using creative thinking to solve puzzles and navigate the map that is mimicked in the menu system. The level of customization from the inventory and task list promotes a sense of creativity and problem solving. The rhythm and dance in the menus are chaotic or free-formed with some grid-like movements to balance the interactions. The movement along the grid utilize different sticks and buttons to move easily between the different levels of menu. These controls used to navigate the menu system and visual presentation (instructions for controls while using the menus) are mimicked in the player's movement while fighting bosses and other in-game creatures.

It is possible to interpret the screen as this game's main menu, or the zoom-out view of the menu system. It is a single, united space between the focuses of the hierarchy of the menu system. The Sheikah Slate is viewed on the player's character and has a role in the story, the Pause Menu is represented in the health indicator, and the menus for controls and quickly modifying the actions are represented on the screen through icons and labels. This menu system is a layer that is intertwined, yet on top of the game world. It is useful, but does not take up too much of the player's time, such that, the player can focus on the action. On-screen menus build on top of the game-world without removing the player from being present in the game-world. The Pause Menu and Sheikah Slate can serve as a paused space when the player feels a need to

pause. Movement between menus are mimicked during gameplay and provide a physical feeling of connection between menu and game. Together, this menu system aids the action and supplies the player with the experience and knowledge needed to understand how to interact with the game-world and what the purpose of play is.

Animal Crossing New Horizons (2020)

Console: Nintendo Switch

Title Screen

The title screen contains the options to enter the save file or to modify the save data through two different button clicks. Press A to enter or press the – to access the game data Settings.³⁶



Figure 55 "Animal Crossing New Horizons" Title Screen

³⁶ There is only one save file available per Switch profile and one game-world per Switch console. Meaning, multiple save files and characters will interact within the same game-world.

Introduction Menu

“Press A [to enter]”, boot-ups and starts the game. It will open up to the game-world introductory menu (non-interactable). The narrative of this menu takes the form of an announcement from Isabelle (NPC). She provides the player with basic information: the island name, the date and time³⁷, visitors (NPCs) or current events that may be taking place on the island. This menu concludes with a farewell.



Figure 56 “Animal Crossing New Horizons” Introduction Menu, Date and Time



Figure 57 “Animal Crossing New Horizons” Introduction Menu, Current Events



Figure 58 “Animal Crossing New Horizons” Introduction Menu, Farewell

³⁷ The game follows the internal console calendar.

Options

Alternatively, instead of booting up the game, it is possible to access game-related settings. The options story dialogue narrative is presented by Tom Nook (NPC). He appears in-character as he presents the options through a simple narrative. This sequence of dialogue must be played through before the player can access the menu. Three options (Move to a new island, Save Data, Island Backup) relate to save data. Nook Link is for in-game effects (online services related to custom designs).



Figure 59 "Animal Crossing New Horizons" Tom Nook Options Story Dialogue pt. 1

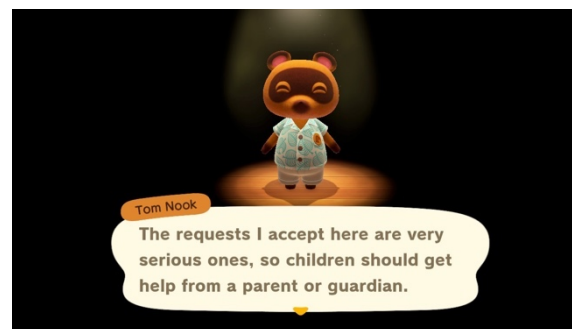


Figure 60 "Animal Crossing New Horizons" Tom Nook Options Story Dialogue pt. 2

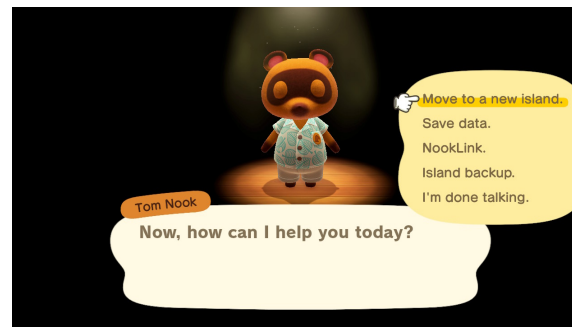


Figure 61 "Animal Crossing New Horizons" Tom Nook Options Menu

In-Game Menus

Nook Phone (Button)

The LR button opens up the Nook Phone (in-game), that is a mobile phone that contains applications as its options. This menu of options each present different game mechanics. These applications, or options, are listed below. The numbers correspond to the position of the icons, left to right, top to bottom and the table is divided into page one options and page two options.

This is the final appearance of Nook Phone applications, including the DLC application.

Page 1

1. Pro Camera	2. Nook Miles +	3. Critterpedia
4. DIY Recipes +	5. Nook Shopping	6. Island Designer
7. Custom Design	8. Map	9. Happy Home Network

Page 2

10. Passport	11. Best Friends List	12. Chat Log
13. Call Resident	14. ! Rescue Service	15. Island Life 101



Figure 62 “Animal Crossing New Horizons” Nook Phone Menu, pg. 1

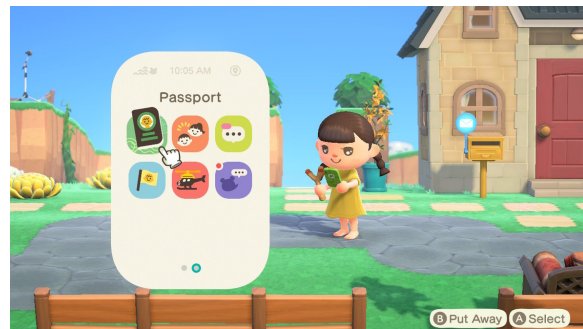


Figure 63 “Animal Crossing New Horizons” Nook Phone Menu, pg. 2

Bag (Button)

The bag (Figure 64) is an items menu. It contains items that are always available, a menu for bells (in-game currency) and the clothing menu. It is a pop-up menu with a table of icons that represent in-game objects and two additional pop-up menus: the bells menu, and the clothing menu.

The bells menu displays the number of bells (in-game currency) that the player has. When selected, it contains options to replace some or all of the amount as an item in the bag. This menu turns the currency into an interactable item.

The clothing menu is where the player can access the list of current clothing items being used. It allows the player to move clothing items between the bag menu and the clothing menu.



Figure 64 "Animal Crossing New Horizons" Bag Menu



Figure 65 "Animal Crossing New Horizons" Bag Menu, Bells Menu Option Selected



Figure 66 "Animal Crossing New Horizons" Bag Menu, Clothing Menu Option Selected

Tool Wheel (Buttons)

The Tool Wheel provides access to tools that are held in the Bag menu. It is accessible using the left controller's arrow buttons.



Figure 67 "Animal Crossing New Horizons" Reactions Wheel

Reactions Wheel (Button)

The Reactions Wheel provides access to performing a reaction. These options are selectable from the Reactions Menu, available by pressing the Y button.



Figure 68 "Animal Crossing New Horizons" Keyboard

Keyboard (Button)

The keyboard allows the player to chat with other players during multiplayer modes. It adds a speech bubble over the player's head with the entered text. It provides no in-game effects.



Figure 69 "Animal Crossing New Horizons" Speech Bubble From a Visiting Player

Save and End (Button)

The – button allows the player to save the game and return to the title screen. This closes the game-world.



Figure 70 "Animal Crossing New Horizons" Save and End

Resident Services (Building)

Residents Services is a building with two NPCs as the two main options. Each NPC contains lists and sub-lists of options for the player to either interact with the game-world or learn about statuses related to other NPCs or the game-world. These menus are presented through dialogue. There are additional menus that are opened by interacting with in-game objects. These open additional pop-up windows with tabs and lists.



Figure 71 "Animal Crossing New Horizons" Resident Services Object Menu

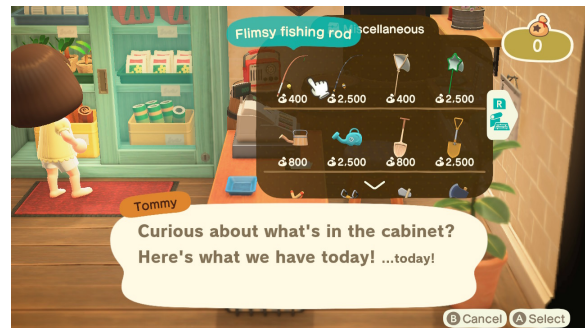


Figure 72 "Animal Crossing New Horizons" Shop Object Menu with Tabs and Lists

Shop (Building)

The shop is a building with submenus and options that are interacted with from game-objects (items and NPCs). Additional menus may appear in dialogue or as a pop-up window with tabs and lists.



Figure 73 "Animal Crossing New Horizons" Shop

Tailors (Building)

The Tailors is a building with its main options being the NPCs, the objects on the floor space of the building (objects on a plane), changing room (full-screen menu), and the back wall (objects on a plane).



Figure 74 "Animal Crossing New Horizons" Shop Changing Room Full-Screen Menu

Museum (Building)

The museum is a building contains all of the donated fossils, fish, and insects (items). This menu's tabs are presented as rooms. Blathers (NPC) presents options through a dialogue menu.

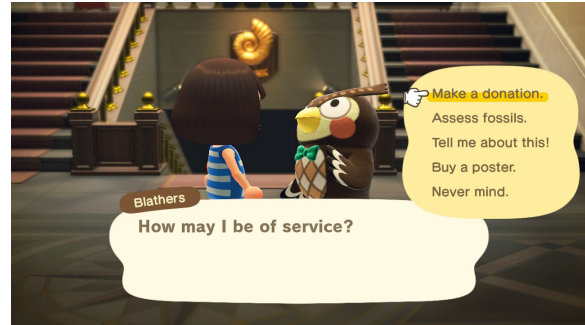


Figure 75 "Animal Crossing New Horizons" Museum Dialogue Menu

Additional NPCs (Game Objects)

There are some visiting NPCs that present different game mechanics and their respective menus. These menus are presented through dialogue.



Figure 76 "Animal Crossing New Horizons" Interacting with NPCs in the Museum

On-Screen Widgets (Screen)

A map, and date and time are available for quick-reference. These can appear or disappear depending on gameplay and player settings. Depending on the player's location, such as the Shop or Tailors, an icon with the player's current on-hand currency may appear.



Figure 77 "Animal Crossing New Horizons" Gameplay with On-Screen Widgets

Loading Screen (Narrative Menu, Screen)

A loading screen may appear before certain actions, such as entering or exiting a building, and traveling to Mystery Islands.

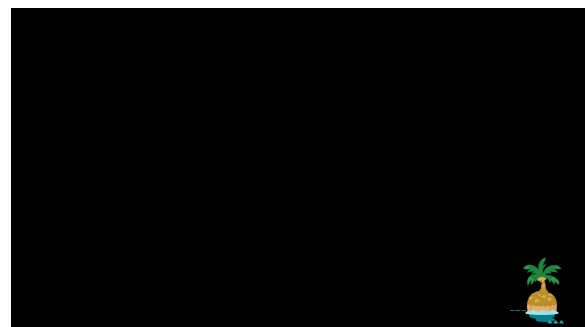


Figure 78 "Animal Crossing New Horizons" Loading Screen

Interpreting the Menu System

The menu system appears to revolve around two areas: (1) Interaction (and modification) with the game-world, and (2) Mechanics through (a) Nook Phone and (b) game-world object menus. Alternatively, the highest-level menu hierarchy can be outlined through the game controls map (Figure 45). Gameplay appears to center around interaction with the game-world, with all other menus assisting these interaction-based menus. These interaction-based menus are the bag, tool wheel, interaction wheel, and keyboard.

Basic gameplay is interaction with objects, such as placing items, touching objects for special effects, and collecting insects or fish. Interactions can be modified or defined according to what tools the player is using. This is understood through the Tool Wheel, Pockets, Reactions, and Chat menus. The value of these options is indicated by their placement as in the highest-level hierarchy (immediate location through the hardware buttons) These actions are generally immediate, with effects that can take days to complete.

The Nook Phone is placed within the story's narrative and can be considered a mechanic just as the game-world objects in a basic sense that these all add to the basic gameplay mechanics from the basic interaction. The options within this menu all take time to load or for any in-game effects. The loading time and the effects of actions that are available from options found in the Nook Phone are longer lasting.

Building names and their interiors are a menu titles and their options, presented on a plane and requiring interaction with game objects and/or NPCs. The time and space of entering a building changes the time-value of these mechanics. The player is forced to travel within the game world to access these menus. These buildings are always present. NPCs that are not part of

buildings³⁸ provide additional menus, each NPC with its own game mechanic. There is an additional element of time in the form of random occurrence.

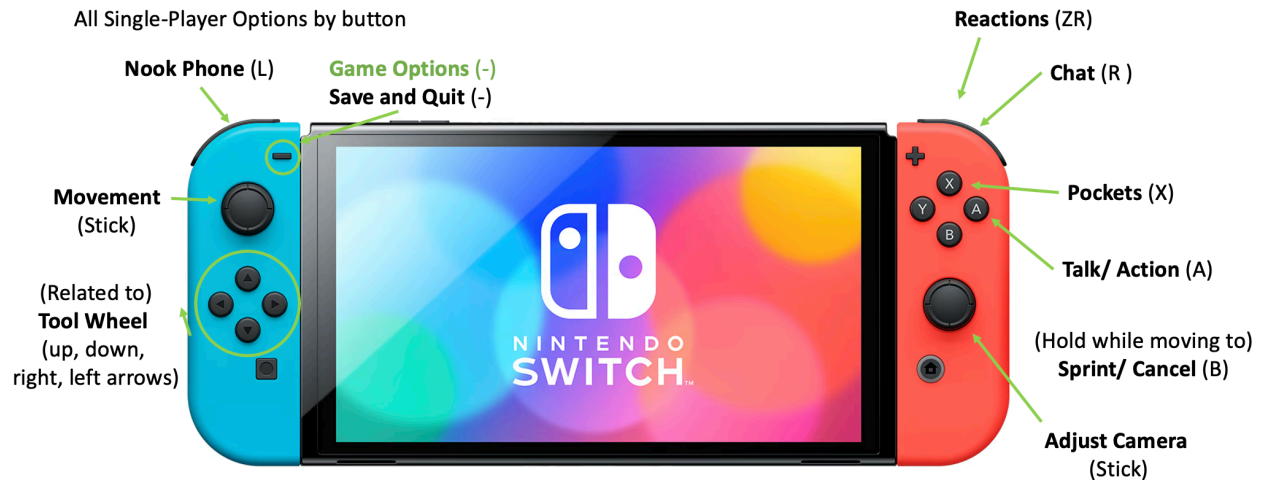


Figure 79 Animal Crossing New Horizon Game Controls Map

There is no single menu to find all of the information needed to play the game. A list of controls and placing it within context on a map is the closest to an index of menus that this game has.

The game time centers around the internal calendar of the console. This game cannot exactly be binged in one long sitting to finish the main story. Events are tied to time. Basic interaction and basic modification of interaction are the high up on the accessibility list since these are directly tied to a physical button. The rhythm of using the menu system isare potentially at walking tempo. The modification of interaction is viewed over the screen and shares the space of the game-world. The interaction-based menus have possibilities of user-customization. The selection of items and tools are limited, but the order in which the player

³⁸ There is one NPC, Redd, that runs a shop, that is a menu as a building, that appears randomly.

makes decisions and from where the player makes decisions is up to the player. There is some sense of improvisation within the tempo of gameplay and within these interaction-based menus.

Gameplay mechanics and the purpose for playing are all tied to the game's main story. After the game's main story is finished, the story continues. Because it is tied to time, gameplay could continue indefinitely. As we see from the menus that represent gameplay mechanics, these menus are not the easiest to access. These take time to access and use. Using these brings the time and space of the screen to these areas. The player is able to focus on certain mechanics, one at a time.

The focus on action (and modifying action) is a theme in the menu's narrative. It is supported by the presentation of these actions within buttons found in the controller. The controller presents a menu and focus on the interaction actions with the game-world. Some action and decision making are stuck in a time-loop. These actions are forever reoccurring either involuntary or purposeful. The menu system focuses on actions within the game world and uses other menus as support. These menus appear in a different sense of space, as if gameplay is split between action and planning, or action, and the menu system. There are parallels between the flexibility and structure of the menu system, gameplay, and the game's story. The focus and structure of the menu system indicates to the player what gameplay that the game is focused on. The menu system is organized in lists to group actions based on time.

Katamari Damacy Reroll

Console: Nintendo Switch

Title Screen and File Select

The first menu is the file select and after the title screen to boot-up the game is displayed. The file is selected by moving both sticks forward to “roll-up” part of the “Namco” letters.

In-Game Menus

All three menus include instructions at the bottom of the screen and icons in the top corners of the screen indicate that there are two other menu tabs. All three menus have game-objects as options. Movement between the three menus, as indicated by animations, is orbital.

Home Planet

After boot-up, the Home Planet is displayed. This menu is a globe and its objects are interacted with by walking the player’s character around.

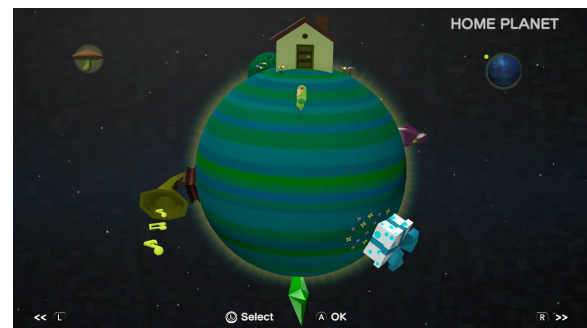


Figure 80 “Katamari Damacy Reroll” Home Planet

The Earth

The Earth menu is a globe where the player’s character flies around to interact with the game-objects. Each object represents a level within the game-world, that the player uses to enter the game world.

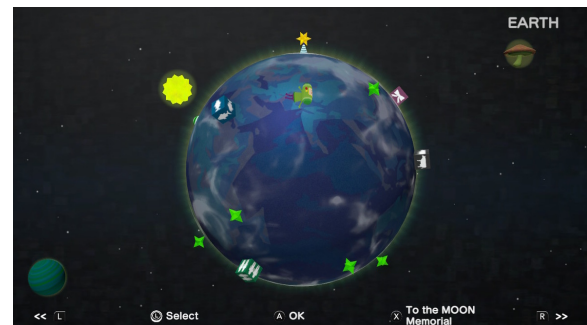


Figure 81 “Katamari Damacy Reroll” Earth

There is an option to travel to the Moon Memorial’s Movie Theater, that consecutively contains the option to go to the Moon Memorial’s Sound Theater.

Game-World Levels

After interacting with a level on Earth and entering a level, there is an introductory menu (no options to choose from) to explain the rules of the level. During any level, there is an on-screen menu and a pause menu. The easily available controls are related to movement (moving the katamari around to roll up objects) and the pause menu's button.

Space Mushroom

This menu is a mushroom that rotates on an X-axis. There are three views (Side, top, and bottom) of the mushroom that assist the player to find a desired player character. The menu option objects are the character selections.



Figure 82 “Katamari Damacy Reroll” Space Mushroom

Menu System Table

Table 29 "Katamari Damacy Reroll" In-Game Menu System

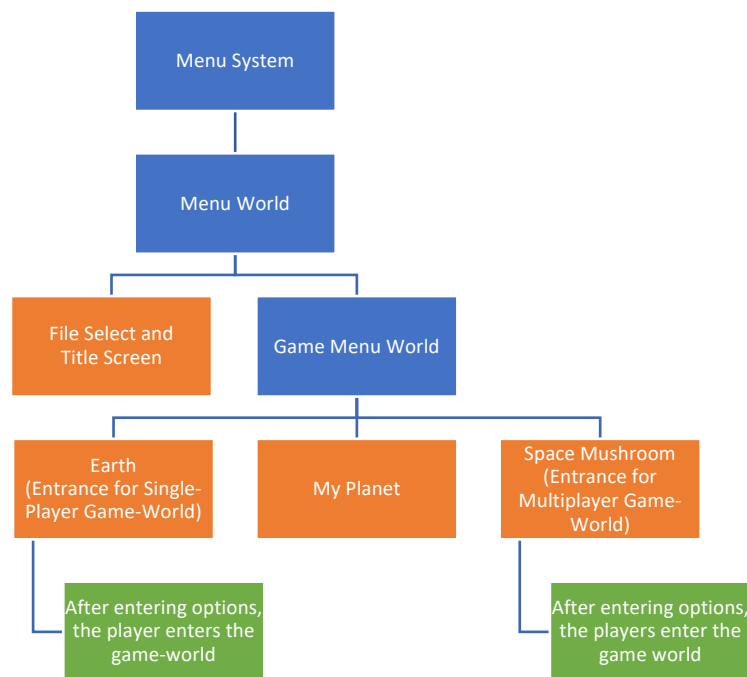
Menu Name	Earth		Space Mushroom		Home Planet
Type of option	Single Player Game-world		Multiplayer Game-world Player selection for two-player games		Save data settings, Character Customization, Game Achievements, Game/ Console Controls and Settings
Description	Globe with icons of stars and other objects that represent level selection options		A giant mushroom with the main character and cousins running around		Globe with various icons that represent options
Options	Level selections: <ul style="list-style-type: none"> • Star 1 • Star 2 • Star 3 • Star 4 • Star 4 • Star 6 • Star 7 • Star 8 		<ul style="list-style-type: none"> • Prince • Ace • Colombo • Dipp • Foomin • Fujio • Havana • Honey • Ichigo • Johnson • June • Jungle 		<ul style="list-style-type: none"> • Kuro • Lalala • Marcy • Marny • Miso • Nickel • Nik • Odeko • Opeo • Peso • Shikao • Velvet
	Menu Name	Moon Memorial: Movie Theater			
	Options	List of cut-scenes by level			
	Menu Name	Moon Memorial: Sound Theater ³⁹			
Options	List of in-game music				

³⁹ Tertiary main menu option that is only entered and exited through the secondary main menu option, the Moon Memorial: Movie Theater

Interpreting the Menu System

The game introduces a space, known as the Cosmos, that consists of the Home Planet, the Earth (and Moon), and the Space Mushroom. This Cosmos is a menu world because it is a dedicated menu space and gameplay is accessed through levels within this menu world. The invisible index and focus for the menu system is the Cosmos. This game is organized like a stadium in the sense that the game-world needs to be entered from an in-game menu-world.

Table 30 “Katamari Damacy Reroll” Menu System Overview



A straightforward list does not exist, but the menu system can be understood as its presentation in Table 27. There are only four available spaces of menu screens (represented in orange). The file select is available before booting-up the game and the game boots-up to the game-menu-world. The game-world (represented in green) is only entered after interacting with the game-menu-world. The Earth (not pictured) contains the Moon, as two menu screens within the Earth. The moon however, is one compartment within another, that is within the Earth.

This game lacks a sense of a global picture of what is going on as the player's view and screen space is always inside of a bigger picture. This lack of a single overview is due to one menu tab of the game menu world always being open with a feeling of other menus of equal size and importance off to the sides. The feeling of the three planets as the basic list of menu tabs is felt in the animation while moving between the three. There is a rotational (or orbital) movement in the animation when changing planet menu screens. It can give a sense of being on a planet within an orbit and the sense that these three planets are one list and a sort of main menu.

Each planet contains options relating to an area of the game. The Home Planet contains options relating to the player, player achievements, and game and console settings. The Earth contains options relating to playing the game (as a single player) and the Moon contains music and cut scenes that relate to game play. The Space Mushroom is dedicated to multiplayer game mechanics. The three planets are connected in an orbit (as provided from the animations between planets) in one space. The screen space focuses on one planet as a time as one planet is always visible. The amount of time and available interactions within each planet suggests time value that each planet holds a similar weight of importance when using each menu. The importance of gameplay is split between these three globes.

Movement between the planets use the L and R buttons on the console, that are located in the upper left and right corner of the console. These mimic the other two planet icons that are in the top left and right corners of the screen. There is a feeling of separation between the outside edges of the screen and console and the center of the screen. The top area is generally for movement within spaces, while the bottom and sides provide support. The location of information is mimicked during gameplay menus and on-screen information. The player character is always in the center of the screen as the planes move by. In the in-game menu-world,

the focus is in the center with additional information around the edges of the screen. In-game-world, the visual presentation is the same. The introduction to each level presents information in the middle of the screen. The player is in the center with the camera following the player (the player will always remain in the center of the screen). The information needed for reference appears around the edges of the screen. The pause menu (the only menu in the game-world) appears in the center of the screen.

The path to find options within the Home Planet and the Earth can follow an x-axis, a y-axis, or a tennis-ball like configuration. There are different paths that take the player to follow a line of like-options and additional options to the sides. The selections are either made with a cursor, but as an object. The plane of movement is free, but restricted to gravity or the surfaces of the plane. The same movement applies in the game world.

On the Space Mushroom, the player uses a little mushroom to make selections and on Home Planet and Earth, the player moves the player character around to interact with objects. These objects within each world makes up a list. Each world, then, is a list and thus a menu. The simplicity of this menu is hidden by the player being forced to interact with the menu as menu options are objects on a plane. This plane does not follow a ninety-degree angled grid. Interacting within options in each planet are not all simple lists either. These options within each planet can be played with. The menus and their options are playful and fun to interact with that the player could easily spend time playing in this menu world.

Actions within the menu world are intentional with how the rhythm of actions are generally long beats. There are some shorter beats when exploring the worlds and making selections. Entering worlds and making intentional decisions, such as entering the game world or changing worlds, have a slower rhythm of longer beats. When the player is not moving the

selection cursor or the prince, there is always some sort of movement. On the Space Mushroom, the mushroom rotates on the X-axis and the available characters are walking around. On Home Planet, the prince will walk around, and on the Earth, the prince will fly around.

Of the in-game-menu world, only one world can be displayed at a time. The length of time that it takes to move between worlds adds value to spending time on each planet. The original game was intended to be simple and have fun. The player can play on the planets and have fun there. The decision-making and fun of this game is not restricted to the game-world. The menus within the worlds are interactable in a fun way and aren't restricted to one narrative of interaction. Interaction with the menus is open-ended with the exception of the basic options that control game-settings and console settings. In the game-world, menus open up an overlay window. Only one menu is available and is used for entering, pausing, and exiting the game world.

Katamari Damacy Reroll is a simple stadium-type game. The primary menu tabs are presented as world and are self-contained. These provide a sense of togetherness as the player decides to move between the three main areas of the game. The visual presentation of the menu system can cause anxiety, because the global view of this system must be felt through animation and movement, rather than a single visual. The presentation of options as game objects, the menus's windows as planes, and interaction with the options are a playful experience within its own use, outside of gameplay. The movement and interaction in both the menu system and the game world are mimicked in their simplicity and type of movement. The player is able to take experience from play within the menu world and use this within the game world. The menu world emphasizes an idea of having fun while utilizing simple controls.

PART 5: CONCLUDING IDEAS

The Role of a Menu System's Narratives

The menu system is a space within videogames along with the spaces inside of the game (as a program): before and after the game has booted-up. This menu system's spaces can exist as a layer over the game-world or as its own space in another plane or dimension inside of the game or within the physical hardware. A menu can be digital, within the game, or physical, from the console (hardware). Menus can be accessed from either physical hardware or from game-objects. Menus within menu systems are either inside of the game-world or along-side the game-world. The menu system exists in both digital and physical spaces as it connects the physical space of player to the digital space of the player character in the game-world.

The narratives of menu systems are found in the relationships between options and information of interaction in the game world, and making decisions. The menu system often begins when the title screen is displayed and provides the instructions to either enter the game or open further menus. These initial interactions with the game have already begun a narration and afforded the player what the primary button for basic interaction is. The title menu and file select teach the player the basic interaction controls of movement (selection), and interaction (selecting). This area before the game boots-up is part of the narrative's introduction.

The organization of menu systems, though its organizational hierarchy and significance of what its contents are, tell the story of action and tools. Hierarchies indicate value and what its content are indicate further action within the groupings. How these menus are interacted with often mimic how the player moves and interacts with the game world. These menus, as an interactable world teach the player the basics of movement that the player can then use in the game world. The player can then learn, through trial and error, how to play the game, by

interacting. The visual presentation of menus within the single screen of the menu help to organize time by action. It delegates time to what action and what types of action that the player should focus on. It affords value.

Menu systems are made up on spaces that are presented and restricted to digital and physical presentation. These spaces appear along a timeline as the entire system cannot be viewed and interacted with simultaneously. The movement inside of menu systems, including the visual movement explain relationships between the screens, and spaces of menus and options. The rhythm and dance of moving between spaces in the menu system is a form of play. These movements demonstrate relationships between actions and options within the game. The dance that the menu system provides is repeated in both the game console and in the game.

Menu systems have increasingly become complicated as games become more complicated. There is a relationship between menu systems following a text-based system or a visual to object-based system and the type of game play. The complexities of games and menu systems are becoming more direct to provide particular experiences, rather than leaving room for the player's imagination. The menu system's visual presentation and visual movements provides structure to, relationships between, and reasoning around the actions of gameplay. The action between menus provide information and experience for the player to understand action in the game world. The menu system provides information both visually and in movement that connects the player to the videogame.

A menu system's narrative has a knowing of art, because it knows the game that which the art in the game comes from nature. A game is built on the art of decision-making. The amount of control, restrictions, freedom of choice, and the idea of beginning, middle, and end, could pose a problem, but are not part of the art of decision-making. This art of decision-making

has more to do with the journey of making the decision. It is a cyclical relationship between what comes from and between nature, humans, and technologies (created by humans). A creation has a possibility to come from art and be transferred back into nature. It is what comes from human nature a technology or can be considered part of nature, as humans are part of nature.

As a narrative, menu systems display and restrict the player's interaction with the game world. Comparing the menu system with its videogame is as comparing a narrative with its art. Narratives considered as something from the human mind, but the art of decision-making as coming from nature. Narratives organizes time and imposes a structure on time, which is found in art. The menu system's narrative organizes action and time within the art of decision-making in a videogame.

Summary of Case Studies

The type of menu system, or its format is a demonstration of how the game is played. This format of menu system forms the type of action and dance of action in a game. It should not be restricted to the genre. This idea of menu systems being able to categorize games as a genre needs the support of an extended game list. For the case studies in this dissertation, the chart below will simplify their general menu system forms.

Table 31 Case Study Menu System Summary

Title	Menu System
<i>Pokémon Leaf Green</i>	Menu Button-Centered
<i>Pokémon Go</i>	Mechanic-Based
<i>Pokémon Violet</i>	Notifications and Multi-Menu- Centered
<i>Zelda: Oracle of Ages</i>	Infographics, Menu, and Map-Centered
<i>Zelda: Phantom Hourglass</i>	Infographics, Menu, and Map-Centered
<i>Zelda: Breath of the Wild</i>	Infographics, Menu, and Map-Centered
<i>Animal Crossing New Horizons</i>	Tool and Action-Based
<i>Katamari Damacy Reroll</i>	Stadium-type

The individual hierarchies of the menu systems in these games clearly point out the objectives of action. The action of the game, whether complicated or simple, is matched in the functionality of its menu system. The menu system knows the game that it is provide a framework for and is able to present the main actions in a way that is application to multiple videogames. The forms of menu systems are not restricted to the game, but rather that the game is restricted to the menu system. A menu's options are sometimes text based and sometimes object based. The movement in the visual presentation of a menu system presents a comprehension of the game's actions. The visual presentation of a menu system typically matches the game-world's presentation that supports how the action can be comprehended by the player.

The menu system in the *Pokémon* main series games originally centered around a single menu. *Pokémon Leaf Green* demonstrates a key point in the single-menu centered menu system. The games added features and placed these in a second menu located in the touch screen of the Nintendo DS and 3DS consoles. Beginning with the development of the mobile game, *Pokémon Go*, and the handheld console game *Pokémon Violet*, the original main menu has been divided among different buttons. This represents the different areas of gameplay and the change in gameplay. Gameplay and game mechanics have expanded to allow gameplay to focus outside of the original menu set-up. The console itself has become the unifying menu, allowing the player to feel closer to its options as these options have expanded and become more complicated. Different game mechanics, as expressed through different areas of the console, can be focused on more closely as types of interaction with the game-world is no longer limited to the basic menu, interact action and exit actions that we understand from the Gameboy's Start, A, and B buttons.

The main ideas of gameplay in the *Zelda* games have remained the same: it is about adventure and solving puzzles. The main idea of the menu system is mostly remained the same as it centers around on-screen information, an inventory menu, and a map menu. The availability of performing actions has changed as the game has become more immersive. The opportunities of action within the menu system has changed to represent how gameplay is performed in the game world.

Animal Crossing New Horizons's gameplay is focused around interaction. Menu system has a focus on tools as modifying actions with the game world's environment. It continues to provide easy access for higher value mechanics and the other areas of the game. These other areas of gameplay mechanics assist the menu system's focus on actions.

Katamari Damacy Reroll places the player in a menu world. Entering the game world has intentionally and freedom to enter the game world with different rules. It also promotes a light-hearted approach as the menu system itself presents itself with game-like interactions. It is a game that is focused on viewing the game as the interactions with it are relatively simple.

Further Exploration of Ideas

Menu systems and video games can be studied and approached from various disciplines, depending on the interests of the reviewer. This dissertation introduces some interdisciplinary perspectives to studying menu systems. The ideas in this dissertation are general and can easily be discussed further. The menu system is a narrative and environment that teaches the player and provides experience within itself and as a connection between the player and the game. The narrative, environmental, and play aspects of a videogame can bring together different disciplines to make videogame studies a multidisciplinary study. The philosophies of the narratives and aesthetics of menu systems come from within human nature and how we understand the world that we live in. Menu systems are tools and a story of action. This dissertation appears to focus on how a menu system is presented and how the interaction is felt with relation to playing the game and understanding the goals of the game. There is less about choosing what goes inside of it (outside of a simple summary that what does inside demonstrates the goals). Continued studies after this dissertation could take continued looks at the different disciplines already mentioned as well as adding other disciplines and areas by either backtracking or adding on to what has already been discussed. To expand, the study methods found here can be applied to a larger list of game and add other elements that were not already discussed. An exploration of how or if menu systems have changed from the present time since the earlier videogames could expand upon the idea of categorizing menu system types.

Expanding the case study list expands the variety of types of menu systems and can solidify the need to study menu systems. There is a larger variety of menu systems than is seen from the few case studies in this dissertation. This study could be continued with other games to provide a larger context of possibilities and boundaries of menu systems and their narrative. Menu systems provide an important role in videogames and can provide further insight to any argument pertaining videogames. Video game genres, as it comes from categorizing narratives, places the game's narrative as more important than the play aspect. It is possible that the menu systems can be understood as a genre, in regards to gameplay styles. This would come from the menu system's narrative, rather than from the game's story's narrative.

An expansion of ideas that are applied to the study of menu systems can include directions of menus. This could expand the idea of a video game as a motion picture or a sequence of events. The directions and locations of menus have been mentioned, but can be expanded to answer: to what does it apply to? The chapters of the game? The game as a whole? The location? The menus can be different from location, but does this also place the game in sections rather than as a whole. This would be similar to chapters in a book or parts of a symphony. These ideas that menus have direction and place in time relates these menus to their point in time within itself and within the timeline of gameplay and the game's story.

Evolution of Menu system

As technology has changed, it is possible to explore an idea that whether or not forms of menu systems have changed or if the visual presentation has changed. The changes in user interface have developed from basic text and lists, but it is nothing new. Augmented reality is relatively new, but the idea of interactable objects as menus is not new. Main menus have evolved with the game systems. Computers started as lines of code and eventually added UI of

folder, subfolder, and even tab menus. Whether the main options for the game are visualized as the computers of the past or doing away and moving back to real world inspiration of something like a toolbox with items to be interacted with, it is still a “main menu.” There is possibly a better term to call these, but it is still the basic initial tools. One example, *Job Simulator* (Play Station 5, Owlchemy Labs, 2023), like in *Katamari Damacy*, uses an object-based menu. It is interactable and helps the player to get a handle of the game, by presenting “risk-free” interaction. There is a nineteen-year gap between these games, the technology used in these games are different, but the basic idea of interacting with objects on a plane has not changed. The role of the player’s imagination in the changes in technology could affect a perception of what is actually the same, basic concept.

The visual, graphic aspect changes the perception of how one views a main menu. Within VR it is certainly possible to have an older main menu system that is folder based (with different views such as list and icon). But there is a larger idea of the main menu has the basic, core, system of organizing information for the game. This is not limited to genres, but how the menu is set up will differ.

The main menu, whether it is a list or older system (like a computer’s interface) or something within UI and the player needs to interact with objects that are available to the player, there is still a sense of the main menu. Understanding the concepts and goals of the game before starting a “level” or a mission. In that sense, even if the programming is completely different, the goals and function of the main menu is still there. The folder design of a computer takes it inspiration from the real world to begin with, so with virtual realities, it is a return to real world organization techniques. The main menu’s functions, whether it is decided to call it something like, be it a waiting room, pause menu, on screen menu, etc. it is from which the interaction

stems from. That is the main menu. *Katamari Damacy Reroll*'s menu system does not feel dated. It could prove useful to the gamification of interfaces in regards to interacting with and about technology, digital, and other physical systems.

The Role of Lives and Death

The role of lives and death is presented and reflected within menu systems. Menus have to accommodate the understanding that there may be game-lives and game-deaths and how these are incorporated into the game's story and narrative.

This idea of lives and death pose a narrative both within the story of the game and the use of the menus and what menu options are available. This topic could easily be studied in depth and relates to the idea of menu systems having narratives. This can also be reflected in save files, that are usually presented before the game is booted up. The save files are generally placed within its own area of menus and time within the running of the game as a program.

The general idea of lives, deaths, save states, and save files, will be reflected in how the menu system is set up. These also affect the narratives of the games and how the game is played. The decisions of the player with respect to strategy will differ based on how the functions of lives, deaths, save states, and save files work. These represent the ability to start over or redo decisions without necessarily needing to start from the very beginning.

Conclusion

The menu system of a videogame, as an interface, connects the player to the game. The menu system is a form of visual presentation within an interactive environment, but within restrictions of time and space. The hierarchies and contents of a menu system are not always displayed neatly and clearly. After the menu system's contents and purposes are identified, it is possible to understand the object and purpose of the game's play. Menu systems's narratives describe how a game is played and organizes possibilities of action, and teaches the player about how to understand what the game world affords, through mimicry of physical action (use) and values within the menu system's lists of options. There are parallels between the menu system's narrative and the game's story's narrative as the menu system is a representation of the game's goals and gameplay.

As a connection between the game and the player, the menu system must have an understanding of both of the worlds that the game and the player belong to. The game-world, is a world in which the mind can flourish without restrictions from the world of the player—the physical world. The physical world, however, is restricted by the mental world. The menu system reminds each world of their limitations, while connecting and knowing both worlds. The menu system is also a character, narrator, and tool, as it exists in both the story and the functionality of the game. The menu system also connects play, subject, and object. The available choices are narrated to the player through the menu system. Play is not about having choice, but about the action and decisions of choosing. The menu system guides the journey of the player through the game.

Narratives are forms that which the subject comes from nature. A narrative, places its subjects within an isolated portion of time that is easier for humans to understand. The subject

could be events, experiences or actions. The narrative of the menu system connects the actions and the story of the game so that it makes sense to the player. Narrative is limited to human nature and the reflection of art; it knows both the game and the human. The narrative of menu system within videogames comes from art and human nature and reflects back a world that imagines both nature and human nature, within the restrictions and self-awareness of its creator.

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ADDITIONAL IMAGES BY CASE STUDY

Pokémon Go Images

Title Screen and Log-in

These three images are the boot-up sequences before the game-world is loaded.

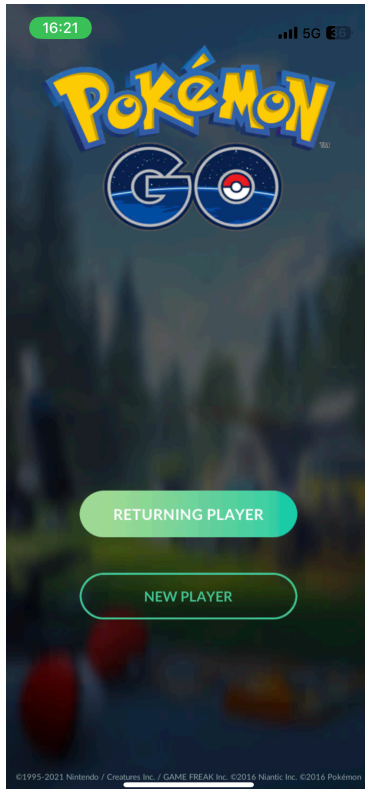


Figure 83 “Pokémon Go” Title Screen

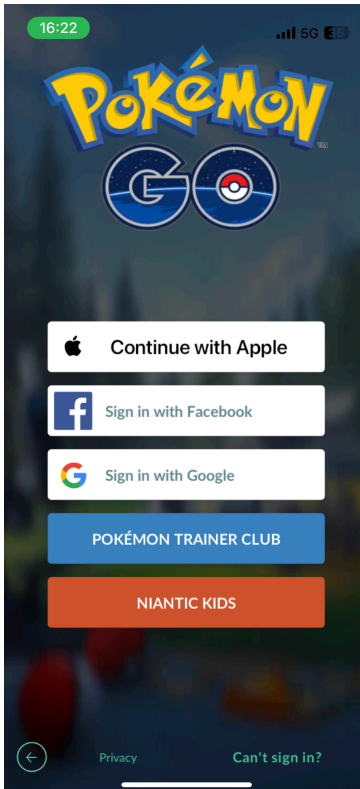


Figure 84 “Pokémon Go” Log-in Screen



Figure 85 “Pokémon Go” Loading Screen

Game World



Figure 86 "Pokémon Go" Gameworld

Weather Menu

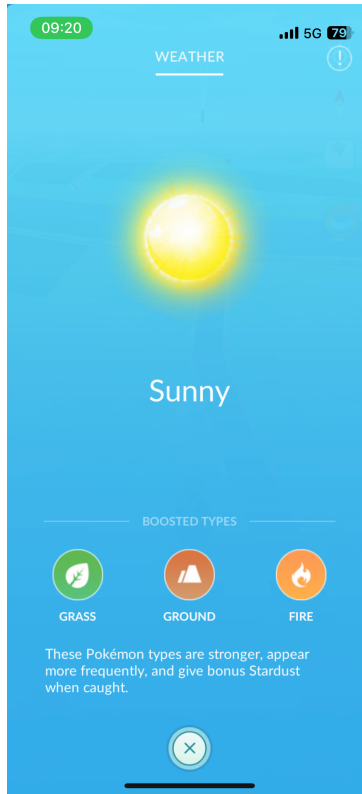


Figure 87 "Pokémon Go" Weather Menu

Routes Menu

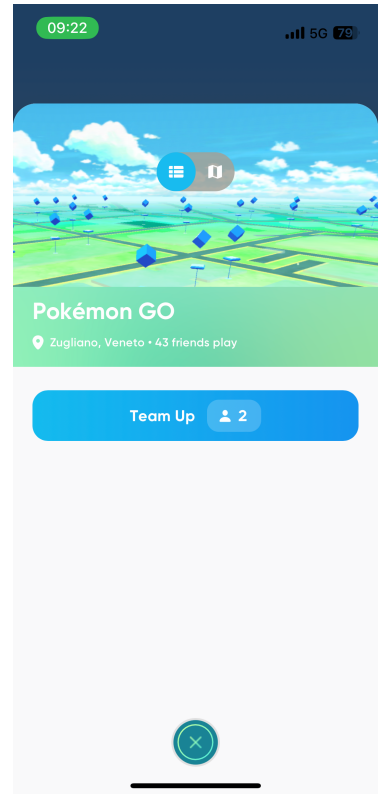


Figure 88 "Pokémon Go" Routes Menu

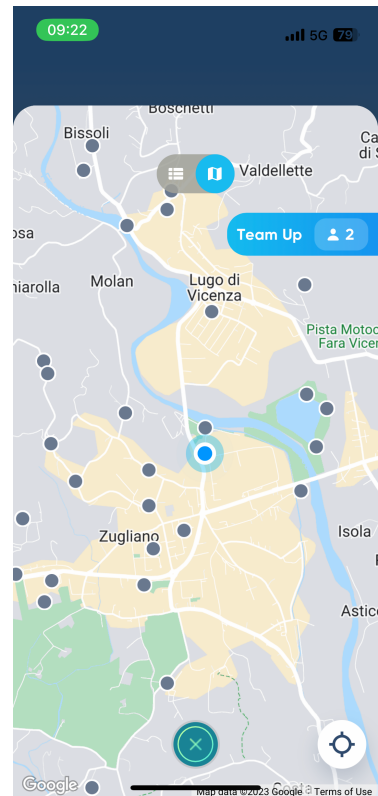


Figure 89 "Pokémon Go" Routes Map

Player Icon Menu



Figure 90 "Pokémon Go" Player Icon

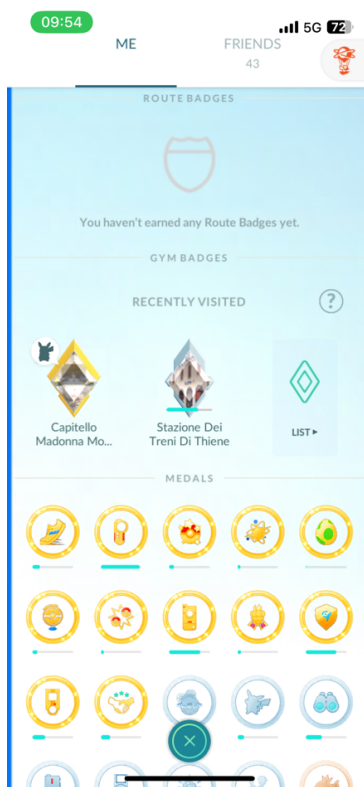


Figure 92 "Pokémon Go" Player Icon



Figure 94 "Pokémon Go" Player Icon



Figure 91 "Pokémon Go" Player Icon



Figure 93 "Pokémon Go" Player Icon

Note: Figures 90- 94 are sequential screenshots of this downward scrolling menu.

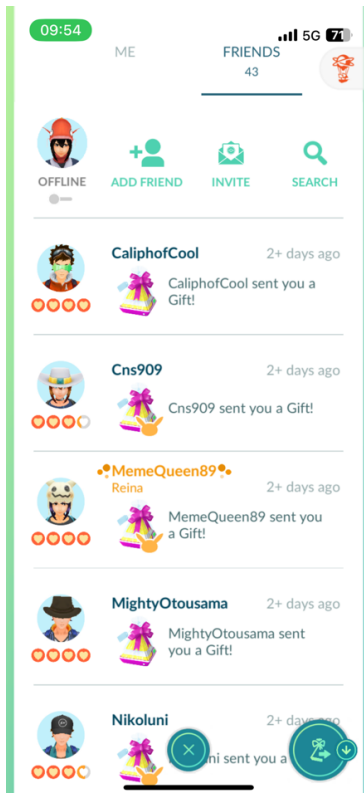


Figure 95 "Pokémon Go" Player Icon, Friends Tab

Note: The list in Figure 95 continues to scroll downwards for as long as the number of friends that the player has.

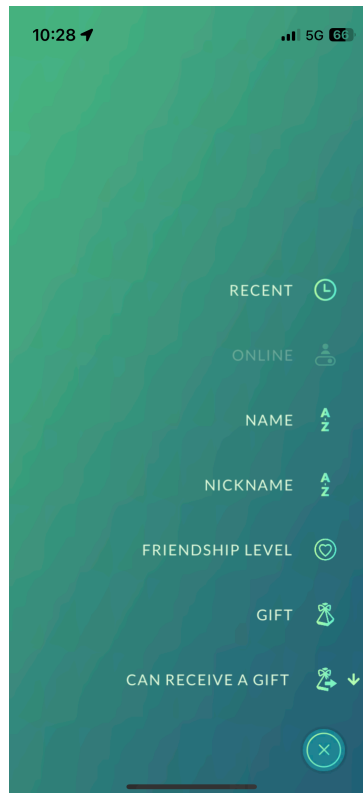


Figure 96 "Pokémon Go" Player Icon, Friends Tab, Sort Options

Note: This menu is accessed by pressing the blue circle icon in the bottom right hand order. It provides options to sort the list of friends.

Buddy Icon Menu



Figure 97 "Pokémon Go" Buddy Icon

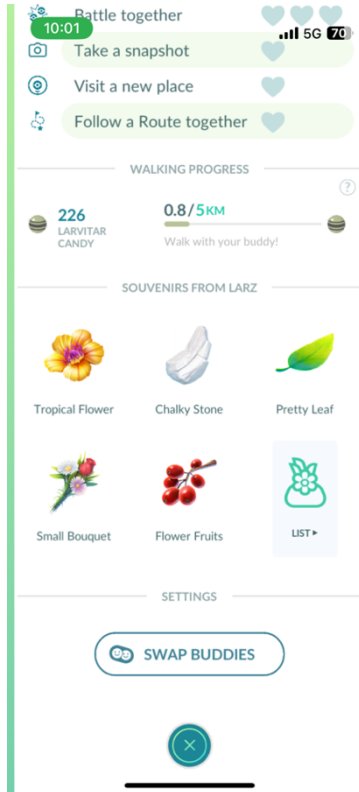


Figure 98 "Pokémon Go" Buddy Icon

Note: Figures 70 and 71 are sequential as this menu is downward scrolling. The top of Figure 71 overlaps the bottom of Figure 70.

Binoculars Icon Menu



Figure 99 "Pokémon Go"
Binoculars Menu, Pokémon Tab



Figure 100 "Pokémon Go"
Binoculars Menu, Raid Tab

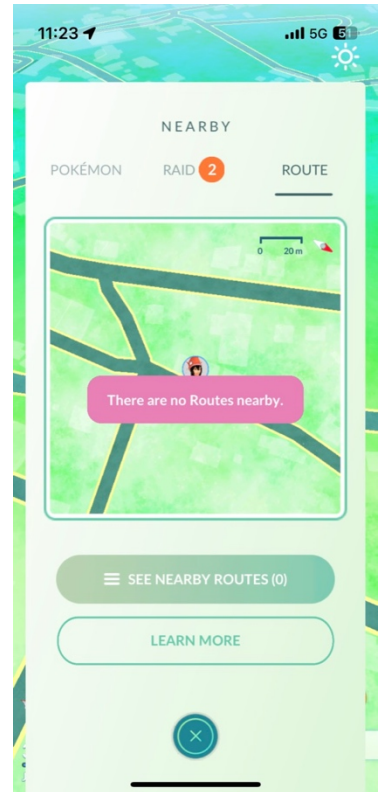


Figure 101 "Pokémon Go"
Binoculars Menu, Route Tab

Pokéball Menu

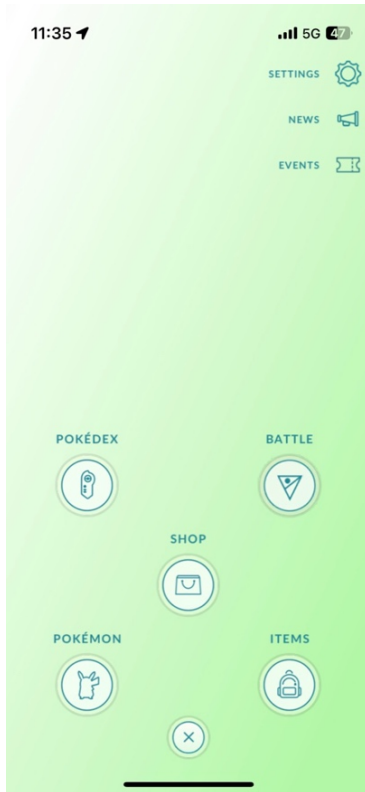


Figure 102 “Pokémon Go” Pokéball Menu

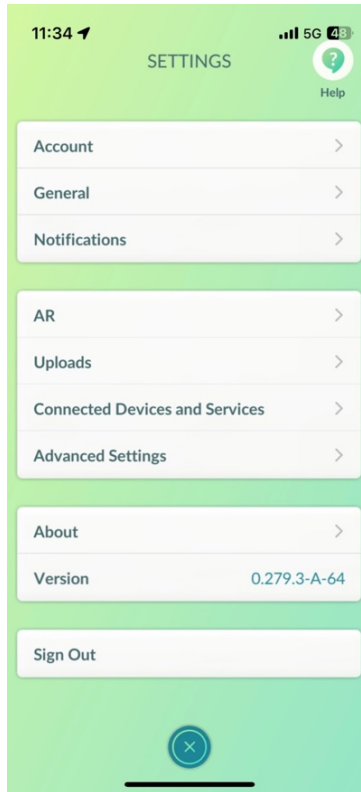


Figure 103 “Pokémon Go” Settings Menu

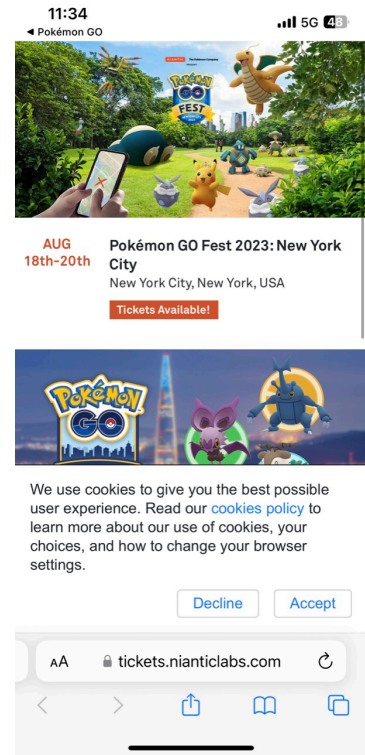


Figure 105 “Pokémon Go” Events Menu (External Application)

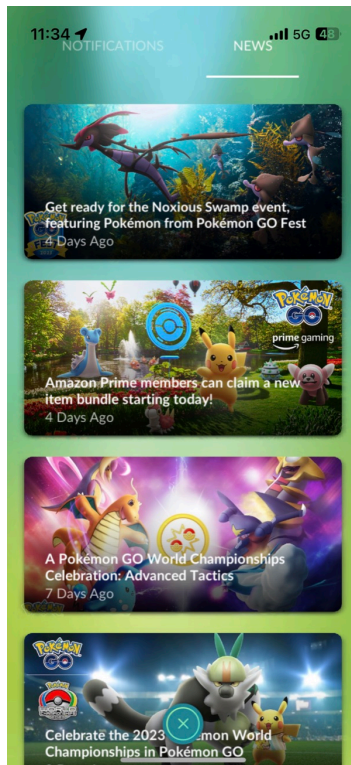


Figure 104 “Pokémon Go” News Menu

Pokédex Option

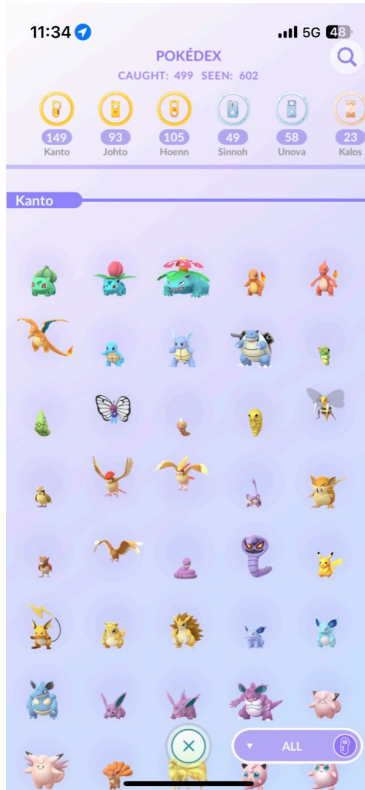


Figure 106 “Pokémon Go” Pokédex Option Menu

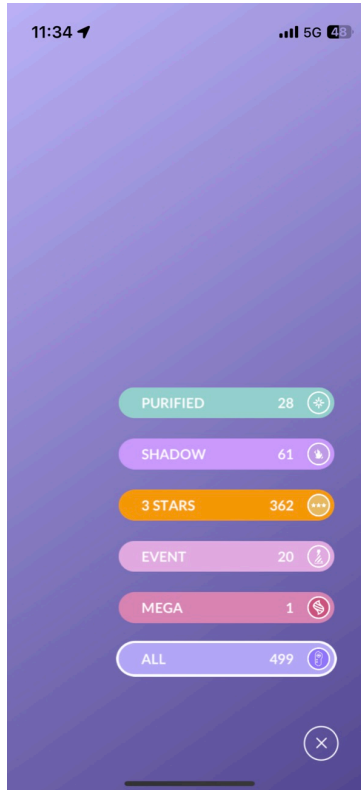


Figure 107 “Pokémon Go” Pokédex Option Menu Sort Option Menu

Note: The Pokédex will scroll downwards (not pictured) until the end of the list has been reached. There are currently 904 available Pokémon.

Pokémon Option

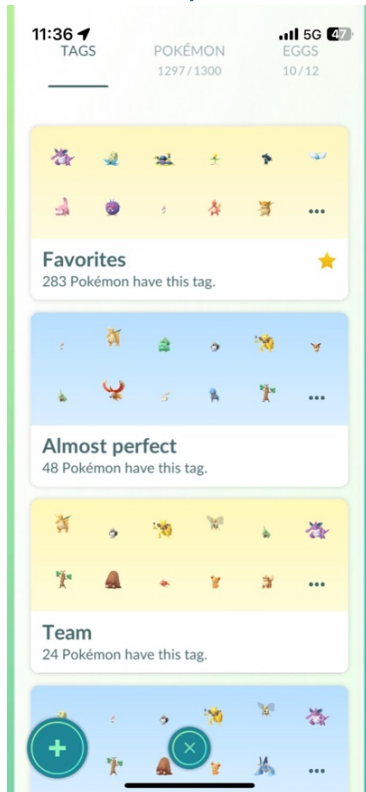


Figure 108 "Pokémon Go"
Pokémon Option, Tags Tab



Figure 109 "Pokémon Go"
Pokémon Option, Pokémon Tab



Figure 110 "Pokémon Go"
Pokémon Option, Eggs Tab

Notes: Figure 109 (1) Tags and Pokémon tabs will continue scrolling down until reaching the end of the list. (2) Each Pokémon may be selected to open its respective Pokémon Selection Menu (Figure 113)

Pop-Ups and Notifications

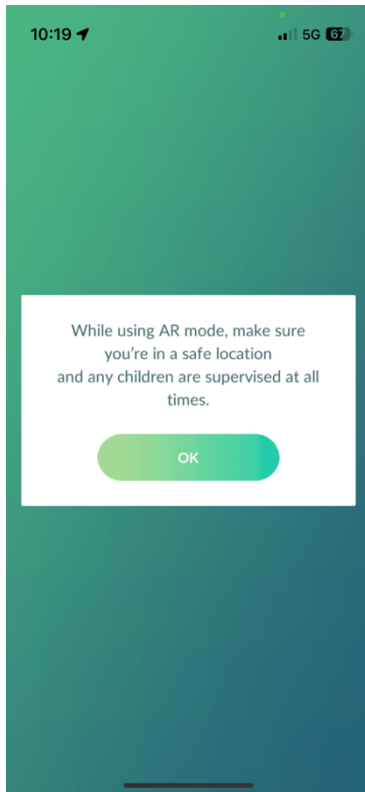


Figure 111 "Pokémon Go" Full-Screen Pop-Up Notification



Figure 112 "Pokémon Go" Gameplay with Interference Notification From Mobile Device



Figure 113 "Pokémon Go" Pokémon Selection Menu with Drop-Down Notification From the Top of the Screen

*Pokémon Violet Images
Credits and Title Screens*



Figure 114 "Pokémon Violet" Presented by Game Freak



Figure 115 "Pokémon Violet" Title Screen

On-Screen Menus



Figure 116 "Pokémon Violet" On-Screen Notifications



Figure 117 "Pokémon Violet" Notifications after Defeating a Pokémon.

X-Button Menu



Figure 118 “Pokémon Violet” X-Button Menu

Main Menu

Bag



Figure 119 “Pokémon Violet” Bag Option, TM Materials Tab

Additional Images By case study
Pokémon Violet Images
X-Button Menu

Boxes



Figure 120 "Pokémon Violet" Boxes Option, Party and Boxes Tab

Picnic



Figure 121 "Pokémon Violet" Picnic Menu

Poké Portal



Figure 122 "Pokémon Violet" Poké Portal Menu

Options



Figure 123 "Pokémon Violet" Options Option

Save

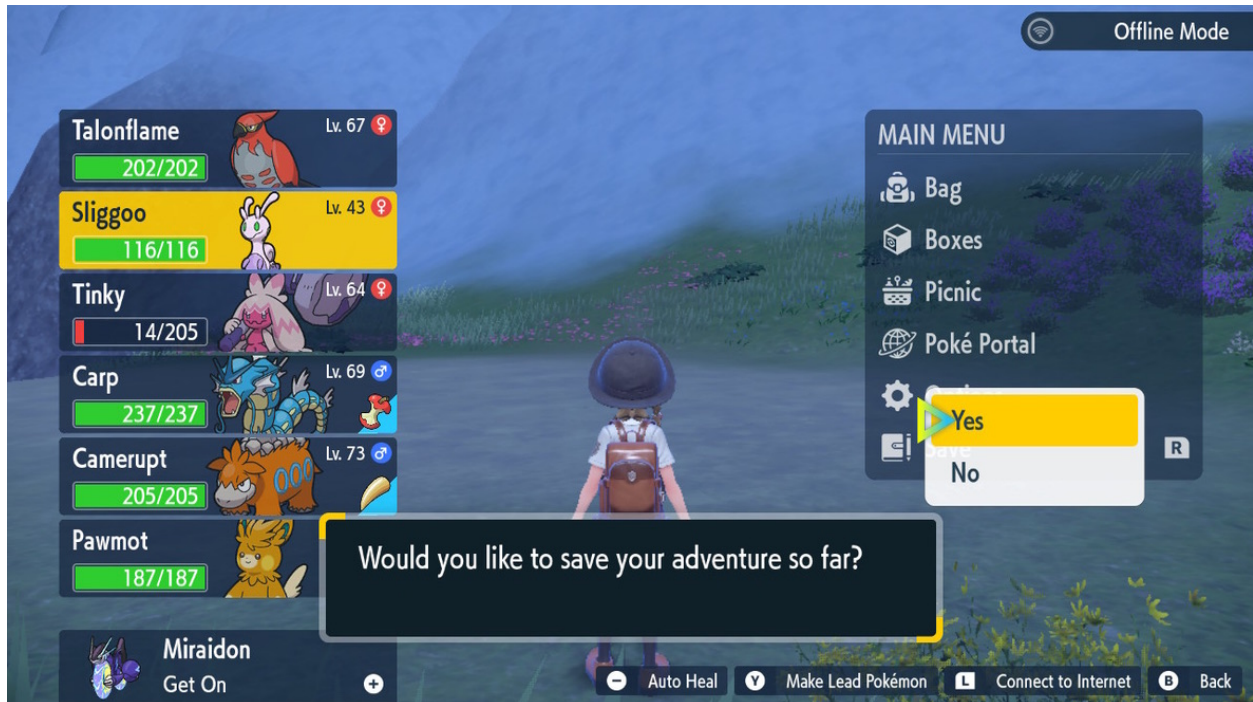


Figure 124 “Pokémon Violet” Save Option

Map

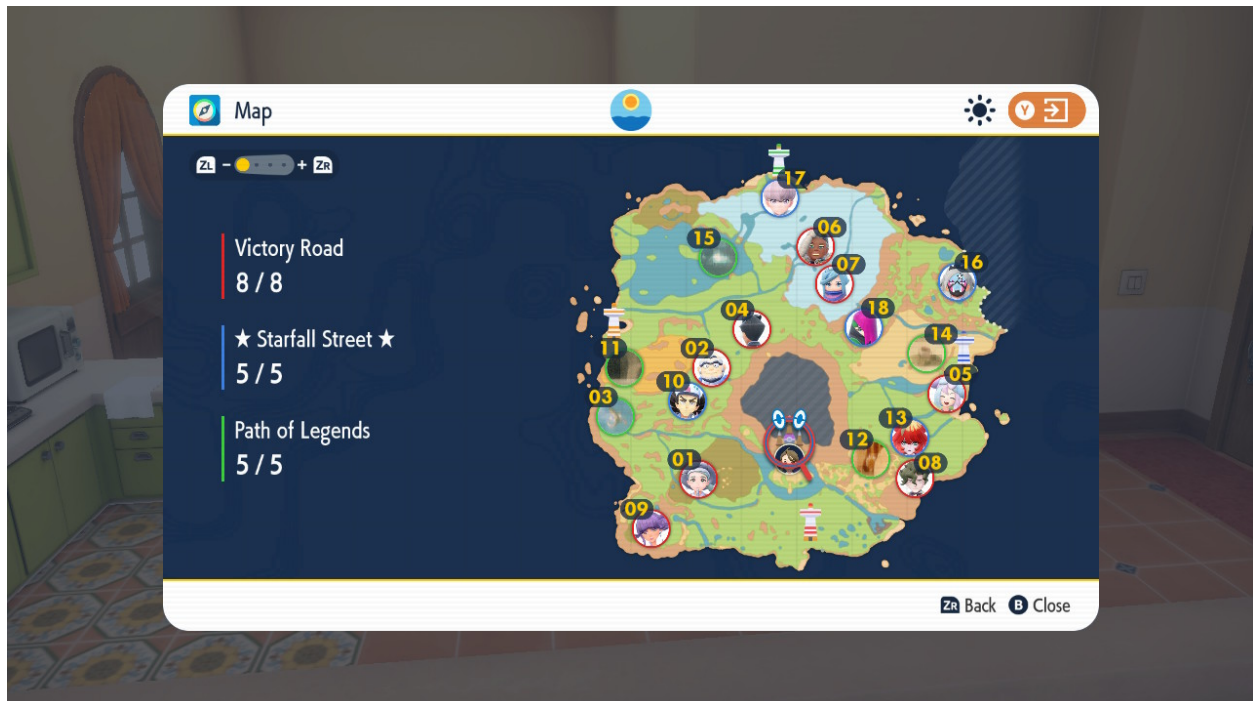


Figure 125 “Pokémon Violet” Map Menu, Furthest Zoom-Out with a List of the Game’s Three Story Lines, All Marked as Completed.

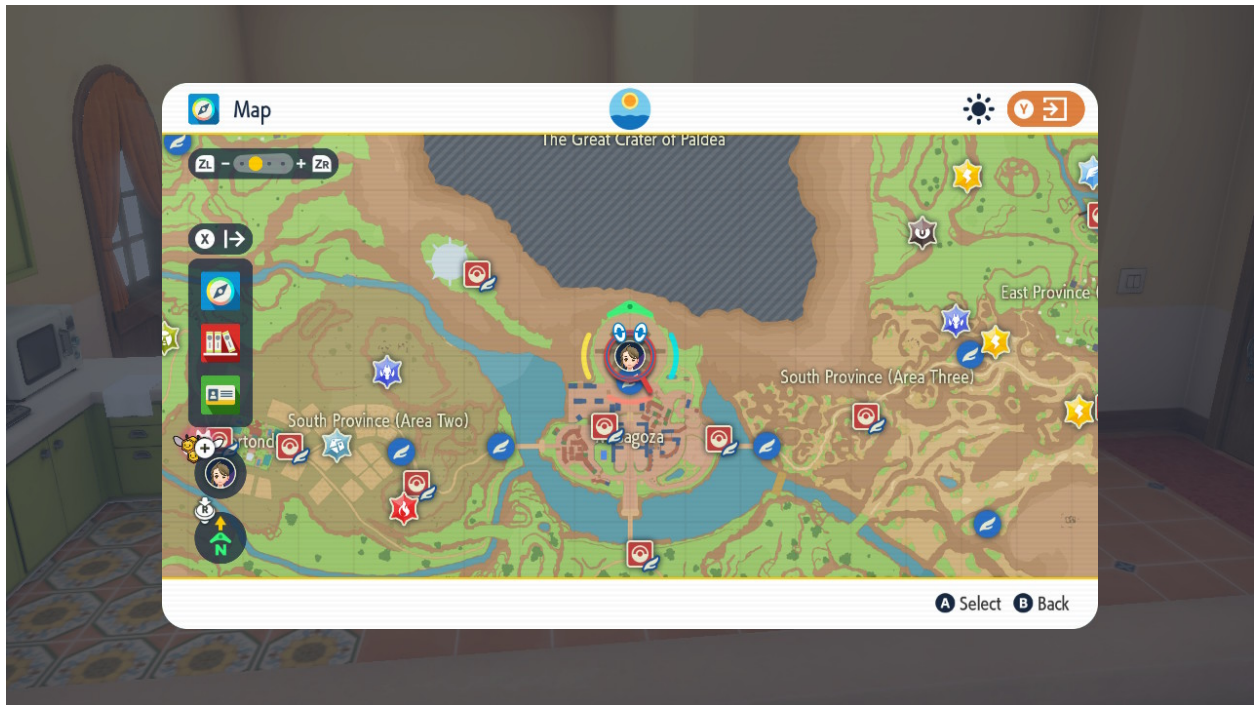


Figure 126 “Pokémon Violet” Map Menu One Level Zoomed-In.

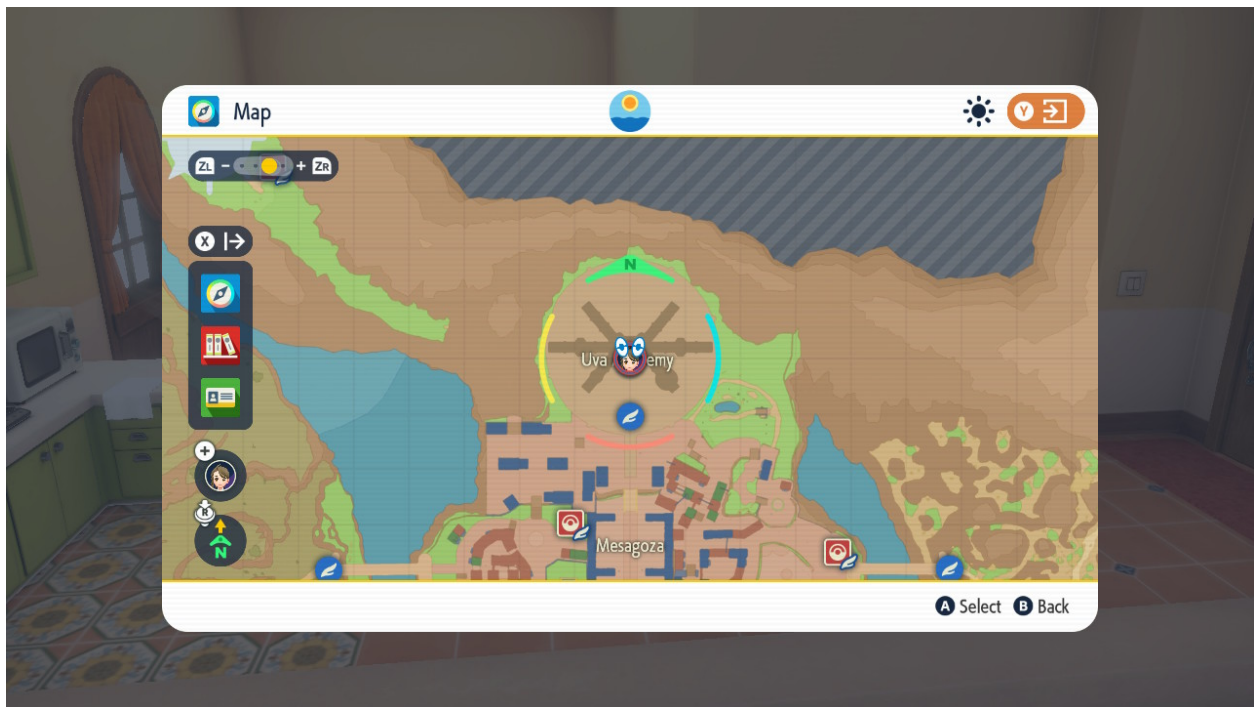


Figure 127 “Pokémon Violet” Map Menu, Second Level Zoomed-In

Pokédex



Figure 128 “Pokémon Violet” Pokédex Menu, List of all Pokémon Option.

Trainer Card

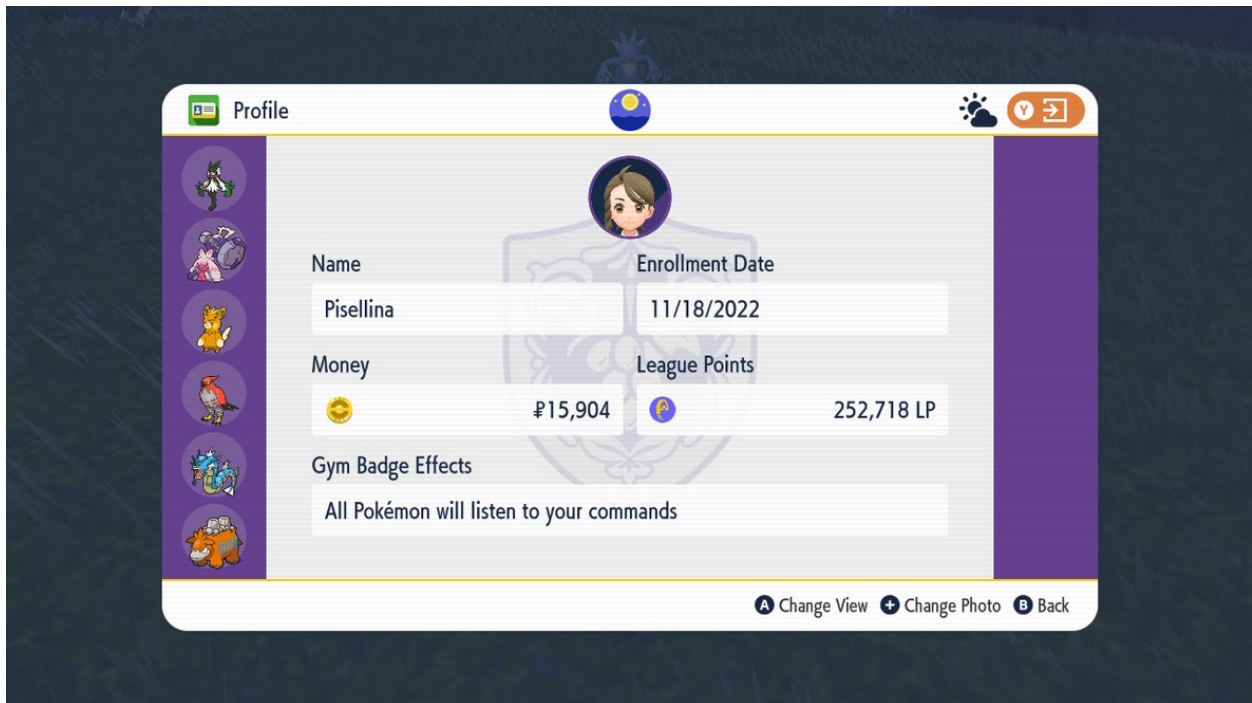


Figure 129 “Pokémon Violet” Profile Menu

Camera



Figure 132 “Pokémon Violet” Camera Menu

Notices



Figure 133 “Pokémon Violet” Notices Menu

Pokémon Center



Figure 134 "Pokémon Violet" Pokémon Center

Loading Screen

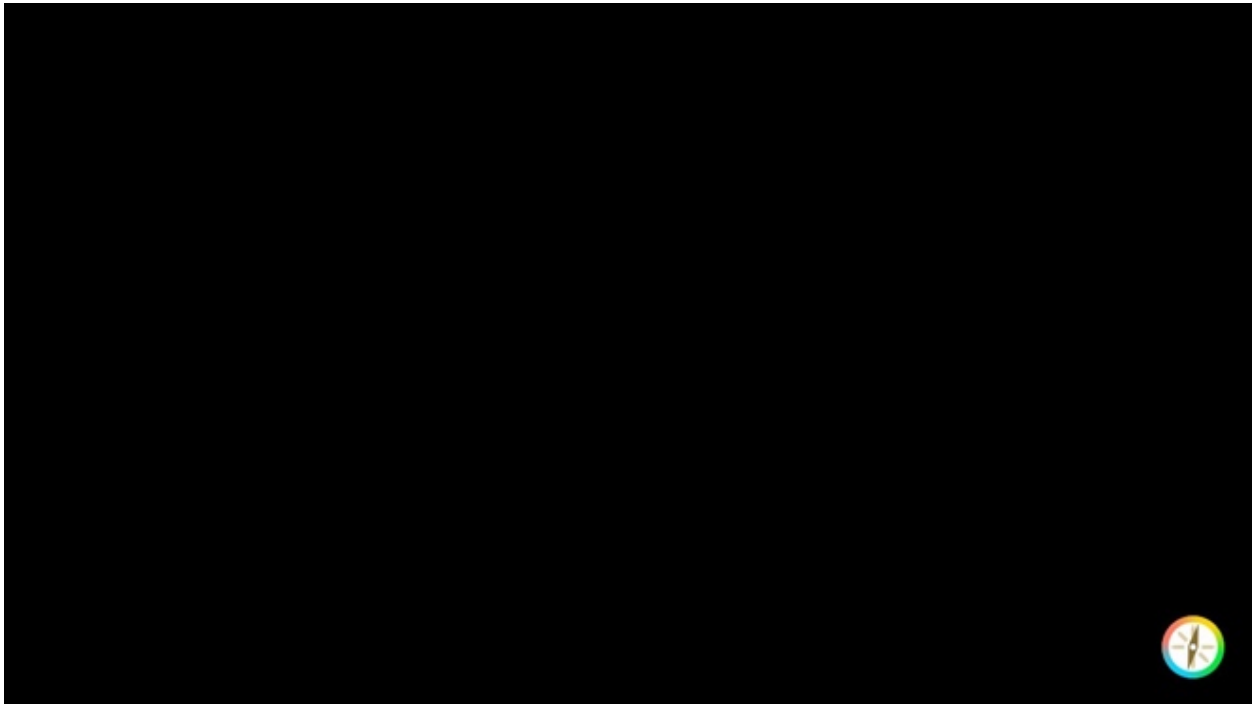


Figure 135 "Pokémon Violet" Loading Screen

Completion Screens



Figure 136 "Pokémon Violet" Title Slide for "The Way Home."



Figure 137 "Pokémon Violet" Example Completion Screen for Completing a Task.

The Legend of Zelda: Breath of the Wild Images

Title Screen



Figure 138 "The Legend of Zelda: Breath of the Wild" Title Screen

On-Screen Menus

Infographics: Health, Tool Selection, Shrine Indicator, Temperature, Sound Indicator, Time and Weather, Map



Figure 139 "The Legend of Zelda: Breath of the Wild" On-screen infographics and game-world.

Extended Tool Selection Menu: Runes



Figure 140 "The Legend of Zelda: Breath of the Wild" Runes Menu

Extended Tool Selection Menu: Weapons



Figure 141 "The Legend of Zelda: Breath of the Wild" Weapons Menu

Extended Tool Selection Menu: Shields



Figure 142 "The Legend of Zelda: Breath of the Wild" Shields Menu

Extended Tool Selection Menu: Bow



Figure 143 "The Legend of Zelda: Breath of the Wild" Bow Menu

Extended Tool Selection Menu: Arrows



Figure 144 "The Legend of Zelda: Breath of the Wild" Arrows menu

Sheikah Slate

Opened by pressing the – button; There are three tabs (Left to right) Runes, Map, and ???.



Figure 145 “The Legend of Zelda: Breath of the Wild” Sheikah Slate Menu, Runes tab

Map



Figure 146 “The Legend of Zelda: Breath of the Wild” Sheikah Slate, Map tab

???

Currently an empty tab.



Figure 147 “The Legend of Zelda: Breath of the Wild” Sheikah Slate, ??? tab

Pause Menu

The Pause Menu contains three tabs: Adventure Log, Inventory, System

Adventure Log



Figure 148 "The Legend of Zelda: Breath of the Wild" Pause Menu, Adventure Log tab

Inventory



Figure 149 "The Legend of Zelda: Breath of the Wild" Pause Menu, Inventory tab

System

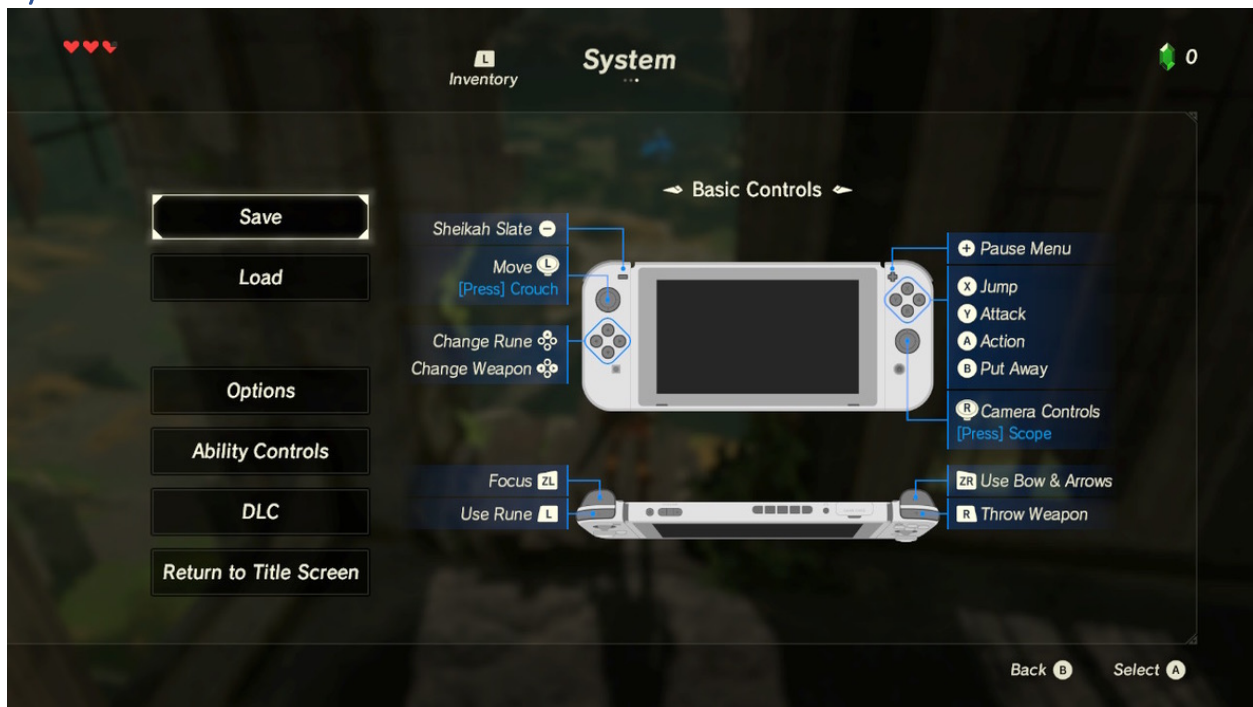


Figure 150 “The Legend of Zelda: Breath of the Wild” Pause Menu, System tab

Katamari Damacy Reroll Images

Title Screens



Figure 151 "Katamari Damacy Reroll" Title Screen Sequence

Home Planet

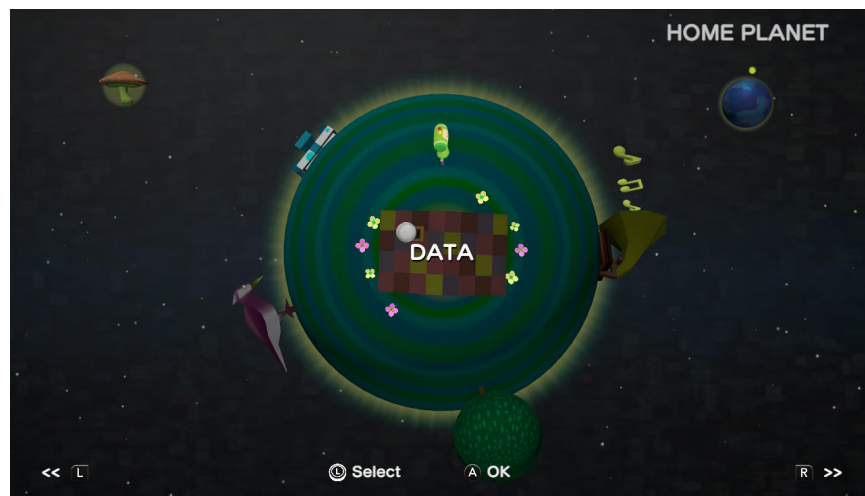


Figure 152 "Katamari Damacy Reroll" Home Planet Menu, North Pole View

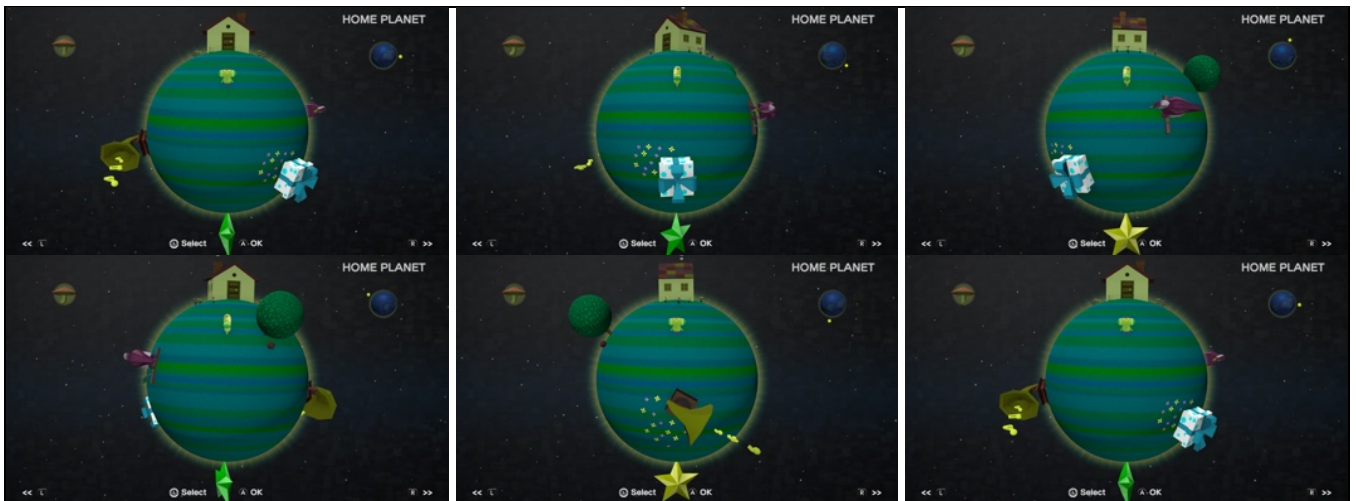


Figure 153 (Left to Right, Top to Bottom) "Katamari Damacy Reroll" Home Planet Menu, X-axis Movement Towards the Right

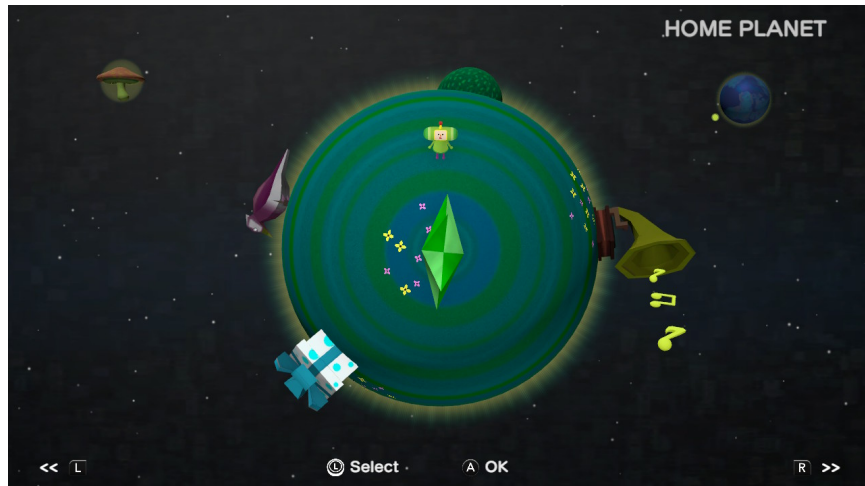
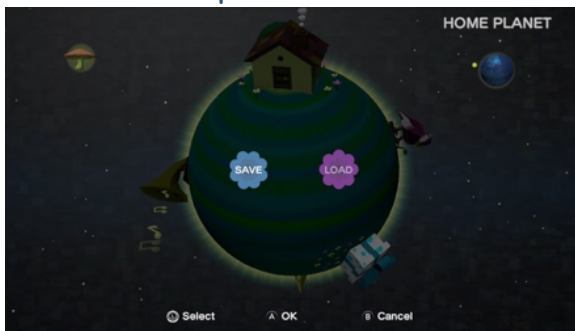
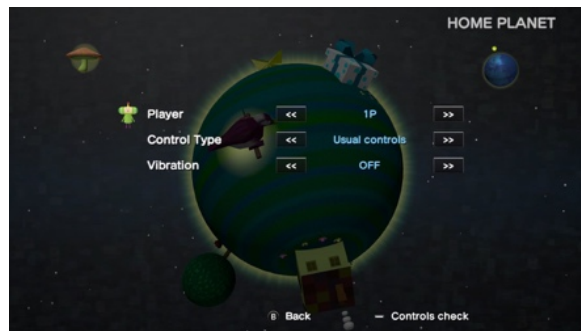


Figure 154 "Katamari Damacy Reroll" Home Planet Menu, South Pole View

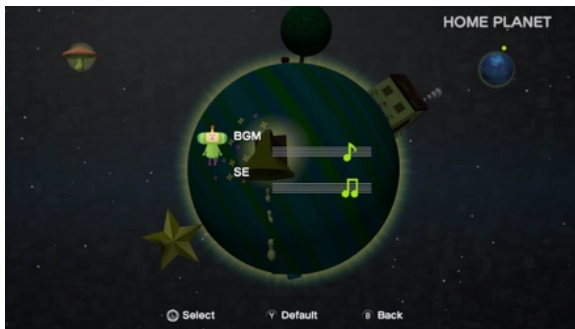
Home Planet Options



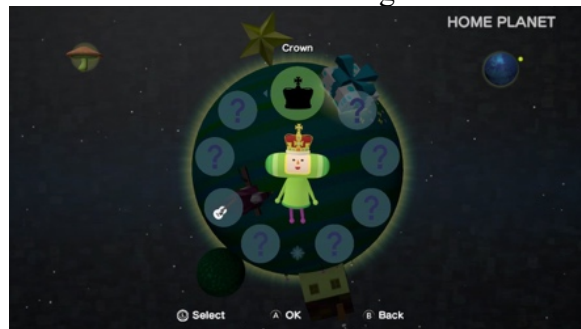
Data.



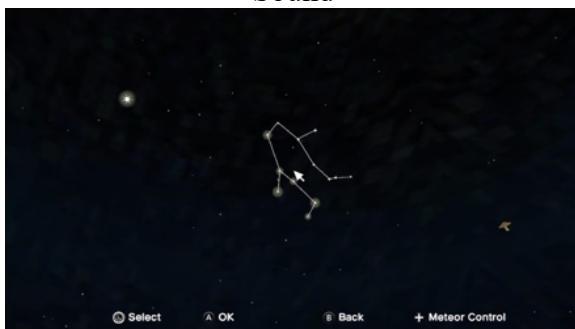
Control Config



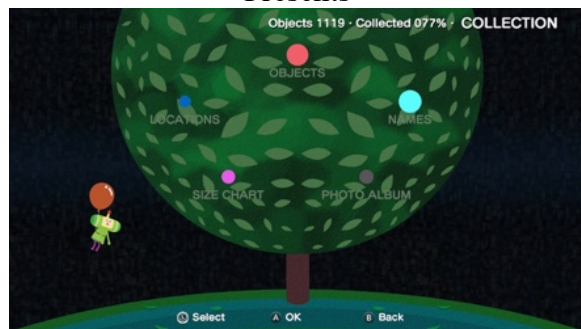
Sound



Presents



View Constellations



Collection

Figure 155 "Katamari Damacy Reroll" Home Planet Menu, Option Windows

The Earth



Figure 156 “Katamari Damacy Reroll” Opening View, Earth.

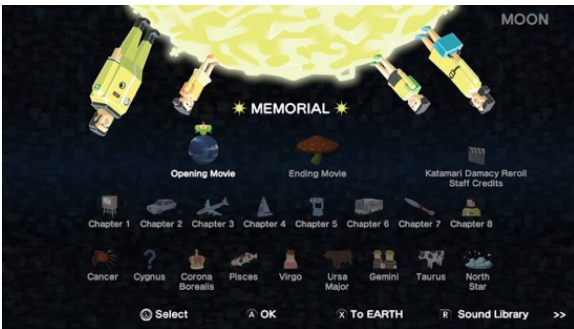


Figure 157 “Katamari Damacy Reroll” Moon Memorial, Movie Theater

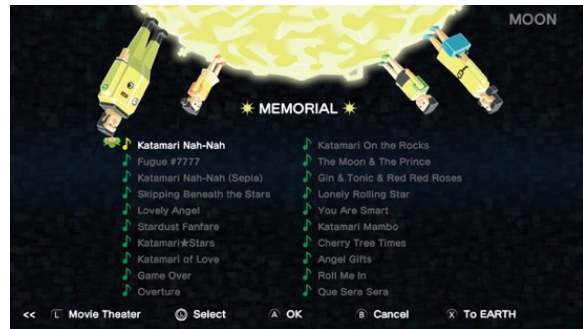


Figure 158 “Katamari Damacy Reroll” Moon Memorial, Sound Library

Game World Menus

Introduction Screens



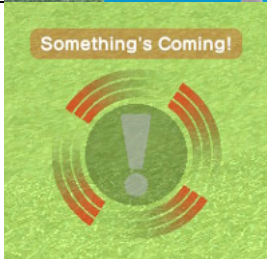


Figure 159 “Katamari Damacy Reroll” Game World Introduction Screen



Figure 160 “Katamari Damacy Reroll” Game World with infographics.

Game World Infographics

Infographic Appearance	Name	Purpose
	Size Meter	Displays the current size of the Katamari and the desired size
	Timer	How much time is left
	Warning	Indicates if there is a moving object heading towards the player


			<p>Player and Location</p>	<p>Shows the player and where the player is: usually land or in water</p>
--	---	--	----------------------------	---



Figure 161 "Katamari Damacy Reroll" Game World, view during gameplay



Figure 162 "Katamari Damacy Reroll" Game World, Pause Menu

The Space Mushroom



Figure 163 Space Mushroom Starting Point



Figure 164 Space Mushroom One Movement Up



Figure 165 Space Mushroom Two Movements Up

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