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## Journey To The Dragon's Gate: A Study Of Hybrid Ride Systems And How They Enhance Attraction Storytelling

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*University of Central Florida*

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JOURNEY TO THE DRAGON'S GATE:  
A STUDY OF HYBRID RIDE SYSTEMS AND  
HOW THEY ENHANCE ATTRACTION STORYTELLING

by

MATTHEW JEFFREY MOORE  
B.F.A. Ringling College of Art & Design, 2018

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Fine Arts  
in the Department of Theatre  
in the College of Arts and Humanities  
at the University of Central Florida  
Orlando, Florida

Summer Term  
2022

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## **ABSTRACT**

The purpose of this thesis is to explore a new type of ride design which integrates one or more transitions between formats. Theme Park visitors have come to expect a certain type of immersive experience from attractions. Most rides in the parks are very predictable such as roller coasters which offer loops, drops, speed and quick turns, while dark rides offer a slower pace with the attention on storytelling. The solution to this situation is to combine two ride systems or more into a single ride. The ride system for my attraction begins with a free-floating boat ride navigating its way down a peaceful river. When it reaches the waterfall, the boat is guided onto a motion platform which lifts it up to the top of the waterfall. It slowly glides through a Torii Gate, past a Powerful Dragon and to the Guests surprise transforms into a roller coaster for a dynamic finish. The results of this type of ride design conclude that transitions between formats gives Guests not only a storytelling dark ride experience, but also an unexpected thrilling surprise in the form of a roller coaster ending. It would provide an increased level of entertainment and a memorable experience for park Guests.

Keywords: Themed Experience, Theme Parks, Attractions, Storytelling, Dark Rides,  
Immersive Experience, Water Rides, Roller Coasters

## ACKNOWLEDGMENTS

There are many people whom I would like to recognize for helping me reach this milestone. First, I would like to thank my Committee Chair, Peter Weishar, for his valuable advice, continuous support, and guidance. Peter, I am so lucky to have you as my mentor. Thank You to my Committee Members, Bert Scott and Dr. Carolina Cruz-Neira. Bert, no matter how busy you were with your Theatre Schedule, you always found time to advise me and share your ideas during my thesis process. Carolina, you have inspired me by introducing me into the world of Virtual Reality and I will be forever grateful. A special thanks to Patrick Brennan for sharing his advice, knowledge, and expertise about the Japanese Culture. I discovered a whole new world through your experiences in Japan.

I would also like to thank my classmates: Carson Luter, Duncan MacPherson, David Brescia, Alexandria Marcello, Jordan Zauha, Lindsey Leffel, Nicole Sutterby, Daniel Escoto, Amy Avalos, and Sidney Wolff for the amazing journey that we created together and for all your friendships. Congratulations and Best Wishes in pursuing your dreams!!

I would like to dedicate this work to my parents. Thank you for all your support, sacrifices, guidance, and inspiration. You were always there for me and believed in me. Thank you for giving me the opportunity to reach for the stars and pursue my dreams. Lastly, I would like to thank my Aunt Janet and Uncle Ken who have cheered me on and encouraged me during my thesis. Uncle Ken, I can now see the light at the end of the tunnel, and it is very bright! To my Uncle Chris, thank you for always inspiring me to do my best and for your unwavering support in pursuing my Master's Degree.

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## CHAPTER ONE: INTRODUCTION

Until now, most Theme Park rides operate on one riding format primarily on a track, trackless, or free floating. Most ride systems offer little surprises as Guests have come to expect a certain type of experience from each system. A one ride format limits the experience of the Guests. What happens if two or more different types of ride systems are combined? Does it give riders a new thrilling, immersive experience?

My thesis develops a new type of hybrid attraction which includes one or more transitions between formats. The attraction that I have designed, "*Journey To The Dragon's Gate*," integrates three different ride formats into one ride. The inspiration for this attraction originates from a Japanese Myth. The story is revealed through a journey on a free-floating boat ride down a peaceful river. Guests experience the traditions and customs of the Japanese culture while riding along the banks of the river.

The journey begins with Japanese music playing in the background while a narrator reveals the story. As the boat travels down the river, it begins to approach rushing waters. A beautiful waterfall becomes visible through the mist. Colorful orange and white Koi Fish begin to jump along the sides of the boat as they attempt to swim up the waterfall and reach the Torii. The Koi Fish are created by using projection mapping.

The boat proceeds forward towards the waterfall and it is guided onto a motion platform. The boat begins to rise to the top of the waterfall and comes into motion, rocking gently from side to side. The vehicle reaches the top and glides through the Torii. Suddenly a large Dragon appears from out of the clouds. It surprises all the Guests because they did not expect this to happen.



As the Guests are distracted by the Dragon, the boat format transitions into a roller coaster. The boat passes the Dragon, and the Guests see light up ahead. They are under the impression that the boat will come out of the building, culminate with a rapid descent and splash into a body of water just like a water flume ride getting them wet. The boat does proceed out of the building, but to the Guests surprise, it has been transformed into a roller coaster racing down a hill, experiencing sharp turns, spirals and moving over several other hills through Japanese Gardens. It returns to the water after it comes down the last hill with a splash and it floats up to the unloading platform. Guests disembark and proceed into a Japanese themed gift shop.

## CHAPTER TWO: JAPANESE CULTURE BACKGROUND

To be able to get a meaningful understanding of this attraction, I have highlighted some of the customs, traditions and beliefs of the Japanese Culture which are present on this ride adventure. I also visited the *Morikami Museum and Japanese Gardens* in Delray Beach, Florida to experience authentic Japanese Gardens, exhibitions of Japanese art, an authentic tea house (*Seishin-An Tea House*) and a museum dedicated to the Japanese living culture. The *Morikami Museum and Japanese Gardens* was opened in 1977 to commemorate the agricultural colony named Yamato, an ancient name for Japan.

### Religions

The two main religions of Japan are Shintoism (the way of the gods) and Buddhism. “These two religions are both practiced simultaneously by the Japanese community, and they are similar to philosophies rather than religions,” stated Adam Acar, PhD (2020). Shintoism believes in *Kami*, who is a divine power that is found in all living things. This religion has beliefs in many gods and sees them as animals. The colorful Japanese Dragon also known as (*Ryu or Tatsu*) is known for its supernatural powers and wisdom. Japanese Dragons are mostly associated with Shinto shrines (Acar, 2020).

Buddhism believes that human life is a cycle of suffering and rebirth. A way to escape from this cycle is to achieve enlightenment (*Nirvana*) through meditation, spiritual and physical labor, and good behavior. Buddhists believe in “Karma” which states that how a person acts can impact their destiny in the future (Ellwood, 2016, p.64). Christianity and other religions are also practiced in Japan.

## Japanese Gardens

Japanese Gardens (*Niwa*) are very traditional and contain all natural landscapes. The gardens provide peace of mind, tranquility, and beauty. The gardens are composed of water in the form of ponds, lakes, brooks, and waterfalls. Water symbolizes renewal, respect, and continuity in life beyond. A Deer Chaser (*Shishi Odoshi*) is found in some gardens. It consists of a swinging bamboo arm that collects water and once it is filled, strikes a rock basin below. The sound of bamboo striking stone is quite loud and therefore startles animals that have wandered into the garden (Morikami, 2022). Rocks represent nature, the duration of time, and they are twinned by pairs and style to give a natural appearance (Kawaguchi 2016, p.59).

A Japanese Tea House (*Chashitsu*) is a free-standing structure surrounded by a garden to observe the peace and quietude of a traditional Japanese Tea Ceremony. The structure in most gardens is a wooden building where the tea is prepared and served. Junko Kawakami stated, “Simple possession of the necessities for a tea ceremony is not enough to make a teahouse. The space must also evoke the proper tea ceremony atmosphere” (Kawakami, 2016).



Figure 1: Japanese Tea House in Morikami Gardens (Photo: Matt Moore)

Japanese Bridges are popular in gardens, and they are usually red representing the idea of transformation, wisdom and sacredness linked to Zen, a philosophy of the Japanese, promoting simplicity and reverence for space (Kawaguchi, 2016). The main elements of Japanese Gardens are stone lanterns. There are four types of lanterns which symbolize purity, respect for love, and protection from evil. The first one is a Pedestal Lantern (*Fachi-Gara*) which has a long pedestal and huge construction. The second one is known as a Snow-Viewing (*Yukimi-Gata*) because it captures snowfall on its broad roof. Remembering Lanterns (*Ikekomi-Gata*) are popular because they respect Christianity and Japanese Christians. These lanterns were designed by the ancient tea masters and are the oldest type of garden lanterns. The last one is a Stone Lantern (*Oki-Gata*) made from stone and granite. They symbolize beauty in the gardens (Thomas, 2015).

The Wisdom Ring (*Chie no Wa*) is a 500-year-old stone lantern. The original lantern stands in Japan at a temple dedicated to the Buddhist deity of wisdom *Monju*. The meaning of this lantern in the old tradition is that three heads think better than one and if a person passes through this lantern three times, *Monju* will grant the person wisdom (Morikami, 2022).



Figure 2: Stone Pedestal Lantern & Wisdom Ring Statue  
Morikami Gardens (Photo: Matt Moore)

Lanterns on the River (*Toro Nagashi*) are Japanese floating paper lanterns. The tradition of floating paper lamps symbolizes the guiding of souls who have left the world and exist spiritually. In Japan, this remembrance is performed on the final evening of the *Bon Festival* with the belief that it will help the souls of the departed to the spirit world. This takes place in either July or August. It is a gesture of respect for the departed ones as well as giving family members and friends a chance to remember them. It is a beautiful ceremony (Thomas, 2015).

Japanese have a passion for plants and their culture believes that plants are a universal form of life. The gardens consist of a variety of plants including evergreens, such as pine, and spruce.

Bonsai plants with twists and turns in branches symbolize age and the journey through time. The bamboo plants provide a unique peaceful sound as their stalks knock against each other swaying in the breeze. Beautiful grasses provide ground cover as flowering trees and plants burst with color. Colorful foliage is used in place of large flower beds around the gardens (Kawaguchi,2016).

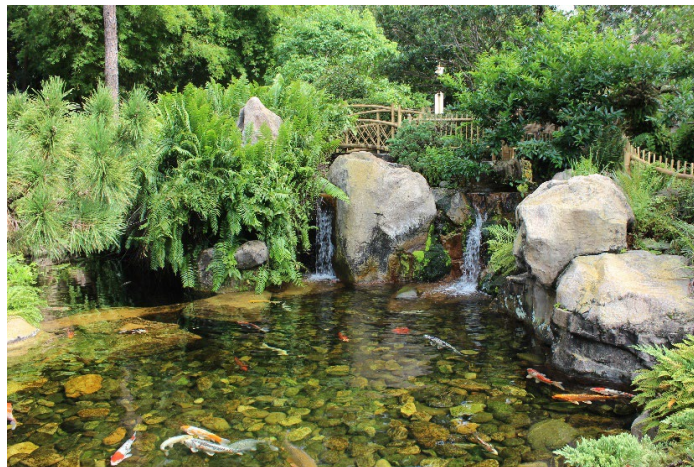


Figure 3: Japanese Gardens at Epcot (Photo: Matt Moore)

## Koi Fish

Japanese Koi Fish (*Nishiki-Goi*) are a type of Amur Carp which live in outdoor pools and water gardens. Japanese Koi became part of Japanese Gardens in the early 19<sup>th</sup> century, where colorful wild carp were bred by rice farmers. These fish had naturally occurred mutations which created beautifully colored fish. Koi are hardy fish, and they can survive cold weather if the water does not freeze. Their metabolism slows down and Koi will spend most of their time at the bottom of the pond or lake during the winter months where the water is warm. Koi are known for their coloring and lineage. The most popular color for Koi fish is orange and white, although they can range in colors such as red, orange, yellow, white, black, blue, green, brown, and cream. For the Japanese Culture, they symbolize endurance, determination, and courage. Koi are Japan's national identity, and they are becoming a universal symbol of peace around the world (Kodama, 2016).



Figure 4: Various Varieties of Koi Fish at Morikami Gardens (Photo: Matt Moore)

## Torii Gate

The *Torii* is a symbolic gateway marking the boundary which separates a sacred space from the human world. Once the *Torii Gate* is crossed, a sacred place has been entered. The gates are red which symbolizes vitality and protection against evil. The idea of a red *Torii Gate* originated from the *Shinbutsu-Shugo* belief. It is a combination of the Shinto and Buddhism religion. The *Torii* is found at the entrance of a sacred place or shrine and represents transition into the Shinto and Buddhist beliefs (Lesley, 2018).



Figure 5: Symbolic Torii Gate Located at Japan Pavilion in Epcot (Photo: Matt Moore)

## CHAPTER THREE: THE STORY BEHIND THE ATTRACTION

### JOURNEY TO THE DRAGON'S GATE

The story of *Journey To The Dragon's Gate* is a myth from Japanese Culture. The myth starts with a beautiful waterfall at the top of a legendary mountain that cascaded down into a grand river. The water flowed rapidly through a very prominent Torii. The Torii represents a traditional Japanese Gate which symbolically marks the entrance to a sacred place. The rapid flowing water generated a cool mist which covered the sacred Torii and created a magical appearance. The local villagers gave this wondrous waterfall the name "*Dragon's Gate.*"

The adjacent ponds led to a stream in which brightly colored Koi Fish live amongst the beautiful water lilies. Japanese legends speak of the Koi Fish which are famous-colored varieties of the Amur Carp. These fish are viewed as strong and determined. Koi are considered good luck to the Japanese Culture.

In Springtime, the Koi Fish swim from the stream and gather in large numbers by the pool at the foot of the falls. It was believed that Koi who could swim against the river's strong current, jump up the waterfall and pass across the Dragon's Gate would be transformed into a powerful Dragon by the gods. Thousands of Koi would try every Spring, but none would succeed.

There were many dangers that these fish would face. The Koi could be swept away by a rushing current or get captured by eagles, hawks, owls, otters, or foxes. Yet, it did not deter them from trying year after year. They knew, that if they met their fears and overcame these challenges, they shall be turned into a powerful Heavenly Dragon.



The Japanese Mythical Dragon represents balance, freedom, and good luck. It is known to have supernatural powers and wisdom. This is the reason that it was so important for the Koi Fish to try and achieve this goal. If even one fish succeeded, it would become a Heavenly Dragon.

One warm Spring Day, the Koi swam to the foot of the falls. This time there seemed to be more fish participating than ever before. The Koi began their mission of conquering the waterfall. One by one they were swept away by the rapid waters of the raging river. One of the smaller fish refused to give up. It was pushed down by the strong current, but it swam right back up the river. It fought and fought to reach the gate. With great determination, the little Koi reached the top and passed through the Dragon's Gate.

At that moment, the gods rewarded the tired little orange and white Koi by turning it into a Heavenly and powerful Dragon. The sky lit up in a bright golden glow in celebration of the Koi's success. The moral of this story is with courage, love, and perseverance, all things are possible (Eswaran, 2014).

## **CHAPTER FOUR: THE EVOLUTION OF WATER RIDES/FLUMES AND ROLLER COASTERS**

One important principle in beginning an attraction is to identify the prime audience before designing begins (Sklar, 2015). Since this attraction is a boat ride with a unique Japanese story and roller coaster ending, it would target an audience of kids, tweens, teens, and adults. A height restriction of 40 inches is required. Each ride vehicle and ride system are different. Height requirements are put into place for safety to protect riders in case something goes wrong such as the stopping on a safety brake or having to be evacuated (Niles, 2018). *Journey To The Dragon's Gate* integrates three different ride systems into a single ride while combining storytelling and technology to create an immersive experience. Before I begin the explanation of the methodology of my ride concept, let's examine the different ride systems.

### History and Development of Flumes/Water Rides

Flumes were developed over 150 years ago. They were originally used to move heavy objects such as logs. Modern log flume rides were perfected in the 1960's by the Arrow Dynamics Company and their design still exists today. The typical flume ride uses a conveyer belt in addition to water that is pumped into different parts of the course by high flow rate pumps (Meyers, 2014). Electric submersible propeller pumps provide large volumes of water at low heads. This generates the required water channel current allowing Guests to travel through the experience expeditiously (Dombowski, 2014).

Water Rides have taken Flume Rides to the next level. Water Rides use vehicles such as boats to maneuver Guests through waterways. They provide a storytelling theme, and the environments display attention to details. Water Rides give an immersive experience and have become part of what constitutes a Dark Ride. These rides move through three-dimensional environments, pass scenes slowly so that Guests see and understand the theme and use illuminated scenes related to the themed narrative (Sehlinger & Testa, 2016).

One such ride is *Splash Mountain at Disney's Magic Kingdom*. *Splash Mountain* is a water ride attraction currently based on the 1946 Disney film *Song of the South*. The log style boat gently drifts through scenes from the story and audio animatronics of critters as they sing songs like "Zip-a-Dee-Doo-Dah" and "Ev'rybody's Got a Laughing Place." The musical boat ride ends in a 5-story drop into the Briar Patch (Sehlinger & Testa, 2016).

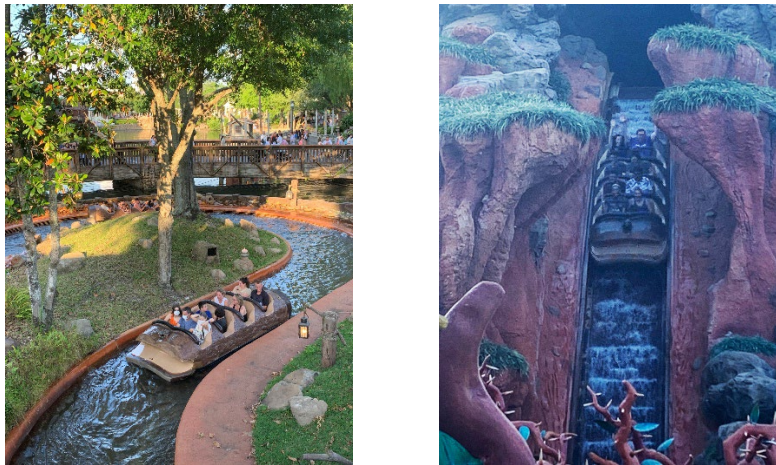


Figure 6: Splash Mountain at Magic Kingdom Water Ride (Photo: Matt Moore)

Another well-known water ride is located at Islands of Adventure in Universal Orlando. *Jurassic Park River Adventure* is a dark ride that plunges 85 feet and has speeds up to 50 mph. It uses 1.5 million gallons of water. The boat ride begins with an immersive experience into natural dinosaur habitats with intense dinosaur action and riders come face to face with a giant T-Rex. The journey ends with the 85-foot drop, soaking the Guests (Orlando Informer, 2021).

### Roller Coaster History and Development

Roller Coasters have been around for more than 150 years. The first commercially successful roller coaster in the United States opened at Coney Island Amusement Park in Brooklyn, New York. (Levine, 2017). As roller coasters became popular through the decades, safety features were added such as safety lap bars. Roller Coasters today have lap belts, lap bars, and harnesses which are electronically locked until the ride has come to a complete stop. John Miller invented the safety ratchet which prevented the coasters from rolling backwards and he also invented up-stop wheels which was a three wheeled system that kept the cars locked on their tracks. The same technology is used today (Sandy, 2020).

Roller Coasters went through many changes thanks to the Arrow Development Company. This company developed new types of roller coasters from inversion to interlocking loops to the first suspended coaster and other coasters which perform corkscrews and boomerangs (Sundstrom, 2013). Coasters have become taller, faster, and longer with tall steep drops and have seats that rotate backwards and forwards 360 degrees in a controlled spin. They have gone from wooden tracks like traditional railroad tracks to tubular steel tracks (Harris & Threewit, 2019).

Let's not forget the newly opened roller coaster at Sea World Orlando called *Ice Breaker* which opened in February 2022. It features four airtime launches (backwards and forwards), a reverse launch into a 93-foot spike with a 100-degree angle. *Ice Breaker* is considered a “*Launch Coaster*” (Moore, 2022).

Islands of Adventure in Universal Orlando features the famous *The Incredible Hulk Coaster* which is themed after Marvel's Hulk and therefore, it features a green coaster and tracks. It provides a walk-through queue prior to entering the loading area related to Bruce Banner's experiments. The coaster races up the track reaching speeds of 67 miles per hour and twists upside down in a zero-gravity roll. The life hill accelerates the train up to 40 miles per hour in 2 seconds at an upward angle leaving the station and eventually reaches its maximum speed. During the ride, Guests will experience corkscrews, a cobra roll, a vertical loop, tilts, and turns. This roller coaster is not for a rider with a weak stomach. Guests love roller coasters for the thrill and near-death experience which these types of coasters provide. This roller coaster is considered a “*Sensation Coaster*” because the riders experience the rage of the Hulk during the ride (UO,2019).



Figure 7: The Incredible Hulk Coaster at Universal's Islands of Adventure (Photo: Matt Moore)

The *Seven Dwarfs Mine Train* is a family friendly roller coaster at Disney's Magic Kingdom. This attraction opened May 2014. The *Mine Train's* Guests experience twists, turns, hills, and drops but it is not as wild as most coasters because it only travels at 34 miles per hour. The coaster travels both indoors and outdoors. Music from the film *Snow White* is featured in the queue and attraction. The queue hosts interactive activities to keep Guests busy while they wait to board the *Mine Train*. This roller coaster has a ride system with a train containing ride vehicles that swing from side to side as the track twists and turns. The *Seven Dwarfs Mine Train* is considered a "*Theme Roller Coaster*" because it has natural and artificial scenery added to the ride to allow Guests to enjoy the experience but, they never become active participants in the attraction. (Widmar, 2021).



Figure 8: The Seven Dwarfs Mine Train at Magic Kingdom (Photo: Matt Moore)

### Story Coasters

A new generation of roller coasters have been added to the industry known as “*Story Coasters*. It is the newest unique themed experience. What exactly is a *Story Coaster*? A *Story Coaster* is an elaborate ride which brings Guests through a story plot with a beginning, middle and end. This type of coaster first presents a queue to set the atmosphere. Second, the ride presents a rising action, climax, falling action and a conclusion just like a story (Theme Park Tourist, 2019).

Universal Orlando opened *Hagrid’s Magical Creatures Motorbike Adventure* in June 2019 at Islands of Adventure and it has been a great success. This ride combines the thrills of coasters with an immersive storytelling experience which includes a queue, pre-show, and animatronics. The coaster travels deep into the Forbidden Forest beyond Hogwarts Castle at 50 mph and plunges into paths of rare magical creatures of the Wizarding World. Riders can choose between riding in either a motorcycle seat or a sidecar. *Hagrid’s Magical Creatures Motorbike Adventure* is a highly themed and a very immersive story roller coaster (UO, 2019).

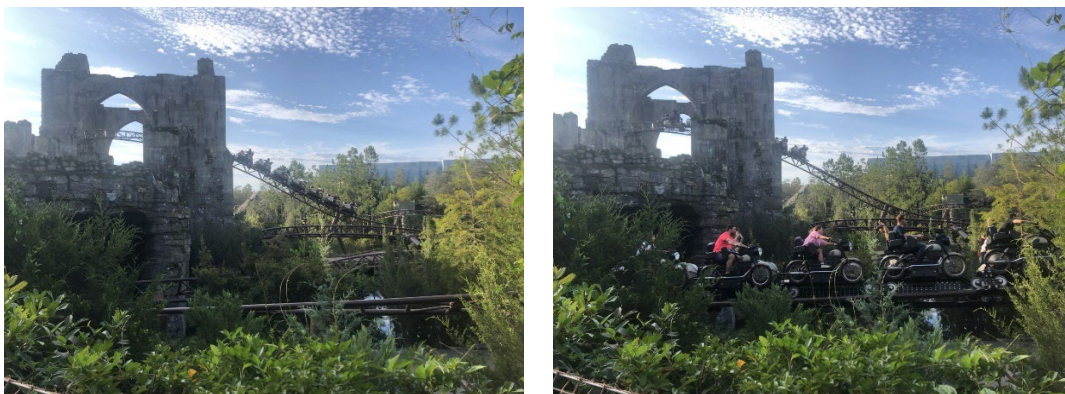


Figure 9: Hagrid’s Magical Creatures Motorbike Adventure at Universal’s Islands of Adventure (Photo: Matt Moore)

*Guardians of the Galaxy Cosmic Rewind* is Disney's new immersive indoor roller coaster at Epcot. It opened on May 27, 2022. This is Disney's first *Storytelling Coaster* with a large queue which winds through the Galaxarium, immersing Guests into the world of Xandar and Earth's galaxies. A second queue called the Xandar Gallery teaches Guests about the Xandarian people, culture, and history. Finally, a third queue called the Phase Chamber features the actual story (McGuinness, 2022). After all this storytelling, Guests proceed into the actual roller coaster loading area. The coaster has a reverse launch as its ascent through a Space Adventure. The coaster cars can spin 360 degrees with controlled rotations and is therefore, labeled an *Omni Coaster*. The roller coaster is also one of the largest fully enclosed coasters in the world (Bricker, 2022).

*Revenge of the Mummy* at Universal Studios Orlando is an indoor dark roller coaster which totally immerses its riders into the story. This ride features animatronics, motion picture technology, audio, and robotics. The queue is a Museum of Antiquities. It begins the story of the Mummy Film by displaying film props, molds, and concept drawings from the film. A video plays explaining the making of the original Mummy Film. The queue transforms into a 1940s archaeological dig inside an Egyptian tomb. Riders board mine carts for their experience. Guests must face their phobias such as fear of the dark, speed, heights, insects, and even death. This coaster travels backwards and forwards, and plunges Guests straight down into a pitch-black abyss. The coaster has a reputation of a story coaster because Guests become part of the story as they ride this high speed, intense, scary coaster (Studio Tour, 2021).



## CHAPTER FIVE: HYBRID RIDE CONCEPT METHODOLOGY

The intent of my thesis is to design a ride system which integrates three transitions between formats. The new system gives Guests an immersive, storytelling experience with an unexpected surprise at the end of their ride. So, welcome to “*Journey To The Dragon’s Gate.*”



Figure 10: Journey To The Dragon’s Gate Marquee  
(Created By: Matt Moore)

The ride begins with Guests walking into a Japanese style building. The building is a wooden structure painted red and white with a gray overhanging curved tile roof. Dark gray stone steps lead into the building. The queue contains Japanese Windows (*Shoji*) which are made of a latticework wooden frame and covered with translucent white paper to diffuse the light (Juuyo, 2014). As Guests proceed through the queue, they are guided into the ride loading area.

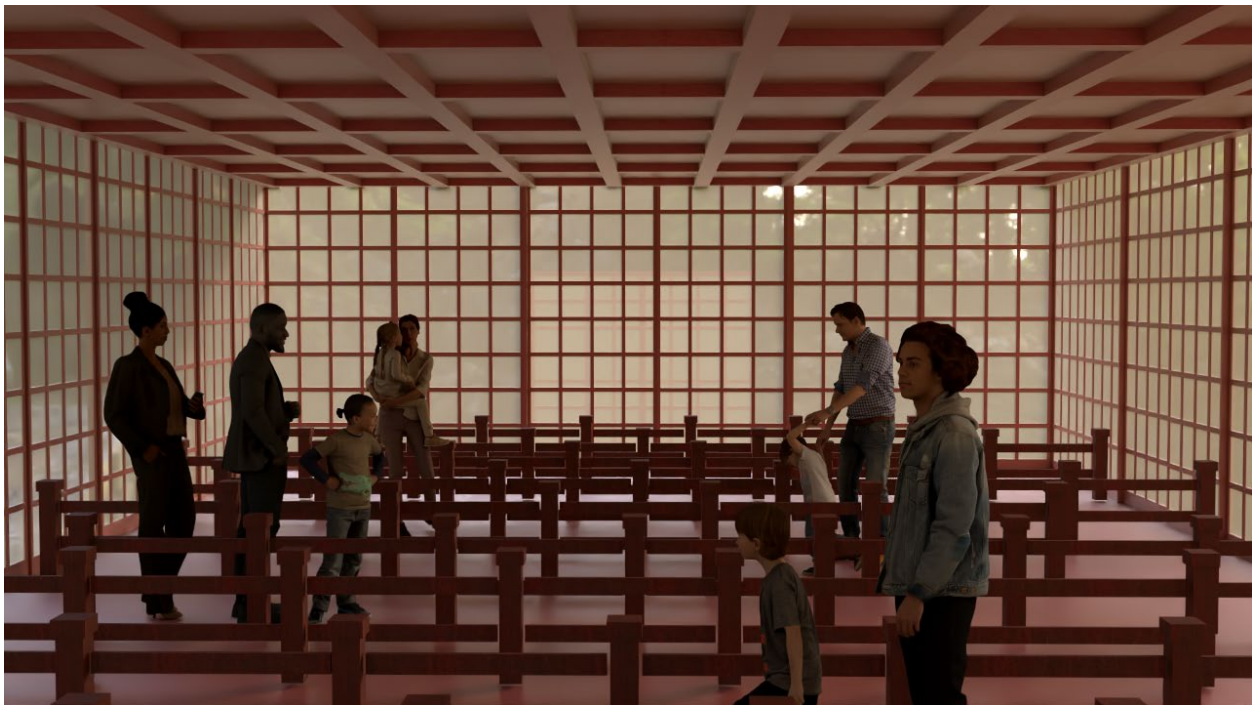


Figure 11: Attraction Queue  
(Created By: Matt Moore)

Traditional Japanese style boats (*wasen*) were made from wood and primarily used for inshore fishing (Brooks, 2021). My design is cognate to the traditional Japanese style boats. Each boat seats nine Guests. For safety reasons, riders are provided with individual locking lap bars. All Guests must be 40 inches or taller to ride this attraction.



Figure 12: Loading Area  
(Created By: Matt Moore)

As the ride begins, the boat floats along a ride path moving with the peaceful water currents. Guests feel that they are not bound to a track but are reliant upon the water's flow. The flow is created by water jet motors (Raineman, 2016). This idea is similar to attractions found in Walt Disney World's Magic Kingdom such as It's a Small World or Pirates of the Caribbean. The boat continues to travel on its journey down the river passing cultural landmarks and authentic Japanese Gardens as described by the narrator of the story. Japanese music plays throughout the ride to reinforce the theme. The boat passes under a bridge and Guests experience the sweet fragrance of cherry blossoms and the vibrant colors of the trees and plants as they enter the garden area.



Figure 13: Ride Vehicle Design  
(Created By: Matt Moore)

Koi Fish begin to swim along the side of the boat incorporating projection mapping on the water. The boat begins to gain momentum as it is swept up by the fast-moving currents as a large waterfall comes into view through the dense fog. As the boat proceeds forward, Guests feel a mist from the crashing waterfall, a cool breeze and the smell of pine trees fills the air. These effects are used to immerse Guests in the environment. The Torii stands proud as the water comes pouring down into the river. Large rocks line the shoreline as the boat gets closer and closer to the falls.



Figure 14: Guests Approaching Waterfall and Torii Gate  
(Created By: Matt Moore)

A conveyor system under the boat slows the ride down and enables it to glide onto a platform in front of the waterfall and stop. The ride vehicle is locked securely into a motion platform. Guests view the Koi Fish trying to swim up the waterfall provided by projection mapping. As the platform begins to move vertically, two mechanical arms begin to extend underneath the boat creating a rocking motion from side to side. (Weisenberger, 2014). As the boat climbs to the top of the waterfall, Guests see less and less Koi Fish trying to swim up the waterfall. The boat reaches the top and the last Koi jumps in front of the boat through the Torii Gate and seems to disappear.



Figure 15: Ride Vehicle on Platform Climbing Waterfall  
(Created By: Matt Moore)

The boat is released from the platform onto a track and passes through the Torii Gate. At this point of my attraction, the boat ride transforms into a roller coaster and roller coaster elements are utilized. The components of a roller coaster operation and design are the tracks, hills, turns, and spirals. My coaster is a steel roller coaster with tubular steel tracks. The wheel assembly of the coaster has three wheels. Up-stop wheels are located under the boat and keep the boat from coming up off the track. Running wheels are above the rails and keep the boat centered on the track and side friction wheels run along the sides of the rails supporting the weight of the boat. I chose this design because it would keep the boat anchored to the track which is very important during twists and turns (Harris & Threewitt, 2019).

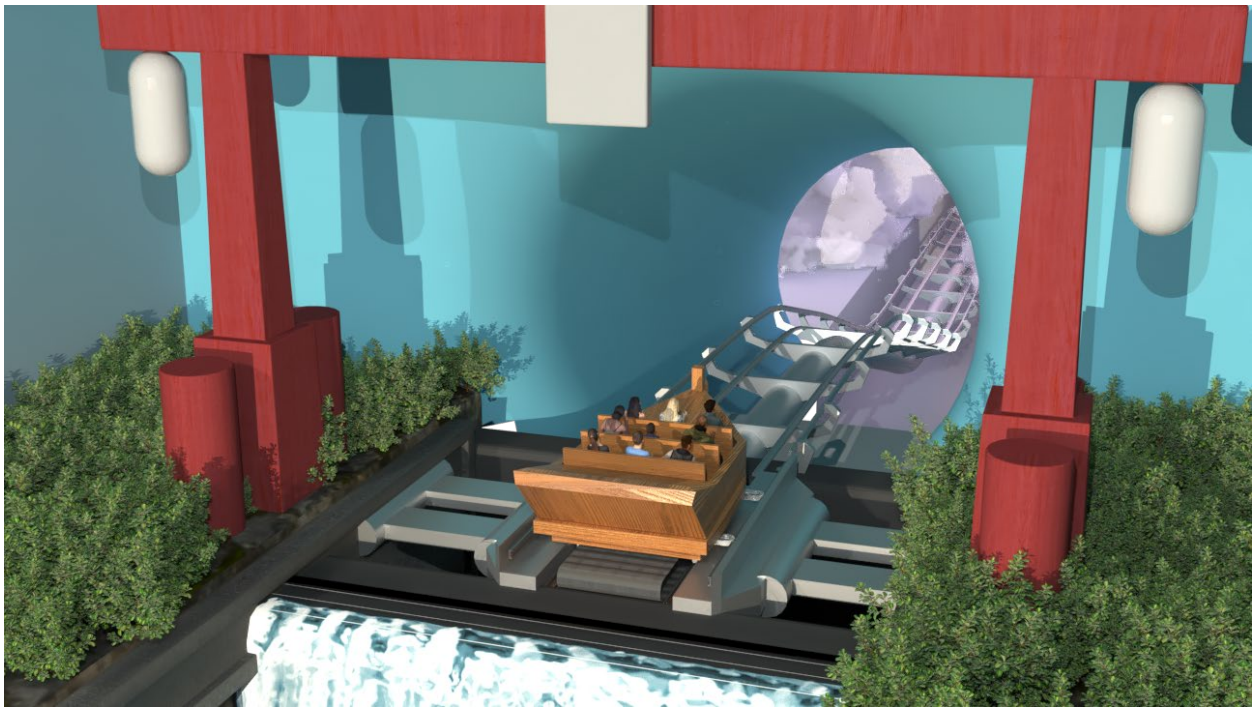


Figure 16: Ride Vehicle Transitioning to Roller Coaster  
(Created By: Matt Moore)

As the boat proceeds forward, Guests find themselves in the middle of dense clouds. The boat continues to travel in a straight path and the clouds begin to clear. Guests become distracted by light coming from an opening up ahead. Suddenly, a large Dragon appears. The boat moves closer and closer towards the Dragon. The Guest's attention is drawn to the Powerful Dragon and suddenly, the Dragon's breath creates white smoke that pours onto the boat. At this point, the Guest's visibility is impaired, and the boat comes out of the building and races down a steep hill. The nice and peaceful boat ride has now transitioned into a moderate roller coaster with twists and turns and airtime hills that navigates around and through Japanese Gardens. The roller coaster is an element of surprise for the Guests. The boat returns to the water with a splash. It floats up to the dock where Guests will be unloaded and guided into the gift shop.



Figure 17: Guests Encounter Magical Dragon  
(Created By: Matt Moore)



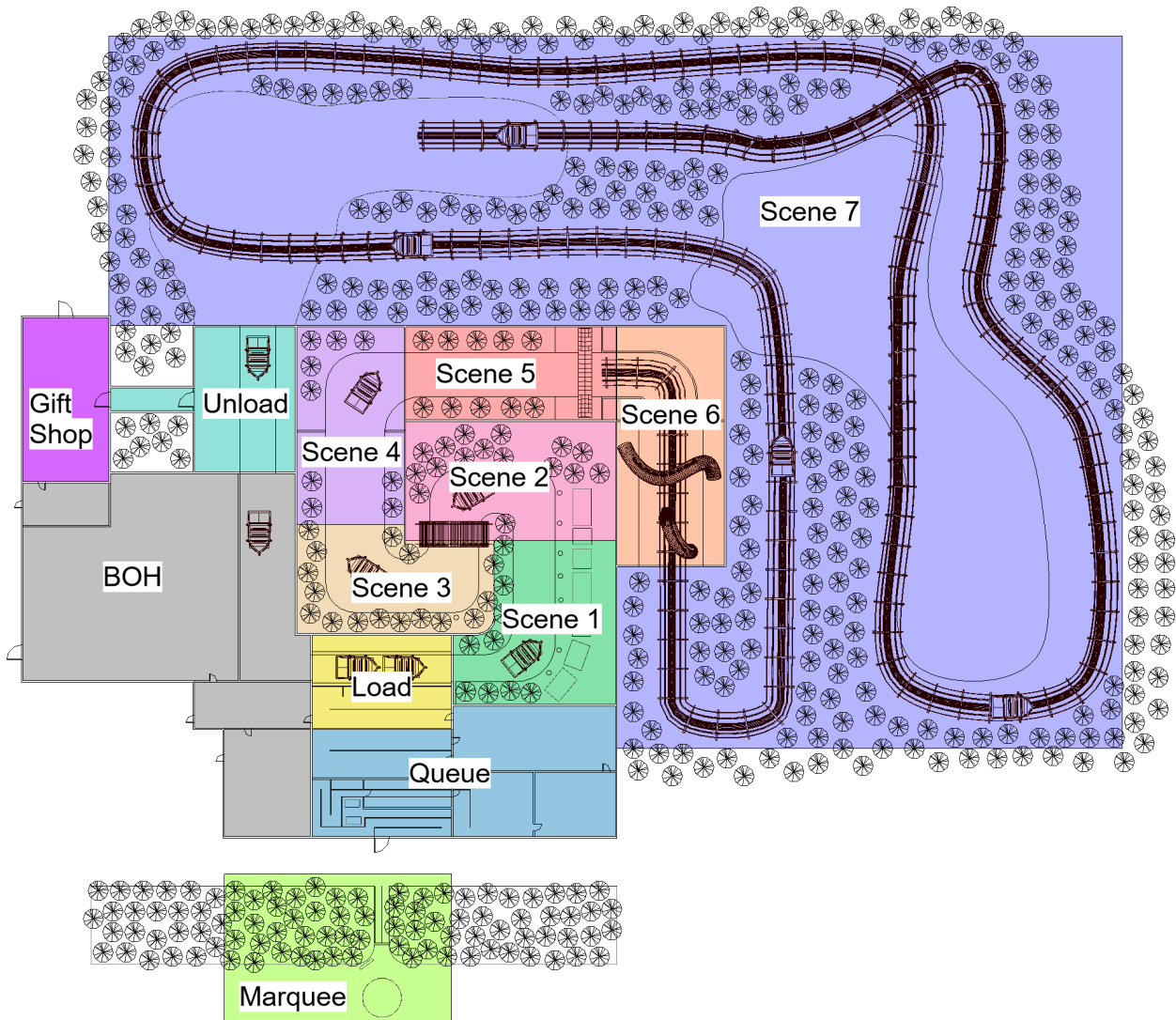


Figure 18: Plan Overview of Attraction  
(Created By: Matt Moore)

- |                            |                           |
|----------------------------|---------------------------|
| Scene 1 Fishing Village    | Scene 5: Transformation   |
| Scene 2: Boat Under Bridge | Scene 6: Dragon Encounter |
| Scene 3: Forest            | Scene 7: Outdoor Coaster  |
| Scene 4: Koi               | Scene 7: Japanese Gardens |
| Scene 5: Approaching Gate  | Scene 7: Unload Area      |
| Scene 5: Jumping The Falls |                           |

## CONCLUSION

As technology progresses for theme park attractions, Guests expect more and more amazing experiences. The implementation of screens within attractions have become very popular. The thrills and action come from these screens and do not really immerse Guests into the action. The overall experience is sometimes disappointing.

Dark Rides work well because they utilize scene transitions and hold the Guests attention by impressive props, special effects, and animatronics. Dark Rides tell a story and take Guests on a journey through beautiful environments. Projection Mapping adds to the environment by using technology to project objects onto a surface. The objects are not just projected onto flat surfaces, they are designed to wrap around and create 3D displays.

Roller Coasters are getting taller, faster, and scarier due to advances in technology. There are usually long wait times for an average ride of just under 2 minutes. Roller Coasters attract Guests who like speed, visceral sensation of fear, thrills, and variety. Even though these coasters are popular, they target certain types of Guests and age groups. Theme Park Enthusiasts are interested in the overall idea of theming, thrills, dark rides, and storytelling all in one attraction. They are looking for a fully immersive attraction rather than just a roller coaster.

The purpose of my thesis is to create an attraction that is not only a storytelling, immersive dark ride but, one that excites Guests and raises the level of entertainment for a unique memorable experience. My thesis promotes the idea of combining three different ride systems into a single ride. I chose the theme of a Japanese Myth, "*Journey To The Dragon's Gate*" for my attraction.

The first ride system for my attraction starts out as a dark ride with a free-floating boat ride navigating down a peaceful river joined by Koi Fish swimming along the side of the boat created with projection mapping. The second ride system begins when the boat approaches the waterfall and is guided onto a motion platform. As it begins to rise to the top of the falls, Guests feel the sensation of the boat moving. It is essential to have excellent theming in initiating the setting and bringing the story to life.

The third ride system begins when the boat is released from the platform onto roller coaster tracks and proceeds through the Torii Gate. Guests are distracted by the Powerful Dragon and therefore, they have an element of surprise as the boat exits the interior of the building and starts its journey as a roller coaster. This transition promotes a coaster with twists, airtime hills, and turns which ends with a splash in the water as it returns to the unloading dock.

This attraction introduces Guests to the Japanese Culture. The peaceful boat ride reflects the gentleness of the Koi Fish. The Dragon represents power and strength as seen and felt experiencing the roller coaster ride. An exceptional attraction needs a standout ride system. This attraction features the concept of combining three totally different ride systems into a single memorable ride. It uses the technology of projection mapping and a motion platform.

Guests hear the story being told by a narrator along with Japanese music. They smell the fragrance of the Cherry Blossoms and Pine Trees. Riders feel the mist from the waterfall and the cool breeze. All of these immerse Guests into the environment of the attraction.

This attraction is not just another boat ride or roller coaster, it is a new experience of a storytelling dark ride adventure which integrates one or more transitions between formats also known as combining three ride systems into a single ride providing an increased level of entertainment and a new kind of experience for park Guests.

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