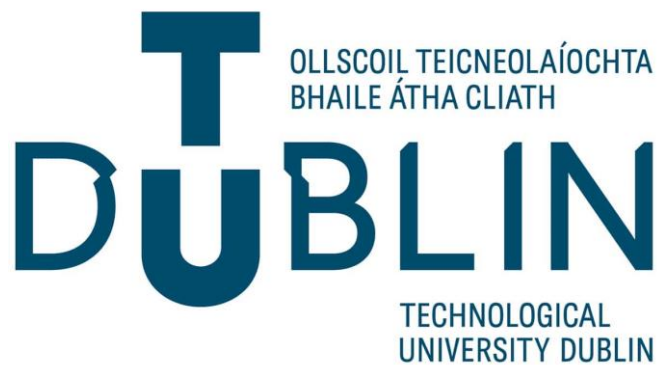


# Planes, Trains, and Silt Striders

## The Influence of Fast Travel Systems on Scale Perception in Morrowind

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# Abstract

This dissertation investigates and discusses the cognitive effects that the implementation of the common game mechanic Fast Travel found within The Elder Scrolls III: Morrowind can have on a player. Through survey analysis, it was demonstrated that as players grow in experience with the game, a large majority will begin to perceive the world as becoming smaller than it initially appears. Further analysis showed that of these players, a significant majority can attribute their experience of a reduction in world scale to their use of the Fast Travel systems present within the game. The results of the performed surveys were then discussed through the lens of gameplay schemas provided by Lindley and Sennersten (2006) and distance cognition work of Montello (1997), where it was found that Fast Travel systems cause a scale reduction effect by reducing the number of environmental features encountered and the time spent by the player on their journeys through the game world.

# Declaration

I certify that this thesis which I now submit for examination for the award of Bachelor of Arts (Honours) in Game Design, is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work.

This thesis was prepared according to the general assessment regulations of the TU Dublin and has not been submitted in whole or in part for another award in any other third-level institution.

The work reported on in this thesis conforms to the principles and requirements of TU Dublin's guidelines for ethics in research.

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Signature  Date 30<sup>th</sup> January 2021

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# 1 INTRODUCTION

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In 2002 Bethesda Game Studios released their ground-breaking and critically acclaimed 3D action-adventure role-playing game (known hereafter as RPG), *The Elder Scrolls III: Morrowind*, the third main series entry to *The Elder Scrolls* franchise. Nearing its 20<sup>th</sup> anniversary in May 2022, the game certainly shows its age against modern graphical fidelity and contemporary game engines. It certainly lacks the impressive visual spectacle present within modern triple-A releases, and its gameplay mechanics are certainly slower and less streamlined. Yet somehow it remains in the mind of many fans of the game, as the pinnacle of the *Elder Scrolls* series.

Fundamental to the experience of *Morrowind* is the world in which it takes place, and the variety of ways the player can use to navigate it such as running, jumping, and swimming. In addition, there are spells such as *jump* that increase the height a player can jump to, *slowfall* spells that allow the player to fall from great heights without injury, and *levitate* spells that allow the player to fly around the world for varying durations. This grants the player a great level of freedom in movement not seen in the later entries of the series. Supplementing these methods of movement

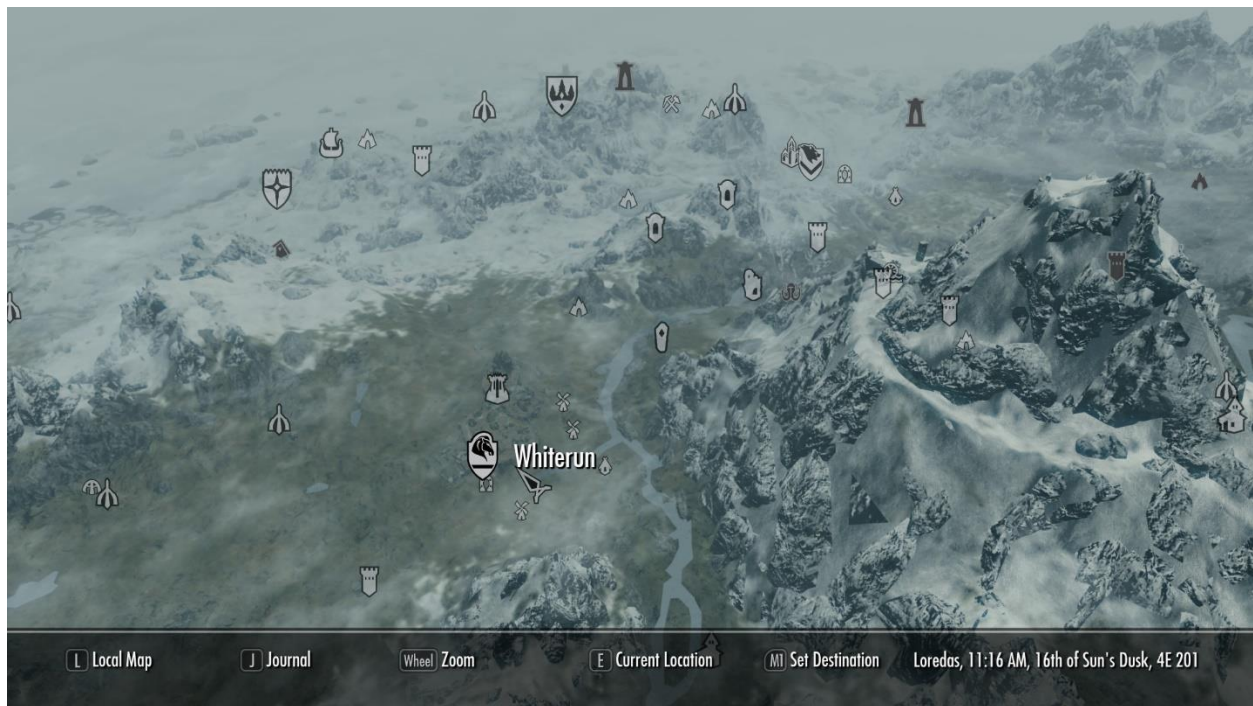


Figure 1. 1 The world map of *The Elder Scrolls V: Skyrim*. (Bethesda Game Studios, 2011)

are the Fast Travel systems within the game, which is the main subject of discussion within this dissertation.

Fast Travel is a broad name attached to various implementations of a mechanic system present in many games, which allows the player to traverse great distances within the game world without the need of player input for wayfinding. As stated, many games have their own versions of the mechanic, and even within the Elder Scrolls series itself, the mechanic can vary in its implementation. For example, Fast Travel within *The Elder Scrolls IV: Oblivion* (Bethesda Game Studios, 2006) and *The Elder Scrolls V: Skyrim* (Bethesda Game Studios, 2011), utilize a map-based node system where locations that have been previously visited are denoted by a node on a UI(User Interface) map of the game world, that a player can select and instantly teleport to. Along with these wide implementations found in games, comes a litany of definitions of Fast Travel, which try to include and exclude various system implementations as being categorized as true Fast Travel. However, this dissertation proceeds with the understanding that Fast Travel is a general term. A rigid definition is likely to become outdated within a couple of years, as game developers push boundaries and blur the lines with new methods of travel within virtual spaces. Therefore, a broader understanding is needed to talk about the concept for research purposes. The understanding this dissertation takes of Fast Travel is a system for automating a player's movement over a large distance within a virtual environment.

A player's perception and cognition of a virtual game world is entrenched with how they navigate and move through that world. It follows therefore that systems like Fast Travel have a strong influence on spatial understanding within a virtual environment. This dissertation is tasked with understanding how the Fast Travel systems in *Morrowind* can affect a player's understanding of the game world and finds that players perceive the game world to become smaller as a result of their use of the Fast Travel systems present within the game. These findings were gathered through a survey analysis.

In the literature review, an overview of the game is conducted, where 'Navigational Aids' (Forest, 2011) are briefly mentioned. Then follows a comprehensive discussion of the Fast Travel systems within *Morrowind*, where various modes of transport are categorized into two major definitions. Moving on we delve deeper into the common discourse surrounding Fast Travel systems, where both the negatives and positive aspects of the feature are discussed in the context



of game design. Subsequently is the exploration of Schema Theory, the framework through which an understanding of the cognitive effects of Fast Travel will be developed. Within this discussion, various applications of Schema Theory are included, looking at work related to spatial cognition research via Mondschein et al (2010) and West et al (2017), and the work of Lindley and Sennersten (2006) (2008) in their work relating to gameplay schemas.

Using the information from the literature review, the dissertation moves toward the methodology taken to investigate whether the development of gameplay schema related to using Fast Travel systems can lead to a diminished sense of scale of the game world. This was achieved through a survey questionnaire which was distributed online through various forums for Morrowind fans.

The motivation behind this dissertation is to gain greater knowledge in the role navigational systems such as Fast Travel can have in shaping the player's perception of a game world with the hope that this understanding proves useful for game designers. We begin our literature review with a comprehensive overview of Morrowind.

## **2 LITERATURE REVIEW**

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### **2.1 AN OVERVIEW OF MORROWIND**

Morrowind is an action/adventure RPG, with a very strong emphasis on its RPG elements. Set upon the fictional island of Vvardenfell in the province of Morrowind, the player can create their avatar, selecting from a variety of fantasy races to play as, creating a class (say warrior or thief), and levelling up skills such as lockpicking and alchemy. The game is heavily inspired by classic tabletop RPGs such as Dungeons and Dragons (Gygax, Arneson, 1974), which uses dice rolls to decide the outcome of actions in the game. This use of probability is also built into Morrowind's gameplay, within areas such as weapon hit probability, spellcasting success, and persuasion success, which is then influenced by the player's relevant skill level.

#### **2.1.1 Travelling in Morrowind**

Compared to later games in the series, Morrowind is a significantly slower experience. There are many contributing factors to this, including its combat system, user interface, and quest

design. However, one of the major influences in the pacing of the game is the act of travel within it and how it is achieved.

In Morrowind the player character is *very* slow, at least to begin with. One of the player characters ‘attributes’ is its Speed attribute, which can be increased by levelling up. The speed attribute affects, like its name suggests, the speed at which the player character moves through the world, while running, walking, and swimming. At the beginning of a playthrough, a character’s speed attribute is typically very low, meaning that even while ‘running’ the character moves at only a brisk walking pace. Coupled with this, running eats into the player’s Fatigue, one of the three major resources of the player (the other two being Health and Magicka). Fatigue is a crucial component in calculating hit probability and damage while in combat, so using it for running can be risky when travelling around enemy-infested environments. This lack of speed encourages the player to utilize the Fast Travel systems available to them so that they might cross the vast distances of the world of Morrowind at a reasonable rate.

### 2.1.2 Wayfinding and Fast Travel

Wayfinding is part and parcel with an open-world gaming experience. Many modern open-world games rely on ‘objective markers’, UI elements displayed on a game map to denote the

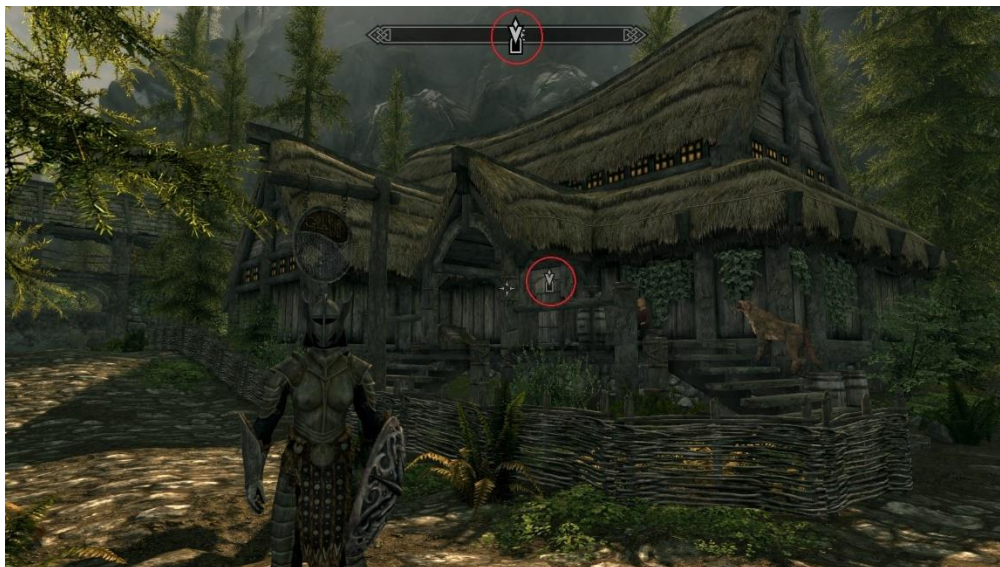


Figure 2. 1 Skyrim’s Objective Markers (Bethesda Game Studios, 2011)

location of the players next objective. (For example, see The Witcher 3: Wild Hunt (CD Projekt Red, 2015), The Elder Scrolls V: Skyrim and Borderlands 3(Gearbox Software, 2019).

Forest (2011), goes into detail in examining ‘navigational aids’ in Fallout 3 (Bethesda Game Studios, 2008), Bioshock (2K Australia, 2K Boston, 2007) and Bioshock 2 (2K Marin, 2010) in which he includes ‘Fast-travel’ under that category and briefly discusses its implementation within Morrowind. He concludes that for the games he examined, the navigational aids “have a profound impact on the way that players experience the games’ spaces.” However, he notes that the presence of various navigational aids is not “necessarily prescriptive of how players engage with the space” but rather that they act as tools for the player to engage with the space. He states that they can indirectly encourage players to engage with the space in specific ways through easing difficulty for those methods of engagement, and in turn discourage other forms that are



Figure 2. 2 Morrowind's User Interface (Bethesda Game Studios, 2002)

comparatively more difficult.

In Morrowind, there are a handful of navigational aids: the UI map that shows local and regional survey information to the player, and a ‘mini-map’ located at the bottom right of the screen. This mini map gives the player heading information by having a fixed rotation with North facing upwards and an arrow icon which rotates based on the player's global direction. The mini map is always present and updates in real-time which removes the need for the player to pause the game and check the local map repeatedly. The regional map contains markers for major locations (for example Towns and Strongholds) in the world, however, they must be visited before they

become visible to the player. It does not contain information for local locations such as entrances to shops and houses, as this information is shown on the local map.

New players may be surprised, however, to find these objective markers, a feature commonly found in many contemporary games, are not present within Morrowind. There is indeed no HUD (Heads Up Display) element that directs the player's route to their current objective. In lieu of this, the game relies on written directions given by NPC's (Non-Player Characters) that can be found and read within the player's Quest Journal. For example, the quest 'Egg Poachers' has a journal entry containing directions to a mine. It reads:

"Eydis Fire-Eye tells me that the eggmine is located a short distance southwest of Balmora, in the bluffs west of the Odai River. The old suspension bridge across the Odai is just southeast of the mine entrance. I'm to follow the river south of Balmora until I see the bridge overhead."

(Journal entry for "Egg Poachers", Morrowind 2002)

Players are required to navigate the world by following these directions using environmental landmarks and heading direction to reach their objectives. This pushes the player to a higher level of engagement with the environment, as they must pay close attention to where they are and where they are going if they are going to reach their objective successfully. Experienced players develop extensive spatial knowledge of the game world as they play the game.

Forum posts for the Morrowind community tend to disagree on whether the lack of objective markers is a positive or negative aspect of the game. Many critics cite the irritation a player can experience when the requirement of navigating to an objective is a gameplay challenge in and of itself. Proponents of the lack of these markers, such as Evans-Thirlwell (2017), praise this experience as invigorating:

"Morrowind isn't a particularly large or impenetrable world - its roads well-signposted, its towns clustered close together - but having to actually look for the place you're looking for is invigorating, a show of faith in both the player's patience and the environment's intelligibility." (Evans-Thirlwell, 2017).

Whether seen as a benefit or not, the navigational aids available to the player help shape their knowledge of the game world. Included within this knowledge is the players understanding of the multiple Fast Travel systems present within Morrowind.

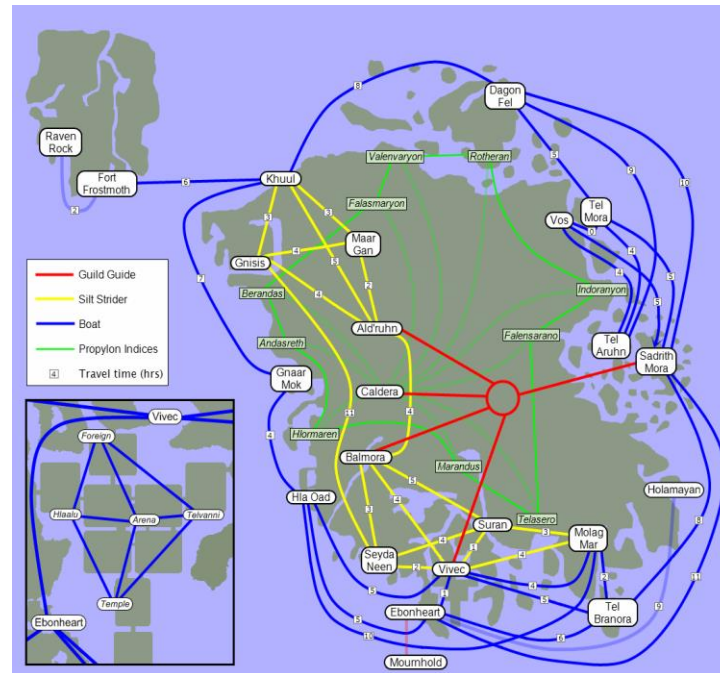


Figure 2. 3 Fast Travel Route Map of Morrowind  
(Unofficial Elder Scrolls Pages, 2012)

Fast Travel is a system that can be found in many contemporary open-world games such as Borderlands 3, The Witcher 3: Wild Hunt, and Divinity Original Sin II (Larian Studios, 2017). These games implement Fast Travel in their own ways, albeit with a lot of overlap between them often using the location waypoint system similar to the system found in Skyrim. Even within the Elder Scrolls series itself, the process of Fast Travel changes in its mechanics from entry to entry. In a broad sense, Fast Travel allows the player to traverse virtual distances automatically, without requiring user input. There exist many definitions of Fast Travel, and there can be general disagreement as to whether Morrowind's systems count as Fast Travel but for the purpose of this study, Morrowind has been elected to be included under the category, as Forest does.

When looking at Morrowind's Fast Travel systems under the context of implementations found in other games, they are strongly integrated into the games mechanics and narrative setting, whereas in other games Fast Travel is not part of 'the game' so to speak, but rather a tool for facilitating play. In Morrowind, they are a diegetic element within the world, as within the



narrative context of the game they are understood to be used by the NPCs(non-player characters) of the fictional world and serve functionally for the player as forms of Fast Travel.

As route information for the Fast Travel systems is not available to the player via an in-game HUD element, players must develop and store the knowledge of routes and connections themselves. As wayfinding and exploration across the game world are such a large element to the game experience, when combined with this lack of information made available to the player, developing route knowledge for the effective use of Fast Travel becomes an important part of the player's knowledge of the game world.

In Morrowind, Fast Travel can be achieved in two fundamental modes: either through a transit system akin to a real-world public transport infrastructure where there are routes linking towns and locations within the game world, or, through magical teleportation spells cast by the player. For shorthand, this paper will progress by referring to the former as ‘Transit’ and the latter as ‘Player teleportation’. Forest (2011) makes a similar distinction in their discussion of Morrowind’s Fast Travel systems but acknowledges them as ‘homing spells’ and ‘public



Figure 2. 4 Balmora Mages Guild Guide NPC and dialogue menu (Bethesda Game Studios, 2002)

transport’. Their discussion does not include the Propylon Indices, which do not wholly fit under the concept of ‘public transport’, justifying the use of the naming convention of this paper.

### **Transit**

Transit can be performed via a selection of Transport modes which includes: ‘Silt Striders’(which in a narrative context act much like carriages), Mages Guild Guides(who act as a teleportation service), Boats, and ‘Propylon Indices’(which are portal devices linking various strongholds in the game world), typically requiring a transactional fee of the in-game virtual currency, with the exception of Propylon Indices. To engage in Transit, the player is required to seek out and begin dialogue with a specific NPC for each mode of transport within a town and choose from a list of destinations accessible by that location and mode of transport. Each destination has a gold cost, typically under the 50-gold range, depending on how far the destination is from the player's current location. Interesting to note is that like bartering in general, travel costs are linked to the player characters reputation with the merchant as well as their overall speech skills. Choosing a destination leads to a loading screen, in which the player understands that they are transitioning to a differing space.

### **Player Teleportation**

The secondary method of Fast Travel is ‘Player Teleportation’. In this method, the player can cast a spell which instantly teleports them to a pre-determined location, through a transition via loading screen. In the game, there are a handful of spells to achieve this. Firstly, there are the ‘Divine’ and ‘Almsivi’ ‘intervention’ spells which teleport you to the regionally closest Imperial Cult Shrine or Tribunal Temple respectively. Then there are the ‘mark’ and ‘recall’ spells, where the first marks a location and the second acts as an instant teleport to that marked location. The teleportation spells can be performed in a selection of ways.

1. Player cast: the player performs the spell, with the success of the spell depending on the player characters skill level, and Magicka resources.
2. Item enchantment cast: The effect can also be linked to an item (for example Amulet of Almsivi Intervention), which can then be used by the player repeatedly without having any skill or Magicka requirements.

3. Scroll cast: Scroll cast is like item enchantment cast, the main difference being that scrolls are ‘consumed’, that is, destroyed after they are used.

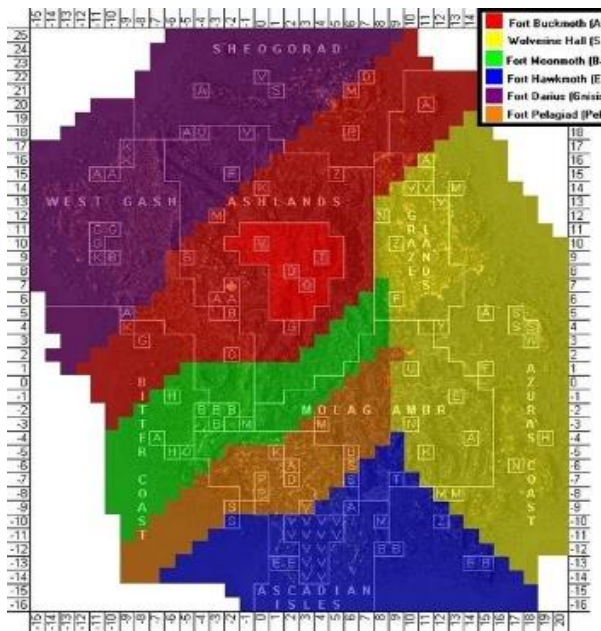


Figure 2. 6 Region of Influence for Divine Intervention

(Unofficial Elder Scrolls Pages, 2012)

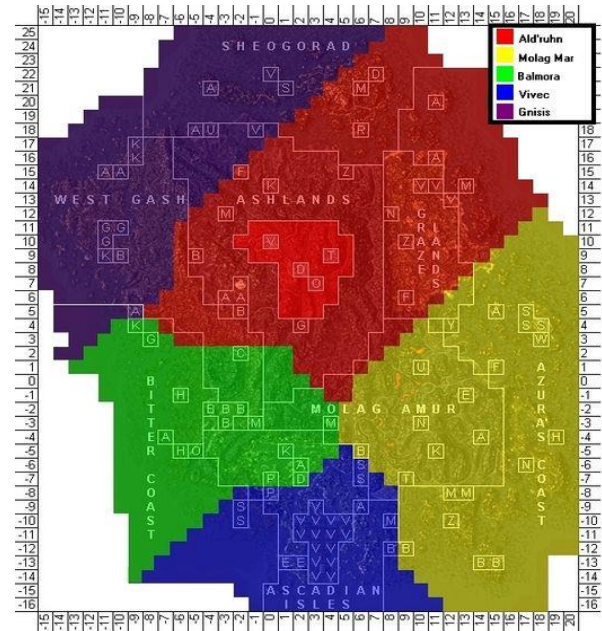


Figure 2. 6 Region of Influence for Almsivi Intervention

(Unofficial Elder Scrolls Pages, 2017)

### 2.1.3 Fast Travel: Divided Opinions

When Fast Travel, as a system in many games, is discussed in a serious capacity, it tends to become a very polarizing subject, at least in online media. Many game media sites and forums are host to both articles and discussions surrounding the nature of Fast Travel and whether it is a positive element to modern game design.

Writing on Gamasutra, Scott (2017) states that Fast Travel systems, at least under their specific definition, is a tool enabling bad game design. They note its role in contributing to issues in pacing, degradation of the narrative elements of the game, and reduction of movement to a boring chore, and finally, that it encourages expansive environments with less dense content. Scott’s definitions of Fast Travel exclude Morrowind, due to the emphasis they place on Fast Travel not being diegetic, and not costly, instead citing an example of Fast Travel as The Elder Scrolls IV: Oblivion, the sequel to Morrowind, that allows for unlimited teleportation for the player, where the player uses the world map to select waypoints to travel to. Scott isn’t the only person to cite the issues surrounding world-building that Fast Travel can cause. User ‘Forum



Pirate' (2016), cites *Morrowind* as a great example of what games can achieve without implementing Fast Travel. They point out that because the transit systems in *Morrowind* are limited, it leads to a better standard of world design, as the transit systems in place are narratively consistent with the game. What is important to note, however, is that both articles tend to have very rigid definitions of fast travel, that conflict with our previously established categorization. This does not take away from the analysis, however, as it is important to note the downsides that Fast Travel can potentially create. We can reinterpret their criticism of Fast Travel as a statement that *Morrowind*'s interpretation is an example of a successful implementation of Fast Travel.

Many would defend more liberal implementations of Fast Travel systems. Caldwell (2015) although still opposed to Fast Travel, accepts the validity of time constraints as an argument for the use of Fast Travel. The argument goes that players today, often lead busy lives, and time spent treading through a game world to get to an objective is hard to justify under the realities of time constraints. Players wish to get to the action quickly so that they may enjoy it.

Also, against the detractors of Fast Travel systems, Spencer (2020), defends its use. Spencer notes that one of the principle issues involved with a lack of Fast Travel is the problem of re-treading the same path repeatedly. From this perspective travel and navigation is seen as an obstacle to the fun of the game. He cites *The Elder Scrolls V: Skyrim* as a great example of the utility of Fast Travel. Spencer presents a game scenario typical to *Skyrim*. The player has completed clearing out an infested tomb and needs to get back to town to earn their reward. Spencer applauds that, in *Skyrim*, the player is not required to manually travel to town, but can simply open the map interface, select the town, and travel instantaneously. Spencer rightly states that for the purpose of the player, a lack of Fast Travel is an obstacle. When the player wants to complete a quest, forcing them to get lost or follow the same pathway back, leads to the experience of travel becoming a distraction from the true intended experience of the game. It should be emphasized at this last point, where Spencer believes that lack of Fast Travel is the cause of the experience of travel being reduced to an obstacle/distraction from the players objective and fun, Scott (2017) believes the opposite to be the case.

Both arguments are valid to some extent, and the two camps have solid examples and reasons to either restrict or broaden the use of Fast Travel available to the player. There is no 'one size fits all' approach, and this is unsurprising in such an experimental medium as video games. Like any

game mechanic or system, it exists for the purpose of solving a problem or issue within the experience a game designer wishes to craft. Take Skyrim for instance, its Fast Travel system is suited for its gameplay style. It is a faster-paced game overall, with an emphasis on action. The systems present within Skyrim contribute to a streamlined action-filled experience, such as its *'Radiant Quests'*. Contrasted against this, Morrowind places a much stronger focus on adventure and exploration aspects of its game experience. Scott is correct that Fast Travel can reduce navigation to a chore, however, if the focus of a game designer is placed in creating an action-filled game, it is reasonable to not place as much focus on player challenges related to wayfinding. There is a compromise that can exist between no Fast Travel and liberal Fast Travel, and Morrowind seems to be a good example of such a compromise. Player Teleportation reduces the problems related to re-treading steps while also not diminishing the overall experience of wayfinding on outward journeys, and the Transit routes provide the opportunity for players to grow in skill and experience. Despite their limitations, Morrowind's Fast Travel systems can create strong changes in how a player navigates the game world, but can they also influence how a player sees the game world?

## 2.2 SCHEMAS

Schema Theory focuses upon the methods in which the brain structures knowledge and information. A schema is a structure of knowledge within the brain that is formed through experience and is used to guide a person's understanding of the world around them and their actions. (Pankin, 2013). They are frameworks that allow an individual to take 'shortcuts' in processing the information they receive from the world (Cherry 2019). They are constantly developing through experience under processes known as 'assimilation', where existing schemas integrate new information, and 'accommodation', where existing schemas are developed. New schemas are formed by gaining new information and through a person's experience. Schemas have many influences on the way we think, as they can influence how we interpret new information and what we wish to pay attention to. (Pankin, 2013). Schemas are a concept utilized by many disciplines including those of cognitive psychology and work related to spatial cognition, where cognitive maps are an example of cognitive schema. Mondschein et al (2010) cite Downs and Stea (1977) in their explanation of cognitive maps, where cognitive maps are structures that contain

“spatial information about the environment including place and route identity, location, distance and direction”.

### **2.2.1 Schema in Spatial Cognition**

Related to the subject of cognitive schemas in public transport is Mondschein et al (2010), wherein the researchers investigate and demonstrate the influence that mode of transport plays in the cognitive mapping process. Within this paper, citing the work of Montello (1997), the researchers explain that “cognition of environmental distance is influenced by pathway features, travel time and travel effort”. In the paper they cite, Montello reviews and examines the available literature in environmental distance cognition, delving into various theories for three main information sources of environmental distance perception and cognition. Montello goes on to state that travel time and effort heuristics are likely to have the strongest influences on distance estimation where the subject has reduced visual access to their environment. Additionally, they mention that there is some evidence that various heuristics will have greater influence at larger scales, that is to say, the scale of public transport. Mondschein and their colleagues demonstrate in their study, that prior experience with different modes of transport is linked to the development of an individual’s cognitive map.

“Utilising multiple measures of spatial knowledge, we find that differences in prior modal travel experience are associated with differences in the content and construction of individuals' cognitive maps” (Mondschein et al, 2010)

There is a lot of research dedicated to spatial cognition, with some researchers such as Warren et al (2014, 2017) using Virtual Reality environments to study the nature of the human cognitive map or, as their research suggests, the human cognitive graph. These experiments looking at spatial schemas don’t offer particularly much help to this dissertation as they take place at small scales and allow the subject to utilize proprioceptive and head direction information through muscle movement and the vestibular system respectively (Ekstrom, 2010). Nevertheless, they give credence to the idea that there is some level of commonality between real and virtual environments. There is neurophysiological work that corresponds with this, as Ekstrom (2010) points out “at least some aspects of what is learned during virtual navigation also apply to real-world navigation.”.

A full discussion on the neurophysiological aspects of spatial cognition within video games is most certainly beyond the scope of the dissertation of a game designer, however, a brief overview will certainly help understand the role that Fast Travel systems can have in shaping players' spatial schemas of virtual environments. West et al (2017) look at the effect that video games can have on the hippocampus, a region of the brain tied to spatial memory and knowledge. The research found that players who employed hippocampus-dependent spatial strategies to navigate a game environment showed an increase in the amount of grey matter within the hippocampus, while players who did not use spatial memory strategies showed a decrease. In their conclusion, the researchers highlight potential methods of warding against the negative effects on the hippocampus through game design. They note that in some action game environments where there are ample landmarks useful in hippocampus-dependent spatial strategies, these games also include HUD elements that act as navigational aids in guiding players to their objectives allowing the player to navigate "without relying on the relationships between landmarks, fundamental to the spatial strategy ". The researchers suggest that removing these navigational aids could lead to better spatial learning. This can logically be extended to Fast Travel, possibly even more so than regular HUD elements, as utilizing it completely removes the need for any spatial strategy while transitioning from one point to the next. Yet, there is also room to acknowledge that other forms of wayfinding and spatial strategy, that the use of Fast Travel systems necessitates, can also lead to the development of new gameplay schemas as Lindley and Sennersten (2006) (2008) reveal.

### **2.2.2 Schema in Video games**

As schema theory informs us, the actions we take within the world and the processes through which we gain understanding of the world require cognitive schemas. Among these are the strategies and knowledge required for skilful video gameplay, of which a player's use of Fast Travel systems is dependent upon. Lindley and Sennersten (2006) (2008), provide a rich framework for the study of games which combines attention theory with schema theory. In their 2006 paper, they provide us with the concept of gameplay schemas, where gameplay schema "is the structure and algorithm determining the management of attentional and other cognitive, perceptual, and motor resources" that facilitate the completion of tasks outlined by a cognitive task analysis (henceforth referred to as a CTA).

The authors provide us with the understanding of scripts, a subcategory of schema, that are a structure for cognitive function that are utilized for “the understanding and enacting of behavioural[sic] patterns and routines”, which “may include cognitive resources, perceptual interpretations and preconditions, decision processes, attention management and responsive motor actions.”. Putting this into the context of a game, say *Morrowind*, an abstract example of the utility of a script can be seen in the script of a player used for navigation and wayfinding to their objective. Content of the script would contain decision algorithms for a player to use the Fast Travel systems available to them, and the relevant input actions required to play the game. The first action after receiving a quest would be for the player to check the journal for the directions to the goal, which will require interpretation, then checking the map to see their position relative to the interpreted location of the objective, which then moves to an initial planning stage, all the while using unconscious memory of the controls for the game. The authors cite the example of the restaurant script which “includes a structure of elements for entering a restaurant, sitting down, ordering food, eating, conversing paying the bill etc.”.(Shank et al, 1977, as cited by Lindley and Sennersten, 2006)

To begin analysis of gameplay, one must begin by looking at the game design features of the game itself by process of a game task analysis (hereafter referred to as a GTA) (Lindley and Sennersten, 2006). Tasks can vary in type, and the researchers give categorized examples such as trading and inventory management, typical of RPG games, grouped together under the configurational task category. We can extend this example by also including wayfinding and navigation as a general task category. The result of this GTA process is a representation of the game task model (further referred to as a GTM). With this GTM, a researcher can then perform a CTA, from which a hierarchical GTM is the result. This hierarchy places overarching goals such as ‘finish the game’ at higher levels, which can be broken down to sub-goals such as *Morrowind*’s quests. In *Morrowind*, it would be safe to assume that in a hierarchical GTM of the game, wayfinding tasks would be found within the subdivision of individual quest tasks. In the same paper, the authors discuss CTA methodologies. The authors note that traditional CTA methodologies that utilize verbal methods including think-aloud methods, have limits to their utility for analysing unconscious processes during gameplay, and so they need to be complemented with eye-tracking and keystroke logging information.

## 2.3 SYNTHESIS

From the research presented, we understand that Fast Travel acts as a navigational aid (Forest, 2011) which assists the player in their navigation through the game world, automating their transition through the virtual space. In *Morrowind*, the systems available to the player reduce the number of environmental landmarks they encounter, and the time needed while navigating to their objective. Through this automation of navigation and wayfinding, the player has no need to utilise the traditional spatial wayfinding strategies as outlined by West et al, which are cognitive schemas related to navigation in the game world. West et al found that through their research, players using non-spatial navigation strategies experience negative neurophysiological effects. The researchers state that this is possibly due to the navigational aids presented through the HUD to the player reducing the need for them to use spatial navigational strategies such as relying on landmarks within the game world in wayfinding to their objective (West et al). By extension, this provides the potential for more liberal Fast Travel systems to compound this effect.

In *Morrowind*, the lack of other navigational aids such as objective markers, emphasizes traditional spatial navigation strategies, through requiring the player to engage with the environments and landmarks in the game world for wayfinding. This should theoretically offset the negative cognitive effects that Fast Travel systems in *Morrowind* are going to lead to. Furthermore, players are required to develop new schemas and scripts to utilise the Fast Travel system. These scripts are contained within the navigational and wayfinding schema of the greater gameplay schema (Lindley and Sennersten, 2006) and make use of information found within the player's cognitive map knowledge of the game world, which contains route and area of effect information for both Transit and Player Teleportation modes of Fast Travel respectively (Mondschein et al, 2010). Use of the Fast Travel systems by the player necessitates and develops these scripts, and as the player gains access to more modes of Fast Travel by advancing their character level, and acquiring gold and enchanted items, those schemas develop further. Scripts and schemas shape the behavioural patterns of the player and as they develop the pattern of player behaviour changes along with them (Lindley and Sennersten, 2006). This is how players become more proficient at the game over time.

Montello informs us that distance cognition is predicated upon three primary sources of environmental information: environmental feature, travel time, and effort heuristics. Fast Travel

systems affect how fast the player can move between two points and the number of environmental features they encounter, and so it is likely to produce a perception of reduced distance between the player and their objective. This reduced scale effect is mentioned by Forest(2011) in relation to Fallout 3's Fast Travel system, as being the result of minimal effort and cost to the player allowing them to travel further faster and thus reach the boundaries of the game world. The research conducted by this dissertation attributes the reduced scale effect in Morrowind being related to environmental features encountered and time heuristics, rather than effort. Notably for environmental features and time, the potency of the effect is likely different for Transit and Player Teleportation modes. Using only Transit methods still requires backtracking when the objective is not located at a node on the Transit system, which in turn take more time and maintains the number of environmental features encountered by both outgoing and returning journeys from Transit node to the player's objective location. Player teleportation methods do not have to deal with the backtracking that Transit methods must deal with.

Through the development of schemas, players will improve the effectiveness at which they play the game, and consequently how well they traverse the game world. As players grow in skill and knowledge, they will ultimately improve how well they travel through the world by route optimization when using Transit modes of Fast Travel, and journey time optimization when using both modes of Fast Travel. This furthers the reduction of the number of environmental features encountered and their travel time, thus leading to the perceived distances between points in the game world becoming shorter, assisting the effect of scale reduction that Fast Travel inherently causes. In the case of Transit this additionally reduces environmental features, as, through route optimization, the player visits fewer travel nodes on the network.

The distance information that the player perceives in the game is then assimilated into their cognitive map of the game world. If this is true, we should see a significant number of players experiencing a reduced sense of scale of the game world. This should be contributed in part with how their skill eases the difficulty they face in using the Fast Travel systems effectively. We should also see among experienced players, that they will use the Fast Travel modes that best optimize their navigation through the game world, which should be the Player Teleportation modes of Transport.

### 3 METHODOLOGY

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To verify the hypothesis of this dissertation, a sampling of data from Morrowind players must be gathered. In an ideal situation, a full hierarchical GTM would give us a clear understanding of the effect Morrowind's Fast Travel systems have on game world scale perception through a mapping of a player's gameplay schema. This would require, as Lindley and Sennersten point out (2006), the use of traditional CTA methodologies like structured interviews combined with quantitative methodologies like keystroke mapping and eye-tracking. Due to the constraints from both COVID19 and time, both structured interviews and quantitative methods are beyond the scope of this dissertation. However, a self-report survey provided initial preliminary support of the hypothesis, from which future research is justified.

Two surveys were carried out, with the first acting a gauge for the level of engagement. The surveys were constructed through a Google Forms questionnaire, and the link to both was distributed to players of Morrowind through the Morrowind Subreddit, this subreddits Discord Server and the Morrowind Facebook group. The preliminary survey was open for 48 hours where it gathered 87 respondents, and the second survey was open for a week and gathered 32 respondents. There was a week between the first survey closing and the second survey going live.

Both surveys used a €30 raffle prize to encourage participation. The winners for each raffle were announced as they were closed through a video published on the Morrowind Facebook group. The raffle was completely optional, and those who wished to enter gave their emails. To select a winner a random number generator was used to pick an email from the list of entrants. Of course, to comply with GDPR requirements, the emails were discarded after the raffles were conducted and all survey participants were asked to confirm that they were over the age of 18. Payment was awarded through PayPal.

Following the overview of each survey, a general summary of the findings will be displayed. These figures will be cited in the analysis and discussion chapter.



### 3.1 PRELIMINARY SURVEY

The preliminary survey utilized a combination of various question formats, including yes/no questions, a sorting order question and freeform answer questions. The survey began with the previously mentioned raffle sign up and age confirmation. This then progressed to asking the respondent to self-categorize their level of experience from one of four options: Beginner, Intermediate, Expert, and Master. This was done with the hope that with enough respondents in each category, one would see the progressive effect Fast Travel plays as players gain experience. Partnered with this, participants were asked to rate in order of importance three factors of influence on their wayfinding choices while using Fast Travel. These were in-game gold cost, number of stops along a particular route, and mode of travel. This information proved vital to support the role of environmental features in distance perception in the virtual space.

Following this, the survey gives the participant a hypothetical gameplay scenario, where they must travel from one in-game city to another across the map. They were asked to describe in terms of travel how they would go about reaching their objective in a freeform answer format. This was done as an approximation of a CTA, although as mentioned a full CTA would involve much more focused and a structured series of questions.

Participants were asked whether their experience made using Fast Travel systems easier to use over both single and multiple playthroughs, answers to both questions convened at the 95% mark. Participants also were asked to describe what factors contributed to this. Additionally, participants were asked whether their perception of the value of gold changed throughout their playthroughs, what factored into this, and whether it influenced their wayfinding decisions.

Then the survey moved to the crucial question, which was intentionally left to the end of the survey to allow participants to ‘warm-up’ thinking about the game prior to answering. Participants were asked whether they experienced the world becoming smaller and more connected, and then were asked whether they believed it was due to how difficult it was to travel between locations. There was an error in the formatting of the survey, as people who gave a negative answer to world-scale perception were also asked whether the reduction was attributable to travel difficulty. This was corrected for in the analysis and further collaborated by the results of the second survey, which asked a similar question, though the question was explicitly asking about Fast Travel. To correct for the error, the spreadsheet of survey responses filtered all the participants who experienced the

reduced scale effect, and the answer to the cause question was then tallied. The corrected figure is shown in figure 3.6. There was an inherent assumption that travel between locations also includes Fast Travel but for explicit clarification, the secondary survey was carried out.

### **3.2 SECONDARY SURVEY**

The secondary survey was much shorter in length and served to clarify results from the preliminary survey. It moves then to ask the participant to give a bulleted list of factors that influenced the difficulty they faced in general wayfinding, followed by whether they believed it became easier to use the Fast Travel over time.

The world-scale perception questions for the previous survey were asked again, however, the error from the original survey was corrected, and participants who gave a negative response to a reduction in world-scale were not asked whether they believed it was attributable to their gain in knowledge and experience. Negative responses were directed to the final section of the survey, while positive responses were asked to outline other factors that made it easier to use the Fast Travel systems. This question appeared to confuse some participants, who listed factors not related to their use of Fast Travel systems, however, these did not take away from the overall analysis.

Finally, participants were asked to pick a mode of Fast Travel they felt most comfortable discussing and were tasked with giving a bullet-point description of how they would go about using their chosen mode of Fast Travel.

### 3.3 PRELIMINARY SURVEY RESULTS SUMMARY

#### EXPERIENCE LEVEL OF PARTICIPANTS

■ Beginner (0)    ■ Intermediate (13)  
■ Expert (31)    ■ Master (43)

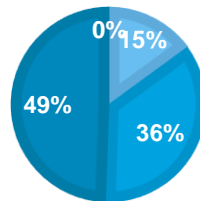


Figure 3. 1 Experience Level of Preliminary Survey Participants

#### Most Important Factor When Choosing Transit Route

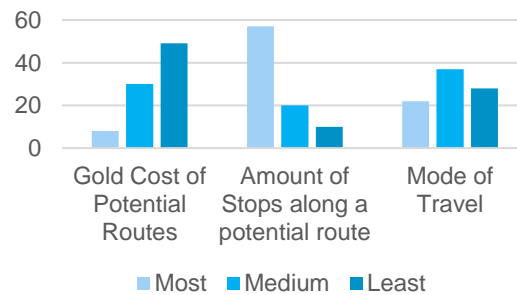


Figure 3. 2 Most Important Factors in Transit Route Choice

#### Did Fast Travel systems become easier to use?

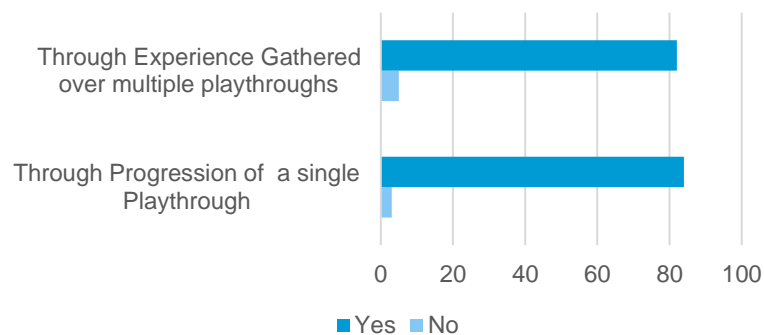


Figure 3. 3 Fast Travel Systems Become Easier to Use

### DOES THE PERCEIVED VALUE OF GOLD CHANGE THROUGH A PLAYTHROUGH?

■ No (12) ■ Yes (75)

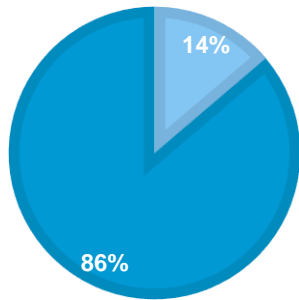


Figure 3. 4 Perceived value of Gold Changes through Playthrough

### DOES PERCEIVED GOLD VALUE AFFECT FREQUENCY OF TRANSIT SYSTEMS USE?

■ No (52) ■ Yes (35)

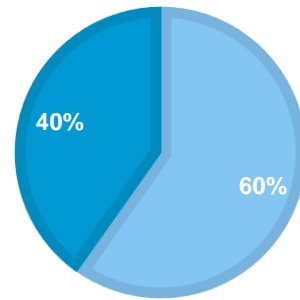


Figure 3. 5 Perceived Value of Gold Affects Frequency of Fast Travel Use

### EXPERIENCED A REDUCTION IN WORLD SCALE

■ No(23) ■ Yes(64)

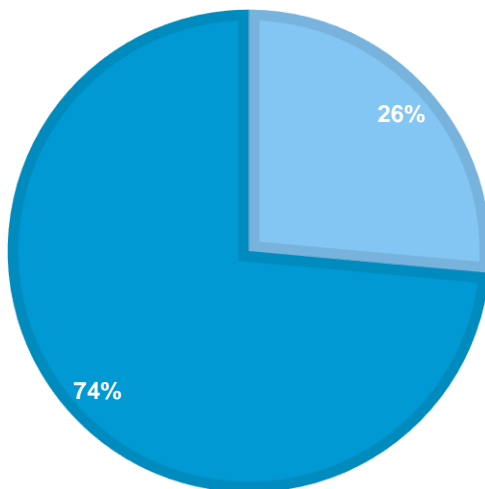


Figure 3. 7 Preliminary Survey Participants Experiencing a Reduced Scale Effect

### SCALE REDUCTION EFFECT ATTRIBUTED TO TRAVEL DIFFICULTY (CORRECTED)

■ Not related to Travel Difficulty(13)  
■ Related to Travel Difficulty(51)

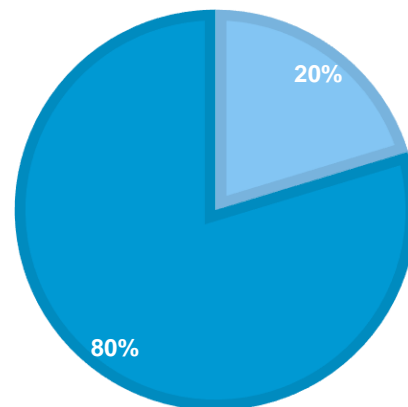


Figure 3. 6 Scale Reduction Effect Attributed to Travel Difficulty

### 3.4 SECONDARY SURVEY RESULTS SUMMARY

#### EXPERIENCE LEVEL OF PARTICIPANTS

■ Beginner (2) ■ Intermediate (8) ■ Expert (9) ■ Master (13)

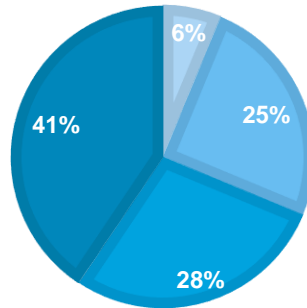


Figure 3. 8 Experience Levels of Secondary Survey Participants

#### EXPERIENCED A REDUCTION IN WORLD SCALE

■ No(9) ■ Yes(23)

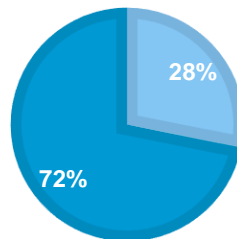


Figure 3. 9 Secondary Survey Participants Experiencing a Reduced Scale Effect

#### ATTRIBUTED TO EASE OF FAST TRAVEL USE

■ Not Attributable to Fast Travel Difficulty (2) ■ Attributable to Fast Travel Difficulty (21)

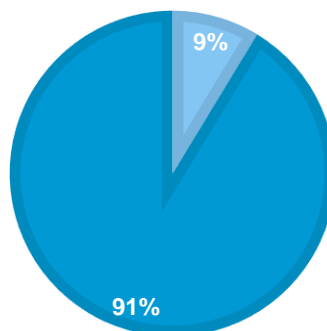


Figure 3. 10 Attributed to Ease of Fast Travel Use

## 4 ANALYSIS AND DISCUSSION

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### 4.1 THE SCALE REDUCTION EFFECT

$S = T_1 + \dots T_m$

$N$  – Survey Index

$M$  – Total number of Surveys

$T$  – Question Response Total of Nth Survey

$P$  – Positive Question Response Rate of Nth Survey

$$\frac{\sum_{N=1}^M (T_N \times P_N)}{S}$$

Figure 4. 1 Equation for Weighting Result Based on Participation Rate for Each Survey

The findings of the survey show strong support for the hypothesis of this dissertation. Firstly, it confirms that the reduced scale effect does indeed exist and that approximately 73% of all survey participants of the sampled player base experience this effect. When asked whether this effect was attributable to the difficulty of travelling between locations, 79.6% of respondents gave a positive response. This question did not distinguish between regular travel through the game world and Fast Travel, which justified the clarification made by the secondary survey which explicitly asked whether Fast Travel becoming easier to use through gained experience contributed to the reduced scale effect, which resulted in a 91.3% positive response rate. This higher rate from the secondary survey can likely be attributed in part by the smaller sample size, while the lower percentage from the preliminary survey is likely due to other navigational factors being included in participant responses. However, if one assumes that Fast Travel was the only factor being considered in the responses from the first survey, we can reconcile this with the result of the second survey using the formula above, where  $M = 2$ ,  $T_1 = 64$ ,  $T_2 = 23$ ,  $P_1 = 0.80$ ,  $P_2 = 0.91$ . The resulting value is 82.9% which still shows the overall significant role the Fast Travel systems have in contributing to the reduced scale effect players experience. To summarise, of all sampled players, roughly 61% experience the reduced scale effect that is contributed to by the Fast Travel Systems.

An explanation can be found in understanding how the use of Fast Travel systems affects the perception of distance. We know that distance cognition and perception is gained through many sources, with the possible three major sources being environmental features, travel time and

effort heuristics with overlap between them. (Montello, 1997). Fast Travel, as a general system found in games, interferes with at least two of these sources, environmental features and travel time. When using Fast Travel, the player character transitions to their destination unseen while the player is presented with a loading screen. They, therefore, cannot perceive environmental features to make distance estimation between the origin and the destination of a journey. It also, as its name implies, reduces the time it takes to move through a game world, often within seconds. Therefore, when players use them, they are going to experience a reduced perception of distance between any two points in the world connected by a Fast Travel system. Through playing a game with a Fast Travel system, the player is going to incorporate this perception of distance into their cognitive map of the game world and thus will perceive that world as smaller.

Interestingly, taking a look at the biggest influences on wayfinding decisions as ranked by players while using Transit modes of Fast Travel in Morrowind (see figure 3.2), the amount of stops along a potential route is ranked as the highest on average. As each Transit stop is in a town, we can view it as an environmental feature. Morrowind's Fast Travel system of transit nodes allows for the convenience of Fast Travel systems present in other games, albeit to a lesser extent, while also segmenting journeys a player takes in the game world. So, while its Fast Travel system can overall contribute to a reduced scale effect, its use of a node network of connected towns serves to partially counteract this reduction effect by introducing environmental features through stops along a players Fast Travel route, hence increasing perceived distance along a route.

Unfortunately, due to the age of the game, it was difficult to gather any significant data based on experience level. Most players who are still active in the game's community have had many years to gain experience and proficiency. Out of both surveys, or a total of 119 participants, only 2 respondents self-identified as beginners to the game, with most respondents having either expert or master level of experience and knowledge about the game. Thus, it's difficult to model the progression of schema development of players, which subsequently makes understanding the influence that proficiency of Fast Travel system use has in the scale reduction effect rather difficult too. Despite this, one can make an educated guess at how improved performance in using the Fast Travel systems can theoretically contribute and influence distance perception.

With Morrowind's Fast Travel systems, as players grow in experience, and develop their gameplay schemas such as their cognitive map of the game world and the scripts associated with

wayfinding and navigation, they will, in turn, optimise the routes that they take. Players tend to optimize their routes as they gain experience with the game, and incorporate Transit route knowledge into their cognitive map. We see from the responses to the survey that the amount of stops along a Transit route is the most influential factor in wayfinding decisions. Making the safe assumption that players will tend to reduce the number of stops they make and that as they gain experience they will learn the best route to take in any potential situation, it could be assumed that given a scenario that requires players to use the Fast Travel systems, master-level players will have a lower average amount of stops along their route than beginners, which presents an opportunity for further research to demonstrate this experimentally. By this, the mitigating effect that route segmentation has on perceived scale reduction is gradually diminished as the player gains experience throughout their playthroughs. In addition to reducing the number of environmental features encountered while Fast Travelling, optimised routes can also reduce the amount of time needed to reach a destination. By optimising the number of stops they need to make to reach a destination, the player reduces the time they spend navigating at towns along the node network and UI menus.

The best way to explain this is through example. Let's create a hypothetical involving a master level player and a beginner. Both are playing non-magical based playstyles and neither have access to enchanted items, so both players must rely on Transit modes of Fast Travel. Both begin in Balmora and must reach the town of Tel Aruhn. For reference see figure 2.3.

A master may begin their journey by looking at their game map and noting the location of Tel Aruhn. They see it is on the east coast of the game world. They see that Sadrith Mora, a town on the Mages Guild Guide network, is regionally close to Tel Aruhn. The master knows that towns close together usually have links to nearby towns, and so decides that the shortest route would be to use the Mages Guild Guide in Balmora to travel to Sadrith Mora. They must make their way to the Balmora Mages Guild and find the NPC that offers the Fast Travel service (see figure 2.4). The process of travelling to the NPC accumulates time that the master spends navigating to their objective. Once in Sadrith Mora, the master needs to swap to the Boat merchant, a process which takes up more time. From Sadrith Mora, they travel by boat to Tel Mora, and from Tel Mora to Tel Aruhn. At each stop, they are accumulating distance information through both time and environmental features. In total, they only use the Fast Travel system three separate times.



Alternatively, a beginner is going to also check their map, but they may not realise that the Mages Guild is connected to Sadrith Mora or even where Tel Aruhn actually is. If they have never visited it before, they will have no indicator on their UI map. They begin their journey at Balmora but decide to take the Silt Strider to Suran, and then from Suran to Molag Mar. At Molag Mar, they exchange for the boat, which takes them to Tel Branora, then to Sadrith Mora. After this point, their journey is the same as the Master, but they have already had a significantly longer journey. They have had to make six separate uses of the Fast Travel system, and between each use, they are accumulating distance information. From their understanding, the distance between Balmora and Tel Aruhn requires six transit uses, which they then incorporate into their cognitive map of the game world. But as they grow in experience, they will learn how to make the same journey with fewer stops. They will then adopt this new knowledge into the same cognitive map.

## **4.2 FURTHER RESEARCH**

Of course, Fast Travel is not the sole contributor to the reduced scale effect. Other factors could include the increased speed of the player character as they progress through the levelling system in the game. This would allow for a low but consistent reduction of perceived distance by reducing the travel time a player needs when navigating the game world manually, whereas comparatively the Fast Travel systems likely only influence the scale effect sporadically and at a greater potency when they are utilised. Yet, simultaneously, the increase in speed is not going to necessarily reduce the number of environmental features the player may encounter on their journeys. Further research into variable speed could be conducted under the context of investigating its contribution to the reduced scale effect. As Montello alludes to, different heuristics may have varying strength of influence on distance cognition (1997). Perhaps the lack of proprioceptive information can cause travel time heuristics to have a greater effect, but this will have to be demonstrated by other research in the context of video games.

As noted in prior chapters, the application of a CTA to generate a hierarchical GTM was beyond the scope of this dissertation. Yet the application of such a model could allow for a comprehensive understanding of other effects caused by the Fast Travel system, such as the engagement and immersive effects as the model outlined by Lindley and Sennersten (2006) accounts for this as a process of schema execution and development. One could even investigate whether the relative gold cost of travel routes can act as a heuristic for distance estimation in the

game, as the preliminary survey results showed that for a smaller, but significant portion of players, gold cost affected the frequency that they travelled using the Transit systems. Perhaps in games where gold does not depreciate in value over time from the perspective of the player, as is the case in *Morrowind* (see figure 3.4), and forms a more crucial role in the game systems, distance heuristics that use information related to the cost of travelling between one point another could possibly be utilised.

There is also room for experimental research into the development of gameplay schemas necessitated by Fast Travel use in games. As mentioned previously, there are not many new players to the game due to its age. It would prove useful to confirm the accelerating reduction of perceived world-scale experimentally as an effect rooted in gameplay schema development to optimise play.

It is also unclear whether the effort heuristic mentioned by Montello (1997) can apply to a virtual environment. It is not clear whether cognitive effort can be interchanged for traditional understandings of effort. Observational research can be undertaken to shed light into this.

### **4.3 PRACTICAL APPLICATIONS**

It must be recognised that for many modern, sprawling, open-world games, the presence of Fast Travel is a necessity. It solves many issues as outlined in the literature review, such as issues related to re-treading paths, while inversely it can indirectly contribute to the creation of large sprawling world's, void of content as per Scott's (2017) evaluation, escalating the issues outlined by them.

*Morrowind*'s implementation offers a compromise between the negative and positive aspects of Fast Travel, focusing its design into encouraging the player to utilise and develop spatial strategies. Where a liberal use of Fast Travel minimises the importance of navigating through a game world using traditional spatial strategies, by keeping it restricted to only specific modes of travel, *Morrowind* encourages the development of alternative spatial strategies on the player's behalf. Its implementation of Player Teleportation modes of Fast Travel serves to address the problems related to re-treading that games with no Fast Travel systems face, and its Transit Modes allow for speedy traversal of the game world on outward journeys to objectives.

Obviously, Morrowind's implementation cannot be integrated into every game, and a designer should use their discretion when deciding what tools should be afforded the player in their gaming experience. Yet still, Fast Travel systems should be recognised as an opportunity to introduce fun and engagement to the player, and not just as a tool for them. The model for the study of games presented by Lindley and Sennersten (2006) accounts for game engagement and immersion as processes of schema selection/development and execution respectively. Designers should use this knowledge to their advantage in creating fun experiences. If the designer intends to make the player feel as present within a larger world, perhaps they should not be too quick in incorporating a liberal Fast Travel system for their player base.

## 5 CONCLUSION

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This dissertation has investigated the Fast Travel systems available to the player in The Elder Scrolls III: Morrowind and has begun to scratch the surface of the cognitive effects these systems have in the player's perception of the game world.

The literature review undertook a detailed examination of the game and its systems, outlining the importance that navigation and wayfinding play in the Morrowind gaming experience and the process through which Fast Travel facilitates this, and how said systems are integrated into the game. Following this overview, research related to cognitive schemas was described and outlined. Applications of schema theory in areas of spatial cognition and game studies were discussed, with the work of Lindley and Sennersten proving crucial to understanding the cognitive effects that Morrowind's Fast Travel systems create and the mechanisms that facilitate those effects. Through understanding the cognitive process through which one acquires knowledge of distance, as put forward by Montello (1997), predictions on a hypothetical scale reduction effect were drawn, where an interplay between players gameplay schema was described as a contributing factor.

Moving towards the methodology and analysis, two self-report surveys were conducted among Morrowind players. Through the analysis of the results of these self-report surveys, initial preliminary support for the hypothesis was found. The results indicated that roughly 73% of players experienced the world becoming smaller as they played through the game, and through analysis, it was found that approximately 83% of these responses were attributable to the use of Fast Travel systems. This phenomenon is explained through the lens of gameplay schema, and

distance cognition, whereby Fast Travel influences distance cognition through reducing the number of environmental features the player encounters and the time they spend journeying through the world. It is further hypothesised that this reduction effect is accelerated due to the optimisation of travel routes taken by players as they gain knowledge about the game world and Fast Travel routes.

This research could prove useful for designers in demonstrating how the Navigational Aids, such as Fast Travel, that they allow the player to make use of, may shape the players perception of game scale. By looking at Morrowind , and how it ties functionality of experience in travelling in a virtual world with the other gameplay systems in the game, perhaps designers can take inspiration from it in next generation video games.

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## 7 APPENDICES

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### 7.1 APPENDIX 1 – PRELIMINARY SURVEY QUESTIONS

#### Morrowind Survey

Thank you for taking the time to answer this Dissertation survey. Your answers will be anonymous and personal information such as name and email will not be collected. Please only continue if you are over 18+ years of age. Please do not give any personal information within your answers that could be used to identify you unless otherwise required by the question.

This is a survey consisting of a handful of questions and scenarios relating to the use of Fast Travel Systems in The Elder Scrolls III: Morrowind. The purpose of this study is to understand how fast travel systems as implemented in Morrowind influence the perception of space within the game world.

For this study, we use the term Transit system to refer to the Silt Striders, Boats, and Mages Guild Teleporters, (which require a transactional fee), and Player Teleportation to refer to teleportation spells that allow you to travel from one location to another (Mark/Recall, Divine/Alsvi intervention).

\* Required

1. By continuing this survey I confirm that I have read the introduction and that I am over the age of 18. \*

*Mark only one oval.*

☐ Yes

☐ No

Experience Level



2. What would best describe your level of experience playing Morrowind? \*

Mark only one oval.

- ☐ Beginner (i.e. You are new to the game)
- ☐ Intermediate (i.e. You have completed a large selection of quests and have 20+ hours within the game)
- ☐ Expert (i.e. You have made a couple of playthroughs of the game with different characters, completing a large selection of quests in each)
- ☐ Mastery (i.e. You have perfect knowledge of the game and its systems, including exploits, quest solutions and have 100+ hours of play time)

#### Scenario

You are in Vivec city and you have received a quest that requires you to clear a Bandit Camp east of Khuul. When you are finished clearing the camp, you are to return to the fighters guild in Vivec city.

You have all your equipment in perfect condition, and you are stocked up on potions and scrolls. You are fully prepared in terms of equipment.

3. In terms of travel, how do you go about achieving your goal? Give a step by step account of your thought process. At each decision, you make in your journey, detail what factors influence that decision. (Note: Specific route knowledge is not required, general description will suffice.) \*

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4. Presuming you have used one of Morrowind's Transit Systems (Silt Striders, Boats, and Mages Guild Teleporters), what information is most important to you when you are deciding which route to take using your Fast Travel system of choice, and why? \*

Mark only one oval per row.

	Most	Medium	Least
Gold cost of potential routes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amount of stops needed along a potential route	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mode of travel (i.e. Using Silt Strider, Boat, or Mage Teleporter)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Singular  
playthrough  
experience  
impact on  
wayfinding  
difficulty

In this section, we want to understand, how through a singular playthrough of Morrowind, whether it becomes easier to use the fast travel system in the game as you progress. Please avoid giving factors that can be attributed to game knowledge that is carried across multiple separate playthroughs, as the goal of this section is to account for gameplay factors experienced within individual playthroughs.

5. Did the use of Transit (Silt Striders, Boats, and Mages Guild Teleporters) and Player Teleportation systems to travel across the game world become easier as you progressed in a playthrough? \*

Mark only one oval.

- ☐ Yes  
☐ No Skip to question 7

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6. Please describe the common factors that made it easier for you to use Transit (Silt Striders, Boats, and Mages Guild Teleporters) and Player Teleportation systems as you progress in individual playthroughs. \*

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Overall player  
experience  
impact on  
wayfinding  
difficulty

In this section, we want to understand how your overall experience of Morrowind makes it easier to use the fast travel system in the game. For factors, list what sort of knowledge and information that you carry between playthroughs.

7. Did the use of Transit (Silt Striders, Boats, and Mages Guild Teleporters) and Player Teleportation systems to travel across the game world become easier as you gained experience within the game across multiple playthroughs? \*

*Mark only one oval.*

☐ Yes

☐ No     *Skip to question 9*

8. Please describe the factors that contributed to the fall in difficulty as you gained experience with the game over multiple playthroughs. \*

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Value of Currency  
through a  
playthrough

In this section we wish to understand the role currency systems play in the use of Fast Travel systems within Morrowind.

9. As you conduct a playthrough of the game, does your perception of the value of gold within the game change as you gain more of it? (i.e. Does it have relative value?) \*

*Mark only one oval.*

☐ Yes

☐ No

10. If so please explain how your perception of gold changed as you gain more of it in a playthrough. Did it decrease in value/importance? \*

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11. Does the relative value of currency affect how often you use Transit systems/difficulty in using Transit systems in the game? (Silt Striders, Boats, and Mages Guild Teleporters) \*

*Mark only one oval.*

☐ Yes

☐ No

12. If so give a quick reason why it has this effect: \*

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### Perception of Regional Size

13. As you played the game did you feel a sense that the world became smaller and more connected? \*

*Mark only one oval.*

☐ Yes

☐ No

14. If so, do you feel that this can be attributed to how difficult it was to travel between locations? \*

*Mark only one oval.*

☐ Yes

☐ No

### Optional Feedback

We would like to know your general thoughts on Fast Travel(Transit and Player Teleportation) in Morrowind. Do you like it? How does it affect your sense of space? How does it play into other gameplay mechanics?

15. What are your thoughts on Fast Travel as implemented in Morrowind?

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### Thank you!

Thank you so much for participating in this survey! The winner of the giveaway will be selected approximately 2 weeks after this survey goes live. Remember to check your email for updates!

## 7.2 APPENDIX 2 - SECONDARY SURVEY QUESTIONS

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### Fast Travel in Morrowind

Thank you for taking the time to answer this Dissertation survey. Your answers will be anonymous and personal information such as name and email will not be collected. Please only continue if you are over 18+ years of age. Please do not give any personal information within your answers that could be used to identify you unless otherwise required by the question.

This is a survey consisting of a handful of questions relating to the use of Fast Travel Systems in The Elder Scrolls III: Morrowind. The purpose of this study is to understand how fast travel systems as implemented in Morrowind influence the perception of space within the game world.

(RAFFLE NOW CLOSED! THANK YOU TO ALL WHO PARTICIPATED!)

Please answer as honestly as you can, and rely on your own knowledge and refrain from using the internet for assistance.

\* Required

1. By clicking yes, I confirm that I am over 18 years of age. \*

*Mark only one oval.*

- ☐ Yes  
☐ No

Experience Level

Please describe your level of experience in Morrowind.

2. What would best describe your level of experience playing Morrowind? \*

Mark only one oval.

- ☐ Beginner (i.e. You are new to the game)
- ☐ Intermediate (i.e. You have completed a large selection of quests and have 20+ hours within the game)
- ☐ Expert (i.e. You have made a couple of playthroughs of the game with different characters, completing a large selection of quests in each)
- ☐ Mastery (i.e. You have perfect knowledge of the game and its systems, including exploits, quest solutions and have 100+ hours of play time)

#### Navigation in General

In this section we want to get information on factors within the game that affect your ease of wayfinding and navigation.

3. Please give a bulleted list of any factors that affected the difficulty of wayfinding and navigation. (e.g. '->Slow movement speed')

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#### Ease of Use of Fast Travel Systems

In this section, we are looking for whether your personal experience and knowledge assisted you in using fast travel.

4. As your skill and knowledge about the Fast Travel Systems developed, did using the Fast Travel systems become easier? \*

Mark only one oval.

- ☐ Yes
- ☐ No

### Perception of World Size

5. As you played the game did you feel a sense that the world became smaller and more connected? \*

Mark only one oval.

- ☐ Yes Skip to question 6  
☐ No Skip to question 8

What made the world seem smaller?

What do you believed played a role in making the world seem smaller?

6. Do you believe this can be attributed to how your knowledge made it easier to use the Fast Travel systems? \*

Mark only one oval.

- ☐ Yes  
☐ No

7. Give a bullet point list of any other factors that made it easier to use the Fast Travel Systems over time, that might also contribute to your perception of the world becoming smaller. These could include game progression factors. (For example -> 'I had access to more intervention scrolls' or -> 'My character gained proficiency in Mysticism')

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### Scenario

In order to understand the decision process used by players when they use these Fast Travel system, you are going to be asked to pick a fast travel system that you feel comfortable with discussing. You will then be asked to describe how you would use this system within a general gameplay setting.

#### 8. What style of Transport would you like to discuss? \*

*Mark only one oval.*

- ☐ Boats
- ☐ Silt Striders
- ☐ Propylon Indices
- ☐ Mages Guild Guides
- ☐ Intervention Spells (Almsivi & Divine Intervention)
- ☐ Mark and Recall Spells

#### Describe your scenario

Please describe in brief bullet-points how you would go about using your chosen method of fast travel. In your answer, highlight decision points in your thought process and what factors might be playing into your decisions).

For example:

-> 'I use the [insert method of travel] when I need to [insert reason here]

-> 'I do this because [reason]'

-> 'When I use it I think about [insert factors]

Note that for spells like intervention spells, or mark and recall spells, be sure to mention how you cast these. (i.e. Using enchanted items, scrolls, or by spellcasting)

#### 9. Please describe in brief bullet-points how you would go about using your chosen method of fast travel. \*

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