

Alex Nadeau

Dr. Nader

THE5190

December 4th, 2023

Queuing Effectiveness: A Comparative Analysis of Immersive Environments

The concept of the "theme park queue" has evolved ever since the inception of Disneyland, the first immersive theme park. "Switchback" queues were implemented in Disneyland to make queuing more efficient. Since Disneyland created the "switchback" queue, Imagineers noted that guests wanted shorter wait times, or at least the "feeling" that the wait time was shorter. Nelson states that "Imagineers learned quickly that theming needed to spread to every inch of Disneyland to make their guests' satisfaction complete" (50). This advancement of queue construction continued to progress. Imagineers implemented "scene one" pre-shows and interactivity within the queue, ensuring the theming and atmosphere were immersive, even within the waiting line.

Since then, theme parks worldwide have implemented these methods to improve the concept of time in lines: "A queue extending the storyline, so that waiting itself turned into a vital part of the plot, was a logical next step. As presented in *A Rocket to the Moon*, the pre-show was a short entertainment piece that introduced the attraction ahead while continuing to hold guests from the main space. Hench wrote of the importance of continuity, 'you don't throw people into the fifth scene, where they cannot make sense of what is happening. You begin with the first scene and move through' (Nelson 53). This paper uses a comparative analysis of the queues for TRON: Lightcycle Run (hereafter TRON) at Walt Disney World's Magic Kingdom

and Universal Studios Orlando's Fast and Furious: Supercharged (hereafter FFS) to identify ways in which theme park queues can either captivate or fail to captivate guests. Online reviews of these rides suggest guests are captivated by the TRON ride but are let down by the queue (Bricker). On the other hand, many riders commented that the queue for FFS is a fully immersive and satisfying experience, while guests are let down by the ride itself (Acuna).

An effective theme park ride queue is imperative to the guest experience. Beyond its practicality of managing crowds, a well-designed queue helps the guest transition from the outside world into the immersive narrative of the ride. It sets the tone, building anticipation and excitement by immersing guests in the story or the "world" they are about to enter. A thoughtfully crafted queue enhances the ride's overall atmosphere and engages guests through interactive elements, enriching their waiting experience. In addition, the queue serves as an introduction to the "backstory" of the attraction. The guest receives instructions about what to expect and what their role is in the immersive experience. An effectively designed queue can build anticipation and excitement. By creating a cohesive and immersive environment, the queue contributes to the ride's ability to entertain and leave a lasting impression on theme park guests.

Ineffective theme park queue design negatively affects the overall guest experience. An ineffective queue makes the waiting experience more manageable and connected to the attraction. The absence of engaging interactive features further worsens this problem, resulting in a disengaged guest perceiving the wait time as tedious rather than a part of the overall entertainment value. This disconnect reduces the excitement leading up to the ride and may diminish the guests' perceived value of the entire visit. Ineffective queue design, as highlighted in this paper, ultimately translates to missed opportunities for park guests to be fully immersed in the storytelling that defines the essence of a theme park experience. Research suggests that

effectively designed immersive queues improve guests' perception of time while also keeping the guests immersed in the experience, building anticipation for the actual ride. When queue design is prioritized, the attraction becomes more memorable and enjoyable for guests.

The Queue as an Immersive Experience

Queue design was driven initially by the need to move people through crowded areas efficiently. Nelson describes how Disney parks have become a standard for queuing, "Walt Disney expected his guests to behave as models of good behavior and, most of the time, they were patient through the long decades of queue adjustment" (56). Over time, Disney's expertise in queue efficiency was often called upon outside the theme park world. For example, the US government relied on Disney managers to help reorganize airport lines after 9/11 to be both efficient and to generate higher customer satisfaction (Nelson 56). Since then, Disney's Parks and Resorts division now known as "Disney Experiences," is known for its exceptional theming and immersive experiences. Queue areas for Disney attractions often feature detailed and interactive elements that enhance the overall story or theme of the ride. This may be why some guests indicate that the TRON queue lets them down.

When entering the TRON queue, guests expect to enter "The Grid," where they would be digitized using a device that queue designers have placed outside the ride (see Fig. 1), not actually in the queue area. This is a lost opportunity to begin the immersive experience, creating a continuity issue. After entering The Grid, guests wait in a room with low-quality digital screens displaying ride safety videos and backlit static images that do not promote immersion into a digital world (see Fig. 2).



Fig. 1: Alex Nadeau, *TRON Digitizer in outdoor queue*, Photograph, 2023.



Fig. 2: Alex Nadeau, *TRON indoor queue signs*, Photograph, 2023.

Since its opening on June 7th, 1990, Universal Orlando has strongly emphasized theming, especially in its newer attractions. The queue areas are designed to immerse guests in the world of the ride, with attention to detail in both design and storytelling. Nelson discusses that "Universal Studios, another leader in the theme park industry, includes gags and interactive components along its queues inspired by Disney's models" (56). While FFS is touted as one of the "worst theme park rides ever," its queue offers an immersive experience into Dominic Toretto's world. While waiting in the queue, guests can view scenes from the movies, such as areas where "the family" meets for meals and some of the most iconic cars from the 10-movie franchise (see Fig 3.). This immersion into the theme of the series offers a fitting example of a queue for a ride with a preexisting IP.



Fig. 3: Universal Orlando Blog, *Fast and Furious: Supercharged Concept Art, Rendering, 2016.*

Elements of Interactivity

Disney queues often include interactive elements, such as games or activities, to keep guests entertained while waiting. These can contribute to the overall experience and help manage

perceived wait times. Some recent queue designs even offer free-roaming areas, allowing for a more interactive experience without the perception of line-waiting. Blesgraaf states, "By taking away the preoccupation with the queue, physical urges, or the day plan, visitors can instead get into the mood for the ride" (76).

Universal has also been incorporating interactive elements into some of its queues, using technology to engage guests and make the wait more enjoyable. *Fast and Furious: Supercharged* integrates actor-operator team members to interact with the guests, as well as two scripted "scene one" pre-shows (see Fig. 4). Zauha describes that "actor-operators allow guests to interact in improv dialogue in the context of the storyworld, but the choice to do so lies solely on the guest. These also provide opportunities for guests to intrude on the diegesis through mentions of real-world references or comments that acknowledge the artificiality of the experience" (68).



Fig. 4: Alex Nadeau, *Fast and Furious: Supercharged 1st Preshow*, Photograph, 2023.

Integrating Technology

Disney has been at the forefront of integrating technology into its queue experiences. It uses features like the Play Disney Parks app to enhance the waiting time with games and interactive content. Examples such as *The Many Adventures of Winnie the Pooh* at Magic Kingdom offer various digital and analog technologies for guests, especially children, to interact with while waiting for the ride. One of TRON's issues is its need for more technological integration within the queue. Screens with essential videos for safety, as well as rudimentary story-based videos on low-quality screens, barely feel like integration and feel forced (see Fig. 5). However, TRON does offer a virtual queue, which reduces the overall wait time inside the physical queue.

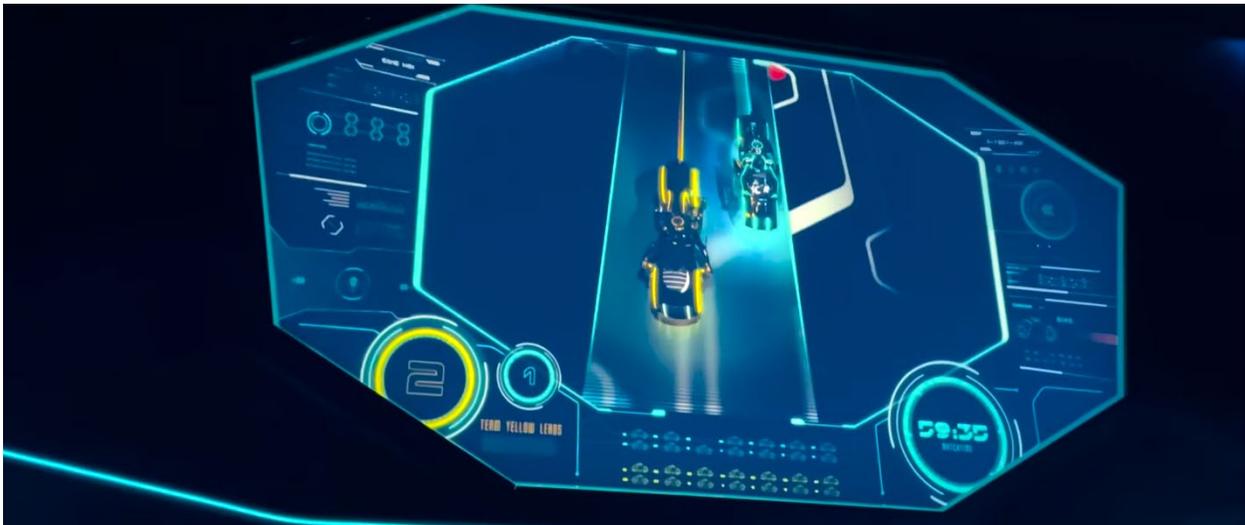


Fig. 5: Alex Nadeau, *TRON queue digital videos*, Photograph, 2023.

Universal Parks has also embraced technology, using interactive elements, virtual queues, and mobile apps to enhance the overall guest experience. FFS itself was one of Universal Orlando's first attractions to offer a virtual queue (Kleiman), allowing guests to do other things throughout the park while waiting for their time to ride. While it was removed quickly after

attendance faltered, it made the guests in the physical queue feel less constrained and packed in line. When entering the "scene one" pre-shows, guests interact with technologies that integrate pre-recorded videos of actors from the Fast and Furious series in a way that makes you feel as if you are directly interacting with them. (see fig. 6) These pre-shows are a near-perfect way of exciting the guest before entering the ride vehicle.



Fig. 7: Alex Nadeau, *Fast and Furious: Supercharged 2nd Preshow*, Photograph, 2023.

Queue Length and Wait Times

Realizing that guests' satisfaction depends on both the actual duration and guests' perception of the wait time has led theme park businesses to adopt innovative strategies. As Daniels et al. note, "For theme park patrons (guests), lines are typically the worst annoyance concerning the experience, and worse than waiting is feeling like they waited longer than they actually did"

(105). This psychological aspect of queuing has prompted theme parks to shape visitors' feelings and attitudes during the wait. In response to this understanding, Disney and Universal have implemented tactics on some rides to influence the guest's state of mind during this waiting period. Lemaster highlights the industry's efforts to shift the focus from the quantitative aspect of wait times to the qualitative aspect of guest experience: "Sometimes, [...] the wait time cannot be shortened, yet guest satisfaction still needs to be increased. Thus, an increasing number of businesses have attempted to control guests' perception of the wait, and not solely focus on the length of the wait" (13).

While TRON has a small queue area relative to the number of people who would actually be willing to wait in a "standby" line, especially while the ride is new, the virtual queuing system on the My Disney Experience application does offer an improvement in terms of perceived wait times. Guests receive a "call back time," and they can experience other rides and attractions while they wait. FFS initially offered a virtual queue, but Universal Studios has not needed to utilize the system on its app since its occupancy has decreased significantly since its introduction. This lack of popularity also ironically allows guests who are interested to interact with the queue for a more extended period. This allows them to view the exciting props and vehicles from the series.

Atmosphere and Pacing

Both parks focus on creating a dynamic and engaging atmosphere within their queues. The pacing of the queue experience is often designed to build anticipation and excitement for the ride itself. The focus on creating a dynamic and engaging atmosphere within theme park queues, coupled with thoughtful pacing, is a crucial aspect that significantly contributes to the overall

guest experience. Daniels et al. have determined that studies on the atmosphere and pacing of a queue "[...] provide insight to designers about the park guests' experience to design to their needs and make the space functional and enjoyable for them. This study is important for any person working towards the creation of theme park attractions [...] to better understand the patron's experience in the attraction" (106). Both Disney and Universal understand the importance of setting the tone for the ride. The concept of atmosphere involves careful curation of sensory elements, including music, lighting, and even scents, to transport guests into the world of the attraction. While FFS offers one of the worst ride experiences (Acuna), its queue is a fitting example of an effective queue. The FFS queue is one that Universal creates to implement "[...] increasingly sophisticated tactics in order to reduce the negative experiences of queues and in some cases turn them into positive ones" (Lemaster 2). Contrary to that, TRON offers a fantastic ride experience (Bricker) while offering a poorly implemented queue.

Conclusion

In conclusion, this comparative analysis of the queues for TRON at Walt Disney World's Magic Kingdom and Universal Studios Orlando's FFS highlights the critical role that queue design plays in the overall theme park experience. The evolution of theme park queues, from the early days of Disneyland to the present, reflects a continual effort to enhance guest satisfaction and engagement. An effective theme park ride queue serves as more than just a practical means of managing crowds. It becomes a transition from the outside world into the immersive narrative of the ride, setting the stage for the adventure ahead. A well-crafted queue contributes to the ride's atmosphere and engages guests through interactive elements, enriching their waiting experience. The queue becomes an introduction to the attraction's backstory, building anticipation and

excitement. Conversely, an ineffective queue design detracts from the overall guest experience. It can make the waiting period mundane and disconnected from the attraction, reducing the perceived value of entertainment. This paper demonstrates that a lack of engaging interactive features leads to disengaged guests, perceiving the wait time as tedious rather than part of the overall entertainment.

The concept of the queue as an immersive experience has evolved beyond its initial purpose of crowd management. Both Disney and Universal have incorporated interactive elements and technology to engage guests while waiting in line. Disney's Play Disney Parks app and Universal's virtual queue system within their Universal Orlando Resorts App are examples of how technology has been seamlessly integrated into the waiting experience, enhancing guest satisfaction. Queue length and wait times remain significant concerns for theme park patrons, and both Disney and Universal have implemented strategies to address these issues. Systems like FastPass+ and efforts to manage the perception of wait times reflect a commitment to improving the overall guest experience.

As theme parks continue to compete for visitors' attention, the design and effectiveness of queues have become progressively more crucial. This analysis underscores the importance of prioritizing queue design to create a cohesive and immersive environment. When done effectively, the queue becomes an integral part of the storytelling that defines the essence of a theme park experience. In the ongoing evolution of theme park design, the queue is crucial in shaping memorable and enjoyable moments for park guests.

Works Cited

- Acuna, Kirsten. "I Rode the 'Fast & Furious' Ride at Universal Studios - It's a Good Family Ride but It May Leave You Hoping for More Thrills." *Insider*, 19 July 2018, www.insider.com/fast-and-furious-ride-universal-studios-review-2018-7
- Blesgraaf, Peter. "Redesigning the theme park queue." *Journal of Motivation, Emotion, and Personality*, vol. 2, no. 2, 2014, pp. 74-77.
- Bricker, Tom. "Ride Review: Is Tron Lightcycle Run Worth the Time or Money?" *Disney Tourist Blog*, 3 Apr. 2023, www.disneytouristblog.com/tron-lightcycle-run-ride-review-magic-kingdom/
- Daniels, Ellen C., et al. "Theme Park Queue Line Perception." *International Journal of Cultural Heritage*, vol. 2, 2017, pp. 105–118.
- Kleiman, Joe. "New Details Emerge on Universal Orlando's Fast & Furious Attraction." *InPark Magazine*, 3 Nov. 2017, www.inparkmagazine.com/fast-furious-orlando/
- Lemaster, Austin, "*Analysis and Implications of Guest Attitudes Towards Queuing in Theme Parks*. 2015. University of Central Florida, honors thesis. <https://stars.library.ucf.edu/honorstheses1990-2015/1720>
- Nadeau, Alex. "Various images from Walt Disney World and Universal Studios Orlando." 2023.
- Nelson, Emily. "The art of queueing up at Disneyland." *Journal of Tourism History*, vol. 8, no. 1, 2016, pp. 47–56, <https://doi.org/10.1080/1755182x.2016.1179795>
- So, Winona. *Avatarme: Digital Avatars in a Theme Park Queue Creating a Better Experience and an Emotional Connection*. 2021. Ryerson University, master's thesis. <https://doi.org/10.32920/ryerson.14652657>

Tuttle, Brittani. *Fast and Furious: Supercharged Concept Art*. 7 Nov. 2017. *Attractions Magazine*, <https://attractionsmagazine.com/universal-orlando-fast-furious-supercharged-details/>. Accessed 12 Feb. 2023.

Zauha, Jordan, *Theme Park Queues as Diegetic Worlds: Using Star Wars: Rise of the Resistance as a Case Study for Core Design Elements*. 2022. University of Central Florida, master's thesis. *Electronic Theses and Dissertations, 2020*. 1313.
<https://stars.library.ucf.edu/etd2020/1313>