Ghost Worlds – Time and Consequence in MMORPGs

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Abstract. MMORPGs are an increasingly popular form of entertainment, yet are limited in their ability to tell stories when compared to other media. This paper analyses some of the underlying reasons for this inability, using techniques form narrative analysis. One of the basic problems identified is that the design of MMORPGs inhibits the use of techniques used in other media to create engaging stories by manipulating the presentation of time. The other issue identified is the problems MMORPGs experience in presenting stories with meaningful consequence. A means to a possible solution to these problems, in separating the personal player view point from that of the overall world view, is discussed.

Keywords: Consequence, Time, Storytelling, MMORPG, computer games.

1 Introduction

Massively Multiplayer Online Role Playing Games (MMORPGs) form a relatively young game form, it being around a decade since the launch of graphical massively multi-player games such as *Meridian 59* and *Ultima Online*. Despite being a relatively recently developed game form, MMORPGs are fast becoming a popular form of interactive entertainment. A key interest in MMORPG design is the generation of stories in these games, notably because advances in graphics appear insufficient in expanding the core market [15]. One way to achieve this is via storytelling, i.e. the provision of personalized, emotional and engaging content. Engaging narratives provide several advantages, notably: 1) Stories provide change. Players will be expecting new content and come back to experience it; 2) Emotional/personalized content. Getting players to care about their virtual characters, will in turn provide retention because players are inclined to keep playing if hooked emotionally; 3) Attract a wider audience. Currently MMORPGs are focused on conflict, however, having a non-competitive aspect will open up the market, by showing potential players that there is more to be gained from the play experience than combat [13]. The ability to include storytelling in multi-player or massively multi-player online computer games (MMOGs) is in general limited by development and running costs, as well as the general state of technological development of the electronic medium that the games inhabit as well as design challenges when accommodating thousands of players within a unified, persistent, real-time running virtual world [5]. Due to these challenges, most contemporary MMORPGs can be compared to a **ghost world** following popular western mythology: The character-avatars can interact with the physical part of the

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virtual world, including talking to its inhabitants and each other; however, they cannot permanently affect it. When a player logs out, it is as if the character-avatar never existed in the world, and any actions performed will not have left a permanent record. In the following, MMORPGs are analysed from a literature perspective, adapting [3]'s work on interactive narrative analysis to MMORPGs. This is in an attempt to clarify the underlying theoretical causes of difficulties in incorporating storytelling within the framework of MMORPGs. Part of this difficulty arises as a function of the medium of expression itself. The purpose of this analysis is not to outline how to tell better stories in MMORPGs, but to clarify the possible solution space.

2 Related Work

During the last few decades a substantial amount of academic work has been performed on virtual worlds and environments, specifically with the purpose of exploring and improving the ability to perform storytelling in virtual environments – i.e. to combine storytelling and interactivity. The application of narrative theory to computer games is far from new, however, most work has focused on single-user experiences, not specifically been directed at the MMORPGs. A variety of approaches are currently utilized, from structural and narrative analysis [14],[17] agent-based systems [2],[21], artificial intelligence [7] to interactive storytelling management systems. The approach presented here varies from these in that the core purpose is not to create storytelling models, systems, story construction structures or similar frameworks, nor to propose direct solutions – work is already being performed along these lines [e.g. 9] – or study how players tell stories about their gaming experiences. Rather, the focus in on enhancing the current understanding of the underlying causes of the challenges related to storytelling (here defined in the broadest possible sense) in MMORPGs, based on recent methods for narrative analysis [3],[4], and how the physical format and properties of MMORPGs makes traditional literary storytelling mechanics difficult to apply.

The analysis presented here is not an attempt to comprehensively analyse MMORPGs, but to focus on the use and implications of **time** and **consequence**. MMORPGs run persistently and in real-time, preventing them from utilizing a host of narrative mechanics in creating character-based narratives. Consequence refers to the ability of players to affect the virtual world, including their characters, the environment and other players. These concepts (time, consequence) form key storytelling tools, and combined with the high number of players in these games, comprise key limiting factors for storytelling in MMORPGs.

3 Narrative Analysis of MMORPGs

From a literary perspective, because MMORPGs are based on persistently, real-time running fictional worlds, in an interactive medium, they contain inherent limitations to the traditional narrative devices they can utilize to form **stories** (or **narratives**, which is one way to understand stories – a narrative could be defined as specific telling or representation of a specific story). One method for analysing how these limitations occur is narrative analysis [3],[4]. This method basically breaks down the object

of study into a specific system of elements, i.e. it is a structuralist approach. Its use here is not to meant to imply a belief that narratology is the best means of analysing MMORPGS, however: *"irrespectively of the general status of structuralist narratology within the contemporary study of narrative study, the model is very useful when applied to the analysis and design og interactive narrative and story construction systems*". [14]. There is however a problem in applying *traditional* narrative analysis to MMORPGs, namely that by being games MMORPGS inherently are non-linear with respect to stories, interactive and based on a dynamic instead of a static media.

Literature theory is traditionally concerned with static narratives, e.g. stories presented in books, films etc., where the audience does not interact with the telling of the story. This has caused considerable challenges in applying narrative theory to interactive media as vessels for storytelling [14],[17],[20], and for example [1] outlined some of the potential pitfalls in applying narratology to digital media.

The dynamic properties of games comprise a fundamental difference from the static form of traditional media, which necessitates an adaptation and evolution of narrative theory in order to deal with dynamically generated narratives [14]. A key example of an adaptation of narrative theory to an interactive situation is presented in [4], where a multi-disciplinary approach to the concept of a narrative is defined, in which a designed work implicates the reader in the enaction of a performance. This concept of narrative fits better with the participatory and performative bases of works on interactive media such as [1], and [18]. As noted by [12], the approaches of [3],[4] can with some modifications work with these theories of interactive media. Work such as [3],[4] have provided a theoretical background and the tools to – to some degree – apply a form of narrative analysis to interactive storytelling in combination with computer game design and development requirements and principles (which utilize causal relationships between e.g. agents and events to generate meaning, in a manner comparable to narrative theory), even though the concepts and methods for analysing "interactive narratives" remain debated [10] and there is a long-running conflict between narrative and interactivity [11]. Narrative analysis is not the only way to approach the subject of storytelling in games, for example, [20] utilized reader response theory, which focuses on the actual process of "reading" (experiencing) a text, and thus applicable to games. Associated theory includes the possible worlds theory of [18],[19].

A narratological approach has the benefit that it is structuralist [14]. Utilizing core principles from [3],[4], here MMORPGs are broken down into a range of components, the key ones in this study being **Fictional World, Text, Fabula** and **Story**. Other concepts (such as pre-text) can also be applied to MMORPGs. These were considered in the current study, however, they appear to be of less importance in deciphering the theoretical causes behind the storytelling challenges of MMORPGs, and are therefore due to space constraints not described here. The definition of these terms remain debated, and as it is out of scope of this paper to argue for the advantages of specific definitions, the terminology of [3],[4] has been adopted here and modified where necessary.

Fictional World: The virtual reality: The player of a MMORPG experiences the game via interacting with the game components and the other players in a virtual world, which is inherently fictional. This comprises the sum of the knowledge of the world setting – content, historical backgrounds, ecologies, developer material, fiction

novels, etc. The fictional world varies with time - as more content is developed and possibly added to a MMORPG, the sum of knowledge of the fictional world, as well as the actual game code, grows in size, or changes. Players of a MMORPG may not experience the full extent of this material, but only the part of the knowledge included in the game content. This is the portion of the fictional world that the player can access via the activity of playing the specific game. Potentially, all players of MMORPGs can experience the sum of the game content. However, unless the player visits every part of the virtual world, completes every quest and examines every in-game item and so forth, the game content experienced will be less than the sum of the game content.

Text: The game and its components: In narrative theory, the text is the object being studied, and is the means by which the story is conveyed to the user. The text can be formally defined as: *"A concrete manifestation in a specific sign language"* [3].

In this case, the text could be defined as the MMORPG with all its constituent parts. This definition is purposefully kept loose – it could be argued whether e.g. the game manual should be considered part of the text. In static media the content of the story expressed in the medium will be generally similar between two people in the audience (e.g. for two readers of a book the book is unchanged). In a computer game, two players may not experience all of the same content, and not necessarily in the same order, yet the underlying game itself is identical. Therefore a number of different definitions of text are possible, of which we give three.

The first is **game text**, which is the entirety of an MMORPG, including its constituent parts and code. The second is the **playable text**, which is the part of the MMORPG text that the individual player has access to, including game manuals etc. Note that the playable text is static and unchanging in between the application of e.g. patches and content updates. This definition gets the closest to the understanding of text from a traditional narrative analysis point of view, where the text is the object of study. The third is the **player text**, which is the part of the playable text that the player actually experiences (not equalling fabula, see below). The playable text is usually the same for all players; however the player text is not.

Changes in any of these texts are introduced, at base, by changes to the game text, as all experience with game depends upon its code. However, changes in one text may not be propagated onto the next. Change in the code may be at the data structure level, not changing the playable text. An update to a MMORPG which expands the game world with new areas, MOBs or quests (i.e. new content) changes the playable text, but does not change the player text until players actually experience the new content.

Fabula: Ordering the events of a story: The fabula can be defined as a: "*series of logically and chronologically related events that are caused or experienced by actors"* [3] Here actors can be equated with the character-avatars of a MMORPG. In traditional narratology, the fabula is the chronological reconstruction of the logically related events of a possibly non-chronological story which is experienced by the character-avatars (the protagonists) of the players. It is the events covered by the Text in their full, real time, aspect within the fictional world. Because MMORPGs are played in real-time, the players will – generally speaking - experience everything their character-avatars do. It can be seen that the players are experiencing the fabula, as they experience everything there character does in the fictional world, in real-time.

However, what one character/player experiences is not the totality for that world – there are many players. This necessitates at least two levels of fabula, the sum of the events experienced by any individual player (the **personal [character] fabula**) and the sum of all players of the MMORPG (**the MMORPG fabula**). Other versions of the fabula could be defined and utilized in narrative analysis of a MMORPG, for example the fabula of a player guild. An event as used in the definition above is simply a transition from one story-state to another, for example, in MMORPG play, engaging a MOB is a transition from one story-state (non-combat) to another (combat with the MOB). Events can be defined at different scales of resolution.

It is relatively simple to describe the MMORPG fabula, if defined as the sum of the fabulas of the character-avatars of the games' players, and to order the events of the fabula chronologically, due to the unchanging nature of the game world state. For example, MMORPGs such as *World of Warcraft* have a day/night cycle, however, there is no world calendar, or changing of dates. In essence, every time the sun sets, the world is the same as it was the last time. This is also true even if the world had a calendar. An abstract date might change, however, if there is no discernible effect on world state via this passing of time, the vast majority of the fabula elements will be from the same chronological instant. Players may need to perform certain actions in order to unlock access to particular parts of the content, however, for all intents and purposes the in-game time (or game world chronology), has remained unchanged. Even if the MMORPG incorporates a night/day cycle, or even a calendar, if the passing of time in the game does not alter the game state, effectively the game world chronology remains frozen in the same instant of time.

This does not mean that MMORPGs cannot contain content from outside the chronological instant of the main world – game design does allow players to be given the opportunity to experience specific events outside the chronological instant of the MMORPG game world, i.e. in the past or the future. E.g. using **instances**: A section of a MMORPG which forms a separate unit, accessible only by individual or groups of players. Multiple iterations of the same instance can operate contemporaneously.

Story: Presentation of the fabula: In comparison to MMORPGs, a book or film can present different events taking place at different times in very different ways. For example, some actions of a protagonist can be briefly described, while another set of actions may be described in great detail. Both are fabula elements; however the presentation of them is very different. Events may be presented out of their chronological order. This transition from fabula to story forms the basis for defining story, which is the presentation of a fabula in a certain manner [3] (be it the player or game fabula). This definition varies from that of [14] who notes that: "*The game story is the total implied game world history as determined by the pre-designed potential of the game in interaction with the game play actions of the player"*. The particular ordering and presentation of the events of the fabula makes one story unique from other stories. In other words, a story is a specific representation of a specific fabula. However, the presentation of the fabula is, for most MMORPGs, currently fixed in the real time-ordering of the fictional world, and thus MMORPGs use a substantial amount of the utility of using time as a narrative device. The result of this is that the mapping from fabula to story in MMORPGs is so simplistic that it could be said that for MMORPGs the **fabula is the story**. This is in marked contrast to other media,

including single-player CRPGs, where the relationship between story and fabula is more sophisticated (i.e. the use of time more flexible). There are many techniques regularly used, such as summary, ellipsis, reversals, foreshadowing, etc. All of these are beyond the reach of most current MMORPGs.

There are other features of stories that are relevant. The **events** of a story concern the experiences of actors (in the terminology of [3]: Hero, villain and such-like having semantic connotations which do not apply to all stories). Actors may include subjects, who have an aim to be achieved that is central to the story, and helpers and opponents to the subjects. The fabula/story then consists of the subjects' struggles to achieve the aim. This, in traditional literature, eventually reaches some conclusion. While in some forms of literature it does not, post-modernist MMORPGs uncommon.

4 Players and Technology: The Problem of Consequence

The lack of temporal control in MMORPGs constitute a serious obstacle in the use of traditional narrative techniques, however, a similarly problematic feature of the use of the MMORPG format and the underlying technology, is the ability to add consequence to the player-focused and -driven storytelling. A substantial number of the technology, development and design challenges tie in with consequence, making it an important area to investigate.

Consequence is important to most kinds of stories. While this of course is a generalization, especially fiction novels often base their stories on conflict and the solution of the conflict/-s, be they emotional, physical etc. In causing or addressing the conflict, the actions and choices of the story protagonists have consequences. It is therefore important to the development of storytelling in computer games that the choices and actions of the player have consequences – or that the player believes they have.

Consequence should not be mistaken for **authoring rights**, although the concepts have somewhat similar in-game effects. Authoring rights [9], in the context of MMORPGs, refer to the ability of players, designers etc. to modify, delete or add content. Consequence is here used in direct relation to storytelling, e.g. in terms of the result and implications of a quest or similar story structure.

Western MMORPGs can be easily seen to derive in large part from what might be called "hero literature". Well-known examples of such literature are *Lord of the Rings* and *Star Wars*. In such stories the actions of the protagonists have large-scale consequences on the fictional world of which they are a part. The actions of the characters results in a permanent, long-term changes to the fictional world. This can also be seen in many single-player Computer Role Playing Games (CRPGs), such as *Baldur's Gate*, where the actions of the characters change the world.

There are many examples of where MMORPGs fail to provide consequences. Simple examples include delivering a parcel (an early quest in *World of Warcraft*), even after the quest is completed, the NPC is still there, asking others to deliver the parcel; and defeating individual creatures, who always respawn. Even with large and important combat scenes, such as against *Everquest* deities, not only do they not result in the permanent death of such NPCs, but they can be undertaken multiple times by the same character. In story terms, the aim becomes simply the undertaking (usually combat) itself, not some change to the world.

The core problem from a resource point-of-view relates to **story-based choice**: Every time a player is given a choice, e.g. in relation to a story development, this has to be pre-programmed (unless controlled by a good storytelling engine), and every time a decision is to have consequence on the storyline – no matter how much and the level of which the consequence applies – this has to be planned for. This leads to the situation where stories in computer games end up as continually branching trees, which quickly become unmanageable and costly. Various solutions have been sought, e.g. multiple-paths storytelling [8], story networks [8], emergent, AI-driven storytelling [7], agent-based storytelling [2],[16]. In MMORPGs, it is unrealistic to expect game content to be accessible to only a narrow percentage of the player base. Therefore the typical MMORPG quest is permanently available and the world is not changed by any one completion of it (outside of changes to the character(s) completing it, such as in level or equipment). As such, most contemporary MMORPGs are games where the actions of the players do not have any permanent consequences on the game world state. This is in contrast to some virtual worlds designed around user-generated content and development, such as *There* and *Second Life*, where the users can e.g. construct permanent objects. These are however examples of the players filling in an empty canvas, not achieving results comparable to traditional hero literature.

5 Consequence Structure in MMORPGs

While the challenge of providing story-driven consequence can be problematic in single-player computer games, the situation is even more difficult to address in MMORPGs due to the sheer number of players and the constraints on using time as a narrative device, outlined above. The type, duration and magnitude of consequences that can be utilized in character-driven storytelling are limited. For example, in a MMORPG situation where players can permanently remove MOBs or challenges from the virtual world, large amounts of content will be necessary to provide for all the players. Furthermore, players might also be frustrated that part of the game content is not accessible to them. In order to address the issue of consequence, it is first necessary to understand what types of consequence that exists in MMORPGs (and other computer games) from the perspective of the individual player (Fig. 1):

A) **Internal consequence:** Affects the character itself. Internal consequence can affect e.g. the rules-based qualities of a character (e.g. abilities, skills, stats), appearance or psychological qualities, give the character new equipment or status.
B) **External consequence:** Affects the surroundings of the character, including other character. External consequences can generally be described in terms of the effect on other player character-avatars (PvP) and those that affect the virtual environment (PvE). Consequence that affects other players can be difficult to balance properly [5].

Note that the consequence of a given action can be both internal and external. Giving one player on a MMORPG shard an incredibly powerful weapon provides internal consequence – however, the majority of the effect of the consequence is an external consequence, as the in-game balance of power is changed to favour the player with the new weapon. This example shows that the **magnitude** (Fig. 1) of the consequence is important as well. A small magnitude consequence could be a player being given a

slightly improved weapon as a quest reward (as is often the case in *World of Warcraft*), or a specific MOB having a brief break between respawn times, which affects the rate at which players can kill it.

Consequence in literature is also of certain **temporal duration** (permanence; Fig. 1). Darth Vader killing the Emperor in *Star Wars* is a permanent consequence in the film narrative (such villain-slaying, arguably, has a tendency to be non-permanent). In a MMORPG, there is a substantial difference between an important quest-MOB having a respawn time of five minutes and five days. The resulting dynamics among the players is considerable. Permanence can roughly be divided into three categories: **non-permanent, limited permanence** and **permanent**. Non-permanent effects are of very limited duration – e.g. the death of a MOB in *Dark Age of Camelot* is a very short term temporary consequence of the action of attacking it, because the game engine re-spawns the MOB after a short period of time. Limited permanence effects can persist for longer, i.e. a magical weapon is useful to a character for a given period of time, or a key MOB is unavailable for several days. Choosing a character class for a character-avatar in *World of Warcraft* is an example of a choice/action with a permanent consequence (for that character-avatar). The boundaries between these categories are purposefully left loosely defined. Finally, consequence does not necessarily have to be tied to the actions of one protagonist only, or a group of players in an instance. Combined efforts of larger groups of players provide a venue for story-driven consequence that MMORPGs are in a unique position to utilize. For example, the "*War Effort*" event in *World of Warcraft* was available to all players on the various shards of the game. The goal of the event was to acquire and donate resources, and the speed with which the resources were gathered determined when a new instance would become available. Conflicts based on player guilds in *Lineage 2* are another example of consequence that operates at a level above the individual character.

In Western hero literature, the actions of the protagonists generally involve major consequences. E.g., getting half the kingdom. This kind of permanent, external, high magnitude PvP-affecting consequence is however hard to integrate in a medium where several thousand players have to operate at the same time and be given equal opportunities to affect the game world (Fig. 1). This generally means that designers have to utilize other forms of consequence in MMORPG storytelling.

It is generally external consequence that is difficult to implement to a significant degree in MMORPGs. Examples of internal permanent consequence are fairly common; however, external consequence is generally temporary. Exceptions include the building of structures in *Star Wars Galaxies* and *A Tale in the Desert*, or the production of in-game items in *Guild Wars* and *Ultima Online.* Note however how these forms of external consequence have a fairly low magnitude. Producing a magical weapon in *World of Warcraft* might be an action with an external, permanent consequence. However, it has a small magnitude (i.e impact on the game world state). As briefly outlined above, it is difficult to provide players with the ability to affect high-magnitude external consequence. This in turn places further limitations on the solution space for generating storytelling in MMORPGs. Because of the nature of MMORPGs, external consequence will affect **game balance**. Story-based consequence that affects the individual player character only – i.e. which integrates consequence in the personal text/fibula of the character without affecting other characters - is much easier to handle in terms of game balancing, however, it is difficult in a mass-medium like MMORPGs to provide character-based consequence which is

not identical to every single player of the game, e.g. when relying on open-access quest systems. Another example is the use of contacts, a form of NPC that the character has a long-term relationship with, in *City of Heroes*. Relationships between characters and NPCs provide a potential for story-driven consequence, without affecting other players.

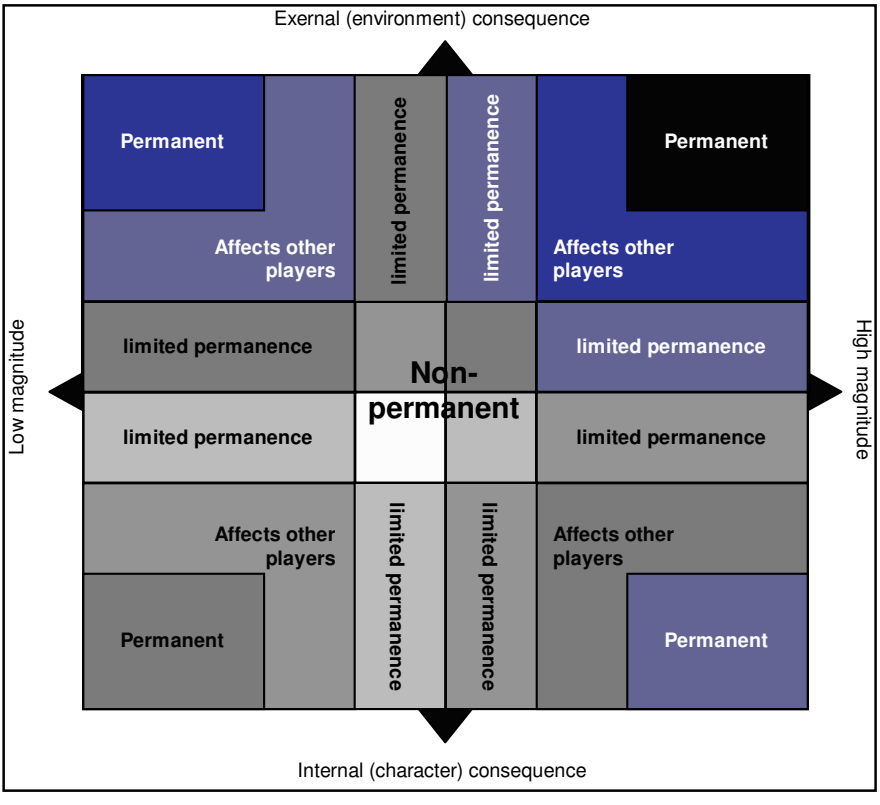

Fig. 1. A model of character-based consequence in MMORPGs. The degree of shading of a given cell indicates how hard it is to integrate in a MMORPG system.

6 Breaking the Link Between Story and Fabula

The analysis presented here is an example of a theoretical method adapted to a case-based study, and is not specifically designed to be used as a tool for MMORPG development, but clarify the underlying theoretical causes of the problems of storytelling in MMORPGs. However, as noted by [10]: "*With a secure understanding of the "how"s and the "why"s we may truly understand the limits and potentials of this thing called interactive fiction*" - in realizing the theoretical foundations behind the challenges of creating engaging and personalized storytelling in MMORPGs, it is possible to realize the operational space within which storytelling in these games must operate.

In MMORPGs the personal story equals the personal fabula – the ordering of the events in the personal fabula will always be identical to the ordering in the personal

story. There is e.g. no dilation or expansion of time in MMORPGs because they run persistently in real-time, and therefore it is not possible to utilize time control in presenting the MMORPG content (i.e. to create engaging interactive stories).

This places limits on the possible stories that can be conveyed (i.e. the solution space), and restricts the employment of traditional storytelling techniques, used in traditional passive media, in the handling of time (e.g. rhythm and ellipsis), except in some limited circumstances. As a MMORPG has to cater, simultaneously, to many players, time in the game world must advance at the same rate for all players, removing most opportunities for flexibility. It cannot arbitrarily advance the time for one player or group of players from the start of a journey to the moment of an encounter along that journey, as is done for the single player of many CRPGs. This also dictates that engaging content must appear through out the entire world. It also precludes stories where large amounts of time must pass between events (for example between the childhood and maturity of a hero). Similarly, the MMORPG format to a degree prevents the application of consequence types that interfere with the gaming experience of other MMORPG-players within the same instance of the game world.

When considering storytelling in MMORPGs, the underlying technology and finance structures must be considered at the same level as the three factors of time, consequence and players. For example, with recent advances in agent-based storytelling (e.g. [2],[16],[21]), it has become possible to integrate advanced (and possibly meaningful) NPC-interaction in computer games. Similarly, interactive storytelling engines, emotion models for player characters, advanced use of game music, directorial AI etc. provide means of enhancing MMORPG storytelling. Generally these technologies aim at the individual, low-magnitude level of consequence (e.g. intelligent NPCs), which makes them highly suited to a MMORPG situation. However, the technologies remain in their relative infancy, and generally untested in the mass-market MMORPG environment. It is therefore of interest to consider the existing level of MMORPG technology and consider the solution space for storytelling within that framework.

The story-fabula relationship indicates that the solution is to create a compelling and engaging fabula, i.e. working within the restrictions of the game format. This is the strategy generally adopted in current MMORPGs, and results in rejecting a whole range of storytelling techniques (which may or may not be a problem). In trying to create a more compelling MMORPG fabula, it is important to realize that virtual game worlds are places, not stories [5] MMORPGs support the emergence of stories, but not the stories themselves – these are dependent on the players. Thus, in order for stories to emerge, the game world must contain a certain amount of content that allows stories to take place, also termed **narrative potential** by [9]. This must conform to the general boundaries of the solution space (governed by time, consequence and the players)

Narrative potential can be added to MMORPGs in a variety of ways [9], including the use of characters with a personality components and the direction of game content towards those components, personalize the delivery of content to the individual or group of players, the use of more adaptable quest systems, emergent game content (e.g. simulated environments [22], short-term content and event-driven storytelling (e.g. in-game events, either delivered via patches/live content team or via a content-delivery system that can spawn various types events), and advanced faction-based systems (e.g. as in *World of Warcraft*). There also appears to be substantial options

for improving quest-based storytelling in MMORPGs by using storytelling mechanics that do not rely on external story consequence, e.g. a broader use of story elements such as betrayals and reversals (put the betrayer in a remote location and it will not matter that he respawn). Various approaches of these methods have been proposed, some of which could operate within MMORPG technological and financial limits.

There is an alternate route available to MMORPGs: Sidestepping the issue by breaking the link between story and fabula, and ignore the rules of logical consistency in narratives. The solution space dictates that this can only be done as long as it does not adversely affect other players than the individual or group of players in focus. The obvious venue for this is the instance, where alterations to the handling of time and consequence can be performed in the same way as for a single- or multiplayer CRPG.

The use of instances allows for a more directed storytelling experience, however, the result will be the loss of logical consistency of the game world. A group of players entering an instance could experience a story where time flows at a different rate than in the MMORPG. They could enter an instance, experience story content that takes a week of in-game time (game world time for the specific instance), but in terms of the time of the rest of the MMORPG world is a couple of hours. The question is whether this is a problem in ghost world MMORPGs, where time is a constant?

Given the popularity of MMORPGs that include major gaps in logical consistency (e.g. the use of instances to handle epic battles and geographic compression in *World of Warcraft*, the current flagship of the genre), in order to promote gameplay, this may not be a significant problem to MMORPG players. In a MMORPG like *Saga of Ryzom*, that actually features an evolving game world with a simple ecological system etc., this kind of time inconsistency may be more of a problem to the player base.

The ideal solution probably lies somewhere in the middle: Combining the solutions that can operate in the real-time worlds of MMORPGs, and add direct narrative potential, with directed storytelling experiences using instances. The alternative is to think outside the box of current MMORPGs. Some games, like the *Saga of Ryzom R2* project, and the *Seed* project, are exploring alternate routes to MMORPG design.

Finally, story is but one side of MMORPGs. Players have varying ambitions with their game playing, and depending on the target audience, MMORPG design face a variety of interconnected challenges of which storytelling is but one.

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