
Worldfulness, Role-enrichment & Moving Rituals

Design Ideas for CRPGs

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ABSTRACT

Roles and rituals are essential for creating, situating and maintaining cultural practices. Computer Role-Playing games (CRPGs) and virtual online worlds that appear to simulate different cultures are well known and highly popular. So it might appear that the roles and rituals of traditional cultures are easily ported to computer games. However, I contend that the meaning behind worlds, rituals and roles are not fully explored in these digital games and virtual worlds and that more needs to be done in order to create *worldfulness*, *moving rituals* and *role enrichment*. I will provide examples from *The Elder Scrolls IV: Oblivion* and *The Elder Scrolls V: Skyrim* (Bethesda, 2006, 2011) to reveal some of the difficulties in creating digitally simulated social and cultural worlds, but I will also suggest some design ideas that could improve them in terms of cultural presence and social presence.

Keywords

Games and intersections with other cultural forms, games as representation, applications of game studies in other domains, heritage, hybrid games and non-digital games.

INTRODUCTION

I develop virtual reality applications for heritage sites, so I also study computer games to see how people learn through interaction, how different types of knowledge can be presented and learnt and how to engage people with digital media. Unfortunately, those games that present apparently historical content, such as the *Assassin's Creed* series (Ubisoft, 2007-2014), are highly successful games in terms of entertainment but have been criticized as misleading and impoverished social and cultural worlds (Chapman, 2012; Reparaz, 2011) even if we can forgive them for historical inaccuracies.

Their attraction is at least in part due to their richly detailed yet still engagingly interactive game worlds, but the contrast between their ludic quality and their educational value may deter educators from employing games to teach heritage and historical content. To address this issue, I will explore three key concepts, Worlds, Roles and Rituals, to see if the development of digital cultural heritage environments can be better informed by commercial Computer Role-Playing Games (CRPGs) and whether CRPGs can in turn provide something approaching the layered richness of cultural 'worlds' via roles and rituals.

Worldfilledness Worldfulness & worldliness

The vagueness of the term 'world' is prevalent throughout even academic literature (Champion, 2009). And 'world' has been used as if it is self-explanatory in scholarly publications (Celentano and Nodari, 2004; Darken and Sibert, 1996; Ondrejka, 2006; Okada et al., 2001). PC Mag (PC Mag, 2015) define virtual world as "A 3D computer environment

in which users are represented on screen as themselves or as made-up characters and interact in real time with other users” but this does not describe a world, only a virtual environment that afford social interaction. Definitions of a ‘virtual world’ in recent textbooks (Grimshaw, 2013) also seem to focus on the simulation of the real world (particularly social interaction and community identification) but not cultural practice. Even in his book *Designing Virtual Worlds*, Bartle (2003) avoided a detailed definition of what exactly is a ‘virtual world’ and Klastrup (2002) also points out the difficulty in clearly defining the phrase.

Virtual Worlds Have a Social Component

I have previously described (Champion, 2009) virtual worlds in terms of environmental presence, social presence and cultural presence. Society defines who we are, how we communicate and the values that we strive towards. It is the acceptance or condemnation of other people in a society that separates social behaviour from individual habits. Stranded on a desert island, a human who was once part of society would endeavour to live according to his or her social upbringing, perhaps because these behaviours are so fully ingrained, or perhaps in case they hoped to be eventually rescued and reunited with human society.

Quickly bored with automatic feedback mechanisms, humans desire regular but also varied degrees of social affirmation. In games we have reward systems that reflect medals, awards and social respect, but in single player computer games we typically cannot gain the social recognition of others. Deliberately or subconsciously moderating one’s external behaviour in response or anticipation of the opinions or actions of others while in a computer game is a sign that a game is functioning as a social world. However, without social recognition, a single player game is less likely to bind the player to social rules or laws, as players do not have social affirmation or condemnation to guide their social behaviour. We could also argue that a single player game is less likely to compel a rich, expansive and creative experiencing of cultural learning and behaviour, as there is no sentient audience to act as cultural arbiters.

Cultural Aspects of 'World'

Worlds are not only physical and social but also cultural. I have written about this definition before (Champion, 2011) but it bears repeating (Kroeber and Kluckhohn, 1952, p. 357):

“Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may on the one hand, be considered as products of action, on the other as conditioning elements of further action.”

An important point in the above quote is that culture is not simply passive, but it is also a storehouse of values, aspirations and identities. Culture can be viewed as a material embodiment of social structure, mediating the relation between the individual and the community and expressing (as well as protecting) the sacred from the profane. Culture also provides instructions on how habits can become intrinsically meaningful and socially ordered through the practice of ritual (Dornan, 2007). Role-play is curatorial: we choose which aspects of culture are worth keeping and the rest we discard.

In the real world, past inhabitations could have left cultural traces of their ‘micro-scale’ (to paraphrase Ruth Tringham) life-worlds in the real world; is this replicated in virtual worlds? I doubt this. Virtual worlds typically lack the ability to record micro-scale life worlds. For example, many fantasy role-playing games portray previous cultures or cultural beliefs, real or imaginary. The games may feature named characters, treasure, 3D objects, goals and so forth, but they often lack distinctly cultural places and this is perhaps because there are few if any identifiers as to how to behave in another culture, and few if any identifiers to the passing of unique or specifically imaginable individuals. When roles, group behaviours and places are interchangeable, inhabitation becomes merely personal; it can never be deeply cultural.

Conversely, any premise that visitors require other real people in the virtual environment in order to feel cultural presence is not, at least in my opinion, necessary. People are needed to create culture but culture can continue to exist in some material form (and to some extent) without the creators. So I suggest that we can gain a *sense* of cultural presence without experiencing explicit social presence. To quote Agnew (1999, p. 93): "... all people live in cultural worlds that are made and re-made through their everyday activities."

Cultural presence, albeit in a weakened form, is possible in the absence of social presence. This is important for designers who wish to convey a sense of cultural presence but who do not have the technology to simulate believable and authentic NPCs (Non Playing Characters) and avatars as cultural agents and are creating single player CRPGs, not Massively Multiplayer Online Role-Playing Games (MMORPGs). And here place is essential. I define cultural presence as a visitor's overall subjective impression when visiting a virtual environment that people with a different cultural perspective occupy or have occupied as a 'place'. Such a definition suggests cultural presence is not just a feeling of 'being there' but of being in a 'there and then', not the cultural rules of the 'here and now'.

However, the sense in which these virtual environments move beyond 'cyberspace' towards 'place' is not clear to many (Johnson, 2005). To edge closer to being perceived and remembered as a place rather than as a space, I propose three criteria: that a virtual world must provide different ways to do things, allow for ways to record and memorialize what has been done, and provide for social mobility, social competition and social progression.

Firstly, a world may have *worldfilledness*. The digital environment allows for different ways of *doing* a multitude of things; it is interactively rich and layered. For example, Johnson (2005) and Steinkuehler (2006) have argued that current massive multiplayer game environments are often a mixture of vague and clear objectives. In these environments peo-

ple immerse themselves not merely by spatially navigating from point A to point B, but also by exploring the environment as a shifting world of interactive possibilities.

Secondly, the virtual world of a computer game may involve learning how to translate and disseminate; the simulation may also modify or create the language or material value systems of real or digitally simulated inhabitants. In this situation, the game play hinges on how well culturally appropriate information can be learnt and developed by the player or passed on to others. *Worldfulness* in this sense is to what hermeneutical extent the virtual environment or game can store, display and retrieve information on the encounters of people in places.

But it is not only the worldfulness potential of a virtual world that is required for rich shareable experiences. A virtual world could afford *worldliness* in terms of its social aspects, although I define this term quite differently to Ropolyi (Damer and Hinrichs, 2013). In my definition worldliness is the skilful cunning and strategic experience by which players can choose social roles to improve their standing and success in a virtual world. The player may decide (or be compelled) to choose between a range of self-identifying livelihoods and positions that allow them to develop and maintain social skills and status (Herold, 2006). In a virtual world that provides for this social role-based competition, the players could be rewarded or punished depending on how well they interact with other players or imitate appropriate social behaviour.

Enriching Roles And Role-Playing

In the article *GNS and Other Matters of Roleplaying Theory, Chapter 1*, Ron Edwards (2010) wrote that role-playing requires Character, System, Setting, Situation and Color. My concern with CRPGs is that the character is too often merely a graphically drawn avatar and their unique relationship to the world can be merely cosmetic. Their role fades into nothingness. Critics have mentioned roles in role-playing games are typ-

ically mere affordances and the games do not involve genuine role-playing (Tychsen, 2006).

The missing quality in CRPGs that appears to exist in live role-playing has been observed by Hitchens and Drachen, who proposed that a role-playing game requires a combination of factors: a (sand-boxed) game world (“A role-playing game is a game set in an imaginary world”), participants, characters, Game Master, interaction (a wide range of interaction), and narrative (Hitchens and Drachen, 2008). As real world role-playing allows roles to be transfigured, expanded, overtaken or replaced, so too should virtual role-playing game worlds also afford these possibilities.

Then what are the features and dimensions of real-world roles and role-playing? Hitchens and Drachen have already remarked on differences between live role-playing and digital role-playing games. If we take a dictionary definition (Dictionary.com, Undated) of roles as “the modifying of a person’s behaviour to accord with a desired personal image, as to impress others or conform to a particular environment” or as “Psychology: The unconscious acting out of a particular role in accordance with the perceived expectations of society” (Oxford Dictionaries, 2015), the inter-social dimension of role-playing is more obvious.

I suggest that social roles in our real world do more than distinguish individuals, provide individual purpose in life, or divide up responsibilities according to capabilities and political acumen. Roles are purposeful and goal-based. They create and demarcate social identities (Fein, 2015) but they also have a component of cultural curation (preserving and transmitting elements of social mores and values), while allowing for evolution and personalization.

I argue that the cultural (rather than merely social) aspects of roles and role-playing have been downplayed, to the immersive and engaging detriment of CRPGs in general and to a potential use as cultural learning environments in particular. In game studies and virtual environment

research, 'culture' and 'society' are two terms that have been used interchangeably, while the term 'world' has been used loosely, and one important if often hidden aspect of 'world' (to afford, structure and separate personal decision-making), has been downplayed or neglected.

In a similar vein, Hocking (Ruberg, 2007) has suggested that people explore spatially, explore the game-system or use the game to explore their own identity, values, or inner conflicts. The first sense is aesthetic, the second strategic and the third is perhaps phenomenological and more externally related than it may first appear. The issue here is the daily conflict between our experiential sense of selfhood and the demands and surprises of the wider world.

How does this tie in with role-playing? The three broad affordances or aspects of 'worlds' have corollaries in role-playing. In full role-play and in richly explorative worlds the player experiences a varied and rich gamut of choices, meaningful decisions and complex consequences. Not only is there possible selection of various roles, there is some degree of freedom in how one interprets and performs that role. So a world made for role-playing should capture some of that freedom of choice, individuality and complex fate. An important part of role-play is role-selection and a world rich in such affordances would allow a multitude of possible paths.

The second aspect of a world tailor-made for role-play is its ability to adopt, adapt, fuse or fight the social identity and position of various roles in relation to others. Roles are social and while designed by society to avoid conflict (where everyone knows their place) they somehow create more conflict. The vaguely shared understandings of roles often create dissent and sometimes lead to open conflict. Roles are continually socially defined and their parameters are continually re-interpreted, identified with, or identified against. Hence the polemical tendencies of real-world RPGs that Tychsen et al. (2005) considered a weakness, I consider to be a strength. For the conflicts between players and the game master are remembered and reflected upon, not the roll of the die. And there is

potential for social conflict, between my perceived role and my role (and fitness for that role) as perceived by others.

The third aspect of a world tailor-made for role-play is not so obvious. I suggest that in role-play not only are we negotiating our interpretation of the role against practical everyday issues, not only are we interpreting and communicating roles in terms of others around us, as role-players we are also acting as curators of tradition. For role-playing allows society to carry forward its goals, values, structure and messages.

In fulfilling a role we are given some responsibility in filling out that role, consolidating the important parts through habit and ritual and ignoring accidental features. The way in which society is preserved and passed on is due in no small manner to the way in which roles are interpreted, inhabited and disseminated by the role 'keepers.' So in a sense role-play is curatorial, we choose which aspects of culture are worth keeping and the rest of the information we discard.

Role-playing Games as Virtual Worlds

It may appear that computer games do not afford a sense of cultural presence unless they are multiplayer environments that allow human players to create and leave artefacts that represent their cultural perspectives. The computer game *Oblivion* has encouraged me to change some of my views on the paucity of inhabited social or cultural worlds, despite its single-player nature and some gameplay shortcomings. I count at least half-a-dozen features of lived-world creation, not common to most computer games, but I have suggestions on how to also further improve them in order to create the illusion of *Oblivion* and similar games transform into not just a social world, but also a cultural one.

With environmental presence the individual affects and is affected by the outside world. If there is social presence we affect others in a virtual world. If there is cultural presence we should be able to detect a distinctly situated sense of inhabitation, of social values and behaviours preserved and transmitted through ritual, artefact and inscription.

Social presence does not necessarily require multiple players (although single-player social presence is definitely much more difficult) and cultural presence does not have to be alive (active). One thing that is required is hermeneutic richness, the depth of interpretation available to self-understanding or understanding others through artefacts and other cultural remains. Here ritual plays an important part, if it does not become too tiresome, if observing and performing it provides in-game benefits and as long as it does not seem laboured or 'cheesy.'

However, socially enriched roles are also vital; they help us develop our own identity in relation to our society, long-term involvement in developing a role results in an attitude of care and compassion and installs respect for other people or players in similar positions. Roles also allow us to play out different aspects of our selves; they provide a framework for future plans.

Role-playing and Cultural Learning

Role-playing is both an important part of cultural learning (Hallford and Hallford, 2001, pp. 231-236) and an important genre in computer games (Tychsen, 2006). Roles are intrinsically related to the notion of social worlds, yet the mechanics of this relationship are not clear in the academic literature. There are few grounded theories in computer game studies on how role-playing works in sustaining and augmenting a thematic world. There are few clear descriptions of what 'world' means in this context and how roles, worlds and rituals are inter-related. Further, distinctions between social and cultural dimensions of both roles and worlds are seldom discussed in any great detail. For historical simulations and virtual heritage projects the cultural and social dimensions of both real world and virtual world playing are important and commercial Computer Role-Playing Games (CRPGs) seem to offer more opportunities to support deeper cultural aspects of role-playing. Can 'deeper' notions of culture be conveyed through a deeper understanding of worlds, roles and rituals?

Moving Rituals

One type of framework or event-based system that helps demarcate roles but also displays information about how people can *be moved* (inspired) but also *move* beyond (transcend) their current role is the ritual. Rituals are not often described in any great detail in computer game literature, at least not in a way that parallels discussions in anthropology (although there are anthropologists who have influenced game studies, the concept of rituals in game studies as not as detailed as in more anthropological fields). This is particularly significant for role-playing games but even what ‘role-playing’ means is seldom clarified.

I note in passing that my framework is much simpler than but potentially congruent with Mark Wolf’s (2014) criteria for imaginary worlds. However, the virtual worlds that I have in mind are not the secondary worlds (imaginary worlds that are separate from our real-world), as exemplified by Tolkien’s *Lord of the Rings* and discussed by Wolf (2014). *Lord of the Rings* was not only fantasy; it was also a reconstituted mythology, a conjectural reassembly of past themes and narratives but with a post-world-war allegory. If they are to be more than static models, archaeological simulations must be simulations of the past through present remains, contemporary scholastic imagination and evidence-based hypotheses. But this is not only a feature of archaeological simulations; it is also a feature of cultural representation in general. Culture is a recollection but also a teleological and conjectural process. These virtual worlds are thus *conjectural* worlds. As they combine historical situations, conflict, social agents and cultural beliefs, these conjectural worlds require their own ethical dimensions and attention paid to how their story can be told, while engaging the player and contextualizing their actions.

A Potted History of Rituals

At least as far back as 13,000 years ago, our ancestors appeared to have fed the dead or dying a last supper, with specially shaped or laid stones and plants, food offerings and dedicated flower beds (Shapira, 2014).

Rituals have been part of human culture for many thousands of years, but how do we know when they are enacted and how do we simulate them and how do we know when they have been performed correctly, to an engaged and suitably appreciative audience?

There have been several papers about rituals in computer games (Gazzard and Peacock, 2011), but the ones I have read have so far don't seem to cover the cultural rather than social importance of rituals. Although one can describe social habits as rituals, rituals do not happen everywhere and anywhere. They are not only or even primarily repeated personal habits. Even if ritual exists on a spectrum with daily habits, there must be some distinguishing features for the term to have any relevance. For example, Roskams et al. (2013) describe ritual objects as "ceremonial, deliberate, formal, formalised, intentional, non-utilitarian, odd, peculiar, placed, ritual, selected, special, symbolic, token and unusual." Scott Kilmer (1977, p. 45) wrote "ritual consists of sacred ceremonies and their routines, with the routines being seen as consecrated acts which contain great mystical powers." He added that rituals contain 'stylized acts' which are adhered to rigidly.

Role-based action in rituals is typically performative and other people often judge the action (but not necessarily during the ritual itself). So a ritual is culturally specific and socially arbitrated. The ritual is typically in a specially designated space, with an introduction ceremony and attendance is not open to all. While the objects and settings of ritual events can vary enormously, there is typically a sense that rituals can go wrong and that something is lost from society when rituals disappear.

For both audience and performer there may be specific physiological and postural requirements. Mossier (2012, p. 58), for example, wrote: "Various sensorial techniques are used to commit and stimulate the participants' body, senses and spirit." The head and body are directed; there are conventions on where one can look and for how long. By specific physiological requirements I mean that that body has to be controlled, directed

and time-regulated, it typically has to be set in repose or rhythmically controlled.

The ritual itself may happen on specific dates in specific places for specific events. There could be progression, framed or choreographed against a landscape that thematically relates to the event (such as the deliberately meandering path that leads up to the Acropolis complex of Athens). There needs to be a critical mass of believers. There are demanding levels of attention required from both the spectators and from the performers. The ritual is typically part of a wider system of belief, based on mythic causality (the belief that certain actions trigger certain responses at a scale different to the human one). And the ritual is traditional in that it typically is inherited from the past and carries clues as to how it should be performed by future generations.

According to essays inside the edited book *Understanding Religious Rituals* (Hoffmann, 2012), rituals typically frame events. According to essays inside the edited book and proceedings *The Study of Play: Problems and Prospects* (Lancy and Tindall, 1977), mythology requires rituals to communicate their message and importance to the wider group. This book also raises the interesting issue that play must be unstructured. This stipulation creates an interesting tension for game definitions, especially for theorists who believe that games are systems of rules. A particularly interesting essay, by Fredericka Oakley (1977), lists five elements of play (for primates):

- A reordering of ordinary behavioural sequences
- Exaggeration of movements
- Repetition of movements or behavioural patterns
- Incomplete behavioural sequences and
- Increased tempo in movements

The distinction that some theorists make between rituals, game and play may also not be as strong a distinction as they have stated. Extrapo-

lating to humans, the distinction between play and ritual may be not as strong as I had thought; there can be elements of play inside rituals (Kilmer, 1977, p. 158). For example, in *Religion as Play, Bori-a Friendly 'Witchdoctor,'* Frank Salamone (1977, p. 166) argued that “both play and the sacred suggest the game-like quality of socio-cultural life...Play and sacred ritual suggest the possibility of change ... New games can be played with different rules.” This is an interesting counter proposal; rituals allow us to see social structures are flexible and short-lived, but it is also a reminder that if we see games as a system of rules, when we try to simulate cultural activities we risk losing the anthropological insights into the relationships between rituals, play, games and society.

Rituals do not necessarily share all of the above features; but they are certainly not features of personal habits. And we can see that rituals require more than just physical (or virtual) attendance. They require complicit engagement and adherence and on the part of the performers, either care, dedications through years of training and / or complete frenzy.

We also seem to have inside our heads an inclination to situate through rituals and through habits of going about our daily lives. Tilley noted (1999, p. 29): “Rituals not only say something, they do something.” While Hodder attempted to show how hermeneutics (the study of interpretation, originally of historic texts) could be used in archaeology, “ritual regulates the relationship between people and environment” (1986, p. 23) and artefacts indicate the shared intentions of their creators (1986, p. 25).

Rituals may allow us to see through the eyes of the original inhabitants, or at least feel that this place once belonged to someone else. Rituals aid our memory; they commemorate important cyclic observations, changes in season, tides and constellations. They allow us to connect back to nature and to wider family groups for both symbolic and practical reasons. Rituals can also function as a rite of passage or as social control. Most importantly for our purposes, rituals are a way of preserving and

passing on cultural knowledge. Yet how does one design for a cultural ritual taking place in a particular cultural place in virtual heritage environments? Digital environments typically lack an in-world social authority or audience to ensure rituals are practiced correctly; participants are not fully physiologically immersed in the digital space; they lack the means to fully teach ritualistic practice; they also lack reasons and incentives to develop and refine rituals through long-term practice.

Staging Rituals

There are certain clues in the above paragraphs that might help us use technology to simulate the staging, process and reception of rituals. To ensure that the required people 'are in the moment' we need camera tracking of their faces or gaze detection (or use Head Mounted Displays). Camera tracking can also show their posture and level of repose. We can also use biofeedback track their physiological levels of excitement and calm.

To ensure that performers take care, we can also exaggerate the scene-destroying affordances if their attention wavers. If their avatar moves or looks around too often, perhaps the voice of the performing character becomes muffled. Outside noise becomes apparent and increases in volume, NPCs shuffle away, or the screen dims. We can program interactive events to only trigger when certain events (such as the passing of cosmological bodies) take place. We can have events; textures and 3D objects triggered or transformed depending on the level of user engagement (determined from gaze detection, head tracking, biofeedback, movements or other behaviours of the avatars). We could also deliberately exaggerate sounds inside certain areas or spaces, to make the breaking of ritual all the more obvious.

To clearly demarcate differences between sacred / ritual space and profane or mundane space, we can transfer the lessons developed in building sacred architecture. There are several historical heuristics in the design of architecture. For example, where movement (along a path) is required,

there do not decorate. Where designing places of repose (centres), there decorate. Create sightlines to line up sacred objects from certain vantage points. Design different textures and apparent cleanliness to demarcate sacred and profane space, as well as raise and heighten floors and levels and ceiling heights to spatially distinguish the two. Use symmetry for sacred spaces, asymmetry for functional spaces.

Games as WorldsNow that we have established some simple definitions, we can ask if CRPGs can be social or even cultural worlds. It is true that single player games are now powerful enough to convey the impression of shared worlds with social presence and social agency. A practical reason to explore single-player worlds is that they don't require highly sophisticated AI, which also makes great demand on computational performance.

Many theorists have focused on multiplayer social worlds, not single player hybrid computer role playing games (CRPGs). However, as an example of a single player CRPG, *Elder Scrolls IV: Oblivion* (as well as its successor, *Elder Scrolls: Skyrim*), has much to offer in the inter-relationship of world and player and it has further potential in the simulation and affordance of social interaction, communal identity and cultural learning.



Figure 1: *Oblivion* had simple social feedback. Screenshot by author, copyright Bethesda Game Studios.

The most recent *Elder Scrolls* games share seasons and changing weather patterns, a large and changing landscape, hostile creatures, inventories, and various types of possible interaction that are not just typical adventurer violence (praying, healing, reading, weapon creation and repair skills, persuading and charming, causing fear, creating followers, recognizing and collecting flowers and animal specimens for alchemy experiments, buying and selling, sneaking and thievery, inducing disgust or revulsion, fomenting frenzy and chaotic behaviour, trapping souls, and so on). The Non-Playing Characters (NPCs) have a life of their own, are of different races and professions, have detection awareness, and can speak dialogue, and be persuaded charmed or repelled. All these features can be modified by the *Creation Kit* available in *Skyrim*, or by the *Oblivion Construction Set*.

Limited Role-Playing

Even though it is a single player game, several key features allow *Oblivion* to be considered as a social world (Figure 1). Despite these promising features, *Oblivion* fails as a rich cultural world. Roles are designed

for game balance and act more as initial affordances and concrete templates than as social profiles that allow and record differences between social expectations and individual behaviour. In other words, while certain performances can lead to expulsion from guilds, there is little if any curatorial responsibility, roles are really attribute parameters, they are not made, they are followed and maximised. The later versions of the game (*Skyrim* and *Elder Scrolls Online*) do not yet appear to have addressed these issues apart from featuring enhanced graphics, the ability to control via voice on the Xbox Kinect and the multi-player nature of *Elder Scrolls Online*. *Skyrim* also allows the player to discover preferred skills, rather than basing them on racial characteristics, which was how *Oblivion* chose to set the base individual skills.

Improving Embodiment

Oblivion has a mild form of spatial detection, it is possible to be directly behind an NPC and attack repeatedly without being detected, but generally the NPCs find attackers from the direction they were attacked from and NPCs can be bumped from observing special areas without them noticing who bumped them! However, *Oblivion* lacks a social understanding in this spatial awareness. Social worlds often feature attempts at natural language processing (Perlin, 2005), understanding a player's keyboard inputted questions and answers. Of course that misses the tone and stressing of verbal dialogue but a great deal of real world social understanding is also acquired through viewing the gestural, facial and postural expressiveness and habits of other members of a community.

In designing a social world, a believable NPC should have some idea of how a human player's avatar feels inside the space, their intentional state and affinity to objects and how they behave in the space according to perceived role and social status. Creating a believable emotionally expressive actor (NPC) is difficult (Perlin, 2005; Fabri et al., 2002) but the problem also involves giving the NPC enough information about the player behind the hero character (Perlin, 2005). If head tracking (via commercially available sensors attached to caps or similar), eye-

gaze tracking (via a webcam or similar) and biofeedback data were fed directly into the NPC's AI, the NPC could make more player-related choices. Tracking head movement and gaze direction and perhaps postural changes could allow the NPC more ability to relate directly to the intentional and focused state of the player and could also help the player to mimic roles of NPCs in the game (see next section for elaboration of this point). Luckily, *Skyrim* can be played with an Xbox Kinect and modifications could allow more subtle gestural actions.

We have also connected biofeedback to games and game mods (Dekker and Champion, 2007). Using a commercial game engine we fed galvanic skin response (GSR) from the player into the game to change the game play in direct response to the 'excited' level of a player; but using biofeedback creates more problems. One major problem is how best to indicate to the player how their biofeedback affects gameplay. If done well, communicating this biofeedback via NPCs could increase the immersivity of the game and could also enhance the apparent intelligence of the NPC.

However, this biofeedback should also be communicated indirectly back to the player through triggered or default behaviours of their avatar. Perhaps the avatar becomes jumpy when the player's GSR increases; perhaps when the player's heartbeat or breathing slows down their avatar does not visually scan so often. *Oblivion* and *Skyrim* allow the player to switch between first person and third person view, but biofeedback could automatically override this automatic camera change when the player becomes excited. When music suggests a nearby enemy, the field of view could also automatically widen and switch to first person.

Participatory Culture, Open Stories And Book Design Like *Oblivion*, *Skyrim* features books containing minor narratives to help game-play. Librarians also play an important part in the meta-narratives and minor quests, as does a certain dragon archivist (Champion, 2014). These books can be stored or traded but now they can also be modded via the game's *Creation Kit*. The game can be modded and videos can be

inserted as cutscenes, but the books can also feature new text and the text can be automatically read by new voices (Figure 2).



Figure 2: Skyrim mods allow modders to incorporate voice-overs, movies and their own books. Screenshot by author, copyright Bethesda Game Studios.

Books can become gameplay keys: when collected together, text from books adds to map information or provides more abilities or gateways to different places (portals). Books can also double as triggers: the designer could place books to trigger specific events. Books could also be created from text fragments. The fragments might need to be found and placed together in the right sequence for the entire book to appear. It is also possible to import RSS feeds as images (PNGs). Books could be collected and used to train NPCs. By opening books to specific pages certain events or other forms of knowledge could be communicated to the NPCs.

There could also be a version of the memetic drift idea that I have discussed in (Champion, 2011). The player could be required to trade specific books in order to see a progression of ideas or counterfactual worlds. Perhaps trading specific books would affect the NPCs or change the social dynamics.

Another idea might be that of augmented storyteller. For example, the player is asked to find flowers and herbs and connections or metals or crafts and match to descriptions that they read in books in the game.

With some modification, the game could add player-created screenshots and movies into the books to create alternative histories, individual travel guides, or personal memory collections.

A more complicated idea would be that of author discovery. The player's task might be to find specific book authors. They might be required to match the written dialogue to the spoken language used by NPCs, with the authors in the game as typical NPCs.

Conclusion: Worlds, Rituals and Role-Play Virtual worlds are more than spaces, and I suggested three aspects that deserve more investigation. Ritual-making is also an under-researched area of investigation and I have suggested three components of role-play that need to be incorporated into a rich role-playing game as well as three aspects of virtual worlds that may help enhance role-playing

- A virtual world should enable freedom of choice, individuality, but also a complex fate. An important part of role-play is role-selection and a world rich in such affordances would allow a multitude of possible paths.
- A virtual world has the capacity to afford the social jockeying of position as roles are socially defined, shifting and often challenged by other social agents.
- A virtual world allows us to act as curators of tradition. For role-playing allows society to carry forward its goals, values, structure and messages.

I also suggested three dimensions of presence that all help virtual worlds afford a sense of role-play. These are physical presence, environmental presence and cultural presence. Unfortunately *Oblivion* and *Skyrim* are not fully developed cultural worlds; the player does not hermeneutically interpret the virtual world, nor are their actions hermeneutically interpreted. One may argue the limitations that I discussed are the inevitable consequences of single-player computer games. I counter that CRPGs

could be further developed as both social and cultural worlds and I provide some design ideas to help us improve these CRPGs.

I hope that the issues I raised will help designers and game scholars better appreciate (and explore further) how cultural presence is much more difficult to attain than social presence, without undermining its value and significance. My long-term aim is to employ CRPGs (and their in-game editors) more effectively and inclusively as a learning tool for educators in history, heritage and cultural studies. I suggest that in order to achieve this aim, more investigation into worlds, rituals, and role-playing is required.

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