THE WORLD BELOW

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Integrative Project Thesis Paper

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Background

I didn't go to art museums when I was little. Cartoons and toys were my influential art pieces, and the small instructional booklets filled with images that came with video games were my galleries. My imagination was fueled by the stories my mother would tell my siblings and I about fantastical monsters and characters of Filipino mythology. When I was five years old, my father brought a Nintendo64 game console for the family. At the time, I was too scared to play by myself. The games were filled with huge spiders and skeletal lurking behind every corner, just waiting for me to fall into their traps. Despite my fear, there was something about the game that constantly drew me in. My father was much braver than I and allowed me to serve as his companion, watching the gameplay over his shoulder. After reflecting on these strong memories as well as the educational path I have taken at the University of Michigan I have pursued a project that serves as a culmination of who I am and what I want to do in life. I have created a 2-D video game titled *The World Below* that inserts the player into a fantasy world influence by Filipino mythology and folklore.

Independent Games

I consider myself very fortunate to have grown up during a time period in which the video game industry is transforming. The mainstream gaming culture has been largely composed of AAA games produced by massive companies with the over-arching goal of attaining mass appeal. Because of the high cost and time commitment that goes into the production of games, many mainstream games follow methods, mechanics, and concepts that have worked in the past, leading to the oversaturation of many similar games in the market at once. An example

of this is the high number of war games currently out or being developed, such as the *Call of Duty* or *Battlefield* games. Within the past ten years games made by independent developers, often referred to as indie games, have seen a sharp increase in popularity (gamespot.com).

Figure 1: A screen capture from Jenova Chen's *Journey*

The massive success of games such as *Journey* by Jenova Chen, or *Undertale* by Toby Fox showed gaming communities around that world that indie games can afford to take creative risks and challenge existing game conventions (gamasutra.com). My exposure to indie games such as *Psychonauts*, *Broken Age*, *Bastion* and more, have inspired me not only as a gamer, but as an artist as well.
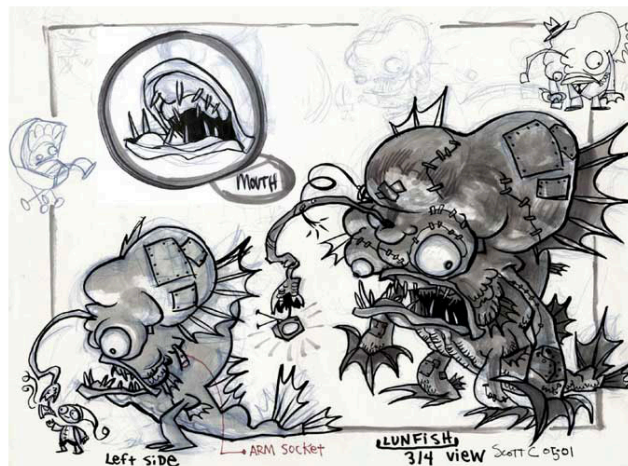

Figure 2: Concept art by Scott Campbell for *Psychonauts*

Psychonauts, a 2006 game created by DoubleFine Productions, introduced me to the world of experimental and unique games. I began to pay attention to what elements of games were important to me, and pushed myself to play games that were unique with regards to visuals, mechanics, or both. *Indie Game: The Movie* illustrated the passion and level of personal expression that developers such as Jonathan Blow of *Braid*, Phil Fish of *Fez*, and Team Meat of *Super Meat Boy* fame pour into their games, and received praise from film festivals and game critics alike. I have taken a class on video games with professor Matt Kenyon twice, and have taken computer science classes within the EECS (electrical engineering and computer science) department. Getting a behind the scenes look at the process of making an independent game made game development and creation less of an abstract process and transformed my interest in games from my previous role as a consumer into one of a maker.

Figure 3: A still from *Indie Game: The Movie (1:25)* featuring Jonathan Blow

Filipino Mythology

My mother is from the Philippines. She grew up near Manila, the capital city, and spent some years living in Hong Kong as well before moving to American when my parents got married. When my brothers and I were young

she would tell us stories that she was told as a kid about the different mythological creatures and monsters that lurk in the night. These monsters were often violent and grotesque in nature, and always evoked a gut-wrenching feeling of dread as well as a morbid curiosity. As I began to research Filipino mythology beyond what I had been exposed to by my mother, I kept these strong feelings and visceral reactions in mind.

My research into Filipino mythology involved the reading of a collection of stories. Many of these stories shared common themes and elements, such as the inclusion of the sun and moon as sentient beings that interacted with other human characters, and the practice of bringing betel nuts to life with the application of a magical oil mixture (tagaloglang.com). I used the elements and feelings gathered from my memories of Filipino folklore as well as my expanded research to aid the construction of the narrative and world in which my game takes place.

The Narrative

The narrative aspect of *The World Below* was built using different elements that I found when reading mythology from the Abra province in the Philippines (tagaloglang.com). In a world without light, a young girl falls off her island in the sky. After recovering from the fall, she begins a journey through the remnants of an abandoned village filled with creatures, grotesque monsters, and small fragments of light in order to find a way back to the island. While the player is moving through the world to return to the island, she is able to speak to peaceful creatures, attack harmful monsters, and collect fragments of light. None of these actions are required, and it is possible to finish the game by just running straight

through everything. The player's actions, or lack thereof, have a direct influence on how the games narrative resolves itself at the end.
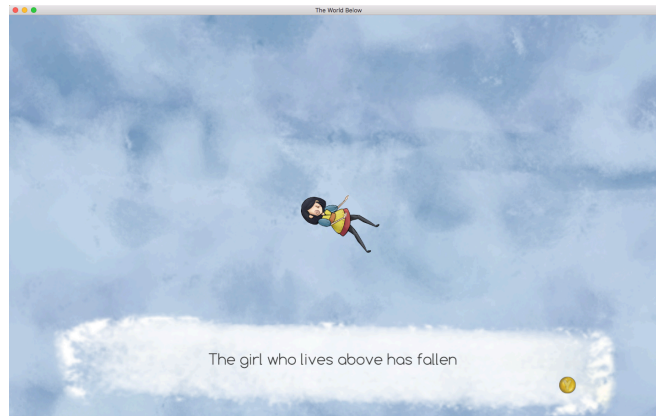

Figure 4: A still from *The World Below* of the protagonist falling from her island

The narrative went through a number of changes and revisions over the past 8 months. I initially started the design process by brainstorming and writing down simple story maps, but quickly found it difficult to commit to any ideas without having a sense of the world in which these stories would take place. After struggling to articulate and flesh out story I decided to focus on creating the fantasy world base. I pinned up large sheets of brown scrap paper in my studio and used sticky notes to build and piece together world elements.

Figure 5: A shot of my studio at the end of the first semester

Over time new sheets of scrap paper would be pinned up, each showing a new progression of the world and narrative. Being able to see and physically move different story elements made the design process feel more natural.

The Characters

The visual assets for *The World Below* were created using a combination of digital and traditional media. I drew out different characters and environments in sketchbooks and went though numerous rounds of revisions to make changes to the overall designs. Periodically I would refine the sketches on tracing paper and scan them in order to experiment with color and rendering styles through the use of Photoshop. Through the design process, especially with character designs, I sought out feedback from peers in the art school as well as from others who had little idea of my project in order to get their initial reactions for further design considerations.

The Protagonist

The protagonist is a nameless young girl that has fallen from her home in the sky. She served as the starting point for the visual design process of *The World Below*, and I drew and rendered her in a number of different styles. While I was going through potential character designs I reflected on the idea of an in-game avatar. Nick Yee, an American researcher who focuses on self-representations in virtual media, says, "Studies have shown that, in general, people create slightly idealized avatars based on their actual selves" (psychologyofgames.com).
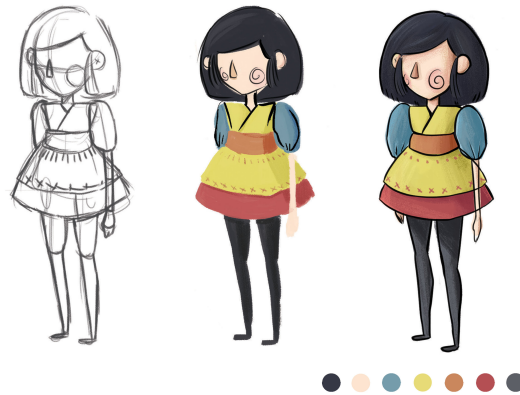
Figure 6: The protagonist final concept art

With this in mind I wanted to create a character that reflected my appearance in a way in which it didn't erase or compensate for my faults. Her final design features clothing that were influence by Filipino festival garments, and she lacks eyes – a tongue-in-cheek nod to my poor eyesight.
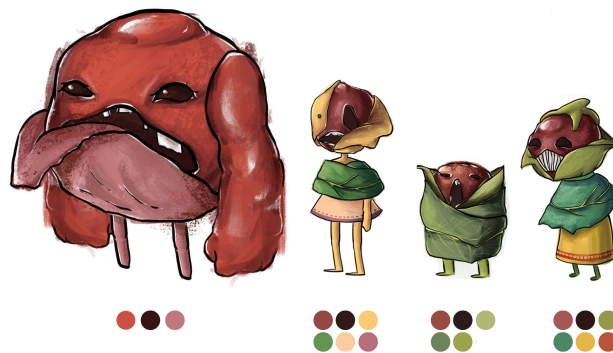
The Monsters

Figure 7: Betel nut monsters final concept art

The monsters are betel nut creatures that have become corrupted by the lack of light in the world. Areca nuts, commonly referred to as betel nuts, are the

seeds of the areca palm tree, and are often chewed by people that live in Asia. I initially created a group of betel nut creatures to serve as friendly companions to the protagonist. Betel nuts, however, are known to cause mouth cancer, and when chewed will produce a deep red juice that needs to be spit out (bbc.com). This discovery prompted a shift from companion to monster, and images of peeled fruit contributed to their split and raw redesign.

The Forest Creatures

The forest creatures were initially created to serve as an obstacle for the protagonist, and were designed to look mischievous and sinister. While the betel nuts underwent their gruesome design changes, the forest creatures began to transition into peaceful characters.

Figure 8: Forest creature final concept art

The final design was influenced by the Kapre, a mythical creature with skin as dark as charcoal that resides in the forest (read-legends-and-myths.com). The forest creature's arms became unnaturally elongated and separated from the

body. The body shape of each creature varies, so each time the protagonist interacts with one it feels like a unique encounter.

The Environment

Figure 9: World environment concept art

The environment design differs from the rest of the game in that it pulls more from my own thoughts about magical and fantastical landscapes rather than Filipino mythology. The world is lush and filled with varying shades of greens and blues, and the land is populated with abandoned shack houses that have begun to deteriorate. Every individual element found within the game was drawn and saved in separate files.

Figure 10: Environment assets found in game

They were then manipulated and placed when designing the final game level. 2D video games can often become visually flat. I placed different elements such as trees and hills in both the foreground and the background of the level in order to add a sense of dimensionality and depth to the game.

Making the Game

In the past I have used traditional frame-by-frame drawings to create character animations for games, in which each frame of the animation is drawn separately. This method of animation is time consuming and labor intensive – a smooth walking or running animation cycle can require at least 8 different frames, with each frame having to be individually painted as well. After determining that there would be 10 different fully animated characters featured in *The World Below*, I began to look into alternate methods of animation in order to save time. After researching animation programs used by other game developers I found a program called Spriter.
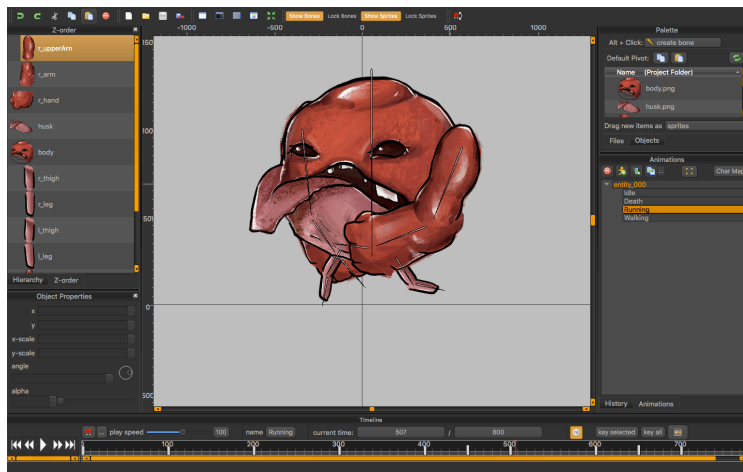

Figure 11: Screen capture of Spriter animation process

Spriter allows users to import their characters as a set of separate elements and rig them to a bone system that can then be easily animated by manipulating the bones. This new key frame animation method significantly decreased the amount of time per animation cycle, allowing me to fully animate a character within a more reasonable time frame.

The game was assembled in Unity, a flexible game development engine that can be used to make both 2D and 3D games. While I have experience with simpler game engines such as Twine or Stencyl this was the first time I have used Unity. I have experience with the programming language C++, which allowed me to pick up some of the basic aspects of Unity's syntax quickly. Additionally, I watched a number of videos detailing Unity's capabilities with regards to 2D game modes and completed tutorials to get a feel for the Unity interface.
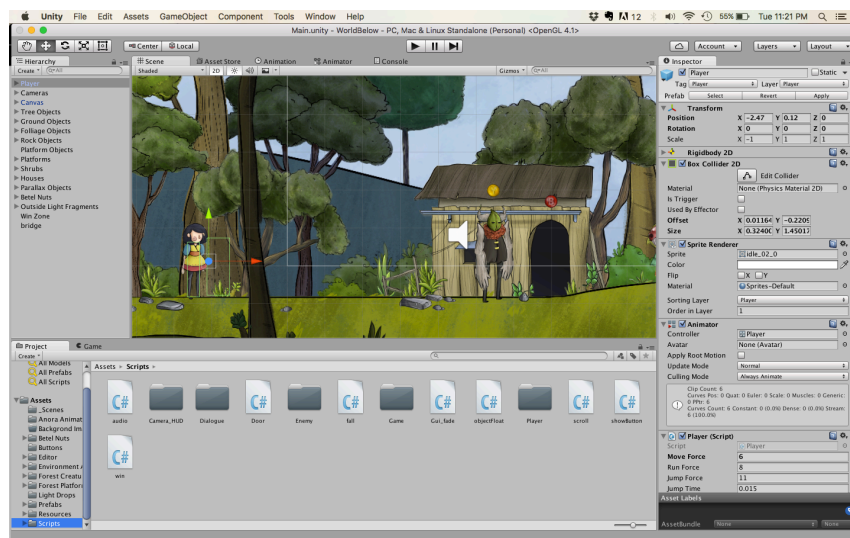

Figure 12: Screen capture of Unity game engine process

Game mechanics such as character movement or item collection can were simple to construct. After thinking about game mechanics that would require more intense programming, such as a dialog system and smooth camera movement, I

reached out to members of Wolverine Soft to look for a programmer that would be interested in collaboration. Jacob Haas, a CSE engineer, worked with me to write the more complex aspects of the game's procedural rhetoric. Additionally, I collaborated with Cooper Riehl, another CSE engineer, to create 2 looping musical tracks to play in the background of the game's main menu and level scenes.

Gallery Installation

The World Below was displayed in the basement of Work Gallery in downtown Ann Arbor. The game was displayed on a 27" iMac computer placed on a pedestal, and was playable with an Xbox controller. To the left of the iMac was another pedestal that held a concept art book. The game was fully functional, and the total playtime ranged from 3-5 minutes. The concept art book is a 14 page long collection of art that shows and discusses the design progression of the protagonist, monsters, forest creatures, environment, and narrative aspects of the game. The book itself is hand printed and bound in a drum-leaf style. On the wall behind the pedestals I hung 3 large posters that showed off various screenshots of the game as a way to grab interest from across the room and draw viewers in.

Viewer's Reactions

Prior to the opening, I was worried that viewers would be apprehensive about playing the game and would instead focus mainly on the book; however, the Xbox controller was a strong enough indication that this project encouraged active participation. Viewers of all ages approached and played the game

without any prompting from me. Watching the different ways in which people played gave me a lot of insight into what elements of the game came across as the most compelling or successful. Those that were more comfortable with video games were able to pick up the controls and goals of the game quickly, while those who were less familiar spent more time considering and planning out their actions before moving on. Many viewers would spend time with both the book and the game, and would often interact with one while waiting for the other.

Conclusion

The World Below is a game about a girl trying to find her way home. It is a way for viewers to enter and explore a new world inspired by fantastical mythological stories, as well as experience an interactive project that may not be found in traditional fine arts museums. Being able to work on this project for such an extended period of time allow me to gain a deeper understanding of the game development process, and the exhibition opening served as a great opportunity to receive player feedback thanks to the wide range of viewers that chose to play. I have plans to continue working on *The World Below* with a small team of engineers, and hope to submit to game festivals around the country.

Final Game and Gallery Documentation

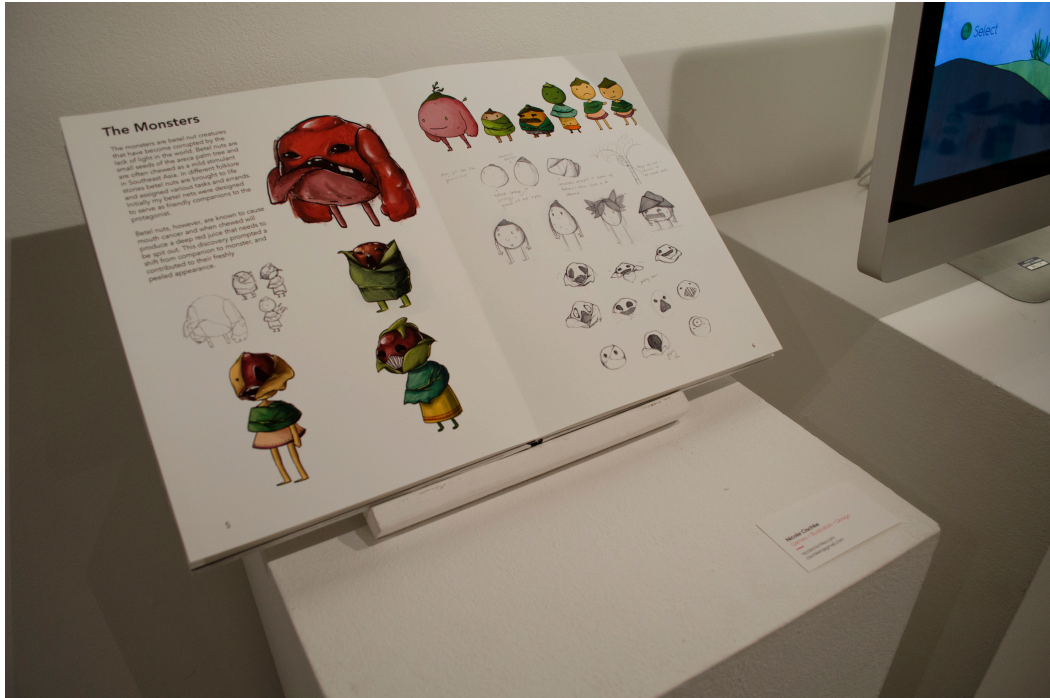Figure 13: Gallery installation: game, book, posters

Figure 14: Concept art book

Figure 15: Gallery viewer playing *The World Below*

Figure 16: *The World Below* **screen capture**

Figure 17: *The World Below* **screen capture**

Bibliography

"Aponibolinayen and the Sun - Tagalog Lang." *Tagalog Lang*. N.p., 17 Feb. 2010. Web.
    20 Apr. 2016.

Parker, Laura. "The Rise of the Indie Developer." *GameSpot*. GameSpot AU, 13 Feb.
    2011. Web. 20 Apr. 2016.

"Thatgamecompany." *Thatgamecompany RSS*. Thatgamecompany, n.d. Web. 20 Apr.
    2016.

Smith, Ed. "Gamasutra - A Personal Journey: Jenova Chen's Goals for Games." *A
    Personal Journey: Jenova Chen's Goals for Games*. N.p., 18 May 2013. Web. 20 Apr.
    2016.

Campbell, Scott. *Http://www.pyramidcar.com*. N.p., 2006. Web. 17 Apr. 2016.

Pajot, Lisanne, and James Swirsky. "Indie Game: The Movie." *Indie Game: The Movie |
    Netflix*. Blinkworks, 2012. Web. 20 Apr. 2016.

Madigan, Jamei. "The Psychology of Video Game Avatars." *The Psychology of Video
    Games*. N.p., 29 Nov. 2013. Web. 20 Apr. 2016.

Doyle, Kevin. "Asia's Deadly Secret: The Scourge of the Betel Nut." *BBC News*. N.p., 22
    Mar. 2015. Web. 20 Apr. 2016.

"Kapre, a Friendly Demon Tree from the Philippine." *Kapre, a Friendly Demon Tree from
    the Philippine*. N.p., n.d. Web. 20 Apr. 2016.