Analysing Cultural Heritage and its Representation in Video Games

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ABSTRACT

This paper outlines research towards strengthening our understanding of the representation of cultural artifacts in video games. The approach described outlines steps towards utilising a framework using dimensions of cultural heritage as reference points for games analysis. This framework is then used as a mechanism to analyse two games: *Assassin's Creed I* and *Unearthed: Trail of Ibn Battuta*.

The case study analysis presents concerns regarding cultural representation in the selected games. This is followed by a discussion of the main concerns coming out of the analysis. These concerns are effectively grouped under five sections: 'cultural appropriation'; 'hollywoodisation and beautification'; 'selectivity'; 'game dynamics rule design decision'; and 'ideological constraints'. The research raises issues about how video game designers approach the inclusion of items with cultural meaning in their products. Next stages in the work involve interviewing of games designers to better understand how the design decisions presented in this paper occur.

Keywords

Culture, cultural heritage, cultural representation, game design

INTRODUCTION

Barwick (2010, p.71) argues that "Culture is a difficult concept to define", whilst Williams (1987, p.87) notes that culture is "one of the two or three most complicated words in the English language". Anthropologists who have shown interest in the concept of culture, such as Tylor, in Birukou (2009) suggest that "culture is a complex whole which includes knowledge, belief, art, law, customs and any other capabilities and habits acquired by man as a member of society". Kluckhchn produced more than 25 pages of definitions of culture (Geertz, 1975, p. 4). According to (Nwegbu, et al 2011, p. 7), "Culture is a pattern of human activities and symbols that give these activates

significance", and Salen and Zimmerman claim, "culture is what we think, what we do and what we produce" (2003, p.508).

Culture is an excellent tool through which humans are able to preserve their histories, but it is still a "fragile phenomenon" (Birukou, et al, 2009). It is constantly changing and is easily lost because it exists only in our minds. Our written languages, governments, buildings and other man-made things are merely the products of culture, and should not be treated as the whole of culture. As a result, archaeologists cannot dig up culture per se in their excavations. The broken pots and other artefacts of ancient people that they uncover are only materials which have remained that reflect cultural patterns; things that were made and used through cultural knowledge and skills (Birukou, et al, 2009).

Material items that can be touched, and nonmaterial values and beliefs, customs and traditions, festivals and celebrations of a society can define culture. While individuals like Jervis (2015) have vacillated between material and nonmaterial definitions of culture. Today many people would agree on a more inclusive definition of culture in: the thoughts, behaviours, languages, customs of a society as well as the things it produces and the methods used to produce them. It is the ability to create and transmit culture that differentiates us humans from the rest of the animals.

In video game contexts we can talk about video game culture, analysing games as Shaw (2008, 416) suggests as 'games in culture' or 'games as cultural artefacts'. However, this paper focuses on the representation of world culture in the images, narrative and other multimedia content present within the games that we consume ('culture in games'). The essential feature of culture, is that it is learned and transmitted from one generation to the next, and rests on the human capacity to think symbolically. Learning implies the development of knowledge, if the learning is incorrect or incomplete then the transmission can lead to cultural modification and /or the loss of cultural knowledge. Video games often contain symbolic representations of the cultures they are representing and thus present a cultural form through which we can communicate cultural knowledge.

This leads us to consider why we should concern ourselves with cultural representation in video game contexts? Taking one multi-million copy selling game as an example: What does it matter if 'WatchDogs' fails to include iconic Chicago architecture such as 'Soldier Field Baseball Stadium' or the 'Shedd Aquarium'? Whilst individuals have highlighted concerns with games representing particular nations and cultures (Sisler, 2008). Games production companies have reacted through mechanisms, such as moving towards using multi-ethnic and cultural teams. This argument is also played out through the continual drive towards the depiction of realism and the use of realistic environments to increase the connection between the gamer and the narrative (Cheng. and Cairns, 2005) and aid in 'cultural tourism' through play (Losh, 2006). The symbols of culture which we consume provide mechanisms for individuals to negotiate meanings from their representation (Hall, [1973] 1980). These symbols and culture itself are not something, which remain constant but they change over time. Therefore, there is a need to understand culture in the context of time, principally through an understanding of cultural heritage.

The research detailed in this paper does not perceive that 'all games should mirror reality', there is space for realism in gaming contexts but the 'game' and its playability are the key critical components. The research posits that if we are aiming to be culturally aware and to design in cultural components within our video game products then 'greater awareness leads to greater consideration'. Therefore the aim of the research presented

within the paper is to develop an understanding of where cultural misrepresentation can occur and to provide a stepping stone towards developing mechanisms which can help our video games production companies consider further questions concerning the representation of culture and cultural heritage.

The next section in this paper details work completed towards the production of a model through which we can analyse games containing heritage artifacts developing an understanding of aspects of cultural misrepresentation. This is followed by a description of the methodological approach, effectively detailing our use of case studies as a mechanism to analyse the inclusion of heritage items in video game contexts. These case studies are then explored in the following section, focusing on *Assassin's Creed I* (Ubisoft, 2007) and *Unearthed: Trail of Ibn Battuta* (Semaphore, 2013) looking at items such as architectural design, the representation of people, and the use of language. This research forms part of a larger research project therefore we detail next steps towards the end of the paper and finish the paper with our conclusions.

DIMENSIONS OF CULTURAL HERITAGE

According to Jokilehto (2005), cultural heritage can be defined as the full range of symbolic and artistic materials, delivered to each culture from the past to the present. It plays a significant part in confirming and enriching cultural identities. Therefore, cultural heritage gives all historical places recognisable features and is the repository of human experience. According to Bouchenaki (2003), the preservation and presentation of cultural heritage is a cornerstone of any cultural policy. Anthropology has divided cultural heritage into tangible and intangible aspects. The intangible aspects include social customs, ethical values, beliefs, traditions, myths and folklore. The tangible aspects include music, dance, and works of art, artefacts, language, festivities, poetry, ceremonies, knowledge and skills.

Tangible, intangible or physical objects are generally man-made, and non-physical entities such as, languages, performing arts, and social practices (UNESCO, 2003). Aspects of cultural heritage were examined by Koboldt, (1997, p. 4) who described cultural heritage as "a collection of tangible objects related to the cultural development of a society that are inherited from past generations and are valued by contemporaries not only for their aesthetic values or for their usefulness but also as an expression of the cultural development of a society"

There is a strong relationship between culture and heritage. Culture tells us about daily life, customs, traditions, behaviours and so on. It also includes beliefs, languages, festivals, food, dresses, etc. All the aspects of culture are subject to change over a lifetime. In attempting to define heritage, Barwick (2010, p.74) states, "The term heritage relates to the concept of inheritance in terms of what [a] history leaves behind for future generations". Culture is an aspect of heritage. The cultural heritage of a nation plays a key part in creating its identity.

It is thus evident that cultural heritage is important in the development of countries and the preservation of their histories. Protecting cultural heritage is significant to economic, historic and cultural processes (Hani et al., 2012). The issue of cultural heritage attracts research attention, particularly when looking at products, such as films, video games and other digital media (Barwick, 2010) since one of the key ways of showing the value of culture is through the development of new cultural artefacts.

With respect to understanding cultural heritage and its representation an understanding needs to be developed of its key components or dimensions. Analysing existing resources which outline such dimensions we find concentration on tangible and intangible dimensions. These dimensions (outlined in Table 1) provide a lense for looking at video games to better understand approaches to representation in their contexts.

Tangible Dimensions					
		No Evidence	Limited Evidence	Satisfactory Evidence	Significant Evidence
Arts and Artifacts	Architecture; Sculpture; Visual Image; Documents and Writing; Performance Arts; Clothes; Design Ethos; Other Arts				
Environment	Places of Scenic Interest; Landscape				
People	People				
History	Historic Sites; Historic Artifacts; Historic People				
Intangible Dimensions					
Arts and Artifacts	Language; Music; Folklore				
Environment	Climate				
People	Behaviour				
History	Religion; Customs; Time; Ages				

Table 1: Dimensions of Cultural Heritage

CULTURAL REPRESENTATION

Hall (1997, p, 15) said that the concept of representation is used to bridge the gap in cultural study. This means that there is a relationship between culture and its representation through which connections are developed between languages and their meaning. Hall also states that "Representation means using language[s] to say something meaningful about, or to represent the world meaningful to other people". According to Chandler in Signes (2007), representation refers to the construction in any medium (especially the mass media including video games) of aspects of 'reality' such as people, places, objects, events, cultural identities and other abstract concepts.

Sisler (2008) defines representation as "the construction of meaning through symbols and images". In the last few years, video games have succeeded in transferring our understanding and comprehension of particular places or times through the process of representation. Representation in video games appears as images, film, narrative, sound, character design etc. and thus in some cases these simulations are true and correct and may in others be wrong when being transferred to our world (Galloway, 2004.p 1).

As outlined in the section above cultural heritage includes tangible and intangible dimensions. The intangible aspects are found within human minds, for example, values, beliefs, superstitions, myths and in the movement of thought. For example, mythologies can include the notion of racial and ethnic superiority and are communicated through culture (Gillentine, 2007, p22). In fact, these kinds of elements may be difficult to represent in media in general and in video games specifically. The ideas, narratives, characters etc. come directly from a transformation of culture because culture tells us information including the lifestyle. However, the value of culture is reputedly to be a lost aspect because it is undervalued as a tool of analysis (Timothy, 2007). Representation of culture in the media can involve various items of clear representational values or may involve misrepresentation.

Where representation occurs, gamers (like the viewers of other screen based media) interpret and negotiate the meaning in the products created by our video games community. Therefore designers have a responsibility to consider the ways in which such items are designed and constructed.

ANALYSING THE REPRESENTATION OF CULTURE IN VIDEO GAMES
Of most interest to the approach taken in this paper we identify the studies of El-Nasr et al. (2008) and Sisler (2008) who have explored cultural representation in video games with a particular focus on Muslim representation (which is also the theme of interest in our approach).

El-Nasr et al. in research similar to this paper investigate *Assassins Creed I* from a multi-cultural perspective focusing, through play, on: Middle Eastern culture; emotional connectivity with location; expectations; and cultural attitudes. Each of the authors analysed their play experience through a cultural lens and an interview with Jade Raymond the *Assassin's Creed I* (Gme producer and Managing Director of Ubisoft), is used to answer some of the questions surrounding design decisions made.

The El Nasr et al. paper focuses around items such as analysis of the back story to the game and its impact on the game's narrative; the visual design; and character design. Discussion is provided in the paper around the ways in which *Assassin's Creed* I bears

reference to its cultural roots and where the game is found lacking in terms of representation. The paper uses the perspective of each of the authors as players to understand cultural response to the gameplay, its environment and the games narrative, finding different cultural responses to the way the game is viewed. The authors suggest that games need to appreciate different cultural perspectives in order to determine the way in which individuals will respond to the game.

In his article 'Digital Arabs: Representation in video games' Vit Sisler (2008) focuses on several important points. He analyses Arab and Muslim characters in video games. Also, he explains the role of ethnicity and religion in video games and how terrorism and hostility affect how Arabs and Muslims are represented. Furthermore, he highlights the difference between digital video games producers external to the Arab world and Arab producers. The author gives many different examples of the representation of Arabic culture and religion. In addition, he attempts to define some important concepts, for example, Arabs and Muslims in the new digital media being linked with terrorism and extremism. The study used a qualitative approach and methodology, analysing video games produced in both Arab and Western countries. It analysed 90 video games produced in America and other Western countries and 15 in Arab countries. Through this study, the author tries to explain the daily life in Muslim countries within new media video games and how we can understand the culture of Arabs and Muslims from the action work in video games.

Both papers suggest a need to better understand the games we play from cultural dimensions to help game designers in future productions to work on better forms of interpretation of Islamic culture.

METHODOLOGY

This paper proposes that the dimensions of cultural representation detailed in Table 1 can be transformed into a framework through which to evaluate approaches taken by designers when including heritage artifacts. The approach taken is interpretivist, focusing primarily on developing an understanding of how dimensions are represented within particular video game contexts.

A close reading provides an interpretative method through which the dimensions we are seeking to analyse can be viewed. In this paper we use a close reading of two video games, *Assassin's Creed I* and *Unearthed: The Trail of Ibn Battuta* in order to better understand how an analysis mechanism based on the dimensions of cultural heritage can be used to better understand cultural representation. The close reading of both games is developed into a case study presenting the researchers' analysis. The approach is multi-staged and is outlined below.

The first stage of analysis involves a play through of the selected video game, following the narrative, engaging with the environment and developing knowledge of gameplay. This initial exploration helps the researcher to gain an understanding of the most critical elements of the game and how the game operates.

Within the second stage of the methodology, the researcher plays through the video game with the intention of identifying and highlighting cultural objects within the video games context. These cultural objects are aligned with our analysis framework. The intention at this stage is to collate an understanding of the different range of cultural objects that are designed within the context of the game, in order to enable decisions to be made about

which aspects of the content the researcher is going to analyse in greater depth. This stage of the project involves the researcher spending an increased amount of time becoming familiar with the cultural content in the context of the game, e.g. they may spend time traversing the game, listening to game conversation, and analysing game characters.

After stage two, the researcher selects a variety of items from the collection of cultural objects highlighted through play to analyse in more depth. These items are again aligned with different aspects of the framework, enabling the researcher to get a more comprehensive understanding of the design of cultural artefacts in the chosen game. After this selection process, the researcher spends time becoming familiar with the literature related to the chosen artifacts as a pre-cursor to analysing selected items in more depth.

In the final stage of the case study production the researcher focuses on a detailed critical analysis of the selected items. This critical analysis takes the form of a mixture of gameplay to ascertain design features and further textual work to understand how these features relate to their counterparts. The researcher provides an interpretation of the level of consideration provided to the dimensions of cultural heritage across a scale of: 'no evidence of consideration'; 'Limited evidence of consideration'; 'Satisfactory evidence of consideration'; and 'Significant evidence of consideration'. It is noted that evidence of consideration can vary across a video game so the critical analysis takes into account where such variability occurs in the case study contexts.

Assassin's Creed I is selected as the first case study to develop and analyse. *Unearthed: Trail of Ibn Battuta* is selected as the second case study. There are several reasons for selecting the game of *Assassin's Creed I*. First of all, *Assassin's Creed I* as a video game is extremely rich in terms of graphic representation of cultural artifacts, indeed it is seen by many as an excellent example of historical play (Van Ord, 2008). The game was built according to historical aims. This means the game focuses on an historical age and a narrative with resonance. Furthermore, *Assassin's Creed I* is designed within a particular period of time, the twelfth-century, and reflects a particular society, the Middle East of the period. This becomes extremely obvious through playing the game. Furthermore, the game includes a vast amount of items with clear cultural value, both tangible and intangible in nature.

Unearthed: Trail of Ibn Battuta is chosen as an example of a game produced in the Middle East (specifically in Saudi Arabia). The game is set in a modern context but is based on narrative linking the game to historical events, specifically the journey of ibn Battuta across multiple nations in the 14th Century. Similar to *Assassin's Creed I* the game represents an example which includes artefacts with cultural value and relevance.

CASE STUDIES

The dimensions of cultural heritage that are identified in Table 1 above are too numerous to critically examine in the space we have in this paper. Therefore a selection is made of analysis of: the narrative of the games; the architectural designs present in their environment; the character design and clothing of the people; and most broadly, intangible artifacts. We present the *Assassin's Creed I* case study first and then follow this with *Unearthed: The Trail of Ibn Battuta*. Following the case studies we discuss the main concerns raised in their analysis.

Assassins Creed I

Narrative

The story of the assassin's (Hashashin in Arabic word) organisation contains three assumptions, that the story can be true, that the story can be untrue or a myth, or that the story can combine fantasy and reality. A great number of writers have produced assassin related stories, particularly Arab writers, because the group of Hashashin came from the Muslim community and have significant cultural relevance (as an organisation which was formed in the Middle East). The most prominent Arab writers who have addressed the stories related to the assassin's organisation are Ibn Taymiyyah, Ibn Kathir and Abu Hamid al-Ghazali. Western writers have also mentioned the story of the assassins, such as Marco Polo, Vladimir Bartol, and Louis L'Amour. Information within these stories would suggest that the Hashashin organisation existed prior to 1256. The stories (in addition to other evidence (Daftary, 1994)) provide evidence to the argument that elements of the story of the Hashashin are true. Many of the references refer to the same events, characters, places and the political aim of the secret organisation of assassins. Thus, an argument that the story has no relationship to fact and may not be completely true. However, there are many references to the story of the Hashashin, which are myth. This point is confirmed by Daftary specifically in relation to *Assassin's Creed I* with "The origin of the Assassin's creed back story is the myth of the Hashashin" (1994). According to Jade Raymond in Daftary, the game tended towards the mythological account of the Assassins due to the significant opportunity afforded to change and add to the storyline.

It is noted that all the games in the *Assassin's Creed I* series are based on real historical events. The historical events are selected based on the significance of their role in the history of the countries in which the games are set, representing important times in the culture of these societies. Each *Assassin's Creed I* game uses the historical event as the structure around which to build the narrative of the game around. The time of the events, the places and the important characters linked to the historical event are interweaved into the gameplay. In this case the historical event is the Holy wars.

The main cultural elements of the game have been selected in order to increase the credibility of the game in the context of the non-fictional account (El-nasr, et al. 2008). The strategy of selecting items of cultural relevance for the game was dependent on salient elements of the non-fictional account. For example, the characters are Altair, Al Mualim, Malik Al-Sayf all names of supposed individuals. The cities were Jerusalem, Acre, Damascus and Masyaf. Buildings selected were Alamut Castle and the Dome of the Rock Mosque. All these elements are included in the game as modern recreations. In this case the game increases its relevance to the non-fictional account. Jade Raymond the director of the *Assassin's Creed I* video game explained during an interview that "You're exploring cities that still exist today – encountering infamous individuals whose names everyone knows - witnessing battles that really occurred. At the same time, because our setting is far removed in time (this is nearly 1000 years ago), there's plenty of freedom to take a revisionist approach, tweak people's personalities and motivations." (El-nasr, et al. 2008).

Architecture

It is a well-known fact the Middle East was a land of fertile architectural amalgamation; one may look at two periods of the Architecture patterns in the Middle East and Arabic history: firstly, architectural patterns in the Pre-Islamic period. Secondly, architecture patterns during and after Islamic renaissance. In the Pre-Islamic period, Arabic

architecture was rather a collection of irregular building patterns and designs; no planning was followed or observed. Moreover, they built their own buildings in accordance with their needs and requirements.

However, during and after the Islamic renaissance the Arabic architecture improved massively as per Islamic teaching and to obey a simple planning rule, 'The Rule of Dot' (Abdurraheem, 2002). 'The Rule of Dot' is a method of describing how items (such as buildings, design, language etc.) are built around a single point, so one experiences concentric circular construction. Such a rule can be easily seen and noticeable in the graphic design of the *Assassin's Creed I* video game, representing Jerusalem City.

The *Assassin's Creed* series has been praised for the emphasis placed on modeling buildings with significant cultural and architectural heritage across locations visited by the player. In *Assassin's Creed I* the attention to detail in its modeling of Aqsa Mosque, Dome of the Rock and Holy Sepulchre Church is evident. Proportionality, design, architectural structure etc. are all maintained to a good degree.

As we navigate further through the environment of *Assassin's Creed I*, we can easily visualise patterns related to Arabic architecture. Generally, the patterns are respected and in synch with the Arabic design, however, there are a number of items where representation can be criticised.

One of the items for consideration in this respect is the appropriation and use of cultural artifacts from locations other than the games location in Jerusalem. As a mechanism to critique this aspect this paper focuses on the minarets (spires or other tall architectural items on mosques) used within the games context.

In the game of *Assassin's Creed I* the minarets, have a cylindrical shape contrary to the existing square shaped Minarets in cities of Levant Region. It is rather different from the actual existing minarets. Egyptian minarets are used in the game which as well as having a different architectural shape also possess many details (by way of architectural decoration, the depiction of plants and other fauna, and the use of calligraphic decoration) in comparison to the Minarets found in Jerusalem or Damascus. For example, the developers used Maghreb calligraphy in the minarets, while the real Calligraphy used in Damascus is Atholoth calligraphy.

This misuse of cultural artefacts can also be seen in: the use of Petra architecture and the use of Persian figurines under the Aqsa Mosque; and the use of Moors crosses in the courtyard of the Holy Sepulchre Church.

In analysis of the above given the attention to detail paid to representation of the architecture in *Assassin's Creed I*, one might suggest that the designers have specifically made design choices to include cultural artifacts to visually improve the video games content. Decoration on the minarets may also improve gameplay enabling the player to more successfully climb them. Alternatively the designers may simply be using items which are representative of Islamic architecture, foregoing consideration of where those items are culturally located.

Character design and Clothing

Gamers play as Altair Ibn-Alahad whilst traversing the cities of Jerusalem and Damascus in the *Assassin's Creed I* game. This character one would assume should be representative of features (looks, clothes, mannerisms, behaviour etc) of people from the Middle Eastern region in the 12th century. According to Lacoste, (2007) a simple character construction process was followed in *Assassin's Creed I* following three phases. Where these phases took simple classical character designs through a phase of development to more stylised characters which better met the needs of the gameplay.

Critiquing the character design we can see in Altair Ibn-Alahad limited representation of the people of the region. The ethnicity of the character does not represent people of the Damascus or Jerusalem regions with the stylised character being criticised for his 'hollywoodean' style. In addition, the characters behaviour, body language, his accent and use of language focus his design in a westernised manner.

Other characters within the game, for example, Al Mualim, were much more representative of the region and its people. However, representation the voice, accent, and body language captured through motion capture all betray concerns of representation.

The design of clothing on the main character used as its design basis the American Eagle (Lacoste, 2007). This betrays the heritage and main target market of the product. A more appropriate bird perhaps would have been a Falcon. Furthermore, the clothes designed for characters within the game whilst in keeping from a colorific perspective with clothes of the region were also stylised by the games designers, with sophisticated materials and design styles. The main characters clothes being made aerodynamic and being adorned with sophisticated arms and armour using materials and designs neither from the era nor the region, all of this being justified by designers on the basis of gameplay.

Intangible Artifacts

From an intangible perspective *Assassin's Creed* I struggles as a game to represent the cultural location. The language used within the game is heavily western influenced. Further exploring within the gameplay provides instances of repetition of phrases and words sometimes with limited linkages with the Arabic or English language. The quality of the Arabic words used during the game, had no link to the time period or the region rather the words chosen in dialogue beamed of American culture, with contents which could be deemed as rude and offensive, of a racist nature, and of limited factual linkages to the culture of the region.

Unearthed: Trail of Ibn Battuta

Narrative

Unearthed: Trial of Ibn Battuta is a third person game composed of four parallel plotlines, each taking place in different locations. The first location is in a modern building, maybe a hotel or business building. The second is in an ancient Egyptian Pharaoh's temple. The third is in an Arab desert and the final location is primarily in the Moroccan city of Tangier. The narrative takes place during the present time. In the game, the player assumes the role of the adventurer Faris Jawad. The objective of Faris and his sister Dania is to find treasures that were hidden in the fourteenth century by the traveler Ibn Battuta. However, another group has the same aim as Faris and his sister.

The games narrative focuses around a Muslim traveler with cultural significance, who lived in the 14th Century. It is important to note the western emphasis in the narrative on the appropriation of wealth through treasure discovery, and the race to discover wealth before others. The traditional story of Ibn Battuta emphasises as its route a Hajj (Pilgrimage) to Makkah Al-Mukarramah with his plans changing to a significant journey of twenty-nine years through more than 43 countries, with a primary emphasis on the accumulation of knowledge and spirituality.

The journey takes place in Middle Eastern countries such as Morocco, Syria (the old city in Damascus), Egypt and Dubai. In the game, players encounter important archaeological and historical sites in the Arab world. This is similar to Ibn Battuta's journey which took him too many of the most significant locations in Arabic culture at the time.

Architecture

The architecture of the world surrounding Ibn Battuta on his journey across the Islamic world and beyond is captured through his writing (Battuta, 1325). You can learn much about the nature of his journey, the places he visited, the people he interacted with and his experiences through his text. Therefore, one can posit that 'a sense of place' played a major component in his travels and therefore should form a major component in any game using his travel as its basis.

Unearthed: Trail of Ibn Battuta closely links its four levels to major locations on Ibn Battuta's travels. The game starts the player's exploration and journey in the new and modern city of Dubai (UAE), before travel to Egypt (specifically to an Ancients Pharaoh's Temple), followed by crossing the North African desert, until reaching the city of Tangiers in Morocco.

Taking Egypt and Tangier as the major points of reference to discuss the architecture depicted by the game, the game's designers take artistic licence to group together in close vicinity, a collection of the most important architectural objects of the location. For example, Abu Simbel temple, Luxor temple, the Temple of Edfu and the Pyramids are provided within a short player distance and single panoramic outlay connecting each together. Furthermore, in the video game the mise-en-scene of the architectural heritage aspects was produced on an imaginative basis.

In terms of realism the designers collected the figures of the Pharaohs exactly as we see them in reality, with some level of beautification to achieve further attractiveness, such as to the colour, size and decoration on the pieces. In reality the designers prioritised 'hollywoodisation', to realism of the temples and their environment in the game.

Deconstruction of the environment leads the gamer to discover elements of design within the game which do not exist in reality. For instance, when the gamer obtains access to the temple they are faced with a large water fountain, in reality no water fountains are found in these Egyption temples. Additionally the water fountain tends to be more of Roman architectural design than that of Egyptian design, trickily the designers added some arts, colours and hieroglyphs to the water fountain from the Egyptian Pharaoh era.

As the player reaches the city of Tangiers in Morocco, the city environment designed in the game is well connected to its modern day basis. Positively Tangiers architectural heritage is respected and replicated in the game to an impressive level of fidelity.

However, a fundamental aspect of the city, it's Mosques are not well represented, containing similar design flaws to those exhibited in *Assassin's Creed I*.

Character design and Clothing

The focus of the game emphasises the depiction of Arab society. The game includes a mixture of racial depictions, some of which are closely related with the Arab world, others existing outside of this cultural context. If we focus primarily on the main character of the game, Faris, we immediately find no distinction over identification of his ethnic origin. There are distinctions between Arabic countries in terms of corporeality and clothing. Unfortunately, the main character in the game fails to convey Middle-Eastern characteristics, behaviors, and clothing design. Furthermore, his actions, mannerisms, and French-bearded face are a distance away from representative Arabic characters.

The designers of the game seem to have followed the Western video game designers in the representation of the Arabic characters such as, stylising on the basis of other famous video characters in the main characters case that of Nathan Drake, from the Uncharted series. Clothing and an overly macho appearance portrays him more like the American hero in Hollywood (Fakhruddin, 2013). Additional items of clothing like the scarf around the neck are used as a small symbol of Arabian culture, but generally are not part of Arab clothing. The scarf has become an important symbol to represent the Arab culture in western visual contexts. Traditional Arabic clothing like the Agal and shmage would provide greater authenticity to the character but are not western stylised ideals.

Other characters who appear in the game, such as the archaeologist Dania and Rashid the old man in Tangier, represent Arabic society well. Dania appears with a scarf (hijab in Arabic) during the game. This reflects the appearance of Muslim women who live in Arab countries. In the Arab world there are different styles for women aged over eighteen with respect to the head scarf. Some of them wear the hijab to cover their hair. This kind of style is the most popular in Muslim counties. Another style, the burka, covers the face, hair and all the body except the hands (traditional Islamic dress for women). Furthermore, some women living in some Islamic countries do not even use the hijab.

Men in Arabic and Muslim counties wear many types of clothing. The traditional Arabian clothing for men is the Thobe (Arabic word). It is a tunic, which is generally long. In fact, this kind of clothing is most popular in the Gulf region, Morocco and Upper Egypt. Nowadays, many men in Arabic and Muslim countries wear European and American clothing as formal clothing, such as civil servants in Egypt. The game reflects the traditional culture of the countries, and the characters wear traditional clothing. Rashid and the female characters appear wearing the traditional clothing for Morocco, which gives the game more credibility and represents the culture accurately.

Intangible Artifacts

The language and music used within the game represent the intangible culture of the Middle East well. Formal Arabic language has been used in the game in order that all Arab speaking people can understand it. In Muslim society there are many different languages and accents, but most Muslims can understand formal Arabic language and writing. In the game, the accent, the conversation and the music are impressive as a result of sourcing the actors and actresses from Arabic society for the Arabic version.

Localisation processes lead to American actors being used in western versions of the game (Jadallah, 2013).

DISCUSSION

The case study analysis provided above raises a number of concerns with respect to cultural representation. This section highlights the major issues that have arisen from interpretation of the case study findings. The issues are split into six sections: 'cultural appropriation'; 'hollywoodisation'; 'selectivity'; 'beautification'; 'game dynamics rule design decision'; and 'ideological constraints'.

Cultural Appropriation

Present in both case studies are examples where games designers have made decisions over the inclusion of artifacts, which are culturally relevant, but are not physically present in the location they have chosen to model. The important aspect to this is cultural relevance, these are not items which are completely irrelevant to the representation of Muslims and Christians but are appropriated from other locations to be placed in the game environment being modeled. The reasons for this appropriation may be a lack of knowledge or may be located in the issues raised around 'beautification' below.

Hollywoodisation and Beautification

It is perhaps unsurprising to discover wrapped in the context of our video games products an emphasis on the 'hollywoodisation' of the games, their characters and the locations. Games exist as stylised environments in which particular circumstances occur, these circumstances can verge on the extremes of our imagination. A game designer's job is to immerse the gamer into the gameplay, establishing reason for keeping the player engaged in the game. These reasons limit how far the designer is willing to go in modeling the 'real' or 'imagined real' within a gaming context. For example, the use of character vocals which are localised rather than 'authentic' enable the gamer to understand the dialogue and so engage with the play. Providing characters that the gamer can identify with helps the gamer to reduce the distance between themselves and their virtual counterpart. Both games selected for case study had a heavy emphasis on the aesthetic in the character design and the environment. Decisions made over items such as ornamentation and adornment of architecture are likely to have been driven by aesthetics, as much as by game dynamics. This design emphasis bases itself on a specific version of 'beautification', often finding beauty in the elaborate, and criticising the simplistic. This can be particularly problematic in terms of its cultural significance.

Selectivity

Our gaming platforms are limited in performance and capacity, therefore there is still a need to make decisions based on how closely spatially our designed games match real locations. In addition, distance provides a challenge to gameplay meaning a player must traverse the environment to get to particular locations. This means our game designers need to be selective over the items that they include within video game contexts. Therefore selectivity becomes crucial to video game designers, choosing appropriately what elements of a location or culture, to include within a game. *Assassin's Creed* I makes the decision to focus on significant architectural structures as a mechanism to provide a feeling of place within the game, Ibn Battuta also emphasises choice on the

basis of significant locations in the Arabic world. However, questions arise regarding cultural influences on these decisions and choices.

Game Dynamics Rule Design Decision

At the end of the process what is being constructed is a game which people play. The games have their own game dynamics which create certain expectations for how designed objects within their contexts are going to behave. These game dynamics impact significantly on the designed characters, narrative and environments. For example, in *Assassin's Creed I* design decisions taken around the styling of character clothing are driven by an interest in remaining authentic but balancing this against the need for the gamer to be able to move swiftly through the environment. Also in *Assassin's Creed I* the representation of particular buildings and their architecture need to be styled in order to enable the player to climb them. In *Unearthed: Trail of Ibn Battuta* issues arise with respect to how the architectural environments are connected to each other, betraying reality.

Ideological Constraints

Multi-faith teams like the ones represented in the design process of our two selected games in the case studies, help to alleviate this issue to some extent. However, the westernisation of content can be all too apparent within our video games. If we simply take Ibn Battuta as our example the heavy emphasis on western capitalism works against the cultural significance of the narrative. You could imagine that games designers could leverage the main emphasis of the game alongside the significance of the journey in Ibn Battuta's heritage, but unfortunately the emphasis focuses on the artifacts imagined to have been collected on this journey. Whilst one can argue that the narrative emphasis of the game is the item that drives design decisions, one can also expect that designers should be able to contemplate the construction of deeper meanings particularly when cultural artifacts (such as Ibn Battuta) are appropriated in the design.

CONCLUSIONS AND NEXT STEPS
The research above demonstrates that we can use as a tool focused around dimensions of cultural heritage as a mechanism to closely analyse culture and its representation in video game contexts. It is clear from the analysis that even in video games which invest substantial amounts of time and resource in their design, decisions are made which impact on the accuracy of representation in their gameplay.

This raises issues about how video game designers approach the inclusion of items with cultural meaning in their products. Therefore following on from this research we have interviewed seven video game designers from different national and cultural backgrounds to develop an understanding of approaches to the representation of cultures in video games.

The aim of the research is to develop approaches to help modern video game designers to improve awareness of the questions guiding cultural production. The hope is that highlighting the dimensions of cultural heritage and levels of approach in representing cultural items will lead to greater consideration of the cultural impact of their design. As stated at the beginning of the paper, ours is not a perspective that 'all games should mirror reality' more a perspective of 'greater awareness leads to greater consideration' and ultimately a more informed product.

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