

UNIVERSITY OF HULL

**Understanding the Representation of Cultural
Heritage within Video Game Contexts**

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By

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Abstract

The research detailed in this Thesis examines how cultural artefacts are represented within modern video game contexts. It takes as a starting point the perspective that whilst there is evidence of substantial investigative work that takes place in the construction of video game environments, there is still more that can be done to improve instances of misrepresentation within such contexts.

Recently (growing over the past thirty years), video game playing has become a predominant part of popular culture. Video games are instances of cultural artefacts of our present time, which offer exciting experiences of many different places and times, in ways that game players of all ages and genders can interact with and be involved in. There are a huge number of video games around the world, some of which have been produced representing cultures in particular locations or representing particular groups of individuals. However, as is detailed from the literature sometimes the culture can be misrepresented through the story, place, or characters. Through the research detailed in this Thesis, the aim is to discover what the current issues regarding misrepresentation are, how do these issues occur, and can we construct measures to help today's game designers in the consideration of inclusion of cultural artefacts. As a particular area of interest, the focus of the main body of the research outlined within this Thesis is on the representation of Middle Eastern cultures within modern video games.

Abbreviations

Acronyms

CED:	Cambridge English Dictionary
UNESCO:	United Nations Educational, scientific and Cultural Organisation
NPCs:	Non playing Characters
AD:	Anno Domini
PC:	Personal Computer(s)
DVD:	Digital Versatile Disc
RPG:	Role-Playing Game
FPS:	First Person Shooter
GIS:	Geographical Information Systems
EA:	Electronic Arts
QA:	Quality Assurance
FOV:	Field of View
NYC:	New York City

Chapter One Research Problem

1.1 Introduction

'Tennis for two' (1958) created by William Higginbotham and *'Spacewar!'* (1962) created by Steve Russell (Rabin, 2010: 4-5) are often cited as the first computer games. These games created from the technologies of the time (for example, *'Tennis for Two'* around (1958) used an oscilloscope for a screen; *'Spacewar!'* around (1962), used a large mainframe computer), have paved the way for the multi-billion-pound global industry that we have today. Even in this first instance of video game construction, the concept of game production processes was evident, with Higginbotham taking responsibility for the design process, and Russell leading on the construction process. In *'Tennis for two'* time was placed into thinking carefully about how to construct the software which would control the arc of the ball and contact on the bat, coupled with how such motion could be captured on the screen technology of the time. In *'Spacewar!'* consideration was given to how to model realistic physics within the designed game. However, little attention was paid to creating other items which we see in games today such as representative player characters of *Rod Laver*, *Neale Fraser* or *Angela Barrett* (global tennis stars of the time), or on simulating the ball boys rushing to pick the ball out of the net.

Tennis for Two and *Spacewar!* Were the first games developed, but not for commercial consumption. The first home entertainment system was developed in 1967-68, dubbed 'the Brown Box', created by Ralph Baer. The initial prototype later became patented and sold as the original games console, known as 'Magnavox' and 'Magnavox Odyssey', becoming a commercial success in the early 1970s. The attention the console drew led to the advent of competing companies for the market, ultimately leading to *Pong* (1972) and the inevitable market we see today.

Now with global reach, video games have become extremely popular across the world leading to an industry which has become highly lucrative. There are video games to suit individuals of all ages: from children through teenagers to adults and the elderly. According to the Entertainment Software Association (ESA) in a survey conducted in 2016, 63% of Americans play computer or video games, 27% of whom are under 18 years-old, 18% are over 36 years-old, and 26% over 50 years-old. In addition, 59% of these players are male and 41% of these players are female (ESA, 2016: 2-3). Moreover, the statistics showed that 93% of “parents pay attention to the content of the games their children play, and are present when games are purchased or rented 89 percent of the time.” (ESA, 2013:6). Regarding the popularity of video games, it was suggested that in 2007 an average of nine games were sold every second of every day around the world (ESA, 2008). By September 2013, *Grand Theft Auto V* had become the fastest selling video game of all time, selling around \$1billion worth of copies in three days of sales (ESA, 2013: 6). Through this increase in sales over time, the digital games industry has become an important creative industry sector. Statistics illustrate that the sales of video games soared from \$5.1 billion in 1997 to \$22 billion in 2009 (ESA, 2009), and more recently have been estimated at 23.5 billion dollars in 2015 in America alone (ESA, 2016: 13). With the increase in sales of games on mobile platforms and growth in web based games content (ESA, 2014) there continues to be an increased level of popularity of games and games play.

Growth in video games playing and sales are not limited to the traditional hotbeds of video game playing (e.g. South East Asia and the wider Western world). There has recently been a rapid growth in the popularity of video games in the Middle East. There are twenty two countries in the Middle East, the majority are Muslim also there are

Christian, and Jewish. Most of these countries have Islamic heritage. These twenty two countries sit within a wider grouping of fifty- seven Islamic countries, with the majority of the population of these countries being Muslim. Similar to many other cultures around the world, Islamic culture has been (and continues to be) represented within video game contexts. With places such as Istanbul (previously Constantinople), Riyadh, Damascus, Jerusalem, Baghdad, Cairo, Tangiers etc. forming the primary locations used within a number of games. The marketing of video games in the Middle East has also become more attractive to investors in the field. Khasawneh (2011) suggests that,

“reliable statistics for the region are few and far between, but the Middle Eastern gaming industry is likely worth somewhere between \$1 billion and \$2.6 billion in terms of revenue across software and hardware. Western developers and publishers have the chance, to successfully enter and influence a very green and receptive market, ready to be engaged and monetized”

Furthermore, the Turkish video game market is the largest in 2016 by with revenue of approximately \$755 million, and the second is Saudi Arabia with around \$502 million (Statista, 2016). In this context, like other national contexts, there is a concern to match the games promoted to the interests of the market through processes of localisation or other (Vorderer, Bryant, 2006: 43).

Alongside this growth in popularity with respect to games and gameplay, Rebetez & Betrancourt (2007: 1) suggest that “in the last decades, video games have been increasingly appealing not only as an entertainment for children and adults, but also as an object of interest in academic research”. With video games research spawning a number of academic journals (Computer Game Education Review; Journal of Games Criticism;

Eludamos; Game Studies; Games and Culture; International Journal of Computer Games Technology, etc.), conferences (DIGRA, Historical game, Digital Heritage, GEEK, Game Developer conference, etc.) and academic courses targeted at specific and non-specific jobs within the video game industry (e.g. BA Games Design; BA Games Animation; BSc Games Programming; BA Computer and Video Games). As one might expect such research crosses a multiplicity of different research areas including: video games culture, theories of play, design theory and an exploration of societal impact (Montola et al, 2009).

Whilst a number of research papers have explored the concept of video games culture, few works (Shaw, 2010; Murray, 2006; Anderson et al., 2009; Barwick, 2012; etc.) have been produced investigating culture as it is represented within the context of video games. The lack of research is surprising given how much culture influences video games. All video games are based within an existing culture, drawing knowledge and ideas from it. *Spacewar!* For example, was created during the space race between the US and USSR; also, a period of time where the notion of aliens was gaining a foothold in American popular culture. Resulting in a game based on such culturally prevalent ideas of the time.

Many games express the cultural context of particular locations through items such as the heritage of the people or places, through the locations themselves, by the people depicted, the languages heard, the story told, and so on. Nwegbu et al (2011:7) stated “Culture is a pattern of human activity and symbols that give these activities significance”, and Salen and Zimmerman (2003:508) claim that “Culture is what we think, what we do and what we produce”. McManus (1997) determines that the term ‘heritage’ has been used in relation to a wide range of elements including natural materials and manmade artefacts (e.g. mountains, rivers, buildings, monuments, arts, social customs and traditions).

The richness of the Middle East in terms of cultural heritage coupled with present day and historical conflicts have drawn a number of video games organisations to use the area as a preferred place, or background for their games, and game series e.g. ‘*Assassin’s Creed*’ (2007-2015), ‘*Prince of Persia*’ (1989-2013), ‘*Battlefield*’ (2002-2016) and many more. However, representations of the region within video game contexts can be questioned through cultural lenses with many design choices not providing strong levels of accuracy. This Thesis aims to examine such inaccuracies from the perspective of their presence in video game contexts (analysed through play) and their construction as part of the video game design process (analysed through conversations with designers about process and value). Thus, the Thesis shall attempt to gain understanding of whether we can help to design and construct mechanisms to aid video game design processes which can result in greater consideration of cultural integration in video game contexts.

1.2 Motivation

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 of such knowledge can lead to cultural modification, and/or the loss of cultural understanding. Video games often contain symbolic representations of the cultures they depict 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 platinum selling game as an example: What does it matter if ‘*Watch Dogs*’ (2014), taking Chicago as its location, fails to include the Soldier Field Baseball Stadium or the Shedd Aquarium? Individuals have highlighted concerns

with games, such as this, which represent particular nations, locations and cultures (Sisler, 2006, 2008). Therefore, there is a growing emphasis on improving cultural depiction within video game contexts. Games production companies have responded through mechanisms, such as moving towards using multi-ethnic and cultural teams. However, are current video game design processes fit for purpose in their consideration of items of culture for inclusion in video game contexts? The argument for more considered cultural representation 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 & Cairns, 2005) and aid in ‘cultural tourism’ through play (Losh & Irvine, 2006, Corrêaa, & Kitanoa, 2015).

The symbols of culture which we consume provide mechanisms for individuals to negotiate meanings from their representation (Hall, 1997: 2). These symbols, and culture itself, are not things which remain constant but which change over time. Therefore, there is a need to understand culture in the context of time, principally through an understanding of cultural heritage. It is in the negotiation of meaning, suggested by Hall (1980: 66), that the author bases the initial motivation to study representation in video game contexts, and to suggest mechanisms to provide a more considered perspective on the inclusion of cultural items.

The research detailed in this Thesis does not perceive that all games should mirror reality in every detail; there is space for realism in gaming contexts, but the game and its playability are the 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 a greater awareness will lead to improved consideration of what, and how, items should be included. Therefore, the aim of the research presented within the Thesis 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 to consider further questions concerning the representation of culture and cultural heritage.

The final element of motivation for this study focuses around the notion of causing offence. The Mayor of New York, Michael Bloomberg, in 2008 condemned '*Grand Theft Auto IV*' (2008), in which gamers explore a virtual representation of New York City and play a gangster who is rewarded for the cruelty and audacity of his violent crimes (Moore, 2008). The focus of Michael Bloomberg's condemnation was the misrepresentation between the virtual world and the physical world equivalent, with a belief that a depiction of the environment as a capital of crime could lead to reduced tourist revenue. '*Call of Duty Modern Warfare 2*' (2009) has also received criticism for its depiction of Russian terrorists massacring civilians at an airport during the single player campaign (Schulzke, 2013). Here criticism fell on the depiction of particular nationalities carrying out a virtual atrocity. '*Assassin's Creed 4 Black Flag*' (2013) has also been criticised for its treatment of animals (Grubb, 2013) and its depiction of various locations (El-Nasr, et al, 2008). Representation, whether accurate or inaccurate, can cause offence. Therefore, the researcher posits that it is useful to analyse representation within modern video games as a mechanism to understand better how offense is caused by design choices. Understanding the potential for offence may lead to reductions in expenditure caused as a result of being required to change game content for specific regions on the basis that the content is deemed too offensive to publish.

1.3 The Research Problem

As outlined in Section 1.1, the symbols of culture we consume provide mechanisms for individuals to negotiate meanings from their representation (Hall, 1980). Video games are a symbol of culture (Wright, et al, 2010: 5) which offer the opportunity to gamers to experience the excitement of different places and times from around the world. These experiences users consume and negotiate meaning from, creating an impact on them. The author suggests that this impact goes further than the impact of media violence and, as reported on in other papers (Anderson & Warburton 2012, Miller and Summers, 2007) to include impact with respect to our appreciations of culture and cultural heritage. Therefore, if we misrepresent cultural heritage it is suggested that it may have a negative effect on users cultural understanding about the culture represented.

Why does misrepresentation matter? There are multiple internal and external areas which would benefit from improved representation. These areas include, but are not limited to: game popularity, commercial success, efficiency of development process; pedagogical improvements, greater tourism and development of social and political ideas. If misrepresentation is reduced and accuracy improved, any, if not all, of these areas could see positive change.

The author recognises that developers aim to make games enjoyable as one of the top priorities in their design strategies; therefore, this can lead to exaggerations and/or manipulations of cultural heritage in the pursuit of game enjoyability. However, the author suggests that not all decisions regarding cultural misrepresentation are made in the best interests of the design of the game. Therefore, what produces these issues in the game production process?

1.4 The Research Question

Given the research problem above, the researcher will start with the very broad task of developing an understanding of the representation of culture and cultural heritage in video game contexts. This understanding is formed through investigating cultural differences in the construction of video games as exemplified by multiple factors, such as the locations of the games production companies, the make-up of the development team and the range of sources used in relation to video games creation. As a primary hypothesis, it is determined from existing research that cultural representation may provide an important area of interest in the construction of video games; therefore, when examining issues surrounding representation in video games contexts, there is a need to include cultural dimensions. This concern is well defined in Sisler (2008), which presents an understanding of issues within the video game *'Assassin's Creed I'* (2007) from more than one cultural construct.

To deal with the issue of cultural misrepresentation effectively, from a developer's perspective, it is reasonable to propose that a formal framework, in which all aspects of the use of cultural artefacts within video games can be precisely articulated and accounted for, would be extremely useful. Consequently, the problem statement could be formulated as follows:

Video game developers lack a formal framework for the use of cultural artefacts in the depiction of real world locations and historical periods. This can hinder the developers from producing games in which the cultural aspects are appropriate, accurate and do not cause unnecessary offence.

The primary focus of this PhD research is the development of an understanding of cultural representation within video games contexts. The problem statement above highlights issues regarding misrepresentation, described as an issue of multiple misunderstandings by Sisler (2006) in his analysis of the representation of Muslims and Arabs in video games.

This focus can be transformed into three related research questions, the first one being:

If misrepresentation of cultural artefacts is present in video game contexts, then where does this occur, and what are the components which outline its presence?

Following on from the first question, there is a need to ask:

How does misrepresentation occur in relation to current video game design processes?

The expectation at the beginning of the Thesis is that misrepresentation exists in video games and comes about through a combination of factors. Some of these factors will be generated through conscious and sub-conscious decision making during the design process.

Finally, as a question to elicit a clear contribution linked to this research, the researcher asks:

Can we develop a mechanism or series of mechanisms to support the processes involved in the design of cultural artefacts within video game contexts?

There is also an expectation at the beginning of the research process that analysing the way that misrepresentation occurs could lead to the development of structures that can help reduce the potential for misrepresentation.

1.5 Aims and Objectives

The overall of aims of this research are to:

1. Provide a contribution which can aid video game designers in understanding issues regarding cultural misrepresentation;
2. Use this understanding to help designers take appropriate steps to further consider design issues related to cultural artefact creation in the design of future games.

Specific objectives related to the above research questions and overall aims are to:

3. Develop an understanding of culture, and cultural heritage, along with their subcomponent elements, which are present within video game contexts.
4. Synthesise research linked to dimensions of cultural heritage and map these dimensions to an understanding of their presence within video game contexts.
5. Investigate a specific instance of cultural representation, that of the Middle East in video game contexts, with the view that this specific case can be translated to wider concerns about generic misrepresentation.
6. Gain an understanding of the game development process in relation to how issues arise regarding the misrepresentation of cultural artefacts.
7. Understand how these issues over process relate to the dimensions of culture defined in earlier stages of the Thesis.
8. Convert this understanding into process mechanisms to support appropriate cultural artefact creation.

The first objective of this research relates to the question of the significance of cultural heritage within video game contexts. In this way, the culture, history and cultural heritage are highlighted and investigated within video games, and a focus is provided on the significance of culture in video games. Chaplin (2007: 6) suggests that “the notion that video games were something with a history worth preserving and a culture worth studying has gone from absurd to worthy of consideration by the Library of Congress”. This objective is investigated through the literature review as provided in Chapter 2 and is also explored through later interviews with the designers of video games in Chapter 6.

The second objective takes the research covered in Chapter 2 and synthesises this into an understanding of the dimensions of cultural heritage. These identified dimensions are linked to specific instances of representation within modern video game contexts, with examples provided across multiple video game instances. Understanding how these dimensions are portrayed within video games provides an understanding of where misrepresentation occurs and helps in an initial identification of why such misrepresentation may occur (see Chapters 4 and 5).

The third objective relates directly to the development of a focus related to the portrayal of Muslim culture in video games contexts. Riedling, (2014: 47) highlighted that “the term ‘Muslim culture’ is used broadly to cover many diverse religious groups: the Asian Muslim culture, the Middle Eastern, the African, the European and American Muslims, each with their own variations on customs and traditions”. Arabic and Muslim culture comes from the religions of Islam (the Quran, the Islamic sacred book only, and the Sunna are the words and deeds of the Prophet Muhammad through multiple publications) and all Muslims follow the orders of the Quran and the Sunna. This objective is explored in Chapter 2 and will be further investigated through interviews with designers in the Arab

video games industry in Chapter 6. The fourth objective investigates how misrepresentation occurs through an analysis of modern video games processes. These processes are examined primarily through interviews, in which participants are mainly video game designers who detail how particular elements are explored and created in order to generate the representation they desire within the context of their game productions.

The fifth and sixth objectives relate to the development and review of mechanisms designed to help cultural heritage artefact production and portrayal.

1.6 Methodology

Broadly speaking there are many types of research methods that can be used to obtain data (Lim & Ting 2012: 1; Bryman, 2015; Creswell, 2014) including qualitative, quantitative, mixed methods, fundamental, conceptual, empirical and many other types. Adler et al. (1989: 61) explain that "choosing a methodology determines what we can study as well as the range of possible results and conclusions". The most popular types of research in academic studies are often classified as qualitative or quantitative. However, it is often difficult to some extent to choose between quantitative and qualitative or mixed method research design. First of all, it is better to understand definitions of what "qualitative" and "quantitative" mean and whether they are related to this research, before selecting a research methodology; as there are many definitions for the two terms. Therefore, the initial part of this section focuses on defining the meaning of qualitative and quantitative in the context of this study. Differences between these terms will first be explained and then a determination of how they are going to be used and/or combined in this study will be provided. Following this, methods linked to these terms and the type of the research covered by this Thesis will be explained. Furthermore,

each of the stages within this research will be outlined and matched to the specified research question, aim and objective.

Qualitative research is an approach sitting within the phenomenological paradigm, which involves some forms of interactions between an individual and a researcher or the situation under study (Saunders et al., 2009; Remenyi et al., 1998; Hussey and Hussey, 1997: 47). Kothari (2012: 3) confirmed that qualitative research is “concerned with qualitative phenomenon, i.e., phenomena relating to or involving quality or kind”. In addition, a “qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behaviour” (Kothari, 2012: 5). Research in such a situation is a function of a researcher’s insights and impressions. Morgan and Smircich (1980) highlighted that qualitative research is not a set of techniques but rather an approach, and its suitability, like that of quantitative research, is determined by the research questions being asked and the phenomena to be studied. Moreover, Kirk and Miller (1986: 60) stated that the qualitative approach to research follows four steps: invention, discovery, interpretation, and explanation. Qualitative research “aims at discovering the underlying motives and desires, using in depth interviews for the purpose” (Kumar (2008: 8). This type of research attempts to discover the feelings of people or “what they think about a particular subject or institution” as stated by Kothari (2009: 3).

As an alternative, a quantitative method can be defined as “explaining phenomena by collecting numerical data that are analysed using mathematically based methods, in particular, statistics.” (Aliaga & Gunderson, 2000: 1). Kumar (2008: 8) confirms that the quantitative method is “based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity”. Such research can provide meaning through an analysis of quantitative statistics and/or through gaining an

understanding of less subjective phenomena through selected metrics. Quantitative approaches are more useful in circumstances where attempts are made to provide an underlying measurement of particular objects.

In relation to the research detailed in this Thesis, there are two core concerns. The first concern is to gain an understanding of the inclusion of cultural heritage artefacts in video game contexts that goes beyond a simple understanding and determining of numbers (e.g. the number of misrepresented items in a game, even if this were possible). The second concern relates to a process, principally the process of designing and delivering such cultural artefacts in video game projects. It is considered by the author that the particular phenomena that is hoped to be observed in this Thesis is not easy to quantify. Therefore the author has made a decision at the beginning of his research process to focus on the selection of qualitative methods which best match particular parts of his research process. As Antwi & Hamza (2015: 220) point out: “qualitative research is used to describe what is seen locally and sometimes to come up with or generate new hypotheses and theories.” Secondly, the same authors note “qualitative research is used when little is known as a topic or phenomenon and when one wants to discover or learn more about it” and thirdly, “it is commonly used to understand people’s experiences and to express their perspectives.” (Antwi & Hamza, 2015: 220). These three points correspond well to the researcher’s core concerns, as video game contexts and the representation of cultural heritage artefacts within them need more descriptive techniques to develop a clearer understanding.

In reality, there are many reasons behind choosing a qualitative approach. This Thesis focuses on cultural artefact representation within modern video games. The determination of cultural artefacts, argumentation about the artefacts and determining artefact relevance

are all subjective phenomena. Therefore, qualitative methods are the best approaches to develop an understanding of them. In addition, determining how these artefacts can be analysed, improved and re-positioned is also a subjective process, which can be informed by multiple stakeholders. Finally, this process requires an understanding of the experiences, feelings and techniques of video game designers, as a set of attributes, which are best suited to qualitative study.

Through a consideration of the definitions of research approaches, the most suitable for this Thesis is that of qualitative research. By using qualitative methods, the researcher can develop an understanding of the answers to the research questions posed and determine the materials related directly to the research aims and objectives.

1.6.1 Methods

Research methods can help a researcher to collect data for conducting data analysis. According to Kothari (2012: 7), “research methods may be understood as all those methods/techniques that are used for conduction of research”. Generally, there are many types of qualitative methods available to a researcher, such as observation, interviews, focus groups, case studies and so on. In this Thesis multiple methods will be used to answer the defined research questions. The selected methods for the collection of research data are observation, close reading, case study, interview and documentary analysis.

1.6.2 Observation

Observation provides a mechanism through which a particular phenomenon is closely examined and understood. In this case, this particular phenomenon is heritage artefacts within the context of modern video games. This work is influenced by the existing work

or research presented in the literature review, as shown in Chapter Two. In particular, these existing works are linked to an understanding of cultural heritage and cultural representation in video game contexts. This observational material will provide an analysis of the phenomenon, which is relatively poorly understood in current academic work. The observational study is developed with the aim of placing the subject under a critical academic lens. Observation is one of the most commonly used research methods, particularly when analysing human behaviour, including ethnographic studies. In this research, observation will be used as a method to collect information about cultural artefacts from video games, especially those which can be understood to be heritage items. In particular, this observation will lead to the development of case studies related to individual video games. These observational materials will be supported by historical analysis and understanding.

1.6.3 Close reading

A qualitative approach is always based on interpretation and understanding phenomena throughout detailed analysis. Many methods in this situation can be used to enable a researcher to carry out a detailed analysis of phenomena; one of them is close reading. The concept of close reading refers basically to analysis and interpretation of the words, texts, or image content of an item. This method is heavily used in the literature. McClennen (2003) comments that “close reading means developing a deep understanding and a precise interpretation of a literary passage that is based first and foremost on the words themselves”. By the same token, Bizzocchi & Tanenbaum (2011: 171) indicates that a close reading “is a detailed examination, deconstruction and analysis of a media text”. Furthermore, visual images can also function as the “texts” on which we can also apply close reading strategies. Reading the elements of cultural thought in video games contexts, however, is a challenge for many designers and players, particularly if they lack

background knowledge of the culture depicted in the game. A close reading provides an interpretative method through which the dimensions we are seeking to analyse can be viewed. In this Thesis, we use a close reading of two video games, *'Assassin's Creed I'* (2007) and *'Unearthed: The Trail of Ibn Battuta'* (2013) in order to better understand how an analysis mechanism based on the dimensions of cultural heritage (as outlined in Chapters 4 and 5) can be used to better understand cultural representation. The close reading of both games is developed into a case study presenting the researchers' analysis.

1.6.4 Case study

Case studies will be delivered to cover the selected video games: *'Assassin's Creed I'* (2007); and *'Unearthed: The Trail of Ibn Battuta'* (2013). The objective of this is to review cultural artefacts in modern video games and discover information on cultural representation in order to build an understanding of current video game design practice. Such an understanding will aid in constructing other methods that investigate current video game design and development processes. As Aarseth explains:

“we can study the design, rules and mechanics of the game....e.g. by talking to the developers of the game we can observe others play, or read their reports and reviews....we can play the game ourselves. While all methods are valid, the third way is clearly the best, especially if combined or reinforced by the other two” (2003: 3).

A structure underlying the gameplay is designed in Chapter 6 involving the researcher in playing the game under examination multiple times to elicit the required data and information of cultural heritage in the selected video games. This structure is supported

through the observational practice and case study development outlined in the sections above.

1.6.5 Interview

Interviews provide a mechanism through which a process can be explored with regards to understanding how current professional games designers go about including cultural heritage artefacts. Kvale (1983: 173) defines a qualitative research interview as "an interview, whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena". In addition, it is also stated that "if you want to know how people understand their world and their lives, why not talk with them?" (Sabi, 2008). Designing an interview strategy is extremely important, as Gillham states, "what questions for the purpose of the research can only be answered by asking people?" (2000: 20). In this research the interview will be divided into two sections. The first section is in relation to interviews with individual lead designers from the video games industry, who can provide the researcher with an understanding of the video game production process as it relates to heritage items. The second section of interview focuses on designers of video games if it is possible. Furthermore, the interviews will focus on globally video games designers to collect data perspectives on heritage artefact construction from multiple design based backgrounds.

1.7 Contributions

The principal contribution of the research provided in this Thesis is that through the design, and creation of a framework enabling analysis of cultural artefacts in video games, the research can help designers improve upon their cultural misrepresentation through

greater foresight and knowledge. Contributions linked to this come in the form of theoretical and practical aspects.

From a theoretical perspective, the research in this Thesis contributes to the field through:

- Critical analysis and evaluation of cultural representation through the examination of tangible and intangible cultural artefacts in video games contexts. This leads to an understanding that there are representation issues (through the case study analysis in Chapter 4 and 5) and these can be rooted in the game production process (through the game designer interviews in Chapter 6).
- Identification of a series of issues (Chapters 5, 6 and 7) which impact on video game representation through case study analysis and interviews with video game designers. This provides awareness of concerns to be overcome in the video game production process.
- Provides contributions to video game design literature in the area of cultural analysis (Exploring approaches to the generation and representation of heritage artefacts in video game contexts, Balela & Mundy, 2016). In addition, materials presented in the Thesis have been presented at a series of events; highlighting the research problem (Analysing Cultural Heritage and its Representation in Video Games. Balela & Mundy, 2015); the case study (Representation of Cultural Heritage Within Modern Video Games. Balela & Mundy, 2015); misrepresentation in video games (Understanding the Realisation of Cultural Heritage in Modern Video Game Contexts. Balela 2014).

From a practical perspective, the research in this Thesis contributes to the field through:

- Providing a framework for the analysis of dimensions of cultural heritage to help video games designers make informed design decisions regarding the representation of cultural artefacts (Chapters 2, 3 and in the Appendix). Through such a framework a designer can further reduce misrepresentation of culture; or improve upon existing representation.
- Determining perspectives on and practical considerations for video game designers and production teams with respect to the identified concerns (Chapter 7).
- Provides a series of interview transcripts with video game designers, which demonstrate engagement with the issues of practical concern to this Thesis. These transcripts may be used by other researchers in different ways to the ways presented in this Thesis (in the Appendix).

1.8 Outline of the Thesis

Within this initial chapter, the issues regarding cultural misrepresentation in video games have been discussed. A problem statement has been established and the understanding of representation and misrepresentation defined. The motivation behind the Thesis is outlined and where initial gaps in representation have been discovered. Figure 1.1 at the end of this section provides an overview of the structure of this Thesis.

Chapter two defines culture, cultural heritage and representation in the context of this study. Representation is analysed through different media: video games, film and animation. Leading to an in depth analysis of representation in video games and the introduction of a framework to develop designer's understanding of the development of cultural artefacts. The framework is then used for the case study. Finally, understanding the perspective the representation of Arabic and Muslim cultures within video games and other medias is reviewed.

The methodology chapter follows, where ontology and epistemology is described and implemented within the Thesis research philosophy. Methodology follows, utilising a qualitative method through interviews of designers is explained in detail. The case studies used employ a close reading and observation analysis of cultural representation in two games: *Assassin's Creed I (2007)* and *Unearthed: Trail of Ibn Battuta (2013)*.

Chapters four and five involve the in-depth analysis of the case studies. Chapter four concerns *Assassin's Creed I (2007)*, a game developed by a Western company portraying the Third Crusades in the Middle East. It is used due to its origin of development and an insight into an outside view on the Middle East. Chapter five examines *Unearthed: Trail of Ibn Battuta (2013)*, a game developed by a Middle Eastern company to portray the Middle East for the outside world. Both games are based exclusively in the Middle East and have been used to compare the accuracy of cultural artefacts of the region from the perspective of two video game companies from different cultures. The Framework has been used as a tool to analyse the accuracy of the cultural artefacts within both games. The outcome of the case studies is used as a guideline to establish the interview questions.

Chapter six transcribes and analyses the interviews conducted. A semi-structured system was used, lasting between forty-five minutes to an hour. Each designer to be interviewed has at least five years' experience in the industry in order to gain knowledgeable answers. Twenty questions will be asked, divided across five categories. From the interviews five main statements will be developed and analysed regarding the representation of cultural artefact representation.

Chapter 7 is the analysis of the findings of the interviews and statements with resulting recommendations. There are seventeen factors discovered which the video game industry has in regards to affecting culture, in which they will be reviewed. These seventeen factors are influenced in the video game by two factors: designer and company. Secondly, there are five statements discussing the development of video games from the perspective of the designer as an aide to rethink the process of representation.

The final chapter involves summarizing key points and findings of the research; how the video game industry can realistically improve cultural representation and reduce misrepresentation of artefacts. Contribution of this Thesis to the field of study; how this work affects cultural heritage within video games. The author also discusses further research potentially resulting from this study.

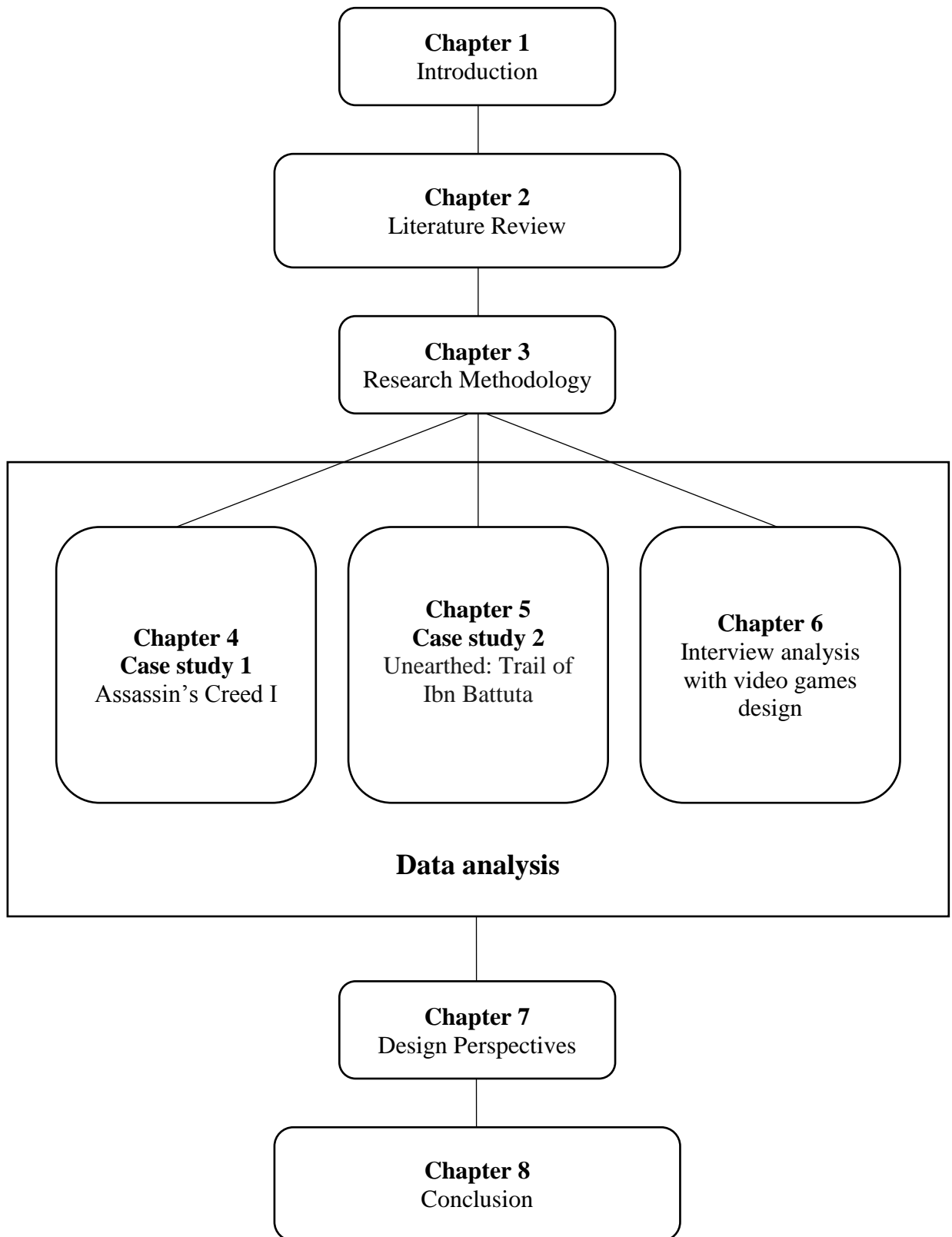


Figure 1.1. Structure of the Thesis

2 Chapter Two Culture, Cultural Heritage, Dimensions of Cultural Heritage and Cultural Representation

2.1 Introduction

As established in Chapter 1, the focus of this Thesis is the development of an understanding of cultural representation within video games contexts. To commence this work through a literature review the author perceives that there is a need to establish definitions for the major concepts to be explored and to critically review existing research in the field related to the area of investigation.

In terms of use of a literature review in research it can have several purposes as Marshall and Rossman (2015: 3) point out, from sharing the results of studies within similar areas of interest, identifying and filling gaps of knowledge in specific areas, and establishing or continuing to develop a detailed outline of the research area. In this case the literature review will help to identify current ways of thinking regarding representation in video games and outlining existing gaps in the research field.

2.2 Chapter Structure

Of major importance to this Thesis are the concepts of culture, cultural heritage, representation and the exploration of existing works linked to representation of cultural heritage in video game contexts. In section 2.3, various different definitions of culture are given and the importance of elements of culture are discussed. Definitions given from anthropological and sociological perspectives are put forward in order to demonstrate the problem of arriving at a clear definition that can be used in the research context. The complexity of culture is explored through these definitions in order to come to a definition that fits this Thesis in the best possible way. The distinction between video games culture

and culture in video games is also explored in order to clarify the difference, and help to prevent possible confusion. How the element of culture is also used by video games in order to enhance or fill a space is briefly discussed here, to be examined in more depth later in the Thesis.

Section 2.4 provides a short overview of cultural heritage, focusing on the key elements of heritage and their importance to this study. Culture and cultural heritage are very closely related, yet there is a clear distinction which is explored within this section. The difference between history and cultural heritage is also discussed in order to arrive at a clear meaning of the term heritage and its relation to history. To simplify heritage, it is broken down into two major divisions: tangible and intangible. What constitutes these two terms is discussed and applied to video games in order to decide what heritage artefacts are appropriate for each category. The accuracy of cultural heritage in video games is discussed in this section with two game categories in mind: ‘Serious’ games and ‘entertainment’ games. Both are explored in order to delineate the difference between each category and how cultural heritage is focused upon within each game type.

Section 2.5 focuses on providing a firm understanding of cultural representation and perspectives for use within this Thesis. It provides more depth on the meanings of tangible and intangible artefacts with regards to the UNESCO definition. The discussion is based around video games using tangible and intangible artefacts with examples from available ‘entertainment’ games. These in-depth definitions are referred to as dimensions of cultural heritage.

Section 2.6 employs the information discussed in previous sections to develop the cultural dimensions into a working framework for video games. The framework shall be a basis

for interpreting and analysing how well cultural heritage is represented within video games. The intention is for game designers to use such a framework in order to examine or improve cultural accuracy in their products. This section goes into detail about how each subcategory can be divided between tangible and intangible items and their subsequent reasoning.

Section 2.7 is devoted to the representation of culture. The definition of representation and the theory surrounding its definition are the initial focus in order to clarify how culture is represented through various mediums. Misrepresentation can subsequently be defined and the difference examined through video games. The section focuses on how games misrepresent culture through two key avenues: intentional thought and lack of understanding. Intentional thinking deals with purposeful misrepresentations and the reasons behind such decisions. Lack of understanding is the unintentional misrepresentations, such as deficiencies in the research performed or an absence of cultural knowledge. This information can then be applied to how wider medias (e.g. theatre, television, film etc.) misrepresent culture and an understanding of why video games have similar issues.

Section 2.8 focuses on how the wider media represents or misrepresents culture. Film (live action and animation) is the principal feature of this section, reviewing literature dedicated to how film represents a culture. This is then compared to video games to judge the similarities and differences between the two media types. To discover the roots of any misrepresentation, the section also covers and compares the history of film and video games. Exploring the history is essential to understanding how and why cultures are portrayed in the ways they are through the media.

Section 2.9, video games through film, deals largely with how a video game uses artefacts and space differently to film. In essence, what a video game focuses on which allows for a different cultural experience to that of film. This section deals with the potential and existing differences of representation between the two film and games.

In Section 2.10, existing research linked to exploring the representation of culture in modern video games is analysed. This section helps in determining current perspectives on issues related to representation in video game contexts, presenting a case for strengthening our understanding of why misrepresentation occurs during the development process. Through analysis of the literature, the section focuses on the accuracy of culture in video games from two genres: serious games and entertainment games. The ‘serious’ games encompass simulations and augmented reality; entertainment is generally for enjoyment. There is research dedicated to the accuracy of cultural heritage in video games, albeit purely through the form of ‘serious’ games, there is limited research based around ‘entertainment’ games.

Section 2.11 outlines Muslim representation through the media. Specifically, film, animation and video games. A brief history of major aspects of Islamic cultures is summarised to provide background information. Representation is firstly discussed through film, how misrepresentations in Western film has led to a stereotype of Islamic culture. Secondly the use of animation, how Islamic cultures have been represented in animations throughout history and the Arabic world’s production of animations. The section has been included because of the author’s Arabic routes and experiences, as well as both case study games being set in the Middle East. The section is essential in understanding the misgivings of cultural inaccuracies in video games.

2.3 Culture: What is it?

Behavioural and social scientists acknowledge that culture is a highly complex phenomenon (Tylor, 1889:1; Spencer-Oatey, 2012:1, Salawu, 2010:1). Therefore, there are many ways in which it has been defined and depicted. For instance, culture can be seen as learned and communal values, beliefs, and customs (Tomasello et al, 1993: 496), or as the range of learned human behaviour patterns (Boyd & Lagoudas: 1996: 77). Irving, from an anthropological perspective, comments that culture is “the shared and learned information people use to generate meaning and order within a social system” (1984: 138). In essence, culture can be a catalyst for people to create meaning within their environment. Hofstede, from a social psychology perspective, maintains that culture is “the collective programming of the mind that distinguishes the members of one group or category of people from another” (2011: 5). By the same token, Nwegbu et al, state that “culture is a pattern of human activities and the symbols that give these activities significance” (2011: 7). From a broader perspective, Salen and Zimmerman noted that culture could be “what we think, what we do and what we produce” (2003: 508).

These differing definitions are not necessarily contradictory, depending as they do on the research context: an evolutionary biologist will have a different framework of reference from a sociologist, which will be different in turn from that of a psychologist, an anthropologist or a historian. For the evolutionary biologist, human culture helps to explain survival mechanisms and can offer insights into important aspects of the development of our species, such as religion (Wilcock, 2006: 68). The same phenomena, for the sociologist, is less concerned with the survival and development of the species than it is with power structures (Swartz, 1998: 69). To the psychologist, culture may represent standards and norms by which individual behaviours can be compared. Anthropologists, on the other hand, are concerned to describe similarities and differences

between cultures separated geographically. For them, culture is a function of distinct habitats (De Groot et al: 400). Meanwhile, from a historical perspective, culture is a driver of events and an agent of stability, change and conflict.

The above stated definitions imply that culture is not hereditary, but is learned. This is confirmed in Spencer-Oatey, culture "derives from one's social environment, not from one's genes" (2012: 6). Moreover, Salen and Zimmerman suggest that culture is "a diverse and flexible concept" (2003: 508) and also that cultures are constantly changing through time, making the concept of culture more problematic to understand. Nevertheless, most cultures are essentially conservative in that they tend to resist change.

Over time, the concept of culture is becoming more and more complicated. Culture as a concept is difficult to define (Jervis, 2006: 3, Barwick, (2010: 71) Spencer-Oatey, 2012: 1). In a similar fashion, Williams notes that culture is "one of the two or three most complicated words in the English language" (2013: 87). Anthropologists who have shown interest in the concept of culture, such as Tylor, have suggested 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" (Tylor, 1889: 1). Furthermore, many academics that have studied culture have provided great lists of its different aspects when providing a definition of culture. Kluckhohn produced more than 25 pages of definitions of culture (Kroeber, 2016).

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 easily lost because it exists mainly in our minds. Our written languages, governments, buildings and other man-made things are merely the products of culture, but they should

not be treated as the whole of what culture is. Thus, archaeologists cannot dig up culture as such in their excavations. The broken pots and other artefacts of ancient people that they uncover are only materials, which remain, that reflect cultural patterns; they are things that were made and used through cultural knowledge and skills (Birukou, et al, 2009).

In contrast to this, sociologists depict two interrelated aspects of human culture: material (tangible) culture and non-material (intangible) culture. Material culture refers to the physical objects, resources, homes, cities, schools, photographs, architecture, advertisements, performance media, and the artefacts of material culture, spaces that people use to define their culture and so forth (Zgourides, 2000: 29, Stokowski, 2002). Non-material culture, however, refers to the nonphysical materials, which includes items such as beliefs, values, rules, norms, morals, language, organisations and so forth (Zgourides, 2000: 30). Both the material items that can be touched, as well as the non-material values and beliefs, customs and traditions, festivals and celebrations of a society can define culture. Newman (2010: 45), alternates between material and nonmaterial definitions of culture. Today, many researchers would agree on a more inclusive definition of culture (Barwick, 2012: 71, Eliot, 2010: xvi) the thoughts, behaviours, languages, and 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 provides a differentiating element between us humans and other animals. It is this more inclusive definition of culture which the author of this Thesis takes as the basis for the exploration of cultural representation in video game contexts, as it is less restrictive than earlier definitions, enabling research related to several cultural elements to be examined through literature review.

The essential feature of culture, that it is learned and transmitted from one generation to the next, rests on the human capacity to think symbolically. The word ‘table’, for example, is nothing other than a symbol for the actual thing, a table. Language is a symbolic form of communication and perhaps the most important feature of culture. Without language, culture could not be transmitted, people could not learn from one another across generations and there would be no cultural continuity (Nwegbu, et al 2011).

Moreover, culture is transmitted through symbols whose meanings remain more or less constant; however, this does not mean that cultures do not change. “On the contrary, cultures are never truly static. Which of us does not remember a grandparent comparing the world today with the one she/he grew up in” (Jervi, 2006). The changes that take place throughout our lifetimes represent subtle cultural shifts in values, the things we use and the way we use language.

While there is relatively little existing research into culture in video games as a tool to educate or inform the user, there is plenty referring to the use of video games in general as an educator. Garris et al, believe using an input-process-output model approach to video games generates interest for the user in terms of a game’s instructional capability (Garris et al, 2002: 441). The article approaches how the model enables the player to learn what video games have to offer; primarily through three questions: “First, what are the primary characteristics of games that are of interest from an instructional perspective? Second, what is the nature of the motivational process that these characteristics trigger in users? Third, how do instructional games affect learning outcomes?” (Garris et al, 2002: 442). The article provides an in-depth analysis of these three questions, although predominantly from a perspective of what engages the player, then pairing such features

to ‘appropriate instructional content’. From a strictly cultural perspective, there is little in this article, which would be beneficial to educating players on a specific culture. This is chiefly due to the complex nature of culture and the article’s focus on using the addictive and repetitive nature of video games to enhance learning rather than an analysis of a game’s historical or cultural content. The content also, perhaps, fundamentally clashes with the purpose of accurate cultural portrayal due to ‘the basic principles of games - that play is free and voluntary, nonproductive, and separate from the real world’ (Garris et al, 2002: 459.). However, the accurate portrayal of real life conflicts with the main principles of video games meaning the article lends no time to how accurate culture can be seen in a video game, as it is contrary to the beliefs of the authors. Moreover, the fact that video games are now a part of our daily life potentially intertwines any gaming experience with our idea of self and culture.

Similarly, there is a vast amount of literature on how video games teach (directly or indirectly, purposefully or not) history; and whether using video games as a tool to teach history is acceptable academically. As history is a quintessential part of culture, the use of video games as a teaching tool likely impacts on how we learn the roots of our culture. While there is a plethora of articles dedicated to history in video games, there are very few that reference culture in respect to how it is portrayed; and whether or not that is an important part of a game or the intended history it portrays. Laura Radetich & Eduardo Jakubowicz’s paper *Using Video Games for Teaching History, Experiences and Challenges* (2015: 10) analyses how it is possible to use video games as a teaching tool and if history taught through games is *indicative* or *subjunctive*. Although the article analyses in depth how history can be taught through games, it does not reference the cultural influences of the time periods being recreated in the present day, or throughout history. Instead it focuses on how a virtual reality reconstruction of history forces the

player to question how realistically a game portrays important world events and consequently entices the player to learn more about the subject through other media. Where there is possible overlap with the article and the research of this Thesis is how plausible it is to portray a certain period of history effectively through the scope of a videogame. Due to a game's inherent nature of allowing the player to virtually change the past (Radetich & Jakubowicz, 2015: 19) they can effectively influence their own knowledge of a period of history. Thus, creating accuracy in terms of culture and historical knowledge through a video game is paramount to reducing the potential issues around creating alternate views of history for the player.

Culture is not entirely overlooked in current academia, but rather it is analysed through a different lens to that of this Thesis. It is primarily video games culture rather than cultural portrayal within video games. The distinction is that video games culture is the culture surrounding playing video games themselves, rather than a particular culture being recreated by a game. In Adrienne Shaw's paper: *What is Video Game Culture? Cultural Studies and Game studies (2010)*, the debate lies around a familiar theme; the complexity of actually defining what culture is and where in culture the relatively new phenomenon of gaming places itself. The article's cultural focus is primarily debating, and at times debunking, mainstream media's view of what video games culture is and how it does or does not fit into society (Shaw, 2010: 404-408). There are some similarities between Shaw's research and the research of this Thesis, mainly in how a game needs to be marketed for maximum profit, and requires a certain image to fulfil this need. Marketing for the game Tomb Raider limited the potential feminist readings of Lara Croft and anchored her image as a pinup rather than a hero." (Shaw, 2010: 410). There is also interest in that the article generates understanding of the culture surrounding video games and how video games are a part of culture. This inevitably results in culture being placed

in at least the peripheral vision of many designers as research in the field grows. “Placing video games within larger cultural discourses is important, as video games themselves are the product of larger cultural contexts” (Shaw, 2010: 410).

There are many articles relating to the topic of culture regarding video games, but scarcely is this to do with cultural representations, as the previous paragraphs have shown. They primarily relate to how history is represented through games, or how games generate a culture of their own (Shaw, 2015: 5). History is often the source of a game’s story, therefore research regarding it is inevitable; what scholars tend to miss (or ignore) is that history is largely a part of culture, and the period of history being represented is often of significant cultural importance to a nation or people (take the large amount of games dedicated to the Second World War as an example).

The symbols of culture provide mechanisms for individuals to negotiate meanings from their representation. These symbols and culture itself are not something which remain constant, but change over time. Therefore, there is a need to understand culture in the context of time, principally through an understanding of cultural heritage. The researcher argues that there are three distinct elements to the transition from culture to cultural heritage. Firstly, there is the element of time. Heritage is necessarily a property of the past and its effect on the present. Secondly, such culture needs to be preserved, either in material or non-material form. Thirdly, there should be a process of documentation, which allows cultural heritage to be described and transmitted.

2.4 Cultural Heritage

There is a strong relationship between culture and heritage. As defined above, culture tells us about daily life, customs, traditions, behaviours and so on, while also providing

us with representations of its presence in the materials used and produced. All these aspects of culture are subject to change over a lifetime. However, heritage is the wealth of the past and is thus unchangeable. In attempting to define heritage, Barwick states, “The term heritage relates to the concept of inheritance in terms of what history leaves behind for future generations” (Barwick et al, 2009: 2). Culture is an aspect of heritage, which in turn is a property of that which is passed down from generation to generation (Johnson and Thomas, 1995; Herbert, 1995). The Cambridge English Dictionary defines heritage as “features belonging to the culture of a particular society, such as traditions, languages or buildings, which still exist from the past and which have a historical importance” (CED online, 2014).

There is a difference in meaning between heritage and cultural heritage. The word ‘heritage’ comes from old French and is associated with the word inheritance; that is, something passed down from past ages to new ages. Kirchhöfer (2012: 11) stated that “If heritage is concerned only with objects created by humans and not nature; it is usually referred to as cultural heritage”. According to McManus (1997: 90), the term ‘heritage’ has been used broadly in “relation to the natural world, referring to mountains and rivers, to buildings and monuments, the arts, and to social customs and traditions”. Furthermore, in 1945, the United Nations Educational, Scientific and Cultural Organisation UNESCO in 1972 confirmed that cultural heritage comprises: man-made single monuments, groups of buildings and sites, which are of outstanding universal value. This value can be of historical, artistic, scientific, aesthetic, ethnological or anthropological nature (UNESCO, 2005).

Cultural heritage plays a significant part in preserving culture generally as well as being a cultural property in its own right. UNESCO and the International Council on

Monuments and Sites (ICOMOS) have a great deal of experience and have collected numerous definitions of cultural heritage. In the present context, a good definition is provided by Harvey (2001: 8) who, at the first conference of National Heritage held in the United Kingdom in 1983, described heritage as “that which a past generation has preserved and handed on to the present and which a significant group of the population wishes to hand on to the future”.

Of course, there are strong relationships between culture, value, tradition and history and all form a unified whole encompassed by the circle of cultural heritage. Culture is the lifestyle, value links with important and worth, tradition is associated with beliefs and history connects us with past events. Therefore, all these meanings are represented in the definition of cultural heritage.

It is important to be aware of the difference between history and cultural heritage. The word ‘history’ has Latin roots, as does heritage, and could be simply defined as the recording and analysis of past events, situations, societies and individuals. Of course, what constitutes a historical analysis depends on the subject area and on the perspective of the researcher. Ashworth and Larkham (1994: 16), for example, take an economic and commercial perspective, describing history as a contemporary commodity purposefully created to satisfy contemporary consumption. It cannot be denied that in many countries, cultural heritage plays an important economic role and has been commercially adapted and marketed to fully exploit this. According to Jokilehto (2005), cultural heritage can be defined as a 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, culture heritage gives all historical places recognisable features and is the repository of human experience. This approach is further emphasised by

Bouchenaki (2003), who argues that the preservation and presentation of cultural heritage is a cornerstone of any cultural policy.

Academia on the subject of cultural heritage generally views the topic from two perspectives. Writers consider games from a cultural perspective either as a source of learning (i.e. ‘serious games’) or as primarily designed for fun (i.e. ‘entertainment games’) (Anderson et al. 2010: 1-3). From the perspective of Anderson et al. games designed for entertainment are the mainstays of the video games business. As a result of the ever-increasing popularity of video games as a source of entertainment, technology companies have been able to develop new software and hardware at an incredible rate. These advances in technology can be “deployed in cultural heritage contexts, as demonstrated by particular games and applications, thus making cultural heritage much more accessible.” (Anderson et al. 2010: 2-3). The idea is that gaming technology has reached, or is on the cusp of reaching, a level which can accurately represent real life. Therefore, games can be designed to accurately portray cultural heritage from a seemingly real perspective. The resulting accuracy enables designers to create games capable of educating people on culture to a degree previously unobtainable. The issue lies in the debate about how evident it should be made that a game is trying to educate on a particular culture. If it is too obvious, then people will see the game as educational and avoid it, stigmatising it as a game for learners. “While pedagogy is an implicit component of a serious game, it should be secondary to entertainment, meaning that a serious game that is not ‘fun’ to play would be useless, independent of its pedagogical content or value” (Anderson et al. 2010: 3). ‘Serious games’ in historic contexts generate an entertainment value primarily through sending the player on quests to discover information about objects relevant to the time period. Games such as ‘*Gate of Horus*’ (2008) and ‘*Virtual Priory Undercroft*’ (2008) both use this method to entertain the player (Anderson et al.

2010: 7-9). While the focus of this research is to engage with how culture is represented through ‘entertainment games’, it is important to note the differences between ‘serious games’ and ‘entertainment games’, as it provides a perspective on the designers’ approach to culture. It is also important to note that games design for entertainment can also be used to effectively portray culture. This is often through very specific events during wartime such as playing through the battle of Brandywine Creek in *Empire: Total War* (2009) (Anderson et al. 2010: 11).

According to Anderson et al. (2010), what affects the cultural representation the most are design budgetary constraints. To reduce costs, developers “use procedural modelling techniques for the generation of assets, including terrain, vegetation or whole urban environments” (Anderson et al. 2010: 12). Procedurally generating these assets reduces cultural representation through monotonous unrealistic repetition. With fewer features in a game, the culture is limited due to a lack of unique location representation present in real life. To accurately represent such places with “highly realistic graphics with a high degree of visual fidelity, this usually requires a recent high-end game engine, the most successful of which usually come at a very high licensing fee” (Anderson et al. 2010: 12). While it is key to note the effect of budgets on the accuracy of cultural heritage, the ability to influence the budget is beyond the scope of this research and therefore little space will be afforded to its analysis.

There are several articles dedicated to the representation of cultural heritage in ‘serious games’, such as *A Serious Game Model for Cultural Heritage* (Bellotti et al. 2012) and *Learning cultural heritage by serious games* (Mortara et al. 2014). While offering a useful analysis of how modern game engines are capable of producing high quality heritage for educational purposes (primarily historical), they do not analyse how ‘entertainment

games' use the same engines to display cultural heritage from a 'fun' perspective. Consequently, their insights are here developed to gain an understanding into the potential use of game engines to increase cultural heritage through improving graphics and educational 'search and learn' quests. There is value to be gained from attempting to analyse how mainstream games represent real world modern and historical cultures effectively and is relevant to this Thesis in the sense that there is a developing and increasing interest in cultural heritage representation through virtual media.

It is evident that cultural heritage is important in the development of countries and the preservation of their histories, because protecting cultural heritage is significant to economic, historic and cultural processes (Hani et al., 2012). The issue of cultural heritage is attracting the attention of researchers, particularly when looking at products such as video games and other digital media (Barwick, 2012) since one of the key ways of showing the value of culture is through the development of new cultural artefacts such as video games. Considering games are a reflection of the culture which has produced them (Massonet in Lauwaert et al 2007: 91) their role in cultural heritage should be acknowledged, as well as their ability to preserve culture through cultural artefact representation within the game. Barwick's Thesis, *Where have all the games gone? An exploratory study of digital game preservation* (2012), has been used to distinguish the difference between culture and cultural heritage within this Thesis. While it is not the author's intention here to explore the concept of video games *as* cultural artefacts, but rather the use of external cultural artefacts *within* the games, it is clearly an increasingly important feature of many contemporary cultures and a subject for study in its own right. The fact that technological restrictions are often considered reasons to dismiss cultural representations in a video game makes the research into representation through this relatively new medium ever more important. Despite these issues, it is the firm belief of

the present author that video games can be presented as an additional tool in the arsenal of cultural heritage preservation, providing insight into a culture for the vast number of players of video games in the present day and for generations to come. A closer look at cultural heritage and cultural artefacts outside the video game world will now be taken.

2.5 Dimensions of Cultural Heritage

The features of cultural heritage discussed in the definitions above are identified clearly by Koboldt, (1997: 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”. However, cultural heritage is not limited to the material manifestations outlined in Kobolt’s research, consisting not only of the tangible, but also the intangible (Vecco, 2010). Furthermore, it includes expressions of the living and conventions that people and societies around the world have inherited from their progenitors and transmitted to their descendants.

The author perceives it important to this Thesis to explore the features identified within the paragraph above as dimensions of understanding within the context of video games. Hofstede’s (Hofstede, 2009) approach is the most relevant to the research presented within this Thesis. The relevant dimensions here are aspects of meaning formed through representations of cultural heritage in video game environments. Therefore, defining what is and is not encompassed within these dimensions will help to determine which aspects of video games are to be examined.

As a starting point for the construction of a framework, we can turn to that provided by UNESCO. An examination of this framework reveals problems of defining distinct

categories while ensuring that all relevant features are covered; relevant features in this case include such diverse categories as music, dance, works of art, artefacts, language, festivities, poetry, ceremonies, knowledge and skills, archaeological sites, buildings, historical sites, monuments, graves and sacred places (to name just those aspects for which humans are responsible) as well as natural features related to geological structures, flora and fauna.

The separate category of natural heritage, as defined by UNESCO, (see Table 2.1 below). covers landscapes, physical and biological features of the environment and significant geological features. Each of these may have important cultural significance when they are meaningful and are valued as something to pass on to future generations. However, it can be noted that the distinction between the natural and the cultural environment is not an absolute one; traditional farmland, for example, shares features of both.

With the dimension now defined, the next step is to further subcategorise each aspect of cultural representation into a workable framework which focuses on specific aspects of culture which a game can portray.

Table 2.1: Cultural Heritage, Tangible and Intangible (UNESCO, 2008)

Culture Heritage				Natural Heritage
Tangible			Intangible	Landscapes
Movable	Immovable	Underwater	Oral traditions	
Paintings	Monuments	Shipwrecks	Performing arts Rituals	Physical
Sculptures	Archaeological sites	Underwater ruins		Biological
Coins		Cities		Geological formations
Manuscripts				

2.6 Structure of Dimensions of Cultural Heritage

First of all, there should be a fundamental distinction between tangible and intangible features, with further subdivisions in each case (see Table 2.2 below). Though these categories have previously been defined, it can be objected that sometimes there is no strict distinction between the tangible and intangible, considering integral structural parts of buildings may be removed (the Elgin Marbles being one such example) or even entire structures (London Bridge was moved to Arizona in 1967). There is also overlap between underwater sites and the moveable/immoveable categories: the Mary Rose has apparently changed categories because of technological advances. The intangible features of cultural heritage comprise mainly the performing arts, rituals and oral traditions. Again, there is some overlap, for example, literature has both tangible and intangible features. The tangible feature of literature is the physical book or writing that exists; while its intangible feature may be the opinions we develop about the literature from reading it. An example could be the use of myths in games and movies. A myth itself is intangible, a story passed down through the ages. The intangible myth can be made tangible by producing a game or movie about the myth (e.g. the Hercules games, tv shows or movies. Or Assassin's creed using the myth of *Hashashin*).

Within each of these two broad categories, it is logical to distinguish three large, parallel and comprehensive subdivisions. These are: people, the artefacts they create and the environment in which all cultural activities take place. The final categories are placed within each of these. In the following description, the individual items used in the framework are in **bold** for clarity.

In the tangible category, the largest group is that of created or manufactured artefacts. As well as the large-scale **architecture** of the game, it includes three-dimensional (**sculpture**, decorative ornaments, jewellery) and two-dimensional representations or graphical designs (paintings, tapestries, carpets, flags and other **visual images**). Textual artefacts are also included in this group, both in terms of **documents** or books, as well as the more artistic expression of **writing** such as calligraphy. It also includes the **performing arts** where they can be clearly represented in physical form (dance). **Clothing** is another important category, representing both historical and ethnic characteristics of a people, a time and a place, as well as the functional and socio-political aspects of dress. **Historical artefacts** is a category intended to include physical objects which are not primarily artistic or semiotic but which are culturally indicative of a time and place. Street and household furniture, as well as many objects from everyday life would fit into this category. **Other arts** may be more or less relevant, depending on the particular game genre and the historical frame of reference. For example, lithography, cartography, photography and film-making.

Regarding the people themselves, these can be divided into the **common people** and **historically significant individuals**. In many video games (and *Assassin's Creed* is certainly no exception in this) there are large numbers of Non Player Characters (NPCs). In crowd scenes, interaction may be more or less limited but the way in which the people are represented and designed into the gameplay have cultural implications. The more important NPCs, which in this case are often actual historical figures, have even greater implications, as the scope and consequences of factual error are greater.

The environment can be considered from the perspectives of the overall **landscape**, **historical sites** and **places of scenic interest**. These factors have a significant impact on

the *Assassin's Creed* series, as they are responsible for a large part of the attraction of the games.

Moving on to the intangible aspects, it is possible to distinguish three relevant items within the category of arts and artefacts. These are **language**, **music** and **folklore**. These are considered here to be intangible because their essential nature, in a historical cultural context, belongs to that of oral traditions.

Within the environment, **climate** is considered here to be the single intangible item. In this study, it is taken in a general sense to indicate the typical physical atmosphere in which the players find themselves when in outdoor situations. So, for example, a hot, dry climate is used in many of the *Assassin's Creed* environments.

Intangible cultural aspects of people as depicted in video games can be understood from the perspective of the most general (**behaviour**), to the more specific (**religion**) to the more idiosyncratic (**customs**). Each of these can convey cultural characteristics of a time and place. Of all the items in the framework proposed here, these three are perhaps the most subject to overlap in terms of definition but will nevertheless be found useful analytical tools.

A further category is necessary in order to complete the list of intangibles. In the framework, it is referred to as History, and includes two items: **time** and **age**. By 'time' we mean the position on a calendar; the date, year or century. By 'age' we mean the chronological attributes of people, places or objects as they appear in context. For example, a building represented in *Assassin's Creed* as being typical of Jerusalem during the crusades might actually be newly constructed and not, as it would appear to a 21st

century tourist, 800 years old. Obviously, to achieve accurate representation, the designers of video games set in historical periods need to construct the environment in such a way that it reflects the experiences of those living at the time and not those of contemporary visitors. The other aspects present in Table 2.2 regarding ‘evidence’ will be described in Section 2.7 as they relate primarily to representation.

Table 2.2: Mapping Dimensions of Cultural Heritage to Video Game Contexts

Tangible	Art & Artefact	Architecture	No Evidence of Consideration	Limited Evidence of Consideration	Satisfactory Evidence of Consideration	Satisfactory Evidence of Consideration
		Sculpture				
		Visual Image				
		Clothes				
		Documents				
		Design Ethos				
	Environment	Places of Scenic Interest				
		Landscape				
	People	People				
	History	Historic Sites				
Historic Artifacts						
Historic People						
Intangible	Art & Artefact	Language	No Evidence of Consideration	Limited Evidence of Consideration	Satisfactory Evidence of Consideration	Satisfactory Evidence of Consideration
		Music				
		Folklore Image				
	Environment	Climate				
	People	Behaviours				
	History	Religion				
		Customs				
		Time				
		Ages				

2.7 Representation

We can begin by suggesting a very broad definition. In discussing cultural representation we are taking culture and conceptualising it. That is to say, we are framing it within a shared set of meanings, of discourse. If it is true, as Hall (1997: 2) considers, that “culture is not so much a set of things ... as a process, a set of practices [and] is concerned with the production and exchange of meanings”, then we are in effect discussing the representation of representations. So, in defining this core concept, it can be argued that ‘cultural representation’ is the use of meaningful constructs (which may not be limited to linguistic items) in order to engage with cultural practices. It is assigning meaning to items, which are in themselves expressions of meaning. In the context of video games, this can include physical objects, sounds or depictions of behaviour when used with the intended purpose of creating historically identifiable situations and environments.

Hall states that the idea of representation is used to bridge the gap of cultural study (1997: 15). This determines that there is a relationship between culture and its representation through which connections are developed between language and meaning. “Representation means using language to say something meaningful about, or to represent the world meaningfully to other people” (Hall, 2013: 2). According to Orgad (2012: 47) “representation are images, descriptions, explanations and frames for understanding what the world is and why and how it works in particular ways”. Furthermore, notes Chandler, in *Signes* (2007), representation refers to the construction in any medium (especially the mass media) of aspects of ‘reality’ such as people, places, objects, events, cultural identities and other abstract concepts and that representation can take forms such as writing, speech and moving pictures. Similarly, Beach (2016) describes representation as “the ways in which the media portray particular groups, communities, experiences, ideas, or topics from a particular ideological or value

perspective”. Therefore, the issue is to understand how the media deal with text, image, language and performance, together with the presentation of gender, belief, ethnicity, social issues and events to an audience.

It is important here to provide a definition of the converse of representation: misrepresentation. In the strict legal sense, three aspects are recognised: innocent, negligent and fraudulent misrepresentation. Clearly, the same distinctions can be made in other contexts, including the media in general and video games in particular. To relate these distinctions to the choices made by games designers, cultural elements which are adapted for a game are always misrepresented (by definition) but these choices can be seen within an innocent/negligent/fraudulent framework.

However, it is obvious to note that the boundaries between these legal distinctions are blurred when it comes to practical applications such as the present one. Take the well-known case of *Call of Duty: Modern Warfare 2* (2009), in which the street signs in Karachi, Pakistan, are all written in Arabic instead of the local Urdu. The design intention is presumably to create an environment which the typical gamer perceives as hostile, by playing on ethnic and racial stereotypes. This is hardly a case of “innocent” misrepresentation. Although it can also be noted that many gamers in markets such as the UK would not have been deceived by such an incongruous and obvious misrepresentation. The motivation for the design choice is clear here. This provokes the question, “What is the role of misunderstanding in cases such as this, and how does it occur?” It is this question, which is at the core of this Thesis. Misunderstanding can be explained as a result of inaccurate or biased sources, as for example when Hollywood movie portrayals of cultures or historical events are used as objective authorities, in spite of the serious issues of cultural, racial, ethnic and gender stereotyping which pervade this

domain (Shaheen, 2015). In contrast to this is the situation where a game designer deliberately misconstrues an element in order to meet a design objective (whether this is an abstract objective, such as creating a certain environmental feel, or whether it is to meet a specific requirement of the game mechanics, such as providing climbing hooks).

In the last few years, video games have succeeded in transforming our understanding and comprehension of particular places or times through the process of representation. Representation in video games appears as images or languages (this ties in with Sisler's (2008) definition of representation as "the construction of meaning through symbols and images") and thus in some cases these simulations contain aspects of reality, and sometimes the simulation may include issues with the translation of these aspects of reality when considered with respect to the items being modelled (Galloway, 2004: 1).

There is a vast literature associated with the use of language to represent objects and ideas. For the purposes of this Thesis, it is not necessary to give more than a brief background and to summarise the main approaches, which philosophers of language have proposed. The classical account is given by the founder of semiology, Saussure (Segal et al, 2013), in which a fundamental distinction is made between the signifier and the signified, and in which the arbitrary nature of the dyadic relationship between the two is noted. In contrast to this, Peirce suggested a triadic model, with the addition of the interpreter (Hoopes, 1991: 7). More recently, Hall (2013: 1) summarises approaches to representation as being either reflective, intentional or constructivist. According to the reflective account, language takes meanings from external reality and mirrors them without modifying them in any way. If we take an intentional perspective, language is an expression of what the user wants to say. In contrast to both of these, the constructivist approach sees meaning as something actively generated through the medium of language

and in a social context. Or, as Orgad (2012: 53) puts it, “any representation...is inherently and inevitably a construction, a selective and particular depiction of some elements of reality, which always generates some specific meanings and excludes others.”

It is clear, in the researcher’s opinion, that the constructivist approach is the most appropriate for this Thesis. With the research aims focusing on the developers themselves (rather than the consumers of video games), constructivism offers more potential for analysing and critiquing the games development process, and for suggesting ways in which the methodology of this process can be improved. This is because constructivism interprets representation as an iterative, learning process in which meaning is actively generated and continuously modified through feedback loops, in an interactive and fundamentally social activity.

The media of theatre and film have been subject to the attention of many writers interested in building on the theoretical insights gained from philosophers of language and linguistics. As fellow members of the creative industries, all of which are by definition concerned with the portrayal of realities, theories of representation developed in one area may have direct application in others. One relevant example, to which we now turn, is the distinction between representation and presentation, as primarily seen in studies of the theatre.

Presentation does not imply understanding or intention (although it does not preclude it either). It consists in the imparting of meaningful content to an audience; indeed, it cannot exist without a recipient. Representation, in contrast, does not imply an audience; although it may be pointless without one, it would not be self-contradictory. It consists in the intentional construction of meaning, of which the agent must necessarily be aware.

To put this into a specific context, actors performing a play may both present and represent, or they may do one, but not the other. To the extent that they use the correct words (as chosen by the playwright) and express the correct emotions and behaviour (as instructed by the director) then, provided an audience is watching, we may speak of presentation. To the extent that the actors engage with the intentions of the playwright and director, and in so doing attempt to construct meaningful experiences for themselves, we may speak of representation. Moreover, we can say that in the latter, the actors are constructing meanings while in the former they are reflecting them.

To pursue the theatrical context further, Schummer (2013: 3) discusses implications of the presentation/representation dichotomy with respect to the actors' purposes as they relate to an audience's perspective on reality. According to Kaufman, the purpose of representational acting is to make the audience believe that they are experiencing real events. Landy & Montgomery (2012: 22) makes a similar point, stating that "the 'representational' mode describes any performance that seeks to create a 'virtual' or 'parallel' reality, which co-exists with but does not inter-penetrate the audience's reality." The audience is essentially passive and is there to be entertained. The purpose of presentational acting, on the other hand, is to challenge the situation of the audience from natural passive to more active it is better to create a moment to moment reality through the performance. (Walmsley & Franks, 2011: 4). The audience plays an essential role in the creation of this reality, with the actors not attempting to pretend to the audience that they are anything other than actors, and are certainly not to be identified with characters. Before leaving this theme, it can be noted that the media of film has clear parallels with that of the theatre, and similar theoretical considerations apply with regard to our discussion of representation.

A discussion of the relationship between objective reality, human understanding and the creative process is relevant here. In the design process, when sources are required, the designer turns to the real world (mediated by whatever informational channels are deemed appropriate) for facts and data. This is an epistemological activity. In this context, we can speak of the accurate or inaccurate collection of information and in particular with facts concerning visual reality. To the extent that the results of the designer's research are accurate, we can say that understanding is achieved. Inaccuracies, on the other hand, lead to misunderstanding. This misunderstanding then feeds into the creative process and it is here that we can speak of representation or misrepresentation. The distinction here is not between accurate and inaccurate, but concerns instead the intention behind any depiction of reality. Such intention can be to offer either true or false depictions of the facts. In the case of the latter, we can speak of misrepresentation, while noting that representation depends on both an intention to be truthful and having accurate facts available: misrepresentation can also occur when there is an intention to be truthful but the designer is in possession of inaccurate facts.

Table 2.2 provides a mechanism for determining levels of representation in various media forms, there are four categories of cultural accuracy provided: no evidence (of cultural accuracy), limited evidence, satisfactory evidence and significant evidence. No evidence means the designed has included items with no links to the culture being represented. Limited refers to items which have some linkage, but generally can be considered to be poorly chosen or have had limited research placed into their design and/or positioning. Satisfactory evidence shows the designer has considered the culture and attempted to portray it correctly, although clear errors still occur. Significant evidence means the designer has portrayed to a high degree of accuracy the cultural items related to the media

item with little to no errors. Table 4.2 in this guise as a qualitative measurement tool will be used at various points through this Thesis.

While there is increasing interest in video games in our society and academic awareness in terms of the portrayal of our community within a video game context; there are still mistakes in some elements of cultural heritage. The author refers to misunderstanding and/or misrepresentation in term of cultural heritage from both video game designers and the video game industry. The author will approach the issue of misunderstanding from a cultural heritage perspective. There are alternative approaches to studying culture through media, such as media theory, media representation theory, media studies and cultural studies. The following section explains why these valid theories are superseded by a cultural heritage framework within this Thesis.

There are many works have been written about video game culture, limited work in this area has examined video games from cultural studies perspective. Zelenko (2018) comments that "Cultural studies is an innovative interdisciplinary field of research and teaching that investigates the ways in which culture creates and transforms individual experiences, everyday life, social relations and power". Furthermore, "it is devoted to understanding the specific ways cultural practices processes by with the existing techniques, institutions and structures of power are reproduced, resisted and transformed" (Grossberg, 1993: 344). Culture study concentrates on how particular cultural practices relate to wider systems of power associated with or operating through social phenomena such as ideology, class structures, ethnicity, sexuality, and gender. Moreover, "we can picture cultural studies as a distinctive approach to culture that results when we stop thinking about culture as particular valued texts and think about it as a broader process in which each person has an equal right to be heard, and each person's voice and reflections

about culture are valuable” (Couldry, 2000: 2). Culture uses in a video game as a medium to reflect or/and represents our experience through video game context (what we see, what we feel, and what we think). In this work we not to argue that all video game studies must approach games as culture, but that those scholars that do approach video games through the lens of culture should adopt the same critical and reflexive approaches to culture that cultural studies has. Herein we argue for a critical game culture, through cultural heritage representation rather than cultural study of games. Shwa identifies that “Game culture” is often defined via descriptions of gamers (Shwa 2010). Furthermore, the Studies, of video game has relied on borrowing techniques from other disciplines, including anthropology, economics, philosophy, psychology, film studies, and so on (Boellstorff, 2006; Loftus & Loftus, 1983; Mortensen, 2007; Myers, 2003). The fields of the video game study, however, “has not drawn deeply as it might from cultural studies, particularly its critical and reflexive tendencies though notable exceptions do exist” (Shwa 2010). In the reason, culture study could help video games study to understand one or more side of real culture that could use in video games. However, there are many studies may share in the video game such as new media theory and Media representation theory.

To put it simply ‘Media theory can be defined as systematic way of thinking about means of communication’ (Laughey, 2007). The use of the theory is primarily to take a step back from mass media and approach it from a critical perspective. Doing so allows researchers to approach the complex nature of society’s relationship to different forms of communication from an analytical point of view. As Denis McQuail points out: ‘Media theory refers to the complex of social-political-philosophical principles which organize ideas about the relationship between media and society’ (2010). Video games are a quintessential part of modern media, and a part of mass media (there is no direct

interaction between player and creator). Therefore, video games can be scrutinised by researchers using media theory. The author of this Thesis is not researching the connection between media and society, or the ideas which form this connection; the purpose is analysing cultural heritage within a specific form of mass media – video games. While a valid method to look at video games, it is too broad a topic to study the specifics of cultural heritage within video games.

Media representation theory is how the media portrays people and culture in various ways and how people react, interact and absorb such portrayals. Questions such as “How do men look at images of women, women at men, men at men and women at women?” (Wood, 1994, P 31) and “How does Hollywood movies portray Muslims and Arabs before and After 9/11?” (Alalawi, 2015 : 58). While a feasible theory for researching the creation and representation of cultures, the theory is focused on how people react to these representations. The theory does not focus on the accuracy of the creation of the cultural items or artefacts, and therefore does not focus on the specific aims of this Thesis.

Media and cultural studies are often found together in academic writing (Stokes, 2013). This is because many aspects of the broad spectrum of media studies are based in cultural representation. Media studies is the general name given to any form of study based in examining media, particularly mass media. Cultural studies is an interdisciplinary field of research that investigates the ways in which “culture” creates and transforms individual experiences, everyday life, social relations and power. Cultural studies can therefore be used in conjunction with media studies to show how mass media develops and presents culture. While these areas are valid methods of researching cultural representation in video games, they are either too broad (media and cultural studies) or are concerned with individuals and their reactions to the media’s representation of culture.

This Thesis uses a cultural heritage framework because the primary concern is the element of cultural heritage within video games. The elements of cultural heritage are defined (i.e. tangible and intangible) and examined as groups and individually, and how video games represent them. The research is based around the ideas that are pertained within this area. The secondary purpose of a cultural heritage framework is to see where the misrepresentation occurs within cultural representations in video games and why such errors occur. This differs from cultural and media studies as well as their subcategories because it is not concerned with the end user's reaction, but why erroneous information might reach the end user. The production process behind cultural artefacts within video games is the key difference, the focus is why these misrepresentations occur (intentionally or accidentally) and how that affects the base culture, not the culture the game is being marketed to.

2.8 Media Representation

Traditional media outlets can be compared to modern ones in terms of how they have represented cultures as a whole throughout history. Films such as *Saving Private Ryan* (1998) have been critically reviewed by many authors for their stark realism, but also for their inaccuracies in how the realism is represented. For example, Toby Haggith in his paper "*D-Day – For Real*" (2002) offers a comparison of 'truth' and 'reality' in *Saving Private Ryan* based on combat film from the British Army's Film and Photographic Unit. He comments on how in the opening 26 minutes of *Saving Private Ryan*, the camera is designed to represent a Normandy cameraman, but when compared to actual footage from the time there are errors in filming techniques. The cultural impact may be considered subtle, but portraying heroism in war affects how a country represents itself. While the scenes in the film can be considered accurate in portraying the horror of war; they may

over represent the individual impact of each soldier and how the cameramen recorded the war for citizens back home.

To complement the literature dedicated to cultural or historical representation in *Saving Private Ryan*, much attention has been paid to video games, which represent the same scene and how they present the events in similar and dissimilar fashions. One example is the opening level in *Medal of Honor: Frontline* (2002), which represents the same beach during the invasion of Normandy. While a movie provides a limited scope of culture through images, dictated by camera angles, aperture, focal distance, and so on, video games provide an interaction with the images that cannot be matched in film. Articles such as “*Working Out Memory with a Medal of Honor Complex*” (2015) by Lequana Cooke and Gaines S. Hubbell explore how a player’s ability to interact with the events being presented provide a broad learning experience for the player, noting that

“a videogame does memory work if it attempts to represent past events through historical, functional, and mimetic realism. These kinds of realism should be present in gamic action, whether diegetic and non-diegetic, and the representation of speech and images in the game.” (Cooke & Hubbell, 2015)

The events can be considered as much cultural as historical through their representation. The suggestion is that accurate speech and images enable the player to feel like they are somewhat reliving the history through a member of the culture of the events. For instance, a Second World War American soldier will use dialogue present and popular in 1940s America, not modern idiomatic phrases or slang. This also adds to the authenticity of the gaming experience. The meaning of ‘Authenticity’ in the context of a video game is best summarised by Eva Kingsepp (2003) as “that which is felt to be real, which is not the

same as that which actually is real”. Unlike a film such as *Saving Private Ryan*, (1998) which is designed to represent the events of the “Normandy Invasion” in a way considered to be ‘actually real’; games such as *Medal of Honor: Frontline*, (2002) are designed to feel like reality, while simultaneously informing the player that it isn’t a definitive reality.

The final point the researcher would like to raise comparing film to video game cultural depiction is how death is portrayed. Death itself and the events which follow are central tenants of any culture. Eva Kingsepp, in her paper *Apocalypse the Spielberg Way: Representations of Death and Ethics in Saving Private Ryan, Band of Brothers and the Videogame Medal of Honor: Frontline* (2002) explains the difference. While *Saving Private Ryan* attempts to represent death through “intimate voyeurism, emotional impact as well as personal ethical reflection on the subject”, *Medal of Honor* shows death as simply an inevitable outcome of the obstacle the player must overcome. The player has no attachment to the enemies in the game, they are designed to challenge the player, therefore emotional distance is inevitable. Once they are dead, they have no further significance and therefore disappear. While technical limitations are also cited as a reason for this (keeping bodies would require a huge amount of memory to maintain), the main point is not to signify the interactions of humanity during war, but to overcome a challenge. Herein lies the primary difference between a video game and that of film or TV shows.

Perhaps the most important aspect of a representation of history or a culture is well expressed in the article *Representing History* (Kirkup, 2003), which points out that not only in film, but in a range cultural and artistic media, as well as historians writing in different periods and from varied politico-cultural backgrounds, all present historical events from different perspectives. This is a view best taken when referring to any form

of media in relation to cultural representation; every aspect of its visual representation differs, however subtly, from person to person.

Culturally, media such as film and animation can have a considerable impact on world-famous landmarks. The effect can be positive, negative or a culmination of both depending on an individual's point of view. Using the 2001 film *Tomb Raider*, we can see how misrepresentation presented through film affects both positively and negatively on the UNESCO world heritage site: Angkor Wat. Using a combination of real and fictitious locations, the film managed to “dissolve the boundaries between the physical and virtual” for the temples to “succumb to a flow of free floating, disembedded imaginary text through the familiar “Hollywood” stereotyping of ancient civilisations” (Winter, 2003: 62). While the film brought large levels of “low quality” tourism to the site due to its popularity, the tourists were mis-sold the true meaning and cultural importance of Angkor Wat. The level of misrepresentation was substantial enough to be considered offensive by local media (Winter, 2003: 62). The negative impact lies in how current and future generations are misinformed about the true purpose of Angkor Wat; with the popular foreign view contradicting the accepted historical view reducing the impact the site has as a location of world historical and cultural importance. Film brings such locations into the international spotlight, highlighting its unique structure and environment, but the true identity is often skewed by invented ‘realities’ to justify the action-packed thrill seeking scenes that have become synonymous with Hollywood blockbusters (Sheldon Hall, 2014).

Film is but one media channel which has been lambasted for its stereotyping; published media such as newspapers and cartoons have also come under fire for their gross misrepresentation. Caroline Marshall criticizes a cartoon which shows an aboriginal man

returning to a tepee with a bow and arrow strapped to his back accompanied by the line “Honey, I’m tepee!” (Marshall, 2012). The image implies that aboriginal people spend their day hunting for food with a bow and arrow and live exclusively in tepees. The comment also causes offence because regardless of what sort of abode a person returns to, they will always say “I’m home” (Marshall, 2012). The reduction of aboriginal culture to these offensive stereotypes through a purchasable publication is another example of how even in the present day such stereotypes are accepted amongst many individuals. If such publications are still considered acceptable, then applying similar stereotypes to other forms of media such as video games or film is likely to also be accepted.

Stereotyping is often so embedded in a culture that it is hard for an individual to disseminate cultural similarity from cultural difference. Perry Hinton (2015) examines the way in which British TV in the 1980s to 2000s portrayed various aspects of Japanese culture as a subtle exploitation of ‘the other’. For example, Hinton describes how British TV shows such as *Tarrant on TV* (1990-2006) celebrates Japanese culture, but for its differences to British culture and its oddities, rather than its similarities.

Hernández-Pérez (2016) paper “*Thinking of Spain in a flat way’: Spanish tangible and intangible heritage through contemporary Japanese anime*” explores the ways cultural tourism and mutual histories influence the methods and representations of Spain through the popular Japanese cartoon style: anime. Postulating the question: does Japanese representation in anime directly influence Spain as a tourist destination? The paper seeks to decide whether Spanish cultural heritage representation is positively or negatively influenced by Japanese anime. The usefulness of the paper is defined by the use of animation (anime) which is particularly popular for use in Japanese video games. Anime, according to Hernández-Pérez serves as a form of advertisement for Spain in Japan, in a

similar way to that of films or video games which can bolster tourism in an area e.g. Scots monument in Edinburgh gaining a huge boost in tourism after Braveheart (Winter, 2010).

Film (animated or live action) can serve as non-official forms of tourism for a country, working ‘as a representation of the cultural values that we might call "intangible heritage" using UNESCO classification.’ (Hernández-Pérez, 2016: 5). The resulting effect is unofficial cultural export, although often a simplistic or stereotypical representation, which only represents a cultural veneer rather than an in-depth exploration. In the case studies used, Spain is portrayed mainly due to its popular nature in Japan through historical connections. Due to Spain not being seen as a Western country in the eyes of Japan, anime tends to portray it as an exotic outsider, something to marvel at. Perhaps similar to how Western medias portrayed the Middle East for the majority of the twentieth century. As a result, anime has generated tourism for Spain but purely on a visual level. People desire to eat the food and see the major sights rather than attempt to experience genuine Spanish culture. What is clear is that Spain has a constructed image through media, such as anime, which has left an international image which can be considered wholly different from that which Spain portrays itself. The same ideas could be deemed relevant to representations of the Muslim and the Middle East (as explored in Section 2.11).

2.9 Comparing Video Games With Films

A fundamental difference between film and video game representation is the perspective the respective audience/player has. Video games should strive to immerse the player in its story and world, the player should be a part of it and act within it. “A good game is more akin to a piece of theatre than it is a movie, but with the player’s role not as audience member but as (usually) lead actor” (Hartup, 2015). On the other hand, a film has limited

interaction, in the sense that you, as an audience member, cannot influence the outcome of events. While film may seem more realistic to the viewer, involving real locations, people and recordings; the viewer has no control as to what they see through these mediums. A person can only see what the camera shows them. This, to some degree, makes it easier for film makers to place heritage items within the context of a culture; by adding items into the back of the shot there is automatically an increase in representation through the use of real items. A person cannot approach the items in the shot and therefore their representation is static. A game, on the other hand, enables a player to view an item from multiple angles and from a distance they can chose. McMahan explain the viewers of the gamers

“Video games allow the viewers to engage actively in the scenarios presented.... are temporarily transported from life’s problems by their playing, they experience a sense of personal involvement in the action when they work the controls, and they perceive the video games as not only a source of companionship, but possibly as a substitute for it” (McMahan 2003: 67)

This makes representation difficult as the items must be placed within the context of a traversable 3D environment rather than a film shot. A video game’s capability is also limited by computer power, only so much can be dedicated to additional items or artefacts before affecting gameplay through dropping framerates or taking up too much hard drive space. A film can use multiple camera shots and as many additional items as a designer sees fit.

There are also fundamental differences in how a player emotionally interacts with films or video games. When watching a film, the viewer is emotionally influenced by the actions and coping mechanisms displayed by the actor(s). A video game on the other

hand, requires the player to make their own decisions and therefore use their own coping mechanisms to see them through events the game presents.

“When viewing a film, the labelling of the emotions felt is determined by the viewer’s passive appreciation of the characters coping potentials. But when the situation is part of a video game it is the player’s assessment of his own coping potentials to determines the emotional experience.” (Grodal, 2000: 189).

The way in which emotions are experienced also differs between video games and film. While a film activates emotions in the viewer by creating passive links between what is happening on the screen and the viewers own experiences; a video game induces emotions by exposing the player’s ability to cope with a given problem and expressing it through the game protagonist (Grodal, 2000: 202). The effects of these responses can also be seen through the length of time it takes to play a game; a film will last a specific amount of time but a game can last as long as the player desires.

Another central difference is the amount of times we view films and play video games. Primarily, a person only watches a film once; because the events are unchangeable and irreversible. For example, if someone dies in a film, they will die every time you watch the film. Therefore, subsequent viewings will almost certainly yield the same emotional responses, or even diminished emotional responses due to knowledge of what happens in the film. Any surprise, suspense or curiosity will have less affect as you already know the outcomes (Grodal, 2000: 205). By contrast, games tend to be played multiple times due to the ability for a player to choose from many different choices with alternative outcomes. You can play a game many times over and create different endings or pathways to objectives. The emotional responses (surprise, suspense and curiosity) will change every time (McMahan 2003: 67). A film always follows the same sequence of events and

the same character learning to arrive at the same conclusion; a game is a learning experience which forces the player to alter or improve responses in order to gain a different result .

The use of space in games and film generally differ greatly. Films tend to move through space relatively easily, often simply by changing scene a movie changes space; If a film is set in Egypt, a film can simply move from a hotel room in Cairo to the pyramids by changing the shot. In reality this would take time, meaning a person would have to travel to the location. A game is different from a film in that you have to travel from one location to another, which also takes time. The designer has to find a way of condensing this space to provide the illusion of distance while being compressed into a relatively small space. While this is an hurdle for designers to overcome it also has the benefits of providing the player with a sense of freedom. Unlike a film, in which the viewer has no control over direction or camera shot; a player in a game can take almost any route they wish to arrive at a destination.

2.10 Analysing the Representation of Culture in Modern Video Games

Whilst a relatively new area of research interest, the study of video games are represented in the social sciences, which attempt to understand the effect of video games on players and others, and in the humanities, which trys to understand the meaning and context of video games. Williams (2005: 445) points out that “despite the relative youth of our research, we have already neatly divided ourselves along the typically divisive lines demarcated as “social science” and humanities” and “qualitative” and “quantitative”. However, video games research is “still young enough that we are not bound to follow these traditional paths” (Williams, 2005: 445). This stratification of research along qualitative and quantitative or even mixed perspectives is apparent in conferences such

as the Digital Games Research Association (DIGRA) and International Communication Association's (ICA) Conference, etc., or in academic journals such as Games and Culture, Digital Culture and Education (DCE), Digital Islam, etc.

There are an increasing number of papers researching culture in video games and their relevant representations; both in published (journals, books, etc.) and unpublished (Master's degree and PhD Thesis) material. Helena Granström's Master's Thesis, *Elements in Games for Virtual Heritage Applications* (2013), begins to touch on the issues which are also raised by this Thesis. The Thesis researches how video games could be used to influence the field of cultural heritage digitisation. Therefore, it differs from this Thesis in the sense that Granström analyses cultural heritage in video games for the purpose of improving specific "cultural heritage applications" rather than the game itself being a tool of representing cultural heritage (Granström, 2013: 1), with the author going on to state that "although video games and virtual heritage applications possess similarities, the two fields have largely developed separately".

Granström's Thesis does acknowledge that the scope of video games in terms of players and financial/fiscal investment can accurately display cultural heritage for preservation. "In an attempt to further the development of virtual heritage, and to correct some of its wrongs, some have begun to look toward the field of video games as a possible source of inspiration" (Granström, 2013: 1). Digital preservation of cultural heritage is becoming increasingly important to institutions, which generally deal with such matters. Institutions such as libraries, museums, international organisations (e.g. UNESCO) and national organisations (such as English Heritage) are all experimenting with digitisation in order to accommodate an increasingly technologically knowledgeable population. The result is an increasing link between video games and cultural institutions to produce methods in

which people can interact with their cultural past. While not from the perspective of game designers, to point out the potential link between the two fields of digital production is important. An interesting point made in Granström's Thesis is that virtual heritage organisations look to video games, not just because of their popularity but because modern games possess the technology for recreating historical cultures in a viable manner (2013: 5). Video game designers possess the ability to accurately portray culture, yet many games still fall short of accurate portrayal. As a result, the importance of the Thesis to game development is limited, but significant in remarking how technology has reached a point where accurate portrayal of culture is possible, as well as the fact that game designers are working ever increasingly with outside institutions to help develop game accuracy.

In connection with Granström's perspectives a study that was conducted by Stricker et al (2001) found that video game technology can be utilised successfully to provide a representation of culture. In this study, they reconstructed the different archaeological sites at Mt. Olympus (in Greece). They used a customised video game program called Archeoguide to recreate key events, people and the structure around them (Anderson et al, 2010). What they found, is that tourists and historians were influenced by the cultural characteristics and the life like images they encountered. Children and youth were the most effected; as they easily made the connection with the video games they played regularly. As a result, those who engaged with the game had a better understanding of Greek culture and what attributes were most important in this society (Stricker, et al 2001, Anderson et al, 2010). These insights are useful, as they demonstrate how culture can be easily represented in video games. Technology allows for these representations to be precise and life like.

Sisler (2012) in *Stories from the History of Czechoslovakia, a serious game for teaching history of the Czech lands in the 20th Century – Notes on design concepts and design process* similarly discusses games from a cultural standpoint: as a way of teaching the history of Czechoslovakia through a serious game. Although not directly relevant to this research due to the nature of serious games, it provides insight into how different cultures view their own histories and how this makes a difference.

Adrienne Shaw's article *The Tyranny of Realism: Historical accuracy and politics of representation in Assassin's Creed III (2015)* discusses how game designers create "counter histories" through the need to appease players by pandering to assumed popular histories. In other words, how designers take a historical event which people assume they know about and recreate it in a game, even if the details of the popular history are incorrect. This is done by analysing *Assassin's Creed III's* historical and visual realisms in order to judge whether or not it is truly accurate, or simply designed to exploit a player's assumed knowledge of the events of the American Revolution. Culturally speaking, the designers of the game assume the player is primarily a non-native American and develops the game around that culture. "The constructed player is assumed to be non-Native (largely), which results in a disjuncture between who the player-character is and where the game's narrative goes" (Shaw, 2015: 5). The game assumes that the player is more culturally in tune with the "white American perspective of U.S. history" and therefore uses cultural tropes and nuances more associated with those players which offers an "oversimplified revisionist conspiracy history, and frequently sidelines some inconvenient truths" (Shaw, 2015: 5). The article comments on the designer's perceived knowledge of the player, editing history and culture in order to produce the previously mentioned "counter history" which a player can associate far closer with, than a game which shows the "inconvenient truths" of the time.

Additionally, the way histories are perceived changes from player to player: “individuals have very different expectations for realism in games depending largely on genre and their own reasons for playing” (Shaw, 2015: 6). The importance of these points for game developers is summed up by Shaw: “we can look at texts, like historical games, as products of cultural industries whose products are shaped to appeal to an imagined primary audience” (Shaw,2015: 6-7). Put simply, games are produced for the audience the designers expect to appeal to. The result is that all cultural aspects are chosen based on how much a designer believes the culture appeals to the prospective audience. While critiquing a game for its non-fictional representation is important, it is also important to critique a game for its fictional representation. Although reality is “merely meant to further a fictional narrative” (2015: 7) in many games, commenting on the misrepresentations in a fictional universe is just as important. Shaw gives the example of games and fantasies inspired by medieval Europe; primarily only portraying a white population, even though there is plenty of evidence that medieval Europe was culturally and ethnically diverse (2015: 7). Understanding why there are additions or omissions to cultural historical portrayal in games lets us understand who the games have been designed for (2015: 7). As with the case of the *Assassin's Creed* series, the use of Desmond, a white American male, points to the fact that the games were primarily designed for people who are exactly that: white, male Americans (Shaw, 2015: 19-20). With an assumed audience, the designers can tailor cultural and historical inclusion to that of what they believe the audience will want to play through. In the case of *Assassin's Creed*, a struggle between predominantly medieval western ideals and that of the “other” i.e. Middle Eastern values.

In many video games, there are fewer African Americans represented. This is a reflection of the larger trends, which are occurring in the entertainment industry and society itself. In many cases, African Americans are marginalized or given a role that will not move beyond different stereotypes. These attitudes are highlighted in a host of video games in similar proportions. According to a study conducted by Williams et al, (2009: 814), they examined 150 titles and how they influenced the people playing them. The study found that African Americans were underrepresented. In most cases, the individual was portrayed in a negative light (such as, as criminals). A good example of this can be seen with Williams saying, “The results show a systematic over-representation of males, white and adults and a systematic under-representation of females, African Americans, children and the elderly. Overall, the results are similar to those found in television research” (Williams et al 2009). This demonstrates how video games are a reflection of culture. In most cases, there is a focus on placing African Americans in roles that fit traditional stereotypes. These insights are a representation of America’s cultural heritage when it comes to race relations and equality.

In a study that was conducted by Burgess et al (2011), they discovered that minority groups were limited in representation. When they were included, it was usually in the form of a negative stereotype. Burgess et al. detected that, in video game magazines, “minority males, underrepresented generally, were more likely to be portrayed as athletes or as aggressive, and less likely to be depicted in military combat or using technology, than white males” (2011: 289). While their second study demonstrated the commonality of overt racial stereotyping. This study “showed evidence of the dangerous minority male stereotype in video game covers. A stereotype is the perception of how certain groups or individuals should look, behave and interact with other groups and individuals. According to McGarty et al. there are three tenants of a stereotype: ‘(A) Stereotypes are aids to

explanation, (B) stereotypes are energy-saving devices, (C) stereotypes are shared group beliefs' (Mcgarty et al, 2002: 2) In the context of this thesis, it is how designers (and ultimately players) perceive how particular cultures should look and interact within the confines of video games. An example would be how Assassin's Creed may use the stereotypical look of a crusader knight to show Christians in the game world.

Again, underrepresented overall, minority males were overrepresented as thugs, using extreme guns, and also as athletes" (Burgess et al 2011: 289). Both studies revealed that minority females are virtually absent in game representations. A third study they conducted through experimentation, exposed players to both violent and nonviolent games with both white and Arab characters. "Participants were faster at classifying violent stimuli following games with Arab characters and at classifying nonviolent stimuli following games with White characters, indicating that images of popular video game characters evoke racial stereotypes" (Burgess 2011: 290). Inside many Western based countries (i.e. the US, Canada, Australia and the EU); these attitudes are embraced as a part of their culture.

Representation of gender also has a major impact on most video games. This is that often males are shown as in control, or as the arch villain. Either way, these representations are used to create views that males dominate the world and have the ability to embrace all the common attributes (i.e. courage, creativity and flexibility). A study that was conducted by Dunlop (2007), determined that in the top five selling games titles, women play a small role. When they are shown, these characters are servants, prostitutes, and/or are often abused at the hands of their male characters. These insights demonstrate concerns over video games as representations of cultural heritage. Traditionally, those who are female are considered to be subservient and lacking intelligence. Video games

reflect this in the way they show women and their relationship with their male counterparts. This is something all societies around the world have traditionally embraced as a part of their cultural heritage (Dunlop 2007).

For Muslims and Asians, the representations are more negative (as described more clearly in the next section). This is because the games will often make them out as the villains, who are willing to do anything to destroy our way of life. For example, in the game the Prince of Persia all of the enemies are from Southwest Asia (i.e. the Middle East) and they are considered to be combatants. The basic idea is to kill as many of these individuals as possible in order to achieve the larger objectives. This is a stereotype. That is using American views to show how these individuals are a threat and must be stopped (McNally 2014). In the case of Europeans, they are considered to be friendly and are depicted as allies. For example, McNally (2014) conducted a study of the top titles from 2007 to 2012. She found that white Europeans are often cast into favourable roles in many titles during the period. This is for games that are sold in Western countries. She does not believe that programmers are intentionally trying to stereotype these individuals. Instead, she feels that this is something, which is a reflection of cultural views in all of these countries. To support these findings, she looks at Japanese games and found the opposite effect. In these situations, they will use certain attributes to market to Japanese audiences. This is when their characters will be from an Asian background and embrace the same attributes as the country where the game is sold (McNally 2014).

However, when the game is cross-marketed in Western countries, more white characters are cast in the different roles with her saying, “75% of the Japanese-developed games on his list feature white protagonists. This is because the majority of these games are meant to cross over into North American and European markets, as Japan has its own insular

gaming industry that prominently deals with Japanese characters” (McNally 2014). This demonstrates how the impact of cultural heritage is taken into consideration when creating different titles. In many cases, certain attributes are embraced in order to make the game more marketable in select regions of the world.

In many cases, the backgrounds used within games (i.e. architecture and buildings) are utilised to demonstrate the culture of specific countries, where they are set. For example, in *Grand Theft Auto: Vice City* (2002), the city of Miami has often been utilized to recreate the streets, and the changing times of day / weather conditions. This will vary dependant upon where the game is sold and the location it is supposed to be taking place. According to Artemel (2013), this makes the game lifelike and it is reflection of the culture and setting:

“Since architecture makes up a large portion of our real-life environment, it makes sense that it would also be incorporated into our simulated environments. Architecture in video games, as in real life, always seems to just be there, a given fact of one’s surroundings, like trees or angry zombies. And yet, architecture plays larger, and more specific, roles in games than acting as mere scenery.” (Artemel 2013)

The importance of backgrounds in video games is perhaps more important than many other features due to their use not only as something to look at, or as a tool of atmosphere, but something the player is able to interact with. The ability to hit, break or admire backgrounds makes them an integral part of the playing experience.

“The easiest explanation for the presence of architecture in video games is that it forms the background for action, and is the scaffolding on which

the characters move, act and, occasionally, die. Franchises like *Grand Theft Auto* and *Assassin's Creed* make full use of exquisite rendering and near photo-realistic architectural surrounds, with playable characters climbing on, crashing into, and using the buildings to further the story” (Artemel 2013).

The background serves to accentuate the atmosphere and actions of the player; therefore, its cultural accuracy is important as it serves to generate the cultural ambience the player experiences. Even more so if the player is able to interact with the background.

The literature analysing and commenting on cultural representation in video games is relatively narrow. With the exception of Vit Sisler (2008, 2006), most papers discuss ‘serious’ games as their main source of research as they are based around the preservation of culture. Although Sisler comments on the cultural accuracy of ‘entertainment’ games, most of it is a form of political commentary, discussing why a game includes culture within its wider political discourse. papers (Cue, & Everbach, 2014, Burgess, Stermer & Burgess, 2007) based upon the portrayal of women in video games has also proven fruitful, but this isn’t based in a particular culture but rather the misrepresentation of women from the majority of cultures. The same applies to minority groups in the West. While white, male characters are usually the protagonist of Western video games, their minority counterparts are often relegated to minor roles or that of villains. As a result, the papers do not particularly focus on specific cultures and their accuracy of representation but the ideals of designers which reinforce stereotypes.

2.11 Islamic or Muslim Cultures in Media

The author perceives that the research presented in this Thesis could explore cultural representation in video game contexts through a number of different lenses (e.g. through historic, multicultural, or monocultural lenses). However, taking particular approaches to the study requires different levels of understanding. For example, a historic perspective on cultural representation may require a detailed understanding of a historic period of time, or taking a multi-cultural approach may require different levels of ethnic experience. Therefore, the author has taken a perspective at the outset of this research to root the lens through which he will analyse cultural representation, in his own cultural background, one of Middle Eastern, Islamic heritage. Aspects of the research, which will explore design approaches to cultural representation will enable a widening of this perspective, but the core of this research takes Islamic or Muslim representation as its key critical lens.

Background knowledge is required to see how Western media portray Arabic and Muslim identities, which is primarily through a negative lens. An issue which has persisted since the West had “first contacts with Arabs and Muslims” (Ridouani, 2011). This has evolved to a fundamental idea that Islamic and Arabic people fundamentally oppose democracy and liberty, two words synonymous with Western ideals; something which has intensified greatly since the 9/11 attacks in the US (Bayat, 2007: 5). The key to explaining how negative portrayals in Western media are forged is in the idea that Islam is a single entity. That is a predominantly Western idea that ‘by employing such a large category, are we not in a sense re-Orientalizing Muslim societies and cultures, constructing homogenous entities that do not actually exist?’ (Bayat, 2007: 6). Of course, it is understood that where there are people there is culture, and culture is not a static entity. The issue relating to Western media here is that cultures which contain a predominantly Muslim population base are portrayed as static and unchanging, sticking to archaic views of the world. The

result is misrepresentation of Muslim cultures in Western media; within which video games are not immune to such prejudices, often portraying Muslim people as terrorists, bandits, or unruly militia. This is most likely a continuation of film depictions in which Jack Shaheen believes that out of 1100 films produced since 1896, the vast majority were negative depictions (Shaheen, 2015: 2).

Due to many Western people being exposed to such media portrayals, it's fair to assume that such misrepresentations are continued in Western produced video games as designers will predict that Western audiences can relate to such depictions. Games such as *Call of Duty: Modern Warfare* (2011), and *Medal of Honor* (2010), are prime examples of such negative stereotyping that has continued from films to video games. The primary stereotype according to Shaheen is that of the 'bad Arab', an evil character who continually causes mayhem, offence and commits acts of violence. Such depictions perpetuate Western stereotypes through constant exposure, driving popular opinion to conflict with that of realistic interpretations of Arabic and Muslim cultures. A similar interpretation through film and games can also be seen in the depiction of Muslim women, where 'Hollywood depictions are... 100 years old.' (Andrews, 2014). This is a hangover from the film makers of the early 20th century, where filmmakers were able to exploit the idea of the 'other' (i.e. not Western) as exotic fantasies, often sexualised (Andrews, 2014). This stereotype usually applies to unveiled attractive women, considered 'good' characters. While when Muslim characters in films are veiled, they are generally considered hostile, or 'bad' (Andrews, 2014). The film *Body of Lies* (2008) highlights this distinction prominently, in which the main female character is an attractive, Westernised character. Her sister is a more 'traditional' Muslim lady, and in Hollywood tradition, is considered 'ugly'.

One of the most prominent forms of media in the 21st century is arguably animation; an industry that is continually developing and gaining support the world over. This is mostly dominated by Western production companies (Disney Pixar, for example) which produce animations loved the world over. As a result, many local production companies are overshadowed, with Arabic animation possibly being the least well represented (Alrimawi, 2014: 2). Likely due to recent events placing the Arabic world into negative light (e.g. 9/11), Arabic films are overlooked by foreign audiences. This isn't helped by Arabic film producers themselves, where animation is often overlooked compared to live action films. 'There is an irony in that there are such a small number of animation films based on local and national myths when Arab culture has a lot of magnificent stories as sources suitable for adaptation.' (2014: 3). There are complicated and abundant reasons why Arabic animation does not necessarily succeed, locally or internationally; the inability to effectively portray culture, myths and relatable lifestyle. A lack of conviction in portraying stories is prevalent within production studios, producers of animations are often denied permission by Muslim councils for portrayals of historic events with relevance to the Quran. They may also feel it's not in their best interest as such productions could draw negative attention (2014: 124).

Within all this negativity is a glimmer of positivity, games and films are slowly changing their perspective. Through all the misrepresentations two games shine through as decent attempts at representing the Arabic world: *Assassin's Creed* (2007) and *Uncharted 3: Drake's Deception* (2011). Portraying the Levant and Yemen respectively. While there are some inevitable misrepresentations (perfection is an impossibility, especially with current technological limitations), each game has done a ground-breaking job of breaking the mould of many pre-existing misconceptions.

Civilisation and culture and all the moral values and concepts pertinent thereto are the result of an idea or ideas that people cherish in their minds. Many things around us are the result of an idea changed into a tangible reality. The culture and traditions of Islam are new to Arab countries, the basis of which focus on the birth of the Prophet Muhammad in 570 AD on Makka, as an Arab island. After his death on June the 8th, 632 AD in Medina, Saudi Arabia, the Islamic religion continued to spread throughout the world. The culture and traditions of Islam were influenced by the Assyrian, Persian, Roman, Greek, Pharaonic and Indian civilisations and cultures (Duiker & Spielvogel, 2006: 34). Mulholland & Turnock explains that “Islam began in Arabia and was revealed to humanity by the Prophet Muhammad. Those who follow Islam are called Muslims. Muslims believe that there is only one God. The Arabic word for God is Allah” (2013:127).

The practices and customs of Islam today are the result of a mixture of local culture and Muslim beliefs. According to the Pew Forum on Religion and Public Life (2013), the number of Muslims around the world is approximately 1.57 billion. This means that it is the second largest religion in the world, after Christianity. The web of the Islamic culture (2013) describes the Muslim culture as representing

“the unification of all the cultures influenced by common beliefs and practices. The guiding religious phenomena and cultural aspects connect its people historically. The religious practices and beliefs of Muslims are centred on the religion of Islam. The original Muslim literature is in Arabic, the Prophet's language. Most of the literature is religious in nature. It comprises communication and documentation of the belief system from the Quran, Sira and Hadith”.

Furthermore, the Quran is considered to be the main source of many aspects of Islamic culture. The Quran consists of 114 chapters, known as suras; the first sura is treated as part of the ritual prayer. These touch upon all aspects of human existence, including matters of doctrine, social organization, and legislation.

Art is also an important part of Muslim culture. Abstract, decorative and floral designs are unique to Islamic art and architecture. Muslim art is always devoid of depictions of the animate, especially human beings, according to the dictates of Islam. Portraiture is taboo to the culture and traditions. Islamic art focuses on the omnipresence of Allah, the 'One who cannot be represented by imagery'. Arabic calligraphy is a recognised art form used to write verses from the Quran. As Islam spread, the first mosques to be built outside Arabia were influenced by the local houses of worship and churches. Though the architectural form and simplicity of the mosque remained, materials for columns and beams were often taken from other edifices of previous cultures. It was much later that a style evolved wherein, with the contribution of creative builders and artisans, a third dimension of spirituality was created through colours, patterns and calligraphic designs based upon quotations from the Quran. The outcome of such an approach today stands out as the hallmark of Islamic art in architecture.

Islamic music is mostly played in public services. The common music forms include Arab classical and North Indian classical music. These classic music styles can be heard throughout the film *The Prince of Persia: the Sands of Time* (2010); which takes influence from the game series. The use of a traditional Arabic instrument, the Oud, can be heard throughout the movie; while perhaps stereotypically used to represent the Middle East in Western films, if used correctly it is considered traditional. The film is respectful of traditions and culture of the time it is set. On the other hand, there are Western films set

in the Middle East, which forgo the use of traditional Middle Eastern music or instruments. For example, the film *Gods of Egypt (2016)*, uses almost entirely Western based music throughout the film. The film is based around the fantasy of the ancient Egyptian gods; but primarily uses stereotypical settings with an overlay of Western music to appeal to Western audiences. As with many portrayals of the Middle East in Western productions, they are tailored to the predicted knowledge of the audience of the area. Using what is familiar to them as a driving force for monetary productivity rather than cultural respect. The musical preferences of Muslim people have traversed multiple world trade routes with the Sufi people credited with the global spread of the music (Sultanova, 2014).

The Quran does not mention many practices that are prevalent in the Muslim world today. Instead, the traditions, sayings and stories of the Prophet Muhammad and his companions provide a basis for today's traditions and practices that are called the Hadith. Examples of this are men trimming their moustaches and growing their beards, women wearing the *hijab*, using the right hand to eat with and the left hand for the bathroom, using a stick called a miswak for cleaning the teeth, and shaking hands when greeting someone. Some practices used by Muslims were never mentioned in either the Quran, or the Hadith, and were introduced by the societies and cultures that accepted Islam. These traditions are important to many Middle Eastern countries, therefore reference to such traditions should be involved in video games as these items and activities set the Middle East apart from other regions. Representations from the Quran and the Hadith ideally will be included in order to portray Muslim life in the Middle East.

When looking more specifically at Middle Eastern representation in video games, there are a number of related articles. El-Nasr et al, (2008) 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* Game Producer and Managing Director of Ubisoft. 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* references 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 game's 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. This can be seen through the different cultural lenses: Middle Eastern and Western. While the Middle Eastern authors experienced nostalgia through "simulated Middle-Eastern cities, the use of Arabic words, accents and gestures, and the detailed Middle-Eastern architectural design" the Western authors found enjoyment in "the beautiful architectural detail and the use of the environment layout as a function of gameplay, such as the use of rooftops for platforming, fast movement and flying-like actions, and stealth" (El-Nasr, et. al, 2008: 1).

The ways in which different cultures perceive and enjoy a shared history (in this case, the crusades) is of interest to a designer as it generates reasons for the importance of representation of these cultures, and how a game reflects such views. The El Nasr paper adopts Boorstin's perspectives on film and uses them to critique *Assassin's Creed*. These are: the voyeuristic eye, the joy which results from learning and discovery; the vicarious eye, the empathetic feeling with characters' emotions and in-game choices; and the

visceral eye, the emotions attached to audio-visual stimuli (1990: 2). All these take into account the cultural attitudes of each player in order to get differing opinions on the representation of culture. This is beneficial to designers as it presents an opportunity to find out why different customers invest money and time into a game. The provision of cultural analysis from four different cultural standpoints highlights exactly how much people from different cultures experience a game. In turn this should influence a design team's marketing for future productions. "Perhaps the most obvious and valuable lesson is that choosing the market for the game and understanding the cultural (or sub-cultural) norms, knowledge, and attitudes is of extreme importance as such variables have direct effect on how the game is accepted, viewed, and played" (El-Nasr, et. al, 2008: 28). The value of the player experience through differing cultural mediums and norms can be seen to be overlooked through many blockbuster series, as they primarily target a single audience (Shaw, 2015), ignoring, or placing less emphasis on the views of other cultures. There are many benefits to be gained from looking at games through many cultural lenses; not only can cultural representation be improved throughout games via better artefacts, for example, but it can also aid in sales, which is of unequivocal importance to game producers.

Vit Sisler is a prominent writer in the field of cultural representation within video games. Usually focusing on the Middle East (Sisler, 2006, 2008, 2009, 2010, 2012, 2013, 2017) and his home country: the Czech Republic (Sisler, 2010, 2012, 2014, 2015, 2016). In his paper, *Video Game Development in the Middle East: Iran, the Arab World, and Beyond (2013)*, the main topic is the emerging market of video games in the Middle East, and how Arabic cultures affect production companies and their games. Additionally, the article helpfully provides insight into how the Middle East depicts itself culturally compared to Western depictions through the medium of video games.

Video Games, Video Clips, and Islam: New Media and the Communication of Values (Sisler, 2009) follows a similar vein to many of the author's other articles in that it discusses culture for the purpose of comparing Middle Eastern depictions to Western depictions. The article discusses how mainstream media such as video games produce, influence and propagate Islamic culture for educational purposes. It is beneficial in its capacity to explain how Islamic video game producers market their games to a Muslim audience, analysing what is important to be successful in the Arabic market.

Another article that is of relevance to this Thesis is *Digital Arabs: Representation in video games* (Sisler, 2008), which focuses on several important points. The article analyses Arab and Muslim characters in video games and also 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.

Sisler (2008) 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 in these games. Within this is the effort to change preconceptions of Arabic cultures, especially in the post 9/11 Western world, which has largely marginalised such cultures. The article

is especially poignant as it seeks to answer the question: “do video games merely reinforce and intensify received cultural stereotypes, or do they contain the potential to challenge and undermine them?” (Sisler, 2008). Concluding that modern video games (in 2008) follow the “general imaginations” of their audiences, Western made video games exemplify Arabic cultures as ‘the other’ and portray them in a negative way common in Western nations (Sisler, 2008).

Misrepresentation is seen to be a symptom of producers’ desires to maximise profits through what they believe to be the demands of their intended market. The article also mentions that technological limitations may also “intrinsically promote schematization” by necessity, as NPCs are depicted by limited and reused textures to save on processing power (Sisler, 2008). While there is mention of Western developers attempting to subvert entrenched cultural biases which are commonplace in the majority of Western games, they tend to be “serious games”, ones which are designed to educate as much as, or more than to entertain. While “a culturally-balanced representation is central to the design” of such games, its use within this Thesis is limited, as the aim here is to investigate games designed for entertainment, not education. The article ends on the idea that video games are tools for promoting culture; but problems such as the ignorance of designers and a lack of academic reflection may cause players to believe negative stereotyping of culture, causing a virtual entertainment platform to affect real beliefs.

Sisler’s 2008 article is heavily based upon his original 2006 work, *Representation and Self-Representation: Arabs and Muslims in Digital Games*. Much of the article discusses the same games and ideas (much is said of Jack Shaheen and Edward Said) as his later work, and therefore many of the conclusions are the same. The conclusion is far less developed in his earlier work, predominantly focusing on stereotyping of ‘the other’

through Western games without comparing each culture's games to that of 'serious games'. The article does, however, aid in the examination of why misrepresentations occur in modern video games, in both the West and the Middle East.

Dima Saber & Nick Webber's paper, 'This is our *Call of Duty*': Hegemony, History and Resistant Video Games in the Middle East' provides insight into how two extremist (Hezbollah and IS) groups use video games to 'engage with, and reject, Western narratives of history.' Analysing the counter narratives produced by these groups, the paper attempts to explain how the popularity of video games enables supporters and potential supporters of the organisations to interact with their ideologies.

As games have become increasingly open source over the past decade or so, the public are able to modify and add whatever content they wish. As a result, groups with political or ideological agendas have been using popular video games, such as *Grand Theft Auto V* (2013), to disseminate their world view to an international audience. While the article takes the stance of analysing the use of games for political purposes, not strictly cultural purposes, it provides an important new outlook on how video games have been used by non-state actors to further their own cultural causes. "In recent years, non-state actors in the Middle East have engaged a new generation of activists through a variety of media strategies. Notable amongst these have been a series of videogame interventions, which have appropriated Western game products to convey political and religious messages" (Saber & Webber, 2017).

Four games have been analysed in the paper for their differing approach to video games as tools of persuasion. Hezbollah's *Special Force 1 & 2*, which were created to provide the supporters of Hezbollah with the ability to live a counter history; and two

modifications made for *Grand Theft Auto V* (2013) and *Arma 3*. The latter productions are modified versions of two popular video games to produce a counter-narrative in order to recruit sympathisers to IS.

The purpose of the productions is to harness the intrinsic ideological ideas of Hegemony in military video games and place them within their own contexts, rather than the dominant Western ones.

“we argue that war games operate with similar ideological mappings; on the one hand, they are vehicles that convey and disseminate the dominant ideologies of the hegemonising powers, and by doing so reinforce pre-conceived cultural stereotypes upon the self and upon the other.” (Saber & Webber 2017)

Using such cultural preconceptions, the games hope to harness the target audience’s sense of patriotism in their causes to further alienate them from their enemies (i.e. America and the West). Using existing popular games gives IS the ability to reach a much wider audience, one which is primarily based in the West and can therefore potentially indoctrinate people to their cause.

The field is new, and the paper provides some brief insights into an alternative cultural use of video games, although it is noted that these games struggle against the dominant Western narratives in video games. Due to limited funding, talent and scope, these games limit agency of the player and end up enforcing ideologies rather than allowing the player to experience them freely. Which inevitably cause considerably obvious “inaccurate, ideological representations of the past.” (Saber & Webber 2017).

2.12 Conclusion

Culture is, by nature, an incredibly complex concept which is so hard to define that there is not a unified definition available. For the purpose of this Thesis, the definition of culture is the one used by Tylor (1889) to avoid conflicting definitions of culture. The spectrum of culture contains the idea of cultural heritage; which is how culture has evolved throughout history, the cumulative knowledge of an entire cultures history. Cultural heritage is no exception to the difficult nature of culture's definition and has aspects of complexity which has caused the field to be divided into two major categories, tangible and intangible. The strategic idea to divide cultural heritage into sub categories has enabled game designers to focus on developing its accuracy; subsequently resulting in better representation within games. Tangible artefacts are perhaps easier to recognise, as they are the visible objects and items of our physical world. On the other hand, intangible artefacts are the non-physical aspects of culture; how we display culture through actions and emotions.

Games employ cultural heritage through two genres: 'serious' games and 'entertainment' games. Series games are ones which preserve a cultural and historical history which can be played by people in order to learn of said culture or history. As a result, cultural accuracy plays a major part in their design. 'Entertainment' games, on the other hand, are designed to primarily entertain the user, resulting in cultural or historical accuracy waning in lieu of aspects designed to keep the user entertained. Games designed to entertain often avoid being overly explicit in their historical value as they may be deemed less 'fun' and more 'educational'. In effect, 'serious' games are far less popular as they are unable to entertain a player to the same degree of a 'entertainment' game. Within the literature there are considerably more articles on 'serious' game's representation of culture than 'entertainment' games due to their intrinsic nature to educate. The indication is that

academia has not yet explored misrepresentation and how it occurs within ‘entertainment’ games; and the resulting impact on a culture’s representation or history.

Exploring cultural representation from the designer’s perspective will shed light on how and why its accuracy is often overlooked in their products. To avoid unnecessary repetition, the many explanations and categories of the tangible and intangible artefacts in relation to video games will not be repeated.

For the purpose of this Thesis, representation is the depiction of cultural artefacts. The way in which we learn about many cultures other than our own are through the medium of media; news, film, pictures, games, etc. The principal distinction between video games and other media forms is that a video game enables you to interact with the culture in a way other than watching or listening. Through a video game you can almost personally experience the location through the ability to explore it; although experiencing daily life in a culture is not accessible, as you play to perform actions in order to overcome obstacles (physical or otherwise) which are not intrinsically a part of daily life. The difference between representation and misrepresentation lies in the accuracy afforded to cultures through any of the aforementioned medias. The higher the accuracy, the better the representation (with one hundred percent accuracy being considered perfect representation) and vis versa.

Due to the relatively new area of research into video games as cultural heritage applications (Granström, 2013) the level of heritage representation is largely unexplored. What is often stated is that video games possess the technology and scope to contribute to a high level of cultural heritage preservation, but fall short due to its relative unimportance in relation to financial gain. After all, ‘entertainment’ games can be mainly

designed to generate as much profit as possible; if cultural accuracy does not impact upon profits positively, then they may be omitted. Even games based in a culturally important time period, (e.g. The American War of Independence for American players) are used as settings. Although they are often produced as counter histories, using the setting as a tool to generate player interest rather than to reproduce historical fact (Shaw, 2015). Therefore, such important histories may be changed to fit the needs of the designers, leading to inaccuracies which may affect a players knowledge of such important historical events.

The academic work surrounding the subject of Arabic representation is also sparse, with only several academics writing on the topic, the most prolific being Vit Sisler. This lack of research is also generally only relative to the topic, with hardly any papers being based on the topic of cultural heritage (mis)representation itself. Cultural misrepresentation of the Arabic speaking world is not confined to games, the modern media (particularly information medias) tends to cast a negative light on the Middle East, especially from the West. There is also a distinct lack of Arabic representation at major international media conferences; specifically, in regards to the animation film industry. The lack of representation in entertainment medias (games, movies, television, etc.) combined with the generally negative representation from information medias (news outlets) means the Arabic world is often not used by designers as a main game setting (unless historical). Much of the information in this Thesis comes from virgin territory in its exploration of Middle Eastern cultural heritage misrepresentation.

3 Chapter Three Research methodology

3.1 Introduction

Chapter 2 reviewed existent research literature related to the research problem, including key terminology of interest to the Thesis and research directly related to the research problem. This established that there is limited understanding at present within the research community with respect to the representation of cultural artefacts within video game contexts. In order to explore this issue there is a need to clearly define the philosophical approach to the research presented in the Thesis and a requirement to clearly define research process and methods.

This Chapter outlines the core elements of research design. Section 3.2 and subsections thereof explore and determine an appropriate philosophical approach for the research investigation. Following on from determination of the philosophical approach, a suitable methodology is selected including determination of the appropriate research methods to be used to answer the principal research question and additional sub-questions. The research methods selected for use in this Thesis are: literature review, close reading, case studies, interviews and thematic analysis.

3.2 Research philosophy

Research philosophy relates to how we perceive the world, how we can best develop an understanding of the world, and how the knowledge and the nature of knowledge are developed (Saunders et al. 2012: 127). It is a belief about the way in which phenomenon data should be gathered, analysed and used (Blaxter et al., 2001). Furthermore, research philosophy can be defined with the help of a research paradigm. Thomas Kuhn in 1962 was the first to use the word paradigm in this sense. The concept of “worldview” was

employed by Creswell (Creswell 2014: 5). These ideas have certainly moved beyond the philosopher's study and to some extent, they have the same meaning (Göktürk et al, 2005: 213). These words are deeply concerned with belief and knowledge, Kuhn defines a paradigm as “an integrated cluster of substantive concepts, variables and problems attached with corresponding methodological approaches and tools” (Kuhn, 1977). In a clearer form perhaps, the meaning of a paradigm has been explained by Gliner and Morgan as a way of thinking about how we can conduct research (2009: 17). It is not a precise methodology, but more of a philosophy that leads to how the research can be administered and delivered. On the other hand, Creswell (2014: 6) describes the ‘worldview’ as “a general orientation about the world and the nature of research that a researcher holds”. As a result, the primary purpose of a research philosophy is to explain the reasons behind the selection of approaches and methods to be used, whether these use qualitative, quantitative or mixed method approaches.

Among the research community there is debate over the components of research philosophy. Lincoln and Guba essentially divide the ‘worldview’ into three core aspects which are commonly used in social research: the ontological (see Section 3.2.1), the epistemological (see Section 3.2.2), and the methodological (see Section 3.3). Bryman extends this perspective to add additional influences on social research detailing with theory, epistemology, ontology, practical considerations (which can cover methods) and values (2015: 17). Finally, Creswell suggests that there are five philosophical assumptions; ontology, epistemology, axiology, rhetorical and methodological (2014: 23). In the following sections, Lincoln and Guba’s perspective is taken as the basis for the structure, with elements of Bryman and Creswell incorporated.

3.2.1 Ontology

Ontology is defined by Creswell as “the nature of reality and its characteristics” (2014: 16). Teddlie and Tashakkori (2008: 86) added that ontology is the nature of reality, being, and truth: this is supported by Blaikie (2007), who also defines ontology as “the science or study of being”. Furthermore, it is concerned with what is, with the nature of existence within the structure of reality (Crotty, 1998: 10). It is a system that reflects that which constitutes a fact. Ontology can be divided into two main categories, as Holden and Lynch (2004) propose: objectivism and subjectivism. Objectivism “represents the position that social entities exist in reality external to social actors” (Saunders et al. 2012: 108). In contrast, from a subjectivist perspective, “social phenomena are created from the perceptions and consequent actions of social actors” (Saunders et al. 2012: 108).

The definitions above refer to the view that ontology is concerned with assumptions made about the nature of reality and also how the reality is structured. In relation to the research presented in this Thesis, ontological considerations are substantial as the research areas of focus are concerned with the nature of cultural heritage and its characteristics in its application in virtual contexts.

3.2.2 Epistemology

Epistemology is the nature of, or the study of, knowledge. It can also provide reflections on understanding the relationships between the knower, and the would be known (Mertens, 2014: 10). Epistemology means the science of knowledge, and is commonly used to signify the science of the certitude of human knowledge (Wenning, 2009: 9). Moreover, it refers to what human experience is, what it requires, and what situations can be ascribed to it (Gough, 2013). Furthermore, epistemology can be referred to as a “theoretical perspective” (Crotty 1998: 5). The definitions above indicate that

epistemology is essentially concerned with what knowledge is, how it is perceived, and how knowledge can be assessed.

Epistemology in this study is concerned with understanding the meaning and components of culture and cultural artefact from one side and understanding the methods that are used in the video game industry concerning cultural artefacts. In the following sections, the author proposes to examine three major epistemological schools of thought: positivism, interpretivism and realism.

3.2.2.1 Positivism

Epistemology is used to investigate the relationship between the two main schools of thought: positivism and interpretivism; Trochim (2006) states that positivism is “a position that holds that the goal of knowledge is simply to describe the phenomena that we experience. The purpose of science is simply to stick to what we can observe and measure”. Additionally, Remenyi et al, (1998: 32) explain that positivist researchers “prefer working with an observable social reality and that the end product of such research can be law like generalisations similar to those produced by the physical and natural scientists”. Positivism is concerned mainly with the natural sciences, such as physics, chemistry and mathematics (where the dominant ideology expects measurement and observable characteristics), but it can also be used in relation to the human sciences, such as geography and philosophy (where characteristics and measurable objects may sometimes be more difficult to define). Positivism is often explored through quantitative data analysis, rather than qualitative data collection and can also be used to test research hypotheses. In this case, the relevance of positivism is limited, but it can be used to describe a cultural framework of social reality, which leads to an understanding of the

roots of cultural artefact construction, thereby enabling video game designers to use cultural artefacts in video games accurately.

3.2.2.2 Interpretivism

Interpretivism is defined by Bryman as “the view that a strategy is required that respects the differences between people and the objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action” (Bryman 2015: 26). Myers suggests that “interpretive researchers assume that access to reality (given or socially constructed) is only through social constructions such as language, consciousness, shared meanings, and instruments” (Myers, 2013: 39). Interpretivism emphasises the individual’s view of the world around them and associates this with the belief that the social world requires a “different logic of research procedure” (Bryman, 2015: 26). Furthermore, this approach seeks interpretations of our social world as confirmed by Crotty with the statement that “it looks for culturally derived and historically situated interpretations of the social life-world” (1998: 67). It is useful to relate the interpretivist perspective to the aims and objectives of this research, which seeks to gain an understanding of the representation of cultural heritage in video game contexts. The author perceives that this understanding can only come from an interpretivist perspective, as the phenomena (for example, the games themselves, the objects within games, and the narratives involved in game construction) being observed will be viewed subjectively by the researcher and those individuals involved in the researcher’s data collection.

Interpretivism can enable the researcher to explore knowledge in depth, gain a rich selection of information, and develop a deep insight into the phenomenon under study. Furthermore, in the use of interpretivism, the researcher himself, together with the many

points of view encountered, can be used in order to achieve different perspectives related to each contributor's experience. In doing so, the researcher includes some of their own values, perceptions, and experiences which inevitably influence the study (Bryman and Bell, 2015: 603). This paradigm reflects the reality of knowledge not being singular or time limited, rather that it can differ depending on those involved in the process, the time of the study and the location in which the study is performed. Therefore, a research question can be accompanied by the development of multiple understandings, each allied to the context of the research background. Finally, interpretivist methodology tends to use qualitative methods, using a framework of steps to produce findings for the research question proposed.

The approach to the collection of research data taken within this Thesis is broadly interpretivist. The main reason for selecting this approach is because it is consistent with the research questions proposed. Representation in itself is an interpretative action which is used to provide an understanding of complex phenomena; in the case of this Thesis, that of cultural heritage.

3.2.2.3 Realism

Denzin & Giardina defines realism as the view that theories refer to real features of the world. 'Reality' here refers to whatever is in the universe (2008: 6). While Saunders et al., explain that "The essence of realism is that what the senses show us as reality is the truth: that objects have an existence independent of the human mind" (2009: 114). Realism is a branch of epistemology, which is associated with scientific enquiry. In this regard, it is related to the positivist approach. Therefore, an underlying positivist quantitative approach is viewed as being 'objectivist'. In contrast, an underlying

interpretivist qualitative approach is viewed as being ‘subjectivist’. Thus, the orientation of investigation philosophy here is interpretive rather than positivist.

Table 3.1: Features of the Two Main Paradigms, Collis & Hussey (2002: 62)

Positivism tends to:	Interpretivism tends to:
Use large samples	Use small samples
Have an artificial location	Have a natural location
Be concerned with hypothesis testing	Be concerned with generating theories
Produce precise, objective, quantitative data	Produce ‘rich’, subjective, qualitative data
Produce findings with high reliability but low validity	Produce findings with low reliability but high validity
Allow results to be generalized from the sample to the population	Allow findings to be generalized from one setting to another similar setting

3.2.3 Axiology

Positivism views the research process as “value-free”. Consequently, positivists believe that they are independent and separated from what they are studying and consider the investigated phenomena as objects. This assumption might be valid in the natural sciences but not in the social sciences, which look at people’s behaviour and activities, which are inherently value driven (Collis & Hussey, 2002). Unlike positivists, interpretivists argue that the researcher employs their own values as an essential factor that can play a vital role whilst developing their research.

Table 3.2 explains the main difference between the dominant paradigms, from the perspectives of positivism and interpretivism as related to ontology, epistemology and axiology.

Table 3.2: Comparison of Two Research Philosophies in Management Research, Saunders et al. (2009: 119)

	Positivism	Interpretivism
Ontology: the research's view of the nature of reality or being.	External, objective and independent of social actors.	Socially constructed, subjective, may change, multiple.
Epistemology: The research's view regarding what constitutes acceptable knowledge.	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisation, reducing phenomena to simplest elements.	Subjective meanings and social phenomena. Focus upon the details of the situation, a reality behind these details, subjective meanings motivating actions.
Axiology: the research's view of the role of values in research.	Research is undertaken in a value-free way; the researcher is independent of the data and maintains an object stance.	Research is value bound, the research is part of what is being researched, cannot be separated and so will be subjective.
Data collection techniques most often used.	Highly structured, large samples, measurement, quantitative, but can use qualitative.	Small samples, in-depth investigations, qualitative.

3.3 Research Logic

The two principal logics in social science research are deductive and inductive logic (Bryman & Bell, 2015; Collis & Hussey, 2002; Saunders et al., 2009). Deductive logic relates to studies following the positivist paradigm, and this paradigm is usually associated with the quantitative approach. Deductive research, as Hussey and Hussey state, is “a study in which a conceptual and theoretical structure is developed which is then tested by empirical observation; thus particular instances are deducted from general influences” (1997: 19). It depicts the nature, and represents the type of relationship

between research and the theory being used. The deductive approach is mostly a linear process, where each step follows the other in a logical sequence (Bryman & Bell, 2015).

In contrast, inductive logic is related to the interpretivist paradigm, where understanding is developed from the observation of reality; thus, general inferences are induced from particular instances. This is in direct opposition to the deductive method, since it involves moving from individual observation to statements of general patterns or laws (Hussey and Hussey, 1997: 13). The inductive process represents another strategy for connecting theory and research. The inductive process differs from the deductive, as it involves gathering inferences from observations; hence, working towards inferences which can be generalised.

The inductive method is associated with analysing qualitative data. For this reason, the inductive approach was adopted in this Thesis to analyse data in order to find clear connections between the research objectives and the themes that were found in the research analysis. Furthermore, it is employed “to condense extensive and varied raw text data into a brief, summary format” (Thomas, 2006: 2).

3.4 Methodology

In academic research, a discussion of selecting a particular research methodology in research is always needed. Adler et al, (1989: 61) explain that “choosing a methodology determines what we can study as well as the range of possible results and conclusions”. The purpose of using any methodological approach such as qualitative, quantitative, mixed methods etc. and any other type of research method is to obtain data. The methodology is the justification for using an appropriate research method, while the method is a research tool or component of the research (Clough, Nutbrown, 2012: 25).

Given the questions, aims, and objectives of this Thesis a qualitative approach can be defined to be the principal methodological stance used to conduct this study.

Qualitative research is an approach consistent with the phenomenological paradigm, which involves some forms of interactions between a researcher and individual(s), or the situation under research (Hussey and Hussey, 2003). Kothari stated that qualitative research is “concerned with a qualitative phenomenon, in another words, phenomena relating to or involving quality or kind” (2009: 3, 5). Furthermore, a “qualitative approach used within a research is concerned with the subjective assessment of attitudes, opinions and behaviours” (Kothari, 2009:5). Research in such a situation is a function of a researcher’s insights and impressions. Morgan and Smircich (1980) highlighted that qualitative research is not a set of techniques but rather an approach, and its suitability, like that of quantitative research, is determined by the research questions being asked and the phenomena to be studied. Moreover, Kirk and Miller (1986: 60) stated that the qualitative approach to research follows four steps: invention, discovery, interpretation, and explanation. In relation to the research presented in this Thesis: invention relates to the steps taken to generate a satisfactory research are of interest and questions; discovery relates to research methodology and process; interpretation relates to the relations drawn between the data collected and discussion formed; explanation relates to the meaning of the research with respect to those initial research questions. Qualitative research “aims at discovering the underlying motives and desires, using in-depth interviews for the purpose” (Kothari, 2009: 3) enabling attempts to discover the feelings, attitudes and experiences of people or what they think about a particular subject or institution.

Quantitative research explains "phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)" (Muijs, 2004: 1). Kothari

confirms that the quantitative method is “based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity” (2009:3). Such research can provide meaning through an analysis of quantitative statistics and/or through gaining an understanding of less subjective phenomena through selected metrics. Quantitative approaches are more useful in circumstances where attempts are made to provide an underlying measurement of particular objects.

In relation to the research detailed in this Thesis, there are two core concerns. The first concern is gaining an understanding of the inclusion of cultural heritage artefacts in video game contexts that goes beyond a simple understanding. The second concern relates to a process, principally the process of designing and delivering such cultural artefacts in video game projects. It is determined by the author that the particular phenomena that they hope to observe are not easy to quantify. Therefore, the author has made a decision at the beginning of his research process to focus on the selection of qualitative methods which best match particular parts of his research process. As Johnson & Christensen (2017) point out:

Firstly, “qualitative research is used to describe what is seen locally and sometimes to come up with or generate new hypotheses and theories. Secondly, qualitative research is used when little is known as a topic or phenomenon and when one wants to discover or learn more about it. Thirdly, it is commonly used to understand people’s experiences and to express their perspectives.” (Johnson & Christensen, 2017: 33).

These three points can match well to the researcher’s core concerns, as video game contexts and the representation of cultural heritage artefacts within them need more

descriptive techniques to develop a clearer understanding. The first point made by Johnson & Christensen points to a need to develop an understanding of the phenomena from what can be seen, in this case of this Thesis in respect to what is visualised and heard in video game contexts (as will be viewed in Chapters 4 & 5). The second point as determined from the literature review, presented in Chapter 2, is that there is limited understanding at present as to the reasons why representation of cultural heritage can often be limited in video game contexts enabling the generation of new theories regarding understanding representation of cultural heritage in video games. The final point linked to an understanding of people, their experiences and their perspectives will also be invaluable to developing knowledge of why issues occur in representation within video game contexts (as described in Chapter 7).

In reality, there are many reasons behind choosing a qualitative approach. This Thesis focuses on cultural artefact representation within modern video games. Determination of cultural artefacts, argumentation over the artefacts and determining an artefact's relevance are all subjective phenomena. Therefore, qualitative methods are the best approaches to developing an understanding of them. In addition, determining how these artefacts can be analysed, improved and re-positioned is also a subjective process, which can be informed by multiple stakeholders. Finally, this process requires an understanding of the experiences, feelings and techniques of video game designers, as a set of attributes, which are best, suited to qualitative study.

Through all the above, the suitable research approach for this research is through the use of qualitative research methods. By using qualitative methods, the researcher can develop an understanding of the answers to the research questions posed and determine materials related directly to the research aims and objectives.

3.4.1 Methods

Research methods can help a researcher to collect data for conducting data analysis. There are differences between methods and methodology. According to Kothari “research methods may be understood as all those methods/techniques that are used for conduction of research” (2009:7). In other words, a research method is simply a research tool, technique and strategy that is used in research. Method is just a part of the methodology, these could be questionnaires, surveys, interviews, participant observation or other feedback polls.

Methodology is the study of how research is done and how the knowledge is gained. In other words, methodology is the justification for using a particular research method. Methodology therefore explains why we’re using certain methods or tools in the research. McGregor & Murnane, write:

“The word methodology comprises two nouns: method and ology, which means a branch of knowledge; hence, methodology is a branch of knowledge that deals with the general principles or axioms of the generation of new knowledge. It refers to the rationale and the philosophical assumptions that underlie any natural, social or human science study, whether articulated or not. Simply put, methodology refers to how each of logic, reality, values and what counts as knowledge inform research” (2010: 420).

Generally, there are many types of qualitative methods available for the collection of research data. In the set of qualitative methods available, the four most common are: individual interviews, focus groups, observations, and the use of action research. The research presented in this Thesis will utilise a multiple methods approach to answer the

defined research questions, primarily as the questions themselves and areas of interest do not lend themselves to analysis through a single method. Therefore, it is important to talk through and understand the methods to be used and their importance in generating data to provide content for analysis. The selected methods for the collection of research data are observation, close reading, case study and interview.

The content of this chapter is in alignment with the overall methodological approach followed within this Thesis. The literature review provided a mechanism for understanding how a critical framework of analysis could be constructed to enable the reading of cultural heritage within video game contexts. However, this is just one element in the overall aim of the research. The aim of this research is to contribute to the development of game designers' understanding of issues related to cultural misrepresentation, in order to enable them to take appropriate steps to improve the design of future games in terms of cultural artefact creation. This aim suggests that we need to gain an appropriate understanding of current approaches to heritage production in games contexts. Two mechanisms can enable this:

1. An analysis that includes a close reading of existing video games against the components of the Framework.
2. An analysis of existing design practices through conversations with current design professionals in order to determine reasons for why misrepresentation occurs.

Qualitative methods are predominantly used in both mechanisms to gain an understanding of current approaches to heritage production and the representation of heritage artefacts in video game contexts. The literature review has highlighted the substantial use in other related research of qualitative methods such as interviews, case studies and participant

observation as methods to undertake the analysis of video games. Qualitative methods provide mechanisms to gain a more complete understanding of phenomena through detailed investigation. The researcher believes that such methods provide scope for increased critical reflection on items of interest, in this case, representation and misrepresentation.

The next few sections of the Thesis will present the methods selected and provide an understanding of the items which will be analysed through them.

3.4.2 Case study

The case study is classed as a qualitative method of research though it may not always yield qualitative results. The case study method provides an exploratory analysis of a person, group object or event. It can further develop an understanding of a complex issue and build upon already known facts/knowledge (Barwick, 2012). Broadly defined, "the case method is a philosophy applying to both education and research that is built upon the creation and analysis of complex real-world examples" (Gill 2011: 1). Case studies can be criticised as it is thought that a small number of case studies cannot offer reliable results and it is also assumed that the intense nature of case studies can bias the findings (Woodside, 2010: 10). However, researchers have continued to use the case study method with some success despite alternative techniques, such as narrative analysis and grounded theory, being available.

In this Thesis the intention of the case study method is to explore existing examples of video games, which contain substantial examples of cultural heritage as designed and implemented within a particular context (e.g. a particular historical or national experience). These examples will provide an understanding of approaches to constructing

heritage artefacts in video game contexts, but the intention is not to determine all approaches, or all of the issues. The focus is primarily just to determine that such issues exist, even within games, where one could argue that heritage representation has been substantially considered. Moreover, observation and close reading were utilised as an orientation to conduct the case studies.

Both case studies provide a detailed description of the selected video games and relate these to the elements of most interest to this Thesis, primarily the representation of cultural artefacts within the video game space. These particular elements relate to the dimensions in the framework presented in Chapter Two. The paragraphs below briefly detail the approach taken in constructing these case studies (this is further explored in Chapter 4, Section 4.2). It is also important to note at this point that observation (see Section 3.3.3) and close reading (see Section 3.3.4) are utilised as methodological tools in order to establish the observable phenomena within the games chosen.

The first stage of developing the case studies involves a play through of the selected video game from beginning to end. This initial play through helps the researcher to gain an understanding of the most critical elements of the game and how the game operates. This initial play through involves a variable amount of game playtime, dependent on the chosen video game, and involves the researcher limiting the exploration to core game tasks.

Within the second stage of the methodology, the researcher plays through the video game with the intention of highlighting cultural objects within the video games context. These cultural objects are aligned with the framework as presented in Chapter Two. The intention at this stage is to collate an understanding of the different forms of cultural

objects that are designed within the context of the game, in order that decisions about which aspects of the content the researcher is going to analyse in greater depth can be made at a later stage. 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. he may spend time traversing the video game space, 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 in the play through 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 artefacts as a precursor to analysing the 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.

In this Thesis, the case studies focus on the issue of cultural heritage representation within the context of modern video games. *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*. First of all, *Assassin's Creed I* as a video game is extremely rich in terms of graphic representation of cultural artefacts, 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 (situating the game in an area of clear interest to the research intent of this Thesis). This becomes extremely obvious through playing the game. Finally, the game includes a vast amount of items with clear cultural value, both tangible and intangible in nature.

Unearthed: Trail of Ibn Battuta is additionally chosen as an example of a game produced in the Middle East (specifically in Saudi Arabia). This enables aspects of understanding to be drawn in relation to whether development location impacts on representation. The game is set in a modern context but is based on a narrative which links 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 clear cultural value and relevance.

There are many reasons to select the *Unearthed: Trail of Ibn Battuta* video game as a case study in this research Thesis. The research focuses particularly on Middle Eastern culture in order to gain specific information about representation of the culture in video game contexts. This provides an opportunity to better understand whether there is difference in approaches to representation between the video games designers (Western and Eastern).

3.4.3 Observation

Observation provides a mechanism through which a particular phenomenon can be closely examined and understood. In this circumstance, this particular phenomenon is heritage artefacts within the context of modern video games. This work is influenced by

the existing work and research (e.g. Vít Šisler (2006) and Seif El-Nasr, et al) presented in the literature review as shown in Chapter two. Particularly, these existing works are linked to development of an understanding regarding cultural representation in video game contexts. This observational material provides an analysis of the phenomenon, which is relatively poorly understood in the context of current academic work. The observational study is developed with the aim of placing the subject under a critical academic lens. Observation is one of the most commonly used research methods particularly in regards to analysing human behaviours including ethnographic studies. Highly structured observations have been used as a type of observation rather than semi-structured and unstructured observations through dimensions of cultural artefacts as checklist for cultural elements in video game. In this research, observation is presented as a method to collect information about cultural artefacts from video games produced, especially those which can be understood to be heritage items. In particular, the observation is used in the development of case studies related to the individual video games. This observation is supported by historical analysis and understanding. The target of this method is to review cultural artefacts practically in (how the cultural artefacts are presented and how mis- representation accrued) in modern video games and discover information on cultural representation in order to build an understanding of current design practice. Such an understanding is aided through the construction of other methods that investigate current video game design and development processes.

3.4.4 Close reading

A qualitative approach is always based on interpretation and understanding phenomena throughout the detailed analysis. Many methods in this situation can be used to enable a researcher to carry out a detailed analysis of phenomena; one of them is close reading. The concept of close reading refers basically to analysis and interpretation of the words,

texts, or image content of an item. This method is heavily used in literature. McClennen (2003) comments that close reading means developing a “deep understanding and a precise interpretation of a literary passage that is based first and foremost on the words themselves” by the same token, read, Bizzocchi & Tanenbaum (2011) indicates that a close reading “is a detailed examination, deconstruction, and analysis of a media text” in this case the media text being that of a video game. Visual images can also function as the “texts” on which we can also apply close reading strategies. Reading the elements of cultural thought in video games contexts, however, is a challenge for many designers and gameplayers particularly if they lack background knowledge of the game’s culture.

In the case studies observation and close reading have been used as methods to explore and understanding how the elements of cultural artefact are represented in video games context.

A close reading provides an interpretative method through which the dimensions we are seeking to analyse can be viewed. While observation used to observe the cultural heritage practically “intangibles” items such as, game's characters behaviour, the language accent, music, etc.

In this Thesis, 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 (as outlined in Chapter Two) can be used to better understand cultural representation. The close reading of both games is developed into the case studies described above in order to present the researcher’s analysis.

3.5.5 Interview

Interviews provide a mechanism through which a process can be explored with regards to understanding how current professional games designers go about including cultural heritage artefacts. The purpose of interviewing has been defined by Patton as being "to find out what is on someone's mind.... We interview people to find out from them those things we cannot directly observe" (Patton, 1996: 278). Hannabus explained that

"we want the respondent's' own perspective to emerge, explore the ways in which people working together share common understandings, get insight into particular experiences, find out motives behind decisions, get a view of informal procedures, consider apparent contradictions between attitudes and behaviour, and allow respondents time to provide their answers" (Hannabus, 1990).

Kvale (1996: 174) defines a qualitative research interview as "an interview, whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena". In addition, Kvale also states that "if you want to know how people understand their world and their lives, why not talk with them?" (1996: 1). Designing an interview strategy is extremely important, as Gillham states, "what questions for the purpose of the research can only be answered by asking people?" (2000: 20).

This Thesis wishes to determine the attitudes of video games designers to the design, development and inclusion of digital artefacts in the games they are involved in constructing. These conversations will help to identify answers to the research questions posed and help in defining solutions to strengthen representation in video game contexts. Such perspectives suggest the need for the use of a qualitative approach, looking to

understand the meaning individuals, or groups ascribe to a particular problem (Creswell, 2014: 4; Bryman, 2012: 31–33). Whilst there are different types of interviews, which can be used to examine phenomena for the purposes of research for instance, unstructured interviews, semi-structured interviews and structured interviews (Robson, 2002: 273). In this case, the semi-structured oral interview was deemed the most appropriate method. According to Bernard, a semi-structured interview is best used when you won't get more than one chance to interview someone (2011: 212). Furthermore, Stuckey, (2013) explained that

"the semi-structured interview guide provides a clear set of instructions for interviewers and can provide reliable, comparable qualitative data. [which] allow the researchers to develop a keen understanding of the topic of interest necessary for developing relevant and meaningful semi structured questions" (Stuckey, 2013).

In light of the difficulties inherent in bringing groups of designers together for focus groups, the opportunity such use of semi-structured interviews offers provide for a far more detailed exploration, than perhaps direct observation of behaviour; these reasons underlie this particular methodological choice. According to Bernard, "semi-structured interviewing works very well in projects where you are dealing with high-level bureaucrats and elite members of a community people who are accustomed to efficient use of their time" (Bernard, 2011: 185). Video game design staff exist as highly pressurised, time conscious, individuals often with high value associated to the use of their time – therefore seem ideal for the use of this method of investigation.

Open-ended interview questions are also chosen as mechanisms to use in the conduct of the interview. These type of questions require a response with more depth and a lengthier response providing interviewees with more freedom to respond in ways which best relate to their practice. Open-ended questions can also allow for further follow up questions designed to probe in more detail regarding the items of research focus.

3.4.5.1 Interview design

The interviews provide an opportunity to explore the processes through which video game designers construct cultural items in their gaming contexts. Twenty open-ended questions were constructed, which explored four main avenues of interest. The first avenue designer demographics (explored through two questions) simply focused on better understanding the interviewees as individuals within the gaming industry (their culture and gender). The second avenue of interest, designer experience, (six questions) explored the experience of the designer both in relation to the games developed, their roles in these developments, and whether their games included cultural artefacts. The third area, was designed to explore their working processes (six questions) looking at design and development methods and seeking to understand approaches to scoping, designing and producing cultural artefacts. The final item, designer perceptions (five questions) explored the designer and their perspectives with respect to culture, artefact inclusion, and need for accuracy in representation.

3.4.5.2 Participants

To find enough participants for the research, purposeful sampling methods were used in this study. A purposive sample is a key to proper research (Ritchie et al, 2013: 96), whether it is qualitative or quantitative. According to Palinkas et, al. (2015) "purposeful

sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest". Furthermore, the purposive sample corresponds with interpretivism linked to the use of smaller samples instead of large samples corresponding with the Thesis philosophy.

The purposive sample focused on interviewing designers (a selection of twelve individuals) with experience of developing games, which included cultural artefacts. These designers were sourced through networking at a commercial games networking event (Dubai World Game Expo, 2014) and through direct contact made with a Saudi Arabian based games company (Semaphore). Designers interviewed were in the majority male, with ages ranging from 33 to 53 years old, and one female aged 36. The experience of working in the industry ranged from at least three years, through to over ten years. The majority of interviews took place physically face-to-face, with a small number conducted by Skype. Furthermore, the average length of interview lasted between 45 minutes to 1 hour, with all conducted in the English language. The interviews were recorded and later transcribed. Roles in the design process were also varied within the sample, with a selection holding senior design positions (e.g., producer, development director), through to more specific roles in design teams (e.g., lead artist, lead game designer) generally within the independent games market. The majority of designers were based in Asia and Africa with a small number based in Europe, with all constructing games for global markets across multi platforms. The games on which designers had worked included 'Asura' (Ogre Head Studio, 2015), 'Unearthed: Trail of Ibn Battuta' (Semaphore, 2013), 'TokTok Drift' (Apps Innovate, 2014), 'Al Mamlaka' (Pinch Point, 2014), 'Boomy' (Lorem, 2014) and *The Witcher 3: Wild Hunt* (CD Projekt, 2015).

Qualitative data are patterns of information gathered in a non-numeric form. Qualitative data analysis was defined by Skinner, et al, (2015: 70) as "the range of processes and procedures whereby we move from the qualitative data that have been collected into some form of explanation, understanding or interpretation of the people and situations we are investigating". The high numbers of words generated within the interviews need to be transcribed and summarised. Furthermore, an understanding needs to be developed of the relationship between various themes which are identified and the respondents (Mathers et al, 2001: 17).

3.4.5.3 Process analysis

Analyses usually fall into two broad categories: content and thematic. In content analysis, as Namey et al. (2008: 138) clarify the "researcher evaluates the frequency and saliency of particular words or phrases in a body of original text data in order to identify keywords or repeated ideas". Furthermore, content analysis is a flexible method to analyse textual data (Cavanagh, 1997). In contrast, thematic analysis "moves beyond counting explicit words or phrases and focuses on identifying and describing both implicit and explicit ideas" (Namey et al. 2008: 138). Therefore, in this Thesis the thematic analysis was established for use as an approach focused on better understanding the substantive issues present within the designer responses. These substantive issues are elicited from the text by keywords that link with interview objectives through the establishment of a coding structure for the material. To engage with this method, the first stage is transcribing all verbal interviews in order for keywords to be determined. All transcripts are explored in relation to this coding structure, and statements are developed, refined and supported, through close engagement with the words and meanings articulated by the designers. For statements to be developed, themes must be established from the transcripts; for the

purpose of this Thesis, themes are groups of information based around a common idea, e.g. Cultural awareness.

After developing fourteen initial statements, in relation to the principal areas of interest explored through the interviews, further refinement focused on the development of a more holistic understanding of the themes under which the statements were developed to be five main themes, these are explored in Chapter six. The five main statements are then used to place all relevant information from the interviews into a logical structure.

3.4.5.4 Framework

The framework is intended to meet four central aims of designers of video games in which cultural features are significant. These are as follows.

Firstly, it ensures that designers are made aware of all the relevant aspects of culture which can impact on the game. To this end, it needs to be as comprehensive as possible, so that nothing is overlooked, but also practical, so that designers are able to implement just the features required for the game under development. The same framework (with perhaps minor modifications) should be applicable to as wide a range of games as possible.

Secondly, the framework should be designed in such a way that it can become an integral part of the design process, especially in the early phases of development. This can be achieved by assisting in the decision-making process, a factor made possible by presenting as clearly as possible to the design team the choices available and their implications for cultural representation. The framework is also relevant to the quality

assurance process, during the alpha and beta testing phases, as it allows critical feedback to be incorporated into final revisions.

Thirdly, and largely as a consequence of the above aims, it is intended that the framework encourage efficient working practices. Changes to game design are more difficult to implement, and so more time-consuming and expensive, in the later phases of development. The framework can help designers to avoid such mistakes, reducing the cost of development while also cutting down time to market (often a critical factor in meeting release dates for video games).

Finally, the framework can be expected to have an overall beneficial effect on the quality (and so commercial success) of the game. That is to say, the framework is an essential component in quality control. Particularly in the cases of enduring franchises, such as the Assassin's Creed series, the quality of an individual release can have an impact on the popularity of future releases. Games companies devote considerable efforts to building their brands, with these efforts being repaid over long periods of time.

With any research framework such as this, it is extremely important to carry out a process of objective evaluation in terms of both theoretical soundness and practical applicability. There are three ways in which the present framework can be evaluated.

To begin with, the point of view of the author, which includes a wide range of knowledge and experience of the relevant cultures, informed and evaluated the full range of cultural items within the framework. This was an extensive process, subject to many revisions before the author was satisfied with the result. Consequently, when it came to carrying

out the interviews and case studies, the author had a clear understanding of the significance of each item and the theory supporting them.

The second source of objective evaluation was the subjects of the interviews, the games designers. As experts in their field, but as non-academics when it comes to social science research terminology, it was important that the framework be both meaningful and relevant to their work. Feedback from these participants ensured that the framework could be used as intended.

Finally, as with any piece of research, the fundamental test of any contribution to the field is the peer review process and the critical comments from fellow academics (Balela, Mundy 2015). In the view of the author, the framework presented here is sufficiently robust and theoretically sound to meet with positive critical evaluation.

Table 3.3: Mapping Dimensions of Cultural Heritage to Video Game Contexts

Tangible						
		N/A	No Evidence of Consideration	Limited Evidence of Consideration	Satisfactory Evidence of Consideration	Significant Evidence of Consideration
Arts & Artefacts						
	Architecture					
	Sculpture					
	Visual Image					
	Documents and Writing					
	Performing Arts					
	Clothes					
	Historical artefacts					
	Other arts					
Environment						
	Places of Scenic Interest					
	Landscape					
	Historical sites					
People	Common people					
	Historical figures					
InTangible						
Arts and Artefacts	Language					
	Music					
	Folklore					
Environment						
	Climate					
People						
	Behaviour					
	Religion					
	Customs					
History						
	Time					
	Ages					

In constructing the framework for the dimensions of cultural heritage (See , Table 3.3) the intention of the author is to cover as broad a range of relevant areas as possible. It is also the intention that the framework be applicable to any video game in which cultural representation plays a part. With this in mind, a rationale is followed where broad

categories are subdivided into relatively specific features in which parallel features can be compared and contrasted.

The first major distinction to make is that between the tangible and the intangible. While there is clearly some overlap between these, as there is between many of the categories presented here, it is a logical starting point. The paradigm of the tangible is the physical, that which is accessible to the senses. Tangible features are likely to endure in time and to be available to multiple individuals. The intangible, by contrast, is essentially non-physical, at least in the sense that it is typically experienced directly by the understanding rather than by the physical senses. The intangible may be more ephemeral, or more subject to change over time.

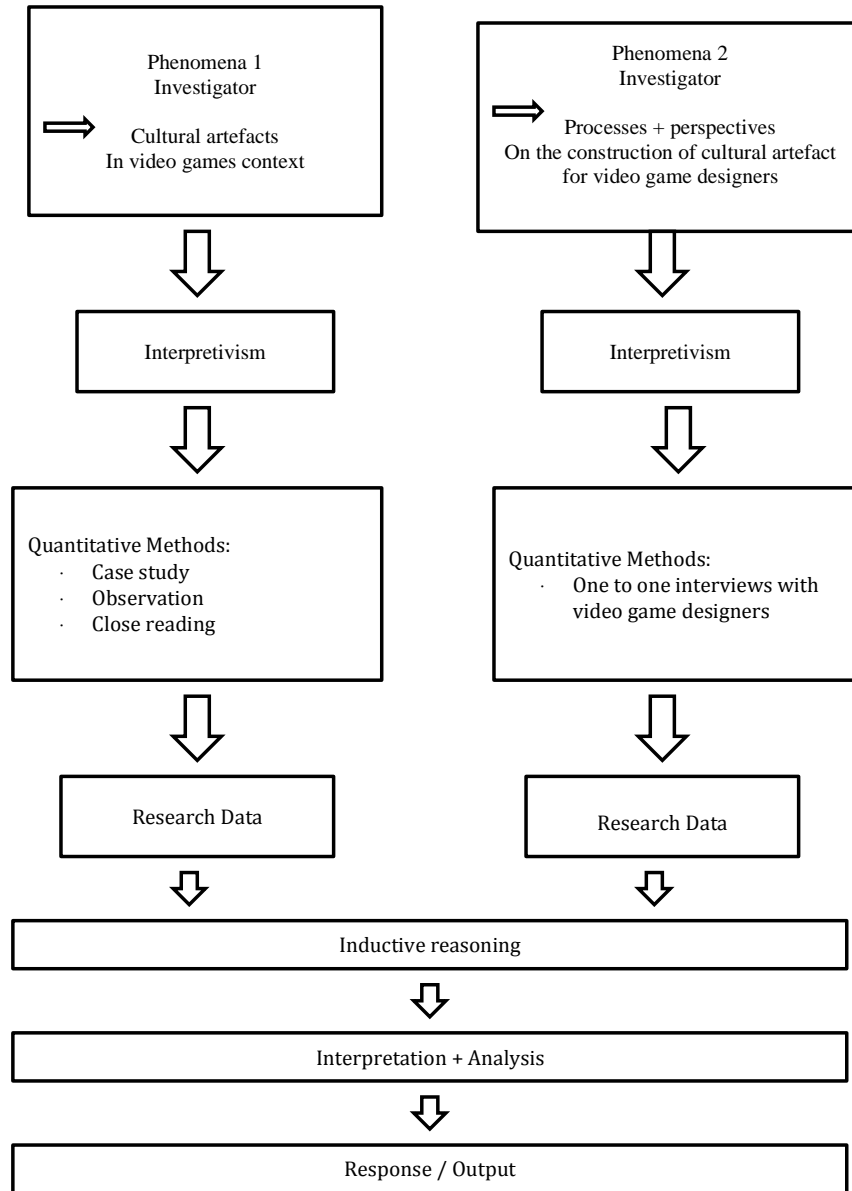


Figure 3.1: Methodological Mechanism

3.5 Conclusion

The study aims to explore, understand and investigate the phenomena of using the cultural artefacts in video games context from different experience and views of relevant professional video game designers. The methodology in this Thesis has being placed into two important phenomena regarding main research questions. Philosophically, a qualitative approach is associated with interpretive philosophy; therefore, it has been logically adapted for over orientation of the research. The first phenomenon from the methodological perspective was investigating cultural artefacts in video game contexts. In this phenomenon, a case study has been utilised as a method to conduct research into cultural artefacts in video games using the methods of observation and close reading to discover the research data. While the second phenomenon is concerned with investigating the processes and perspective regarding construction of cultural artefacts from the perspective of video games designers. Within this phenomenon, one to one interviews have been used to achieve the research data. Both phenomena are based on inductive reasoning to outline a set of procedures that are employed for the analysis of qualitative data, where the analysis is guided by specific objectives. Interpretation and thematic analysis are involved to achieve response and output of the research data.

4 Chapter Four Assassin's Creed Case Study

4.1 Introduction

Chapter 3 outlined decisions made over the philosophical approach to be followed in this Thesis and the methods to be used to investigate the research question and sub-questions posed. The Chapter established that an interpretative approach using inductive reasoning would be followed in gaining a better understanding of the research problem. Initially the research problem can be split into two halves, the first half being establishing where misrepresentation occurs within video game contexts (to be covered in Chapters 4 and 5), and the second half being how this occurs through the development process (to be covered in Chapter 6). These halves will then be brought back together at the end of the process to determine research findings.

This chapter outlines research towards strengthening our understanding of the representation of cultural artefacts in video games. The approach to analysis of both case studies has initially been described in Section 3.3.2, and is further described in Section 4.2. This Chapter outlines steps towards utilising a framework (see Section, 3.3.5.2) using dimensions of cultural heritage (see Chapter Two, Section 2.5) as reference points for games analysis. This framework is then used as a mechanism to analyse two games: *Assassin's Creed I* (Chapter four) and *Unearthed: Trail of Ibn Battuta* (Chapter five).

The chapters (four and five) propose that the dimensions of cultural representation detailed can be transformed into a framework through which designers can determine and evaluate practice, when including heritage artefacts within video games. The approach taken is interpretive, focusing primarily on developing an understanding of how the dimensions will be, or are, represented within particular video game contexts. The

dimensions of cultural heritage are divided into four main evaluation criteria planning for or assessing the degree of cultural representation in the games: no evidence, limited evidence, satisfactory evidence and significant evidence. The framework dimensions are used as an approach to conducting the case studies through two methods: observation and close reading through play, based on an interpretive philosophy (see Chapter three sections 3.3.3 and 3.3.4). A PC and Playstation 4 are used as the main instruments for conducting the observations and close readings through playing the games, taking screenshots, composing notes and recording video (quick time player for Mac). The researcher employs their experience supported by books, articles, websites and other articles particularly in relation to description of Middle Eastern cultural artefacts.

The case study analysis of *Assassin's Creed I* and *Unearthed: Trail of Ibn Battuta* goes through each of the specific areas of the framework within this Thesis, the researcher selects from his analysis key items to explore in-depth in order to demonstrate how the framework can be used to guide and analyse game design development. The case study commences with a focus on the main cultural artefact elements which are tangible or intangible. Elements such as: the narrative construction presented through information from the historical context, a description of the function of play and an analysis of the story, architecture within the game, sculpture, visual image, documentation and writing, performance arts, characters in the game and clothes. The intangible focuses are cultural heritage, which includes language, music, folklore and behaviour.

The case study analysis presents concerns regarding cultural representation in the selected games. The first game is *Assassin's Creed*, which takes place in the Middle East and describes more than four cities through the game's journey. The game has been selected for its abundance of cultural artefacts, specifically with regards to the Middle East in

which the author has a vast experience. The game was created by Western video game designers. In this context, we can understand how a non-native cultural understands and represents cultural artefacts in the game. The attention will be concealed with misrepresentation and accurate representation of cultural artefacts in order to develop cultural representation in the video game.

Assassin's Creed I is rich and diverse regarding the use of elements of cultural artefacts, while, *Unearthed: Trail of Ibn Battuta* uses a more limited range of cultural items. The reason for this can be located with the game story, the gameplay and mission of the game and the playing time available to the player. For example, to finish *Assassin's Creed I*, requires at less 9-10 hours, but generally significantly more. Whilst, *Unearthed: Trail of Ibn Battuta* requires a reduced amount of time of between 3- 5 hours to complete the game.

To understand much of the context of where misrepresentation occurs through these stereotypes we must first define what a stereotype is, as well as the symbols of culture. A stereotype is the perception of how certain groups or individuals should look, behave and interact with other groups and individuals. According to McGarty et al. there are three tenants of a stereotype: '(a) Stereotypes are aids to explanation, (b) stereotypes are energy-saving devices, (c) stereotypes are shared group beliefs' (McGarty et al, 2002, p.2) In the context of this thesis, it is how designers (and ultimately players) perceive how particular cultures should look and interact within the confines of video games. An example would be how *Assassin's Creed* may use the stereotypical look of a crusader knight to show Christians in the game world.

However, A symbol of culture is a non-physical or ‘physical manifestation that signifies the ideology of a particular culture or has meaning within a culture. Richardson (2006: 165) explain that. culture “symbols have meanings that are widely recognized by a society or culture. Some conventional symbols are the Christian cross, the Star of David, a swastika, or a nation’s flag” and so on. Within the context of this thesis, symbols of culture include both tangible and intangible cultural heritage items.



Figure 4.1 PC DVD Assassins Creed, (Ubisoft, 2007)

4.2 Assassin's Creed Video Games

Before embarking on a discussion and analysis of the case study of *Assassin's Creed I* the author feels that it is important to discuss the game's development company, Ubisoft Entertainment. This description will include information regarding the structure of the company, including most importantly its global reach in terms of game development team capacity. It will also include a summary of the whole series of the Assassin's Creed video games.

Ubisoft is a multinational company that develops and publishes digital video games. It was founded in 1986, in Montreuil-sous-Bois, France (Guillemot, 2013). The company currently has more than 29 video game studios in 19 countries worldwide and employs designers from different cultures across those game studios. According to Ubisoft, the company has “more than 9,200 team members worldwide, including 7,800 dedicated to production” (Dunning, 2014). The company's sales during 2012-13 exceeded 1.256 billion Euros (Entertainment Software Association, 2013). With this organisational infrastructure in place, Ubisoft has the capacity to create games that are blockbusters in the industry and to spend time on the production process creating complex narratives, which sometimes (including in the case of *Assassin's Creed I*) have a particular resonance with historical storylines. The diverse nature of their human resources also makes it easier for Ubisoft to construct games that represent a wide variety of cultural contexts. The company's products commenced with the French titles *Zombie*, *Masque* and *Fer et Flamme* in 1989 and have gone on to include many popular cross-platform games, such as: *South Park: The Stick of Truth* (2013); *Tom Clancy's: The Division* (2016); *The Prince of Persia* series (1989 – 2013), etc.

The *Assassin's Creed* series provides games in open world environments that feature action and adventure for the gamer across multiple historical periods of time. According to Suszek (2014), the series has sold more than 73 million units since its debut in 2007. Each game in the series is placed in a different historical period, all of which include different events, stories, locations, and characters. This approach has enabled gamers within the series to experience a large number of different historical contexts. As a result, each game has a specific game environment, different from the others. The next few paragraphs discuss briefly the main games within the series. This discussion is required within this Thesis in order to gain an understanding of the development of the game's narrative across individual games in the series.

The *Assassin's Creed* series of games commenced in 2007, with the most recent game being produced in 2015 (*Assassin's Creed: Syndicate*). The game series focuses on events with a historical heritage, and most of the games are formed within an authentic background. The company has managed to make the series appear as a coherent unit and to manage the narrative flow across the various games produced. The series has received mixed reviews; for example, Van Ord (2008) pointed out the richness of the aesthetically pleasing environments and the beauty of architectural details whilst Joynt (2008) complained about "the repetitive nature of the game-play". The game has maintained the features of the main character from the initial games (including the face, clothes and the weapons), as part the game's branding throughout the series. The *Assassin's Creed* series has become available on the Internet for people to play online. This feature started with *Assassin's Creed: Brotherhood* in 2010 and extends across later games in the series. All the above factors make the game popular and representative as one of the most important video game franchises of the last decade. According to McMillan (2015), the *Assassin's*

Creed series is one of the highest selling games over this period, with 93 million units sold.

The novel “*Alamut*”, written by Vladimir Barto in 1938, was the inspiration for the location (the Middle East) and characters of the original *Assassin’s Creed I*. Subsequent games in the series continued the narrative arc in different locations: *Assassin’s Creed II* (2009), *Assassin’s Creed Brotherhood* (2010) and *Assassin’s Creed Revelations* (2011) transposing the main character to Renaissance Italy, for example. Other games in the series maintained the general environmental style, while changing the location and historical period (see Table 4.1). The aims and strategies of the games remain the same throughout the series, but the places, time, events and environment of the games are different. Moreover, whilst the story of the game changes slightly across the different games of the series, the hero and environment retain the same core features of the first *Assassin’s Creed* game. In the series, the games have three key elements in common: a focus on historical events; a distinctive culture and lifestyle; and an engaging storyline. While the particular histories, cultures and storylines are visibly different from one another, there is a clear stylistic unity and narrative coherence which persists through time and space. In the next section, the timeline of the game series will be explained briefly.

4.2.1 Timeline Series

The first game in the series was *Assassin’s Creed*. This game was created in 2007 and is set in two different time periods: the present day and the twelfth century. The main idea of the game, the storyline, the game mechanics are discussed here.

The first *Assassin’s Creed* video game is set in a significant time in the history of the Middle East, the Third Crusade (1189-92), specifically focusing on the long-running

conflict between the “largest and most influential organisation the medieval Western world had ever known” (Ralls, 2007: 9), the Knights Templar, and the Assassins, a secret society based in the region and with a long and complex history of relations with foreign powers (Wasserman, 2001: 249). The scenario of the game takes place across four cities in the Middle East, (Jerusalem, Acre, Damascus and Masyaf). This game focuses on establishing the storyline and on introducing the gameplay mechanics, both of which expand across other games in the series. As the series has progressed over the years, more information has been added to the storyline and the key characters, and in addition the graphical sophistication has improved (as the researcher can confirm from first-hand experience).

Other games in the series (see Table 4.2) also take place in the same time period (the Third Crusade) and same geographical area (the Middle East). For example, *Assassin's Creed: Altair's Chronicles* (2008), a game developed for Nintendo DS and various mobile phone platforms, which focuses on further development of the story of the main character, Altair. The action in this game takes place in two new cities, Tyre and Aleppo, in addition to the original cities of Jerusalem, Acre and Damascus. In 2009, the third and final part of the story of Altair was released, *Assassin's Creed: Bloodlines*, for the PlayStation Portable. These two games in the series differ little regarding story, characters and location. The key difference in *Assassin's Creed: Bloodlines* is in the control scheme, which was tailored specifically for the PSP. Another difference was that the movement of the characters was improved, such as changes to how the character scaled buildings, ran around the cities, and engaged in fighting other characters (Nash, 2009).

The sequence of the game's events depicted in Table 4.1 below enables us to understand how the cultural contexts of the game have developed, moving on from the initial focus

on the Third Crusade in terms of storyline, and some of the characters, through the time of the Italian Renaissance, ending in the colonial period of the main European nations. Various games in the series have addressed major historical events such as the American Revolution, the French and (native American) Indian war, and the golden age of piracy in the Caribbean Sea.

Table 4.1 The Periods Covered by the Assassin's Creed Games Series

Time period	Century and Date	Location	Game title	Release date
Third Crusade	Eleventh to Thirteenth Century, (1096-1291).	Middle East	Assassin's Creed	2007
			Assassin's Creed: Altair's Chronicles	2008
			Assassin's Creed: Bloodlines	2009
Renaissance	Fourteenth to Seventeenth Century	Italy	Assassin's Creed II	2009
			Assassin's Creed II: Discovery	2009
			Assassin's Creed: Project Legacy	2010
			Assassin's Creed: Brotherhood	2010
			Assassin's Creed: Revelations	2011
			Assassin's Creed: Multiplayer Rearmed	2011
			Assassin's Creed: Recollection	2011
Colonial Era	Fifteenth to Twentieth Century.	Europe and America	Assassin's Creed III	2012
			Assassin's Creed III: Liberation	2012
			Assassin's Creed IV: Black Flag	2013
			Assassin's Creed: Utopia	2013
			Assassin's Creed: Pirates	2013

Late Modern Period	1789- 1989	France	Assassin's Creed: Unity	2014
Victorian Britain	1837-1901	London	Assassin's Creed: Syndicate	2015

4.2.2 Assassin's Creed Background Story

These paragraphs will outline the most important elements to the background of the game series of *Assassin's Creed*. The first task is to present a discussion around the fictional and non-fictional aspects of the game's narrative. The second task is to focus on discussing the secret organisation of the Assassins and those figures most important in the organisation's history. The final element will focus on the activities of the Assassins, the place where they were supposed to live and their relationship with the Muslim population of the region. This will enable an understanding of the storyline and the influence of these elements on the construction of the game environment. This will help to develop an understanding of the process by which developers select cultural heritage items for use in the game.

There are four possible readings of the story of the Assassins (Hashashin in Arabic): the story can be true; it can be untrue; it can be a myth, or it can combine both fantasy and reality. A number of writers have produced Assassin related stories, with examples coming from both the Arab community of the region as well as Westerners. The Arabs had direct access to and experience of the Hashashin, and presented the stories as historical truth, while the Westerners tended to portray the stories as at least partly mythical. The most prominent Arab writers who have written about the stories related to the Assassin's organisation are Ibn Taymiyyah (Minhaj Al –Sunnah, 2003) and Ibn Kathir (Al-Bidaya wa'l-Nihaya, 1990).

Western writers have also mentioned the story of the Assassins, including Marco Polo as outlined in 'The Travels of Marco Polo' (1997), Vladimir Bartol, Michael Biggin (Alamut, 2012) and Louis L'Amour (Flint, 1984). Information within these stories would suggest that the Hashashin organisation existed prior to 1256. These stories (in addition to the research of Daftary (1995) provide evidence supporting the argument that elements of the story of the Hashashin are true. Many of the references are to the same events, characters, places and the political aims of the secret organisation of Assassins. Thus, an argument that the story has no relationship to fact cannot be supported. However, according to Western writers there are many elements in the story of the Hashashin which are considered to be mythical. This point is made by Daftary in relation to *Assassins Creed I*: "the origin of the *Assassin's Creed* back story is the myth of the Hashashin" (1994). According to Jade Raymond (2008), "the game tended towards the mythological account of the assassins due to the significant opportunity afforded to change and add to the storyline on the pretext of myth" (Balela and Mundy, 2015).

However, the main cultural elements of the game appear to have been selected in order to increase the credibility in the context of the non-fictional account (El-Nnasr, et al. 2008: 6). 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 used are Altair, Al Mualim, Malik Al-Sayf and so on. The cities are Jerusalem, Acre, Damascus and Masyaf. Buildings selected were Alamut Castle and the Dome of the Rock Mosque. All of these elements are included in the game as modern recreations. In this way, the game increases its dependence on the non-fictional account. Jade Raymond, the director of the *Assassin's Creed I* title, explained during an interview with El Nasr et al (2008) 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. It's fun to explore the idea that something else was happening beneath the information gleaned from historical textbooks. People are also fascinated by 'History's Mysteries' and the Templar Treasure was ripe for exploring" (El Nasr et al, 2008: 6).

The name of the game, character clothing and names, city design, building architecture and environments etc. open doors for people to obtain an understanding of a representation of Middle Eastern history. The game also gives individuals a chance to gain an impression of Muslim societies in the Middle Ages. A brief description of the secret organisation of the Assassins and the important characters within it will be presented.

The Order of the Assassins is referred to by several names. These include the 'Assassins', as they were known by the French army as they led the Third Crusade into Jerusalem, the 'Hashashin', as they were known by the Muslim army in the Holy Land, and the Heyssessini (literally, those who hide in the night) (Daftary, 1995). According to a historical account, (Chaliand & Blin, 2007: 4), the Assassins as a political party was formally founded around 1090 when Hassan-Ibn Sabbah founded the great castle of Alamut near modern day Tehran in what was then Persia. Zaheer (1985) explains that the focus of the organisation at the time was to take control the Middle East and from there to spread their beliefs to the wider world.

Hasan Ibn Al-Sabbah is supposed to have emigrated from Damascus to Persia in order to establish the Order of the Assassins in Alamut Castle (see Figures 4.3). This castle was built at the top of a mountain (in Arabic, Alamut means ‘Eagle’s Nest’). Al-Sabbah was born in Qom, a city in modern day Iran, although his father was originally from Yemen and belonged to a Shia sect, the Nizari Ismailis (see Figure’s 4.4). The Assassins are believed to have had an understanding that everything was permissible, even killing. Al-Sabbah supposedly had great power (as a holy man), such that he was able to control his aides, who would not hesitate to sacrifice themselves for the sake of their leader (Lewis, 2011). Marco Polo used the name “Old Man of the Mountain” to refer to Rashid ad-Din Sinan, a historical contemporary social subordinate of Al-Sabbah, who lived in Masyaf. However, in the game, these two key figures in the Order of the Assassins are misrepresented as one, and given the name Al Mualim.

Marco Polo describes Alamut Castle as having a great garden that was a paradise that no-one except the friends of Al-Sabbah and his most loyal soldiers were allowed to enter. This garden is believed to have been full of fruit trees and beautiful women. Al-Sabbah was rumoured to have given those who entered the garden hashish, and told that this was the paradise promised to them by God. By contrast, in the game, the castle is portrayed as dark and hostile.



Figure 4.2, The first image is a fictional drawing of Hasan Ibn Al- Sabbah with Arabic clothing of the war. The second fictional image is the head of Ibn Al-Sabbah whilst wearing a turban (Sommer, 2015)

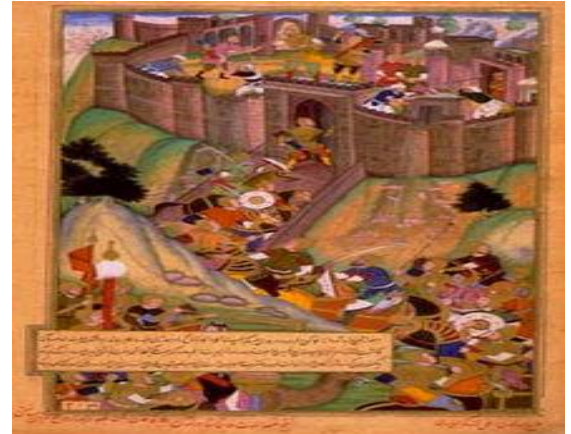


Figure 4.3, The image on the right is a fictional drawing of Alamut Castle. (Sommer, 2015).

The Assassins organisation is believed to have assassinated many people of all religions. Ibn al-Qayyim (2000: 243) writes that the group was dependent on stealth and secrecy, and any member would kill himself before divulging its secrets. Many important figures of the Sunni Muslims are determined to have been killed by the Order of Assassins across different cities in the Middle East. Those assassinated include Netham Al-Molk, a government minister and scientist; Imad Al Deen Zengi, a ruler of Mosul, Aleppo, Hama and Edessa; Prince Moudud; Fakher Al-Deen, a minister and Al-Mustarshid, the Abbasid Caliph of Baghdad. In addition, they are believed to have tried but failed to kill the leader Salah Al-Adeen. In total they are estimated to have killed more than eighty thousand Sunni Muslims (Ibn al-Qayyim, 2000: 506). It is important to note that the historical characters and events described here are from a Sunni perspective and by no means accepted by all groups in the Middle East, with the Shia, for example, regarding many of them as mythical.

Assassin's Creed I uses putatively historical events and organisations as the building blocks for the narrative in order to add a sense of reality to the game. Due to the nature of important events, such as the Crusades, a game based in the period can create an engaging atmosphere in which the player can indulge longings for a past golden age. Using non-fictional accounts and historical events makes it easier to insert fictional stories within the game in order to allow the developer to manipulate the story to their needs.

4.2.3 Game Narrative

The core of the *Assassin's Creed* series is a story based around time-travel, particularly time travel of the mind. Many of the games in the series are based around the concept of individuals accessing ancestral memories through machine-based manipulation of their DNA and inbuilt genetic memory. The series, therefore, has a significant part of its gameplay set in a historical period, while other parts are set in the present. The principle aim of the game is to access knowledge that could only be found in the past; for instance, the location of an artefact such as 'a piece of Eden'.

In the game, two secret organisations, the Assassins and the Templars, control all the events that occur in the world. They are both trying to obtain the "Apple of Eden". Whereas the Templars want to save humanity from itself by controlling free will, the Assassins want to ensure the survival of free will in order to allow for the progression of new ideas and the growth of individuality (Steinman, 2013).

The hero of the game is Desmond Miles, "a member of the Assassins and a descendant of numerous familial lines that had sworn an allegiance to the Assassins, including individuals such as Aquilus, Altaïr Ibn-La'Ahad, Ezio Auditore da Firenze, Edward Kenway, and Ratonhnhaké" (Ubisoft, 2013). In the game, Desmond Miles lives in 2012

and works as a bartender. The Abstergo Company is a fictional company “officially founded in 1937, [and] was actually one small part of the Templar scheme to control the world through capitalism and scientific progress” (Luke, 2014). In the game, it is owned by the Templars, who kidnap Desmond and take him to their laboratory in order to obtain information from his predecessor that stored in his subconscious. Two scientists force Desmond into a machine to recall the memories of his ancestor, Altair Ibn-La'Ahad, a prominent member of the Assassins Brotherhood, who lived in the Holy Land, specifically Jerusalem, in the year 1191 during the Third Crusade.

The first time he is in the machine, Desmond has trouble adjusting to it, but eventually he relives Altair Ibn-La'Ahad's exploits over the next few days. The first mission is to retrieve one of a series of artefacts known as the "Pieces of Eden" from the Temple of Solomon, which is located precisely under the Al-Aqsa Mosque in Jerusalem. Altair is not alone in this mission: he has help from Al-Sayf, and Kadar. Unfortunately, Robert, who is a commander of the Templars and a sworn enemy of the Assassins, stops them. In the ensuing commotion, Al-Sayf is killed, and Malik seriously injures his arm, while Altair returns to the Assassins' stronghold at Masyaf. Malik, who survives, returns with the Pieces of Eden and disparages Altair on account of his arrogance. As a result of trying to kill Robert while attempting to retrieve the treasure, Altair breaks three tenets of the Assassins' Creed: not to kill an innocent person, hide from the eyes of the people or to share the secrets of the group, and he ultimately fails.

Al-Mualim, the leader of the Assassins, therefore decides to punish Altair in front of all the people and stabs him with a dagger. However, Altair uses a Piece of Eden to survive the stabbing. Al-Mualim then demotes Altair to a novice but gives him a last chance to rise again through the ranks of the Assassins. Al-Mualim assigns Altair the task of

assassinating nine key figures across the Holy Land in Jerusalem, Acre and Damascus, with the aim of bringing about peace between the Crusader and Saracen forces. Each target is based on a non-fictional historical character from the Third Crusade; these include Majd Addin, Garnier de Naplouse, Jubair al Hakim, Abi Nuqoud, Sibrand, William of Montferrat, and finally, Robert de Sable. All the figures have a different character and a particular task. In addition, they all have a secret, which makes Altair's task difficult and confusing. However, Robert discloses the most important secret, that there are not nine but ten figures and Al-Mualim is one of them. Altair discovers that Al-Mualim has been lying to him all the time, and his master decides to reveal the truth to him. Al-Mualim denounces religion and other seemingly supernatural events, for example, the Ten Plagues of Egypt, the parting of the Red Sea and the presence of the Greek Gods in the Trojan War, claiming they are illusions caused by the Piece of Eden, which has enormous power (Ubisoft, 2016). Then he states his intention to use the artefact to put humankind into a brainwashed state and by doing so, bring about an end to all conflict. Altair is eventually able to see through the deceptions created by the Piece of Eden to kill Al Mualim. Altair knows there are 28 Pieces of Eden dispersed around the world.

When Desmond exits the machine, he learns that Abstergo is managed by the Templars, who decide to kill him. However, Desmond is helped by Lucy, who has written information referring to the end of the world on the wall of his room. Lucy then asks Desmond to use the machine again in order to resurrect his second grandfather, Ezio Auditore da Firenze.

The game narrative provides an opportunity to manipulate real historical events into an epic fictional tale. Using genuine history, which has been well researched and publicised

with the addition of a fictional story enables the player to place themselves in the familiar surroundings of the Third Crusade, and manipulate the events in it to fit in with the game's narrative arc. As a result, the player can experience the epic real life battles and events of the Third Crusade, but they can change and alter the history by acting upon the fictional events of the game. Events such as the assassination of well-known individuals, or scaling world famous historical cities, provide plenty of opportunity for game players to explore and engage with the historical environments.

4.2.4 The Game and Historical Events

In the first *Assassin's Creed* video game, the events of the game take place in cities in the Middle East, such as Jerusalem, Acre, Masyaf and Damascus. In these areas, there was a conflict between the Saracens and the Crusaders. Many books and movies have focused on this conflict, for example, '*God's Warriors: Knights Templar, Saracens and the Battle for Jerusalem*' (Nicholson & Nicolle, 2006), which focuses on the history of the Knights Templar and the battles between the Saracens and Crusaders. Furthermore, movies such as *Kingdom of Heaven* (2005) have highlighted the religious conflict between these groups. However, the movies, books and documents do not mention the conflict at the heart of the *Assassin's Creed* series between two ancient secret societies, the Assassins and the Knights Templar (even though these groups are believed to have existed at the time of the conflict between the Saracens and the Crusaders). The game takes advantage of this gap in media representation to embellish the mythical secret conflict between the Assassins and the Knights Templar. El-Nasr et al. (2008) confirm that the game story of *Assassin's Creed* is centred on the myth of the Assassins, rather than the more obvious conflict between the Crusaders and the Saracens (2008). The *Assassin's Creed* series has become well known as providing games with a strong historical context. At the same time, the games industry has greatly expanded to compete with and become independent

of the movie industry. As a result, digital video games have specialist writers and directors with an in-depth understanding of events, times, places and culture to present the video game narrative as historically accurate as possible (Ince, 2006: 28).

The representation of historical events within the series comprises several elements. A particular time period has been represented, with the places, cities and architecture created to fit. This kind of technique has been used for all the games within the *Assassin's Creed* series. Furthermore, the cultural changes through the time periods are represented.

It is noted that all the games in the *Assassin's Creed* 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 significant times in the culture of these societies. Each *Assassin's Creed* game uses the historical event as the structure around which to build the narrative of the game. The time of the events, the places and the famous characters linked to the historical event are incorporated into the gameplay.

4.2.5 Gameplay

The *Assassin's Creed* game takes points in history to construct a sequential narrative, which guides the player through a series of events set in specific cities at certain times. Some of these events are authentically historical, and some are purely fictional. The game has been critically acclaimed and has provoked a significant amount of discussion in relation to its realism (Van Ord, 2008; Joynt, 2008).

To understand how the gameplay of *Assassin's Creed I* works, it is better to start with an explanation of the environment and nature of the game. Completion takes around nine to

twenty-five hours of play time, depending on the experience of the players. Two important factors affect the gamer's experience. The first is related to the characteristics and the object of the game and the second is related to the individual experience of playing the game (Castel et al, 2005: 218). There are nine missions, which the player must beat to win the game. The game is designed to appeal to an adolescent market, aged between 12 and 20 years (Egli & Meyers, 1984: 309). In each mission, there is a general goal of an individual who must be eliminated. The game includes a substantial narrative, so multiple dialogues drive narrative sequences (cut-scenes) which are interspersed with the gameplay. The player is provided with a map, which guides the player through the various locations to be explored. Players can perform a series of different moves through the interface; for example, running, walking, jumping, climbing and pushing. The fighting techniques include the use of hands and legs, and require knowledge of conventional weapons. This game is not only for pleasure; it is also for learning about another culture (Murray, 2006: 186).

The game contains two major environments. The first environment is set in the twelfth century, with the second set at a time in the near future. In the second environment, which consists largely of explanatory cut-scenes, the role of the player is limited as there is little interaction. The dialogue between Desmond and the lab researchers is used to link the exploration of the past to a search for historical remnants in the present day.

On finishing the game, the player has experienced a wide range of apparently authentic locations and has interacted with a number of historical and fictional non-player characters.

4.2.6 Architecture

It is a well-known fact the Middle East at the time of the game was a land of rich architectural amalgamation. There are two distinct architectural influences, one dating from pre-Islamic times and the other from the 8th to 13th centuries. In the pre-Islamic period, Arabic architecture was a collection of irregular building patterns and designs; no planning was followed or observed. Buildings were constructed in accordance with individual needs, rather than the requirements of the community.



Figure 4.4 The layout of a typical traditional Arab city (El-Nasser, 2008)

However, during and after the Islamic Renaissance Arabic architecture improved greatly, in accordance with Islamic teaching, and to obey a simple planning rule, ‘The Rule of Dot’, (See Figure, 4.6) (Abdurraheem, 1998). ‘The Rule of Dot’ is a method of describing how items (such as buildings, design, language and so on) are built around a single point, so one experiences a concentric circular construction. Such a rule can be easily seen in the graphic design of the *Assassin’s Creed I* video game, representing Jerusalem City (See Figure 4.7).

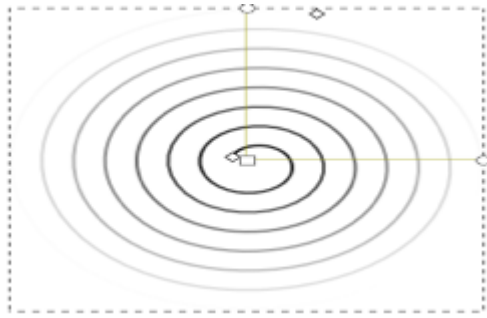


Figure 4.5 The Rule of Dot.
(Abduraheem, 1998)



Figure 4.6 Image of an Arab city without
any planning control (pinterest, 2017)

The *Assassin's Creed* series has been praised for the emphasis placed on modelling buildings with clearly defined cultural and architectural features throughout the locations in the game. In *Assassin's Creed I*, the attention to detail in the modelling of Aqsa Mosque, Dome of the Rock, and Holy Sepulchre Church is evident. Proportionality, design, architectural structure and so on are all present to a high degree.

As the player progresses through the environment of *Assassin's Creed I*, the patterns related to Arabic architecture are clearly visualised. Generally, the patterns are respected and in accord with Arabic design; however, there are a number of items where the representation can be criticised. One of the issues for consideration in this respect is the appropriation and use of cultural artefacts from locations other than the game's location in Jerusalem. As a mechanism to critique this aspect this Thesis focuses on the minarets (spires or other tall architectural items on mosques) used within the game.

The Minaret is one of the most familiar architectural elements associated with mosque design. It is used to make the call to prayer. Minarets were used in Islamic history as a political symbol of the ruling patron and as a symbol of Islam's might over the conquered land. They also functioned as a place where fires were lit to signify the time of fasting or prayer (Rasdi, 1998: 274).



Figure 4.7 The different types of Minarets in Muslim countries. (Forum.davidicke. 2017)

In *Assassin's Creed I* the minarets have a cylindrical shape, which is contrary to the actual square shaped Minarets in the cities of the Levant (see Figure 4.9). Egyptian minarets are used in the game which, in addition to having a different shape, also possess many architectural details (by way of decoration, the depiction of plants and other fauna, and the use of calligraphy) in comparison with the minarets found in Jerusalem or Damascus. For example, the developers used Maghreb calligraphy in the minarets, while the actual calligraphy used in Damascus is that of Al-Tholoth. Another significant difference is that while the mosques in the game generally have only one or two minarets, the actual mosques of the period had four, with one in each corner (this is a necessary aspect of the function of the minaret, which is to broadcast the call to prayer). In order to allow the Muradin (the crier) to perform his role, the upper tier of each minaret has a balcony-like structure. In the game, these balconies are much larger than those actually present on the minarets of the region, and are more similar to those found in Egypt.



Figure 4.8 Jerusalem Minarets, the Old City. Al –Aqsa Mosque.



Figure 4.9 Screenshots showing Egyptian-style minarets, Ubisoft (2007).

In respect to the representation of the architecture in *Assassin's Creed I*, it may be that the designers have specifically made design choices to include cultural artefacts to visually improve the game's content. Features of 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 in general, foregoing consideration of where those items are specifically located.

4.2.7 Sculpture

Sculptures are objects (statues or similar art forms) which may bear some form of religious or personal meaning. Often they represent a famous historical figure or symbol. Using a non-factual or mythical strategy to design an enjoyable game is a well-respected narrative path, but to consciously or subconsciously misrepresent cultural heritage without prior research, may be risky for video game success in terms of business or a nation's historical and cultural identity. When identifying cities or countries we often look at famous or prominent surroundings and at the arrangements defining famous buildings, monuments, gardens, or courtyards and city squares to include all existing sculptures. This can be applied to how they are transferred to a virtual world.

In Assassin's Creed I there is evidence of misrepresentation or a lack of viable representation of sculptures; some issues are more evident than others, although all contribute to problems from the understanding of the design team. For example, Moors Crosses (commonplace in the Yorkshire region in the United Kingdom) were not present in Jerusalem during the twelfth century. They are, however, used within the game (at the entrance to the Holy Sepulchre, for example, (See Figure 4.11, 4.12)) to serve a semiotic function for Western audiences who, familiar with the cross as a symbol, will readily understand that a Christian location is designated. A further example of the misuse of cultural artefacts can also be seen in the transplanting of the architecture from Petra (Jordan) to locations in the game such as Jerusalem. Petra is one of the seven wonders of the world, and is a national symbol of Jordan (see Figure 4.13, 4.14). Game designers may utilise the architecture of Petra in the game from a marketing or beautification perspective. In a similar way, two Persian Royal Guards (Shiraz) are found in the city of Jerusalem (see Figure 4.15, 4.16). While the designs are generally factually accurate

given the limited evidence available, their location is inconsistent with data we have on the historical time period.



Figure 4.10 The image of religious zones that are occupied by Christians who are living in the city of Jerusalem. ©Ubisoft (2007).



Figure 4.11 The Moors Crosses, North Yorkshire (photograph taken by the researcher, 2014)



Figure 4.12 Petra architecture under the Aqsa Mosque in the game of Assassin's Creed-I, Source: Assassins' Creed ©Ubisoft (2007).

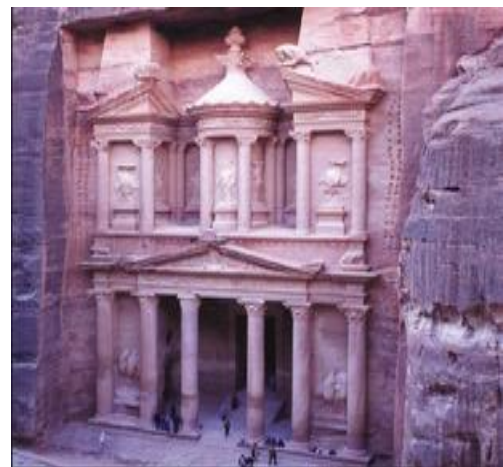


Figure 4.13, the image of Petra architecture in Jordan (Sporleder, 2016)



Figure 4.14 Persian Royal Guards figurines under the Aqsa Mosque in the game of Assassin's Creed-I, Source: Assassins' Creed ©Ubisoft (2007).



Figure 4.15 Persian Royal Guards in Shiraz, Iran (pinterest, 2017)

The consistency and implementation of generic sculptures (such as fountains) are factually representative of the time period, although it is difficult to represent their exact location within the cities. This is primarily due to insufficient or absent surviving evidence of their location. Despite this, the use of generic sculptures within the game environment is satisfactorily in line with the historical period. The researcher would argue that using sculptures native to the environment should be used objectively to supplement the environment of the game rather than arbitrarily including objects from foreign cultures.

4.2.8 Visual Image

Marketing is the leading method used to publicise products. However, using a company's logo and trademark in game, and inserting it into the heritage of cities and countries presents problems, as it may lead to misrepresentation of the cities' cultural heritage.

In *Assassin's Creed I* the use of its game logo is noted on nearly every rock around the city, reducing the impact of the environment through overuse and exposure to the marketing of the series. The use of the in-game logo itself isn't necessarily negative in itself, as it is used in conjunction with the story, although if the environment is saturated with the logo it reduces the cultural heritage and environment impact on the player as it was obviously not present during the crusades. The author employs anachronism in the form of the mass noun. 'The action of attributing something to a period to which it does not belong' (OED). In this perspective, anachronism can be defined as video games using historical and cultural items outside of their real historical context. A good example of an anachronism deliberately included in the game is the use by one of the factions, the Saracens, of the modern flag of Turkey as its banner. At the time of the Third Crusade, the Turkish state was 800 years in the future (see Figure 4.17). There is no evidence of the design being used by the Saracens during the crusades. The image of the Crescent moon and star is a familiar sight used to represent the Islamic world, leading to possible confusion when the designers were creating the Saracen flag as the primary Muslim faction. In contrast, the flags of the European factions are fairly accurately depicted, possibly due to the designers being more familiar with western accounts of the Crusades. However, inaccuracies further occur in the over stereotyping of the European crusaders themselves.



Figure 4.16 The modern Turkey flag used in the game and in time of Third Crusade the Ottoman Empire do not started yet. Ubisoft (2007).

The imagery associated with mats, rugs and carpets can be considered very accurate in terms of design and usage. Generally these are placed in appropriate locations, for example, prayer mats in the living room. However, there is a notable tendency to exaggeration in the placement of decorative rugs and carpets. No doubt influenced by the Western artistic movement known as Orientalism, in which the archetypal Persian carpet played a large part, richly decorated rugs and carpets are found adorning many of the interior locations in the game. In reality, they would have been far less commonplace and in more limited locations. Using game symbols within the game itself is an understandable choice by the designer, to promote the game and represent story or plot. In respect to this, oversaturation leads to reduction of representation and negatively impacts on the game. When used correctly, semiotic visual images such as flags, as well as decorative items such as carpets, can enhance the imagery of the game and can help to correctly represent an environment for a given historical period. But when used anachronistically or inappropriately they can give an entirely misleading representation of the time and place.

4.2.9 Documentation and Writing

Calligraphy is part of Arab and Muslim life and cultural heritage, the skills having been passed down through the generations, and it is still taught the traditional way, with a master teaching an apprentice. There are many rules to learn for the many scripts of calligraphy, each type relating to the identity of a tribe, city, Arab Nation or a specific region in the Middle East.

In *Assassin Creed I*, three types of Arabic calligraphy can be identified in Jerusalem and Damascus. Maghreb Calligraphy (popular in northwest Africa and Andalusia, famously so in the Alhambra at Granada) has been used for the Damascus minarets (see Figure

4.18). Thuluth Calligraphy, popular in Egypt and Anatolia (modern Turkey), and often found in mosques for decorative purposes, is also found in the Dome of the Rock in Jerusalem (see Figure 4.19) but is a recently added anachronism that was certainly not present in the 12th century. Al-Koufi Calligraphy, more popular in Iraq, misleadingly appears in the game in the main library of Damascus. Maghreb Calligraphy is not related to Jerusalem, Damascus, or the Levant Region, rather it is from the Maghreb region in North Africa (Tunisia, Algeria and Morocco). In fact, the 12th century inhabitants of Jerusalem and Damascus would have been unable to read such calligraphy, therefore such misrepresentation of such an important element of cultural heritage could have been easily avoided by strengthening the understanding of such calligraphic styles.

There is evidence of nonsensical writing placed around the game; for example, an archway in Damascus has indecipherable scribbled lettering on the top section of the arch. There is also meaningless lettering in Kofi square, used as decoration. The lettering is pseudo-Arabic script, although it has no meaning, which is contrary to the meaning of calligraphy in the Arabic world as something important.



Figure 4.17 Maghreb Calligraphy used in the Damascus minarets, Ubisoft (2007).



During the last part of the game there
Figure 4.18 Thuluth Calligraphy used in Dome of the Rock in Jerusalem, Ubisoft (2007).

are a variety of languages used to describe the apocalypse. The languages are accurate in terms of understanding from a native or non-native perspective. The writing in *Assassin's Creed I* is generally accurate in terms of symbols, although the content tends to vary,

possibly due to writing being used primarily as a decorative tool rather than specifically used to inform the player.

4.2.10 Performance Arts

Going through *Assassin's Creed I* in more detail we can easily find unrelated aspects of cultural heritage in the cities of the Levant used within the environment of the game. One of the many details that can be missed is the performance art of the characters and their behaviour and actions. When analysing performance art, there are two simple misrepresentations of cultural heritage.

The game applies Buddhist traditions to the way Altair walks, as well as many NPCs (see Figure 4.20). This is inconsistent with the methods used at the time in terms of religious prayer. The performance may lead to confusion between religions due to the alien nature of the movement for the environment at the time.



Figure 4.19 Altair uses a Buddhist walk praying in the game, Ubisoft (2007).

There is a distinct lack of recreation amongst the Arabic soldiers, especially in relation to performance. The primary method of recreation was sword dancing; the game includes no evidence of such activities. Unfortunately, this means there is a lack of cultural representation of Arabic soldiers.

People gathering in market squares to negotiate, or for discussion, is representative of some aspects of Middle Eastern culture, although there are inconsistencies. In reality, people would gather in groups to discuss and barter; in the game the interactions are generally one-to-one. The overarching feeling is one of hostility, even though the market squares of the time were often vibrant locations.

The in-game use of women who carry jars of water on their head is relevant to the region, although not completely accurate (see Figure 4.21). Water was primarily transported in goatskins then transferred to jars in the home. The method used in-game can be attributed to North African traditions. There is also a lack of variation in Assassin's Creed, as only a single female model is used throughout the game, which suggests a lack of thought, or possibly time, or performance limitations with regards to this aspect of the game.

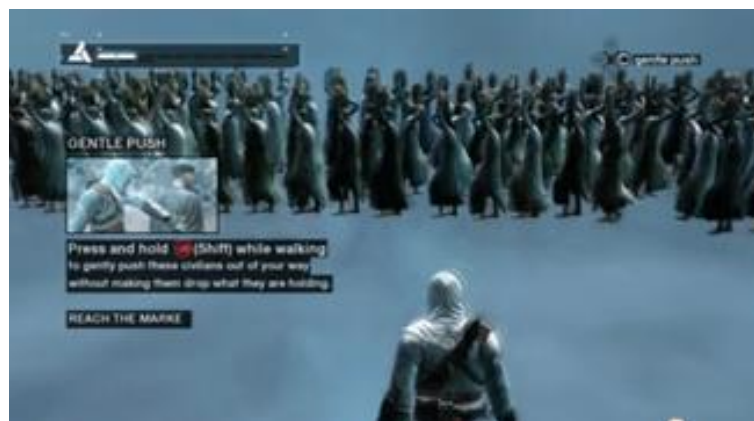


Figure 4.20 Women who carry jars of water. Ubisoft (2007).

Major social gatherings are represented as correctly as can be expected in the game. The leader stands on a balcony, or raised platform, and speaks to the audience, who are not permitted to interrupt. This is consistent with current, as well as historic, Muslim traditions of important figures giving speeches on a Friday.

The performance art within the game ranges from being poorly representative, to accurate to the best of current knowledge. This shows that the design team have given some thought as to how the society interacted with recreation and ritual; although there is inevitably room for improvement.

4.2.11 Characters in The Game

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 of people from the Middle East in the 12th century. According to Hodgson & Knight (2007), a simple character construction process was followed in *Assassin's Creed I* following three phases. In phase one, designers simply portrayed the main character in the classically realistic way. In phase two, designers added and inserted further details during the development of the main character until it looked more like the main character of *Prince of Persia: The Sands of Time* (2003) combined with an Arabian Knight. In phase three, designers decided to make the main character more edgy, quick-tempered and stylised, thus to make it compatible with the aim of the game.

Critiquing the character design, we can see in Altair Ibn-Alahad a limited representation of the people of the region. Given the researcher's experience and ethnic origins (Saudi Arabia) it can be asserted that the ethnicity of the character does not represent the people of Damascus or Jerusalem, with the stylised character portraying a typical 'Hollywoodian' style. For example, Philip Shahbaz, an American actor, represented the voice and model of Altair Ibn-La Ahad (see Figure 4.22). He bears no resemblance to a man from Damascus or the surrounding region, which is supposedly the origin of Altair. Peter Renaday, an American actor, represented the voice and model of Al Mualim (see

Figure 4.23). In this case the designers achieved a close approximation to the ethnicity and heritage of the region.

In this area, the portrayal of ethnic features in the game is subject to the same criticism as old Hollywood movies in which, as a well-known example, biblical figures such as Jesus are played by white (ethnic Caucasian) actors.

The game designers chose a historical episode from the Middle East, using real events and characters to portray the cities in the region. This ought to have been a straightforward task for the developers. However, analysing the appearance of the people (the game characters) they only achieved partial success in terms of accuracy.



Figure 4.21 Philip Shahbaz an America actor represented the voice and model of " Altair Ibn-La Ahad, Ubisoft (2007)



Figure 4.22 Peter Renaday provides the voice and model of "Al Mualim", Ubisoft (2007).

The game emphasises and focuses on the importance of the main character by providing an in-depth background of the character (history, motivations and so on) and his important counterparts. There are many characters in the game related completely to the Middle East and they are associated to historical events, for instance: Rashid ad-Din Sinan (1135-1191), also known as Al Mualim (the Mentor), who is the Mentor of Altair (in realty he was a strong leader of the Assassins); Malik Al Sayf (1165-1228), who was the head of

the Assassin bureau in Jerusalem in 1191 and Tamir (1147-1191), who was a member of the Templar Order, and a well-known black market merchant based in Damascus. All the above characters are in the game and each of them are involved in historical events, but the game missions differ very significantly from historical reality. This misrepresentation may have an impact on the historical understanding provided by the game, especially as the figures are not known to the general public and these figures emerge in the game as negative characters.

The character used does not look Arabic, but rather he looks western. If we consider the character's behaviour, movements, language and complexion with his cleanly shaved face, the game portrays him as a Hollywood star (interestingly, the game has now been adapted as a feature length movie). Furthermore, his accent betrays him the most, and one soon starts to wonder if such misrepresentation of cultural heritage aspects was consciously, or unconsciously done. It is likely the character was created in such a way as to appeal to western game players, in order for them to identify more with the character. Furthermore, critics highlight the facts that the words chosen and mannerisms portrayed by the character are completely different from those of people from the Middle Eastern region. Such deformation was done to Hollywoodify the main character without respecting cultural heritage.

By examining the characters in the game, it is obvious that little attention has been paid to the portrayal of women. The same model has been used for virtually all female characters; the style of clothing as well as the facial features of the characters have barely any variation. A *hijab* and long dress bearing some representation to the Middle East is the style of clothing. The accuracy is somewhat lacking as a variation in clothing was inevitable during the Crusades; for men and women alike. Women play an important role

in society and their lack of representation is concerning considering the depth of representation of men. Overall, the characters have been designed with an American or European audience in mind, rather than the region being represented.

4.2.12 Clothes

A bird of prey is used as a source from which to design the clothes of the characters in *Assassin's Creed*, although it would have been better to use a Falcon instead of the North American Eagle (see Figure 4.24). Furthermore, analysing the clothes designed for characters, we found it to be made fashionable and aerodynamically oriented. This is out of line with the authentic fashion and clothes design to of the time period, thus not matching with the reality of the time period of the story.

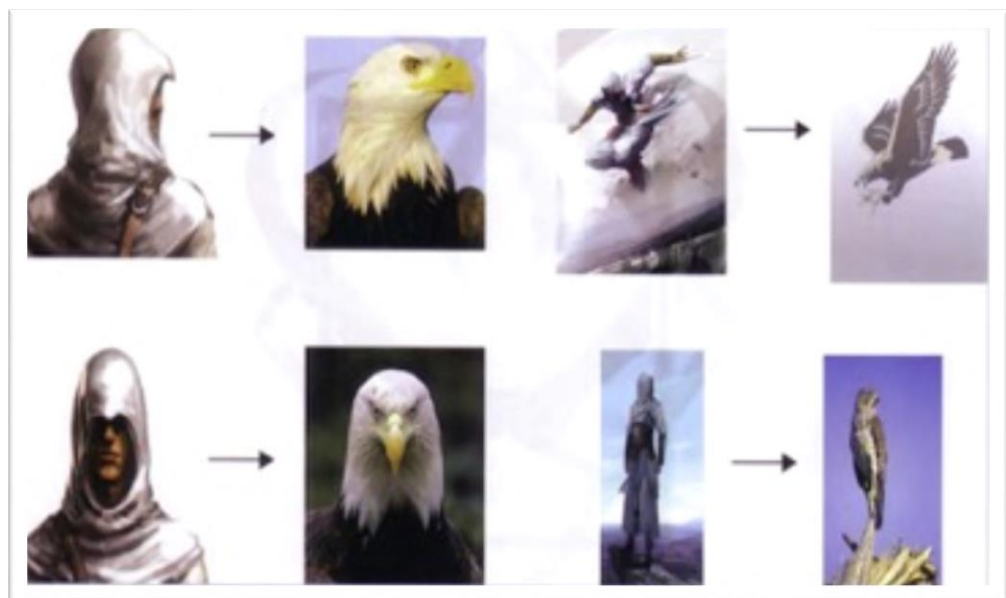


Figure 4.23 the idea of using bird of prey as a source to design the clothes of the characters in *Assassin's Creed*, Knight, Hodgson, (2007).

The main idea to design the clothes, movements and actions for the main character Altair are displayed in Figure 4.25. Moreover, such clothes have no link to Jerusalem or Damascus except the colour white, and for whatever reason the designers chose such stylised, aerodynamic clothes, with sophisticated arms and armours using materials and

designs neither from the era nor the region, all of this can be justified by designers on the basis of: it is a Mythical story, and not related to factual cultural heritage being compatible with the needed actions for the characters to achieve the targets within the game play. In doing so the game does not respect any heritage from the clothes design, to the type of weaponry used, rather they misrepresent these.



Figure 4.24 Assassin's Creed main character, Knight, Hodgson, (2007).

Just as women are underrepresented as a part of society in Assassin's Creed, their clothes also suffer inaccuracies. The *hijab* used resembles modern fashion, rather than historical function; the dress is generally not consistent with Middle Eastern design. Women's clothing was stereotyped most likely as an afterthought due to more attention required of more important characters. In a similar vein, the clothing of generic soldiers also displays inconsistencies, although generally speaking the European knights are portrayed well. The Saracen knights on the other hand are more representative of Mughal knights from the Indian subcontinent; rather than historical Saracen soldiers. On the other hand, major characters have lots of detail, as mentioned previously, there is varying consistency of accuracy for these characters from historic and cultural perspectives. While there is lots

of detail afforded to main and important characters, the accuracy varies largely due to the focus on Western ideas of protagonists, much the same as the portrayal of other characters within the game.

4.2.13 Places of scenic interest and landscapes

Assassin's Creed employs an array of background art and scenery to complement or enhance the experience for the player. Places of scenic interest allude to the use of Religious sites (Mosques, churches, etc.) and open spaces such as marketplaces and town/city squares (see Figure 4.26). The landscape is the general environment itself, area by area, such as mountains, terrain (desert, woods, etc.) and settlements (single houses to cities). The environment and its relevant places of scenic interest have several inconsistencies. In reality, areas that surround mosques have significant cultural importance and are usually adorned in such a way to reflect this. In the game mosques do not reflect this value, with the absence of typical monuments, or respect within their surroundings. Similarly, town and city squares are areas of importance and should be reflected to such a degree; yet in game squares vary little and are primarily copies of each other without any unique markers. Outside of cities there are also inconsistencies. Farming was (and is) an important part of life in the Levant; where there should be farmland in game, there is desert. Ignoring the huge cultural importance of the Middle East. There is little to no evidence given for why the farmland is represented as barren desert. Alamut castle's representation is also warped to show its importance to the storyline; being placed higher up in the mountains and made to a grander scale to show its significance.

The city of Jerusalem is highly representative of its historic and cultural value. The city landscape is accurately enclosed in walls, which have also been designed with cultural

sensitivity. This can also be seen from in-city vistas; with the player being able to see in its street design, infrastructure and social areas such as markets, clear consistency with their historic counterparts. Although these marketplaces are highly representative from their façade, you cannot enter them, hindering the portrayal of their cultural importance.



Figure 4.25 Landscape of Jerusalem City. Source: Assassins' Creed Ubisoft (2007).

Places and landscapes in-game have mixed levels of representation in terms of cultural heritage. While Jerusalem and its surroundings are well represented (perhaps representing the significance given to ensuring significant levels of accuracy), cities such as Damascus suffer. While there may be some purposeful reason behind this, it can be deemed to impact negatively on the historic representation.

4.3 Intangible items of cultural heritage

As outlined in Chapter 2, intangible elements of cultural heritage are understood as the practices, representations, expressions, knowledge and skills; along with the instruments, objects, artefacts and cultural places. Communities, groups and individuals are also integral intangible elements of cultural heritage. With the advancement in game

technologies, intangible cultural heritage has been easier to integrate. Intangible (or immaterial) artefacts include, but are not limited to: oral traditions, customs, language, music, festivals, rituals and special skills.

4.3.1 Language

Language are the methods through which we as a species communicate, either written or verbal. Within the context of this thesis, language also includes dialects, accents and the meaning and significance of communication within video games. Defined as the mother tongues of locations, this poses an issue when people of differing mother tongues attempt to communicate. However, our skills in learning make such challenges a (relatively) simple hurdle, which we bypass with few difficulties related to the quality of words and accent, such aspects expose some facts about our heritage and identity. As a result, language is arguably one of the most important features of the identity and culture of people. Ironically, in *Assassin's Creed* such an important aspect of the design was not respected, and is simply poor in promoting the real identity of Altair in the game. For instance, Altair's accent is not of an Arabic person from the Middle East, let alone from the Levant, it would have been much better selecting an actor from Jerusalem, or Damascus, or one with such heritage. Surprisingly the designers opted for Philip Shahbaz, an American actor with no Arabic skills at all.

Sadly, when we sample the language used in-game we can easily notice the repetition of many phrases and words, unfinished sentences, those which have no meaning at all, as well as the use of a different language that has no link to Arabic or English. The Arabic words used within the game have no link to the time period, or the region, rather the words chosen in dialogue relate to those from current American culture, with contents which could be deemed to be racially offensive, rude, and with no factual link to the

culture of the region. Such findings from analysing the video game have been shared by many game reviewers. For instance, myp3 reviews strongly criticized Altair's accent and the language skills used in the game. The design teams reason why Altair speaks with an American accent can be related to the fact that it's not really Altair talking; the whole experience is being processed by Desmond (a modern American guy) through the Animus. Desmond is trying to relive Altair's life but is building on his own experience, therefore the designers have a mechanism to ignore cultural relevance in Altair's accent and language.

Major characters aside, the general use of Arabic in the game is simplified and repetitive; often recognisable by simple short sentences with little to no real importance. There is also evidence that the language has been over-stressed for the benefit of non-native speakers; with proper nouns such as people, or places, being over enunciated for the benefit of such people. Inevitably this leads to errors in other areas of speech; for example, directions are often given in Arabic, but the wrong word is used. When a player is directed to go left, in game characters will tell the player to go right. While the Arabic is for the most part correct, it is obvious that it is primarily used as part of the background atmosphere; with little or no intent on being checked for substantive errors.

Due to the game's target market of a Western demographic, the language focus is understandably English. The unfortunate effect is that cultural representation suffers as the language used to express the culture is supplanted by another; resulting in poor error correction where the native language is used. While it is positive that Arabic is used within the game, it is not implemented to the extent that could be considered fair to the native language or its culture.

4.3.2 Sound and music

Sound and music is an important part of any culture, and is used throughout the game; background music, atmospheric music, and denoting cultural changes through musical pieces (from Saracen to Crusader) are some of the uses. As with many games, music is integral to the generation of emotional scenes within the game, and therefore it is essential to the player experience. In the Middle East, a common sound in any city is the Athan (the call to prayer) but this is absent in the game. The Minaret's primary use is purely functional, which is for the Athan. The structure is used in all major cities in the game; which would allude to the game integrating call to prayer, especially considering it is called five times per day. The oversight reduces the cultural meaning through the exclusion of a fairly simple, yet highly significant form of music.

The incorporation of the oud (a traditional Arabic instrument) in many sequences and areas of the game delivers a positive element of representation. However, unfortunately, the instrument is used incorrectly. An oud is usually played solo and at a slow tempo; the game uses it as a support instrument within an orchestra. While significant enough to comment on, the uninformed use of the instrument leads to its cultural importance being overshadowed by outside influences, usually in the form of the Western instruments.

Each city employs different music to present them as unique locations. The music is designed to reflect (to some degree) the culture of the city at the time. Acre employs Western instruments, and vocals, such as guitars, and monk chants to help portray its occupation by the Crusaders. While Damascus uses more traditional Arabic sounds, such as drums and flutes to portray it as an unconquerable Muslim stronghold.

The significance of sounds and music within any culture or society cannot be denied, which is why it has a defining influence on the atmosphere and mood of the game. While the game's music has some positive impact in terms of the instruments used and the relevance to the locations; there are absences of essential sounds, such as the Athan, or the correct function of instruments.

4.3.3 Folklore

Folklore is the tradition of orally passing on stories and myths through the generations. The game draws upon some Arabic and Western folklore to incorporate mystery as well as sentimentality for players.

The function and secrecy surrounding Alamut Castle is an example of folklore employed by the game. In traditional Arabic folklore, Alamut castle contained a paradise, and the use of hashish. This is chiefly what Alamut Castle is known for, however, this is excluded from the story, or its physical representation in the game. While aspects of real folklore must be omitted from the game, it would be worthwhile considering the inclusion of key aspects of traditional knowledge. This exclusion can be thought to reduce the representation of the true spectacle of Alamut Castle.

In a similar vein, the folklore behind the legends of Richard the Lionhart, and Saladin are still largely significant in Western and Middle Eastern cultures respectively. There is limited reference in the game to either character, essentially they are used to supplement the story. The impact is similar to that of the exclusion of primary cultural folklore in Alamut Castle.

On the other hand, the story of Al Hashashin is followed relatively accurately according to legend. The locations, characters, and general trend of the story is followed throughout the game. Due to its significance in Arabic culture, the inclusion and experience of the legend is culturally substantial. Folklore is important culturally, and the inclusion of various folklore stories has a positive impact on cultural portrayal within the game.

4.3.4 Behaviour

Behaviour incorporates how the game depicts the attitudes, gestures, actions, accents, etc. of the player character, as well as NPCs. The behaviours of most NPCs in the game are subtle and often allude to their intended culture, although Altair is depicted more as the American hero, as explained previously.

The gestures and greetings of characters in Arabic cities is overlooked within the game. In-game there is no evidence of handshaking, waving, or other important physical contact when people greet each other. Handshaking is of exceptional importance, considering Prophet Mohammed signifies that handshaking is an important part of greeting as it creates a physical and respectful connection. As a result, expecting people to shake hands (and wave) in public throughout the game is justifiable, yet non-existent. The repetition of phrases referring specifically to Mohammed and the wellbeing of his mother makes interactions in the game feel stale and repetitive.

Malik is portrayed more Middle Eastern than most major characters, or at least more believably (El-Nasr, 2008: 26). His use of gestures, personal space and mannerisms all present a more traditional Arabic interaction, at least in comparison to Altair. Similar actions can be seen in some of the unnamed NPCs within the city walls, although they lack the entity of well-interpreted greetings.

Throughout the game the interactions vary. With a focus on Arabic culture, the majority of interactions fall short of being acceptable; especially in Altair, the player character. While this maybe due to Altair being experienced through the eyes of an American, it serves to distance the player from the cultures in the game. This can also be applied to the methods of interaction between NPCs through the game, both named and generic.

4.4 Conclusion

This chapter shows that we all view the culture portrayed or exported by a videogame through our own experiences of that culture and its interaction with our own. While a game is not strictly expected to mirror reality, as this is a virtual impossibility, the conclusions drawn from each point should serve as a lesson for designers. The lesson being that cultural perception is interrogated through different mediums dependant on the player. Therefore, the accuracy of the culture the game is portraying is an important factor in how the player interacts, and interprets said culture. Creating a more informed product is not only beneficial to the experiences of the player, but also the designer's ability to create a more enjoyable game, potentially resulting in a more lucrative and respectable product.

While there is inevitably a target audience of the game, how other audiences experience the game should not be ignored, a more informed product leads to a more informed base of players and generally more positive reviews (if based upon the portrayal of a community or culture).

The sections above each analyse a specific part of the design of the game. Each section reviews and critiques the culture through the experiences of a player from the Middle East

and how cultures relative to their own are represented throughout a game designed predominantly by individuals from a western background.

5 Chapter Five: Case Study Unerthed: Trail of Ibn Battuta

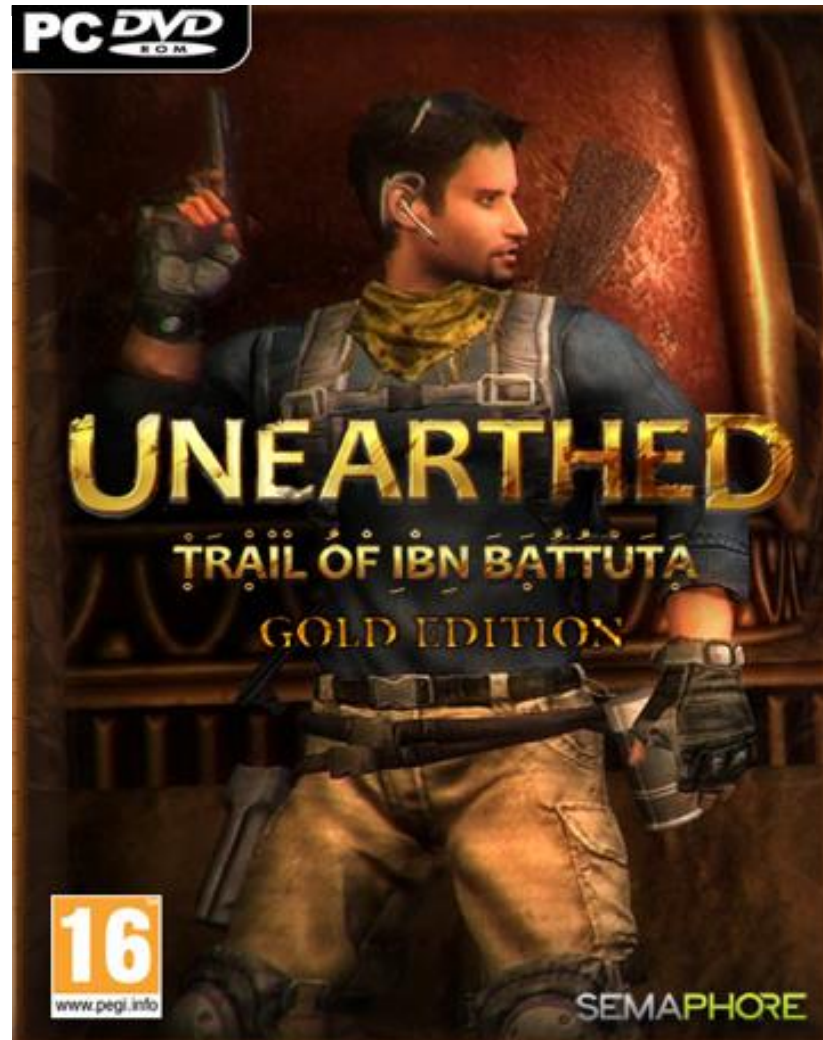


Figure 5.1, The cover of the PC DVD of the game Unerthed Trail Ibn Battuta, Semaphore (2013).

5.1 Introduction

Chapter 4 presented a case study regarding Assassin's Creed with respect to analysis of the representation of cultural artefacts. This initial case study presents a case that a range of misrepresentations exist within video game contexts. To further support these findings and to demonstrate an understanding of some of the impact of game production location on representation there is a need to analyse a second game.

This Chapter presents case study analysis of *Unearthed: Trail of Ibn Battuta* (2013). This video game was developed in Saudi Arabia for a global market. The case study analysis follows the same form as Chapter 4. At the end of the Chapter a discussion and analysis of the main concerns from both Chapter Four and Chapter Five will be provided. These concerns are effectively grouped under five sections: 'cultural appropriation'; 'hollywoodisation and beautification'; 'selectivity'; 'game dynamics ruling design decisions'; and 'ideological constraints'. The research raises issues about how video game designers approach the inclusion of items with cultural meaning in their products.

5.2.1. Development

Unearthed: Trail of Ibn Battuta is an action adventure video game series. The game was released in 2013, developed by Semaphore and published by Semanoor International, the parent company of Semaphore in Riyadh, Saudi Arabia. This game is considered to be the first game created and developed by Saudi developers. Aldoghaither comments, "We are thrilled to be introducing Saudi Arabia's first multiplatform video game to the world. We are determined to deliver a next-generation experience that will do justice to the amazing story of Ibn Battuta" (Clarke, 2011). The game was created to support a multiplicity of platforms, such as PlayStation 3, PC, IOS and more. Furthermore, the game is provided in more than twenty different languages (Arabic, English, French, etc).

The Arab and Muslim world are not as well developed in the video game industry compared with the western video game industry. The main objective of the game, according to Designer D is to reveal the beginning of the Arab world in the games industry. In fact, he states that they wanted to offer a different view of history and present Islamic and Arabic culture accurately unlike the misrepresentations or distortions that occur in Western video games (2014). Actually, the Arabic and Islamic world is very rich in terms of culture. Through the war in Iraq and impact of 9/11 there is an increasing interests in the Middle. Many films, documentary programmes and games have addressed the area of the Middle East. However, the focus of the media has primarily been on terrorism, religion and war. For example, *the movie of Hurt Locker* from 2008, about the war in Iraq, the movie of *King David* set in Jerusalem (Elfand 1985) and *Kingdom of Heaven*, which was set in Morocco (Scott Free, 2005). Many video games have been set in the Middle East, for example *Assassin's Creed I* (Ubisoft, 2007) was set in four countries in the Middle East and *Uncharted 3* (SCE, 2011) was set in Yemen.

5.2.2 Plot

Faris and his archaeologist sister Dania receive a call to visit an Arabic country in the Middle East (Morocco) in order to follow in the footsteps of the famous Muslim explorer, Ibn Battuta (1304-1369 A.D.) who travelled to many places around the world. Throughout their journey, they are forced to tackle many obstacles and solve a number of challenging puzzles. In addition, they encounter another team taking the same journey for the same reasons.

The journey takes place in Middle Eastern countries such as Morocco, Syria, Egypt and Dubai. In the game, players encounter the most important archaeological and historical

sites in the Arab world. The game uses formal Arabic style such as language (conversation), and old Arabic calligraphy (Moroccan style). The game also uses one of the Arabic inventions “Astrolabe” as a logo of the game. The game in Arabic is “Al-Ricase”, which means treasures buried underground long ago (Ibn Manzur, 2003).

Unearthed: Trail of Ibn Battuta is composed of four parallel plotlines, each taking place in different locations. 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 traveller Ibn Battuta. However, another group has the same aim as Faris and his sister and to finish the game players must accomplish the four missions.

At the beginning of the game, Faris appears in a modern building, where he faces a group of enemies and uses weapons, such as bombs, as well as fighting by hand, in order to complete the mission. This section of the game is short and the objectives are limited.

In the second part of the game, the player moves to an Egyptian pharaoh’s temple. In this location, Jawad faces many puzzles, and he tries to find keys to open doors. The player can use different actions, such as jumping, running, climbing and crawling. At the end of this part, Jawad fights with a strong man, and then the player continues with the story.

In the third part, Jawad appears with his sister in the Arab desert. The heroes use a motorbike and face many different enemies. The enemies use a car, a helicopter and a motorbike, however, this part is short and the action is limited. The final part of the game is set in Morocco, primarily in Tangier. The player takes a tour of the city of Tangier

accompanied by Rashid. Thereafter, the player takes part in a car chase on the streets of Tangier.

5.2.3 Back story

The game follows the footsteps of the famous Muslim traveller, Ibn Battuta, who lived in the 14th century. He explored many places and countries and encountered numerous people. Ibn Battuta is Muhammad Ibn Battuta. Battuta is a female name, and Ibn Battuta received the name from his mother. He was born in the year 1304 in Tangier, Morocco. He started his explorations when he was twenty years old around 1325. The aim of his traveling was to go on a Hajj (Pilgrimage) to Makkah Al-Mukarramah. However, the plan changed, and he travelled for about twenty-nine years. During this time, he covered around 74,000 miles, visiting more than 43 countries. Most of the countries visited by Ibn Battuta were in the Islamic Empire (see the map) (Ibn Battuta, 2000).



Figure 5.2, A map of Ibn Battuta's travels.
Orias (2012)

The journey of Ibn Battuta started in North Africa and included countries such as Egypt, where he visited Alexandria, Cairo, and the Pyramid of Giza. He also visited Damascus in Syria, Jerusalem, Iraq, Iran, Turkey and many more countries. Ibn Battuta explored many places and encountered many different cultures, not only in the Arabic, and Muslim world, but also beyond. He wrote a book about his experiences under the name of *Al-Rihla* (Dunn, 2012).

The game transferred the idea of Ibn Battuta travelling from place to place through to the game narrative linking the past with the present time through the use of some modern cities e.g. Dubai and old cities in ancient Egypt. The game takes advantage of the stories of the famous Muslim traveller, Ibn Battuta, but the reality is that there is no relationship between the game and the real story of Ibn Battuta.

5.2.4 Architecture

The architecture of the world surrounding Ibn Battuta on his journey across the Islamic world and beyond is captured through his writing (Ibn Battuta, 1325). Individuals 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.

Modern Dubai is mainly represented through a hotel and office space. These areas are not highly detailed and therefore hard to comment on their cultural representation. As a result, the location could be anywhere in the world and has little reason to be a part of the game (as it is meant to be representative of the Middle East).

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, the Abu Simbel temple, the temple complex at Luxor, the Temple of Edfu, and the Pyramids. These are all provided within a short gameplay distance and through a single panoramic outlay connecting each together. Furthermore, in the video game 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 (see Figure 5.3). In reality the designers prioritised 'hollywoodisation', over the true realism of the temples and their environments in the game.



Figure 5.3 The figures of the Pharaohs. Semaphore (2013).

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 Egyptian temples (see Figure 5.4). 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.



Figure 5.4 Large water fountain found I the game, Sempere (2013).

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 (see Figure 5.5). 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*. The depiction of lifestyle in Tangiers coincides with its architectural design; social interactions employ the use of architecture positively through the use of fountains and open spaces as locations.



Figure 5.5 The city of Tangiers in Morocco, Sempore (2013).

Architecturally speaking the game is well represented in terms of architecture when depicting natural, or ancient spaces, while city locations can be seen as generic. Tangiers effectively depicts many aspects of culture and combines old and new in a positive way, but religious sites are neglected.

5.2.5 Sculpture

The most prolific use of sculptures occurs during the navigation of Abu Simbel Temple in Egypt. There are four main styles of sculpture employed: human, animal and the use of columns and obelisks. With regards to human statues, most come in the form of Pharaohs; the most common (or stereotypical) stone human depiction of artwork from Ancient Egypt. The sculptures themselves are highly representative in terms of accuracy, material, colour and size; although it is an eclectic mix of statues from the whole of Egypt, not just Abu Simbel. Thus, each sculpture is accurate in their own right, yet the collection is variably inaccurate due their origin being foreign to the temple. Animal sculptures are almost exclusively of rams; also commonly found in Ancient Egypt, although not generally found at Abu Simbel. The Ram sculptures appear to have been based upon ones

found at Karnak Temple in Luxor; a large distance from Abu Simbel (see Figure 5.6). They are often placed in close proximity to the pharaohs too, which is not common practice known in ancient Egypt. Similar to the human sculptures, the rams are accurate in terms of design (size, colour, materials, aesthetics) but are unfortunately incorrectly placed in terms of location (in both origin and proximity to other sculptures). The columns used are accurate in terms of decoration and design; utilising hieroglyphics and artwork typical of column motifs from the period. The design uses a consistent shape, size, and materials with fluted heads, this can be considered accurate and consistent with how statues were implemented in temples in Ancient Egypt. Similar to the previous two forms of sculpture, the design of individual columns raises few issues, it is their location, which does. Fluted columns are native to Karnak, much like the rams. As a result, the accuracy of the individual statues may be overshadowed by their peculiar location. Many of the in-game statues have collapsed, or have been intentionally destroyed; this is not frequently seen in the major temples of Ancient Egypt. The most inaccurate form of sculpture, although still fairly accurate, are the obelisks. While accurate in terms of construction (clearly monolithic) they are overused, out of place, and visually designed to be easier to climb. Due to this interaction (climbing) being part of the game design, it is understandable that culturally speaking their accuracy has faltered. The design appears to imitate that of the famous obelisks in Luxor; although there is no hint as to the pairing of obelisks, which was part of their design in Ancient Egypt.



Figure 5.6 The animal Ram, the columns sculptures found in the game. Source: Semaphore (2013).

Overall, sculpture design is accurate in terms of physical appearance and cultural importance with regards to their status in Ancient Egypt; while there are minor misrepresentations, the employment of sculptures can be considered a success from a cultural perspective.

5.2.6 Writing and documents

Arabic Calligraphy is an incredibly important part of most Middle East and North African cultures. There are many Arabic scripts, which differ from region to region; therefore, accurate use in each location is paramount to the effective representation of culture. Due to the story being based in Morocco, the dialect and calligraphy are essentially all Moroccan. Written language is highly representative of the regions in the game; even including hieroglyphs from Ancient Egypt. Thuluth Arabic Calligraphy can also be seen throughout the game, this can be seen from its distinct shape, in which one third of each

letter slopes; a very difficult script to replicate, its inclusion shows the importance given to it (see Figure, 5.7).



Figure 5.7 Arabic Calligraphy used in the game, Semphore (2013).

It is very hard to fault the Arabic script from a knowledgeable standpoint in terms of grammatical or spelling errors; therefore, the writing and documentation in the game tends to be highly effective in terms of cultural representation.

5.2.7 Visual image and Landscape

The environments depicted in the game are undeniably attractive, particularly ancient Egypt. It is evident the designers have spent a great deal of time and effort on provision of detail. Ancient Egypt has been selected regarding the richness of the visual images, which gives the designers an excellent opportunity to choose what is appropriate for missions in the game. For this reason, the game has used some ancient figures for the purpose of in-game beautification. The misrepresentation occurs when the designer concentrates on gameplay, rather than an accurate visual representation of environment. There is an abundance of detail applied to the Egypt level, while accurate in terms of

individual items; it is an eclectic mix of different Egyptian artefacts. There are some misplaced items and traps, e.g. fireballs, while a strange sight, they do not necessarily detract from the impressive accuracy of other objects in the environment.

Graphically, *Ibn Battuta* pales in comparison to *Assassin's Creed*, therefore the visual beauty of the game is less impressive. This simplifies the process of representing items as the designers cannot apply as much detail; resulting in simpler cultural representation with the associated limitations, i.e. it is easier to represent items although to a lower possible degree.

5.2.8 Characters

The narrative, environment, architecture and characters used in the game encompass cultural elements. However, there are many arguments in terms of cultural issues, which portray wrong messages about the included cultures. The characters in the video game are important figures for reflecting the image of culture. Furthermore, the centres of attention for the player during the game are primarily on the main character. However, the development of video game graphics makes images within the video game clearer and easier to mimic anything from reality. In spite of this evolution, there are still some mistakes made in portraying the personal identity, which are reflected the culture. The following paragraph will focus on the characters of the game, within which the characters will be analysed and compared.

The game of *Unearthed: Trail of Ibn Battuta* depicts an Arabic society. In the game there are many characters, some of them carry an Arabic identity, and others are difficult to pinpoint the origins of their identity. For this situation it is better to start with the main character of the game: Faris. The game does not divulge his country of origin. His identity

appears to be comprised of multiple Arabic identities in terms of corporeality and clothing. For instance, Arabic cultures are concentrated in two locations; one in Asia which includes the Arabian Peninsula, the Levant and Iraq. The other location is Africa, with their own distinct features.



Figure 3. 8 Faris the main character in the game. Source: Semaphore (2013).

Unfortunately, the main character in the game fails to convey Middle-Eastern characteristics, behaviour, and clothing. Furthermore, his action, mannerisms and goatee (beard style) is not representative of any Arabic culture (See Figure, 5.8). However, in the modern day, Arabic culture can be more mixed due to migration and movement of people, particularly across the Arabian Peninsula.

The designers of the game have taken influences from other games, mainly from Western video game designers for the representation of the Arabic characters, such as the main character of the game of *Uncharted 3, Nathan Drake* (2011). Resulting in the design team paying little attention to cultural issues.

Other characters who appear in the game, such as the archaeologist Dania and Rashid the old man in Tangier, represent Arabic society effectively. Dania appears with a scarf (*hijab* in Arabic) during the game; this reflects the appearance of Muslim women who live in Arabic countries.

5.2.9 Clothing

The clothing and overly macho appearance of Faris portrays him more like an American hero in Hollywood (Fakhruddin, 2013). The scarf around his neck can be interpreted as a small symbol of Arabic culture, but is usually worn on the head, while Faris wears it around his neck; an impracticality in the Middle East due to the climate. This scarf can often be seen in movies or video games; for example, Matt Damon in the movie of '*Green Zone*' (2010) and Nathan Drake in '*Uncharted 3*' video game (2011). It has become an important symbol to represent Arab culture in western society. In the past, traditional Arab clothing like (Agal and shmage) have been used to represent Arabic characters in video games. Although now designers have followed Western video game designers in the way they represent characters from the Middle East.

Other characters who appear in the game of *Unearthed*, 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. Actually, in the Arab world there are different styles for women aged over eighteen. Some of them wear the *hijab* to cover their hair. This kind of style is the most popular in Muslim countries. 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* (See Figure 5.9).

The game's female clothing can be considered an accurate representation of Middle Eastern clothing. The clothes Dania wears are a viable example; when we compare her to strong female Western characters, such as Lara Croft from *Tomb Raider* we can see the clear difference. While Lara Croft wears relatively revealing clothing, Dania wears clothes considered appropriate in Moroccan culture and therefore wears clothes, which cover most of her body. This is distinctly different from the stereotyped Arabic women's clothing in other games; which are often revealing and 'exotic'. This can be attributed to 'orientalism', the view that 'Islamic society is a timeless exotic entity' (Sisler, 2008). Thus it is refreshing to see a game, which portrays Arabic women as a legitimate reflection of the aforementioned culture.

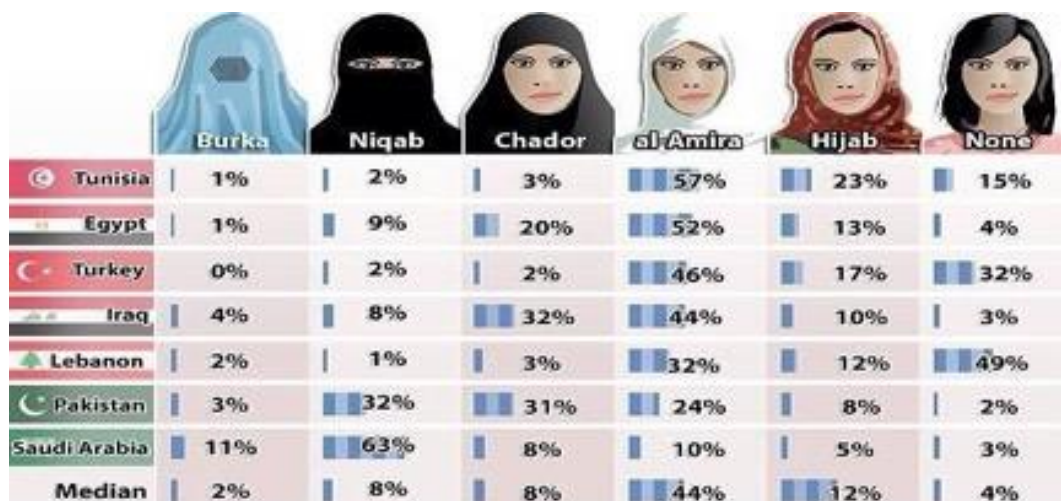


Figure 5.9 The type and percentage of women *Hijab* in Arabic and Muslim countries. (Pew, 2013)

Men in Arabic and Muslim countries 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.

Faris wears typically American clothing, somewhat representative of the changing style in the Middle East, although perhaps a contradiction of the aim of the game to promote Middle Eastern styles and locations. This is due to marketing and is used to be representative of other popular exploration franchises such as *Uncharted*; with the style of Faris being based on Nathan Drake, from the *Uncharted* series.

The game reflects the traditional culture of the countries, and the supporting characters wear traditional clothing. Rashid and the female characters appear wearing the traditional Moroccan dress, which gives the game more credibility and represents the culture accurately (See Figure 5.10).



Figure 5.10 The Arab clothing of man and women in the game, Semaphore (2013).

Most supporting characters wear clothing that can be deemed as accurate, especially those from North Africa; wearing traditional items, such as long dress, a fez, a *Hijab* and so on. This positive representation is contradicted by Faris, whose similarities to Nathan Drake to associate the game with the adventure genre diminish accurate portrayal of Middle Eastern clothing. Using what is a virtual copy of the *Uncharted* protagonist to epitomise the adventurer stereotype.

5.2.10 Language

The language and music do represent the intangible culture of the Middle East. 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 because all the actors and actresses are sourced from Arabic societies for the Arabic version, whilst American actors were used for the English version (Designer D, 2014).

The music within the game is not representative of Arabic culture. Instead, it is designed to appeal to a global audience; therefore, the use of music in terms of culture falls short of expectations from a game designed primarily in the Middle East.

The language in the game is highly representative of regional Arabic, resulting in accurate cultural representation. Unfortunately, the music in the game affects the atmosphere, as it is not correct for the regions and country portrayed in the game.



Figure 5.11 The Arabic actor and actresses in Semaphore studio, Semaphore (2013).

5.2.11 Discussion of the case study

The representation of elements within modern video games is complicated and as such misleads the player about the culture. The complications actually relate to the culture itself (Taylor, 175); in order to understand the different types of culture through video games this requires an understanding of different elements of cultural representation. The complicated nature of culture makes recreation of the elements mentioned in this chapter difficult to analyse and research. As a result, only certain aspects of cultural representation have been selected for analysis in this chapter and the Thesis in order to analyse the representation. Arab and Muslim cultures have been selected for explanation through the case studies. Moreover, there are many video games focused on Arab and Muslim cultures such as *Prince of Persia: The Two Thrones* (2005), *Persian Wars* (2001) and *Arabian Knights* (1993).

The designers of *Unearthed: Trails of Ibn Battuta* have gone to great lengths to represent Middle Eastern culture accurately. This can be seen in the sculptures, language used (both verbal and written), supporting characters and some of the environments. The inaccuracies in these areas generally lie in the misplacement of items, which themselves are culturally accurate, e.g. sculptures of animals and obelisks from Karnak being placed in Abu Simbel. As a result, it is difficult to fault the effort of the designers due to their wish to include a plethora of cultural artefacts throughout the game's areas. While positive, as it is at the forefront of the designer's creation; including too many artefacts can reduce representation through poor placement or overcrowding of items.

While most characters in the game portray accurate representations of their origins, Faris has been designed to appease western audiences. The result is a character whose appearance is out of place in terms of clothing and mannerisms in order to create

familiarity with western players. This negatively impacts on the game's depiction of Middle Eastern culture through misplaced visual choices. Although this is an understandable intentional decision due to the marketing aspirations of the game.

Overall, the game's cultural representation is positive and effectively depicts specific parts of Middle Eastern culture. While marketing needs lead to 'Hollywoodisation' of certain game aspects such as the characters, clothing and attitude, they have little impact on the positive cultural representations in sculpture, language etc. Although the environments portrayed are accurate as individual items, the link between each is tenuous, betraying reality as the reasons to travel to each location are under explained. Each mission effectively illustrates culture through both tangible and intangible artefacts and can only be marred by the overly American appearance and attitude of the game's main character.

5.3 Discussion and Analysis of Both Case Studies

Assassin's Creed I and Unerthed: Trail of Ibn Battuta were chosen as case studies given the reasons stated in Section 3.3.2. *Assassin's Creed I* is designed by Western designer's and *Unerthed: Trail of Ibn Battuta* is designed by Middle East designers. Actually, this gives an opportunity to understand the creation of artefacts from different designer perspectives. Addressing culture in both games through tangible (physical) and intangible (non-physical) artefacts leads to a comparable overview of as many aspects of culture that can feasibly be expected of this Thesis.

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 ruling design decisions’; and ‘ideological constraints’.

5.3.1 Cultural Appropriation

To put it in simplistic terms cultural appropriation is ‘the taking from a culture that is not one’s own – of intellectual property, cultural expressions or artifacts, history and ways of knowledge’ (Ziff & Rao, 1997, p.1). Game designers often use artefacts not from the culture being recreated as additions or substitutions, e.g. Assassin’s Creed using a Gaelic cross in the Middle East.

Present in both case studies are examples where games designers have made decisions over the inclusion of artefacts, 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 modelled. The reasons for this appropriation may be a lack of knowledge or may be located in the issues raised around ‘beautification’ below.

5.3.2 Hollywoodisation and Beautification

Hollywoodisation is to adapt a story to conform to the supposed norms of a Hollywood film. In the context of this thesis, Hollywoodisation includes ‘cultural imperialism’, which is how the typical Hollywood style (e.g. simplicity and grammar) has permeated into much of the worlds film industries. The way in which films usually portray Arabs as faceless terrorists is an example of Hollywoodisation and imperialism. The use of the term Hollywoodisation over cultural imperialism is because the former is more specific

and relevant to game designers; while the latter is a broad term which could include many more forms of cultural imperialism outside of Hollywood's influence on video games. 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 reasons for the player to keep 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. Beautification is the process of adding extra or unnecessary details to make a cultural item look more 'beautiful'. The extra detail is often misrepresentation because it is not a feature of the original object, but has been added to possibly make the item stand out or for a specific game purpose. This can be damaging to cultural representation. 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.

5.3.3 Selectivity

Our gaming platforms are limited in performance and capacity, therefore there is still a need to make decisions based on how close 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 (selecting someone or a specific item that is considered the best fit for the location) 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.

5.3.4 Game Dynamics Rule Design Decision

The decision and selection of cultural heritage artefacts as part of the player's interaction with the game. For example, the use of the minaret in *Assassin's Creed* as a cultural heritage item which the player is able to climb; and the process which the designer uses to choose these dynamic interactions.

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 this is balanced 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.

5.3.5 Ideological Constraints

How a designer's beliefs and personal culture may prevent them from including certain items in a game, or a specific way the items may be designed. It is also the inability to create new ideas, and to use existing game as a basis for a designer's production. Ibn Battuta being an example, using the Uncharted series as its basis. 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 meaning particularly when cultural artifacts (such as Ibn Battuta) are appropriated in the design.

5.4 Conclusion

The research above demonstrates that we can use a tool focused around the 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.

Issues such as a need to market through ‘Hollywoodisation’, which designers use to create familiarity, and to engage audiences with western Hollywood culture. This aspect of culture supplants elements of the local culture portrayed in the game resulting in a loss of accuracy. The reason is not to directly offend the culture in question, but to encourage the user to continue playing through immersion in what is comfortable for them. Even multi-faith teams are unable to escape the need for ‘Hollywoodisation’, although through careful creation other aspects of a game can be refined to increase the perception of culture and therefore it’s accurate interpretation. Unfortunately in *Unearthed* the focus on Western ideas significantly impacts the games representation of Ibn Battuta’s travels, which could have taken a more important role in the games narrative.

This raises issues about how video game designers approach the inclusion of items with cultural meaning in their products. Therefore, following on from the research presented in this Chapter 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 ways of approach to representing cultural items will lead to greater consideration of the cultural impact of their design. The position taken 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.

6 Chapter Six Analysing Interview Data

6.1 Introduction

Chapters 4 and 5 detail two case studies regarding the representation of cultural artefacts in video game contexts. Across both case studies elements of misrepresentation occur, and these are discussed with respect to particular concerns at the end of chapter 5. Whilst the previous two chapters identify that problems exist, they do not determine how they occur. Therefore, there is a need through this Chapter to understand process through conversation with game designers.

This chapter details the findings from the qualitative interviews carried out with a selection of ten designers (from a range of cultural backgrounds) all of whom have experience of commercial video game development. The interview findings are translated into five key statements which are further explored through discussion. The Chapter provides an understanding of designer attitudes towards cultural representation in video games and an understanding of issues related to process which impact on the development of the artefacts. This understanding coupled with the findings presented in Chapters 4 and 5 provides greater understanding of the issue, in order to formulate approaches to helping to resolve problems in the process.

6.2 Statement analysis

As described in Chapter three the focus of this investigation is to gain an understanding of the approaches designers use to construct artefacts representative of culture in video games, and to better understand their perspectives on the importance of cultural representation. Section 3.3.5.1 defines the process followed in exploring designer

approaches to the representation of cultural artefacts within video game contexts. Essentially the researcher planned to interview ten designers from international video game companies and explore from their responses core themes related to the representation of cultural artefacts through the development process. The interviews (each of which lasted between forty-five minutes to an hour) are transcribed and provided in the Appendix. The questions were grouped into three core areas of focus: understanding the designer's experience and cultural background; understanding heritage production as part of a video game process; and understanding perspectives on the importance of heritage representation in video game production. An inductive approach was taken to analysing the interview data, from which five key statements are constructed. These key statements are analysed in Sections below.

6.3 Overview of statements

In short, the first statement examines the importance of cultural representation as balanced against gameplay, aesthetics and other elements. This provides an understanding of how designers perceive the relevance of representation in the context of their video game productions. The second statement provides an understanding of resources used to construct representative artefacts demonstrating that personal knowledge, primary experience, and secondary sources are the fundamental avenues of information gathering for any game designer. Statement three explores how cultural bias, marketing demands and stereotyping can impact on the effective representation of culture within games. Statement four essentially covers designer perspectives on the differences between reality and the virtual representations of objects in game worlds. Game worlds can allow players a mechanism through which to tour, a time and place, however, game designers' perspectives on how representative their game worlds are required to be is important in the context of this Thesis. The fifth and final statement explores narrative as

a core mechanism of determining the requirements for representation in video game contexts. Does narrative work as a constructive element in determining the quality of representation or does it work against it? Do narrative structures result in requirements for representative artefacts or do narrative structures result in representative mismatches in gaming contexts? The following provide a detailed analysis of each statement with regards to what the designers interviewed have said.

6.3.1 Designers are influenced by a multitude of different elements (including the aesthetic, gameplay, design strategy and market demand) with respect to whether culture is of importance or not to their game development.

Exploring the statements made within the interviews, there was a balanced perspective provided amongst the designers on the importance of the representation of culture. Statements such as “culture is not important” (Designer G) and “we make our own scenarios and we make our own world, nothing from the history, or culture” (Designer E), could be balanced against statements such as “we had to take the culture into consideration” (Designer D) and “the cultural side is very important on the design and must be taken in consideration” (Designer C).

However, an equilibrium needs to be obtained between representation, believability, playability and marketability. This is perhaps best captured through the following brief example from the interview transcript with Designer D, “in order to achieve a balance between the culture and business we dressed her with if we may call it modern *hijab*, thus it can be practical when she is going for the adventures exploration to treasure hunt with her Brother Faris, and the *Hijab* had to be practical, thus make it realistic to the users that she will be able to overcome obstacles or going into caves or any other objects and show that her clothes are as practical as possible, with total respect to the cultural”.

In the above case, the use of a modern *hijab*, can be perceived to have multiple benefits for the gameplay, and marketing of the game. For one, it may enable the user of the game to be immersed more intimately in the game world due to familiarity with the modern style of *hijab*. The player may be able to find some common ground with the in game character (and as a result, the game's universe) creating a bridge between the modern and historic cultural contexts. In addition, it provides the designers with an authentic costume for their character, which promotes the believability of movement and motion within the gaming context. Personal experience is also a powerful marketing tool, if the game is relatable to players through the use of common experiences, they are possibly more likely to buy it due to a shared connection with the purpose of the game and its cultural representation. The use of the *hijab* is a common experience in everyday life in many parts of the Middle East, which the game *The Trail of Ibn Battuta* utilises to benefit its own marketing campaign.

The game is aimed at a Middle Eastern audience, but also to acquaint players from other parts of the world with Middle Eastern culture. The use of a *hijab* provides the creators with the capacity to attract attention to the game, due to its familiarity and significance within present day Middle Eastern culture. The intentional use of modern day culture in a game based in an historic context is justified by creating a wider audience, which can experience the cultural accuracy of the rest of the game. The designer creates realism through the modern *hijab* as a balance between cultural accuracy, gameplay, and a need to generate business. A specific cultural object, in this case the *Hijab*, is a powerful marketing tool for the designers to use when targeting a specific audience, placing an emphasis on an accurate graphical representation of such an important cultural artefact. "The users usually rely on the marketing aggressively to try and play the games, however the quality of the graphics, designs and dynamics is a massive contributor to the users,

therefore studying the market and taking in consideration the cultural side of the users will definitely be a big factor to the success of the game” (Designer, C).

In modern video games cultural elements have been extensively used to represent our world. Games may use culture to represent a society correctly, or incorrectly. Designer D considers culture in his work, but implies it is accurate representation is not a priority: “We had to take the culture into consideration and was made to be seen in our visual design, characters, background, places, graphical art, history and many more” (Designer D). According to Designer D, the ability to understand the culture to be represented is important in developing a good environment without any serious misrepresentations of the society in question.

Involving cultural heritage in a video game may enable global sharing and representation of the said culture’s richness. “The purpose of using cultural items is to share and publicize Egyptian culture globally, simply by accurately using the historical monuments of Egypt” (Designer B). The need to accurately portray Egyptian monuments is driven by a desire to increase the profile of Egypt’s rich cultural heritage, and to increase physical tourism on a global scale for the monuments, also it may make the game more convincing for the gamers. As the level of detail increases through improvements in technology, the more accurately the cultural monuments can be represented by video game designers, leading to an more developed portrayal of society.

A number of those game designers whom state that culture is an unimportant part of the strategy of the game, consciously choose to use culture in a purely aesthetic fashion, rather than creating an in-depth cultural experience for the player. The choice to remain unfaithful to a culture can be due to marketing, using the stereotypical familiarity of

generic cultural structures and artefacts to depict a location, instead of the culture itself. “Cultural items are grounded within the time period and the area, although sometimes we try to go as generic as we can, for example, if creating a pot from the middle ages, we try to keep it as stereotypical as possible. The challenge is to bring cultural items and environments together to create the area we are trying to build, e.g. do these structures and trees fit a Scandinavian environment” (Designer I).

Culture is often prevalent in video games, even if included subconsciously. Due to the exposure of culture in our everyday lives, as previously stated, it inevitably effects our actions, either directly or indirectly. In some cases, the designer does not intend to use any aspects of the culture, but the cultural background of the designer subconsciously impacts on their production work. In this regard, whilst some designers through the interviews said, “culture is not important” (Designer, G), there is some evidence in games that they had produced included some cultural items. Game designers are not immune to this cultural influence; it is unavoidable that their cultural experiences will permeate into their designs, whether immediately obvious or not. While the end users who are of the same culture, as the designers may not notice that such culture has been included subconsciously; the subtleties could be evident to users of different cultures. Therefore, it is incredibly important for the creators of the game to pay attention to their cultural bias, as they need to best understand how this can impact on cultural and inter-cultural markets.

Another designer explained the environment of production for their game “We make our own scenarios and we make our own world, nothing from the history, or culture” (Designer, E). The designer in this quote confirmed that they did not involve the Japanese culture in their games; whereas there are many aspects of Japanese culture that had been

used within the game such as: narrative; environment; music; language; and characters. The designer in their interview response meant that the culture is not a part of their plan, or that the culture did not exist in the game. Other designers have used cultural aspect in their games but without giving any attention to the specific culture, to be represented in the game. The accurate depiction of culture in video games can be entirely dependent on the potential audience and outcome set by the game's developers.

However, some designers don't acknowledge that the culture created in their video games represents that of any real life culture; that an established culture, even their own, bears no representations within their games. "We make our own scenarios, and we make our own world, nothing from the history" (Designer E). The belief is that an entirely new culture is generated, yet the designer is often ignorant to the fact that their real world culture has affected the development of their game. The designer believes that a video game culture should have been developed separately from the real world, a new society that has entirely developed independently. This however, is an impossible task; for a culture to have been developed for a video game, it must have a history, including links to a real world culture where its roots have been developed in order for a new culture to be born.

Many developers overlook the importance of cultural accuracy, as the production team may believe too much cultural focus portrays the game as an educational tool, rather than an entertainment outlet. "[Culture] is not important and we don't give too much importance to the accuracy of the cultural artefacts, if we are accurate therefore we are trying to teach history via a game, but in here we are not trying to do so, therefore we are not taking into consideration the historical and the cultural facts" (Designer A). The reluctance to portray culture accurately is evident in many popular games. Instead,

developers use cultural stereotypes to vaguely portray a situation or location. The drive for such inaccuracy is the need to balance business, familiarity and gameplay. For example, culture is needed to display something relatable to the player, it serves as a connection between the players own experiences, and the experiences the game serves to provide. Often, this is where cultural representation ends, and gameplay, graphics and the need to turn a profit take priority.

This is true even in historical games, where historic accuracy (including cultural representation) is required to a high degree, yet there still needs to be leeway to allow the gameplay to remain enjoyable, without getting stuck in the semantics of cultural complexities. “In most cases we can’t achieve the 100% accuracy to represent the real cultural event or environments, therefore we take the liberty to design the game to the nearest accurate picture of the place and a people’s cultural heritage, thus we can adjust them to the requirement of an enjoyable game” (Designer, D). As we can see, and have stated previously, the need to balance business with enjoyment and culture is always at the forefront of a designers thinking. They may attempt to make the game as accurate as possible to the culture they are trying to portray, but the arduous task of making a game one hundred percent accurate is simply not financially feasible. The solution is to make the game as culturally relevant as possible to the player’s expectations, while not limiting the gameplay to the strictest (and impossible) rules of any given culture. Of course games based on history and culture also have to adjust for their prospective markets. Citizens from different cultures may require various methods of cultural projection through the medium of games. “A European Citizen will be more artistic and less flashy to that of an American Citizen” (Designer, C). This makes cultural representation and accuracy in a game all the more important, but also far more difficult to achieve; as the game has to be marketed to different cultures, yet remain appealing within multiple markets.

“The cultural side is very important on the design and must be taken in consideration, as it could be the winner on the market and you will have a successful game to the market, saying that I must say that games also can be used in different countries even if the cultural side is related to different country” (Designer, C).

As this statement suggests, the difficulty of this task is daunting. Therefore, it may be more viable for game designers to include cultural accuracy to a point where it can be understood across multiple cultures, rather than a specific culture. This inevitably makes it impossible to remain one hundred percent accurate in terms of displaying the intended culture of a game, but makes the game marketable to several independent cultures for maximum profitable gain. The ability to market a game to different cultures is a major part of a game’s marketing approach, as the design of the game needs to adhere to the requirements of the cultures in different regions, no matter how subtle the variations may be.

An essential part of the production of a game is the business strategy; this contains the macro-scale plan of all aspects of the design, coupled with considerations of other processes such as how the game is to be marketed and sold. Aesthetics, mechanics and gameplay follow the strategy, therefore if culture is a major part of the strategy; it will percolate through the other branches of game design. Within the transcripts a subset of the designers had experience of circumstances where the cultural aspects of a game design were a core component element of the process. Though this very much depended upon the game. Within the transcripts we can see this aspect coming through in areas such as the visual design, the narrative, considerations around the environment etc. As an overarching comment Designer, D explained that “we had to take the culture into

consideration and this was made to be seen in our visual design, characters, background, places, graphic art, and history, and many more.” The designer clearly believes culture is a key component in strategy, as all facets of their game design includes culture; from the game visuals to the historic narrative depicted in the game. Culture in this case, is a significant consideration of strategy, and how influential culture is on the outcome of the game is based on the goal of the designers. For a culture to be portrayed accurately; it has to be represented through all parts of the game; therefore the importance of the presence of culture in strategy is paramount to how immersive the game is for the player. Culture can be story driven, or used as an auxiliary item to compliment the narrative of the game.

The quality of graphics provides designers with a great opportunity to create detailed environments, which reflect a significant sense, attention, motivation for players to interact with the games without feeling bored with monotony. Aesthetics is the facade and the unique flavour developed in the video games. The term ‘aesthetics’ is used in games to designate a particular style and this links with the environment of the game. The aesthetics in video games are not just for interacting with images, but also include visual and aural dramatic elements in the game. Most of the graphical elements are inspired by our culture; after an initial focus on the game strategy, the game designers shift emphasis toward employing an artistic element in the game. In this case, the game's team consider aesthetics from two different angles. First of all, they seek to fill the game space with something associated with game narrative (e.g. using culture items to confirm the game description). On the other side, aesthetics are used for marketing purposes by portraying a famous community or location familiar to the players.

6.3.2 When developing games, which include cultural items, design teams make use of a range of different resources, ranging from personal knowledge, through secondary sources, to primary experience. The meshing together of these various sources directly impacts the finished product.

Selecting even a single item representing cultural heritage in the design of a game may require the exploration of a range of different resources. The interviews with video game designers, highlighted three main subsets of resources, which are used to select or create cultural artefacts: personal knowledge, primary experience, and secondary sources.

Personal knowledge includes the non-material knowledge of the designer such as their cultural background, their belief system and their level of knowledge about the particular cultural context acquired over a period of time. Designers interviewed (A and B) who use primary knowledge generally depend on this expertise, especially in circumstances they determine they are familiar with. Designer B suggested “I use my personal experience by knowing and living in Cairo” and Designer A suggested that “I didn't need any research into the cultural background, and my cultural level is outstanding as I am a Native”. In circumstances such as the above, designers are determining that they have sufficient knowledge as well as experience of living within the culture, which can aid in delivering cultural accuracy within the game, enriching the cultural representation of Cairo (in Designer B’s context) or elsewhere for the player.

In circumstances where designers perceive themselves to have the existing knowledge there can be a reticence to use other primary or secondary sources. For example, “It was easy and simple to take into consideration all cultural aspects without going through many books because we have been educated at school” (Designer D). Native knowledge can be constructed from a range of circumstances but can include an experiential understanding of the range of cultural items depicted in a gaming context, whether this be the clothes worn, music heard or locations visited by the player. Such conversations

with designers all demonstrated a level of confidence regarding the use of their knowledge in order to create representations of a society they perceived they knew / had experience of.

Moving through conversations with designers it became evident in places that strategy changes dependent on the context. For example, Designer D suggests “I do not need any knowledge sources” and “I praise myself of having great knowledge of the different cultures and religious backgrounds in my country”. When quotes such as these are coupled with their perceptions on the lack of need for extra resources in the paragraph above, then it provides a picture of a designer who relies on their levels of knowledge in order to construct game environments. Designer D perceives that they have sufficient understanding of the many different cultures, within their own country as well as external cultures. They see significant benefits in having a multicultural background which allows them to implement aspects from many different cultural facets in the development of their video games. In this case the intention is to appeal to various different societies within their own country, in respect of cultures such as the Hindu, Greek or Asian Muslim communities.

Designer I has suggested that a multi-cultural staff is highly beneficial when it comes to recreating cultural knowledge and artefacts in game, although when their understanding is vague, it is often preferable to use books and the internet to increase accuracy of knowledge. “If we can’t get items first hand from our multi-cultural staff, because our staff come from all over the world, we get it from the internet. We consult our colleagues on the time period of game we are producing, is it from the middle ages or the renaissance?... When we find out, we search for props from that time period on the internet or from books” (Designer I). Therefore there is a clear need to better understand

the context regarding design decisions made. Stances such as those portrayed in the paragraphs above regarding reliance on individuals and the use of individuals knowledge may apply in contexts, where designers are making personal decisions over the construction of specific elements or specific parts of the gameplay. Whilst this may be tempered by the need to develop a wider knowledge of the specific environment or narrative structure that they are developing, the conversations with Designer D and I demonstrate that whilst designers may have a reliance on their own personal knowledge, which can help them in a range of scenarios, this may also need supplementing through other sources.

Personal knowledge may in itself be insufficient to represent cultures within video game contexts, even where the game is situated within a designer's own cultural framework. Representing cultural materials can require in-depth knowledge of the intricacies or complexity, such as the operation of a particular society, language, and the design of its physical artefacts. An existing understanding of a culture may not be enough to support its representation in a game, therefore a designer may choose to supplement their existing knowledge with additional sources.

During the interviews, the majority of game designers noted a need to use secondary sources to supplement their knowledge in the design of elements within the game. Secondary sources include the use of physical materials depicting the environment, location or culture in focus. Secondary sources indicated by the designers ranged from use of "websites" (Designer D), "books" (Designer I), "Google Earth" (Designer B) and "photos of famous monuments and places" (Designer B) through to specific documentary sources as outlined by Designer C in "we watched scientific documentaries".

The range of sources indicated provide different levels of understanding with respect to the elements being designed. For example, the “old medieval encyclopaedias” indicated by Designer D provide both narrative descriptions of items and visual depictions from a historical perspective. The documentaries highlighted by both Designer C and D can provide a visual and oral representation of a subject, from the beginning to the end, providing a step-by-step understanding of how a particular topic has developed. Thus enabling an individual to gain an appreciation in a short space of time for a specific topic of interest.

Secondary sources in themselves, without primary knowledge, present their own challenges. For instance, images (e.g. photos and paintings) sourced from multiple locations have the great power of mimicking reality, but sometimes the image may contain hidden meanings or carry symbolic messages, which need cultural knowledge to understand. The use of the web, as indicated by multiple designers, enables access to a multitude of different sources which are ever expanding, but it creates concerns regarding the validity and integrity of the information as it can be difficult to determine this. “Constructing the background in Egypt was taken from different books and photos existing we also used Google earth to extract few real pictures...” (Designer D). Another Designer (I) also uses an array of additional designers for a myriad of different sources, “The teams work like a democracy; if someone thinks it’s their calling to create a prop, then other teams will tell them if it looks too much like another culture, or if it’s good” (Designer I).

Where designers do use such secondary sources to build the elements of cultural heritage, this is often achieved through a focus on the delivery of more detail or to simulate reality, for example, “We studied the documentary deeply to decide on the graphics and the

design of the main characters” (Designer C). Using video materials (in this case, a documentary) can help game designers to understand and replicate similar graphics, actions and motions in the game they are creating. For example, the hood in Assassin’s Creed (2007) is designed to appear as a bald eagle’s beak, and the motion and movement of the character when jumping off buildings is designed to represent the actions of a bald eagle. These movements and motions are often unique to the visual representations documentaries provide, making them an invaluable source. The use of the bald eagle creates a cultural link with the intended audience of Assassin’s Creed (2007), which was predominantly American.

Increasingly, specific sources also aid in particular games, if they focus on a finite period of time. Such specialised or specific sources can be used to achieve more accurate cultural representations. ‘There is one book called, *The Third Crusade 1191: Richard the Lionheart, Saladin* and the battle for Jerusalem that has been especially helpful because it covers the year in which our game takes place’ (El-Nasr et al, 2008). Designer D gave evidence that they also used “books about Ibn Battuta” to provide more detail regarding the games narrative. Sometimes the cultural representations in a game require extensive research, often leading to the use of sources, which provide specific details about a particular item or person. This enables the designer to represent a story (in this case, Ibn Battuta) with as much cultural and historical accuracy as possible, for the benefit of the player’s experience.

There are two different types of sources, tangible and intangible. Tangible sources are physical; they can be seen and touched. While intangible sources are non-physical, such as spoken language and knowledge. in the game process often use experts to bring intangible knowledge to increase the accuracy and array of tangible knowledge and items

within a game. Experts can be regarded as intangible as they bring verbal discussion of their expertise, in opposition to the unchangeable knowledge a tangible source provides. The use of experts is also indicated as being used as a mechanism to inform design within El Nasr et al, (2008) e.g. “The historian helped us with some harder topics to find information such as original city plans of Jerusalem, Damascus, and Acre that date back to the 3rd crusade” (El-Nasr et al. 2008). There was limited evidence of this in the interviews conducted for this research, however, there was some indication of making use of opportunities to gain first-hand experience (primary experience) of locations through “traveling and discovering the world [in which] he decided to go further afield and become one of the great Arab (World) explorer’s who travelled from Tangiers in Morocco and around the ME and went further on to India and China” (Designer D).

Designer B makes clear reference to the use of the collection of a set of resources influenced by primary experience in their production lifecycle, “We have a team in Cairo and Alexandria who goes to the ground, and go around the two big cities in Egypt to take photos and enhance the design idea by what they see in the street”. This level of interaction with the environment being modelled is similar to the location shooting model used within film contexts and provides a rich resource of material to be used. Ultimately in Designer B’s context, this material is interpreted by individuals who have not collected the data, but questions of those who did collect the primary data and generated items can be demonstrated in order to gain a better understanding of how representative the environments are that have been constructed.

Designer I meshes personal knowledge, secondary sources and primary experience to produce items which the game requires, this is done through three steps. Firstly, designer I chooses an item to be included in their game, in this instance ‘*The Witcher 3*’ (2015).

The nature and design of the item itself is discussed by a variety of teams within the company; using the knowledge and understanding of a large group of people to validate and refine the use of the item. “Basically when creating something like pots of carpets I advise how we will create them in terms of culture. I discuss with my team how these items should be made... [then] I send the information about what we want to companies from around the world” (Designer I). Once the item has been decided upon, the teams begin to improve the item with the addition of secondary sources. The teams usually use documentation such as books as well as the internet to develop the accuracy of the object further, in addition to what the team discussed in the first stage. While personal knowledge is invaluable, secondary sources supplement the item by providing evidence for the context and placement of the item, as well as improving what knowledge the designers may already have. They also enable the designer to create items relative to other cultural artefacts, for an environment to be as close as possible to the real life counterpart. “If we can’t get items first hand from our multi-cultural staff, because our staff come from all over the world, we get it from the internet... we search for props from that time period on the internet or from books” (Designer I). Finally, designer I visits the location to perform a field study. This is the integral stage of development; the designer is able to experience the location first-hand, this facilitates the understanding of atmosphere, sounds, smells and aspect of the object to be designed. Primary experience is essential in creating an object in terms of cultural and physical representation due to the fact that all aspects of the item’s meaning and importance can be included in the design. How people react to the item, how the environment and architecture interact with the item, and how the item is projected in its location can only be truly understood by performing a case study. Therefore, the cultural subtleties are imbued in the image for the player to see and experience.

“Visiting the places is probably the most important aspect. I go the places, stare at the details, take photos of the details and that is what I use to design the in game item...For example, we have an artist from Britain, but when I was driving around city outskirts in Britain, what they had drawn was what I saw, but you could tell there were cultural influences that were very subtle, only someone from that area could have designed them” (Designer I).

When all available resources are used in the design of a single object, the cultural accuracy of the object is able to be as precise as it is possible to be, dependent on the designers intended use of the item. The designer is able to marry the physical and emotional feelings of an object, creating a vivid and immersive experience for the player.

From the evidence in the transcripts and the discussion above it can be determined that the amount and variety of resources used can directly impact the cultural accuracy of a game. Using personal experience, as well as primary and secondary sources may help to create an environment that makes the player feel more immersed in the culture the game is trying to portray; leading to improved gameplay experiences (or instances of cultural tourism) and a more knowledgeable understanding of the society or environment the designer has attempted to create. Ultimately such representative environments are still governed by comments such as “In most cases we can’t achieve the 100% accuracy to represent the real cultural event or environments” (Designer D).

It could also be determined that cultures that are developed entirely for video games can also benefit from sources and experience, as the more knowledge of the closest representable culture may lead to the creation of richer and more immersive virtual cultural environment. Researching historical cultural sources and background

information helps the designer to supplement the created game world, even if the virtual world is not representative of any singular real world culture. This makes the game relatable to the player, as there are familiarities that acclimatise the individual with the virtual world, without confusion or frustration.

6.3.3 The cultural bias of the designer and/or design team, market demands, and stereotyping can have a substantial impact on representation of culture.

There is evidence across the interviews that market demands, cultural bias and the use of stereotyping in video games can have a substantial impact on how culture is represented. Marketing needs may have a direct impact on video games designers, the culture of the company or company's policy, a game's geography, and the type of game, narrative and game's audience. Regarding video games designers, there are many factors that probably impact on elements of culture represented in video games today such as, the cultural background of the designers, a designers experience and the game project itself. Furthermore, stereotyping and cultural bias play a significant role in structuring the elements of culture in a video games context. Stereotyping affects cultural representation by being presumptive of what the cultural meaning is, often this is a skewed understanding of the genuine meaning of the items. The meaning becomes diluted, which is inevitably damaging to cultural dissemination. The significance of the impact of bias can be seen in the creation of a game that potentially depicts a culture that is altered by the views of the creator. Going hand-in-hand with stereotyping, bias can lead to severe inaccuracies in the representation of a culture, either intently or accidentally.

From within the designer interviews, there is evidence of understanding that the cultural background of individual designers and design teams can influence the works that are produced. Within the sample of designers interviewed there were a number (Designers

A, B and D) who were focused primarily on representing their own cultures, or cultures they had familiarity with. Where this was the case then the designer believes that they are starting from a cultural aspect to design, or selecting the cultural elements of the game from a position of strength, as they are already saturated with cultural data. This saturation can be used consciously or unconsciously during the design process for example as identified in the first statement as discussed above, “I have great knowledge of the different cultural and religious background” with “Asura based on a Hindu cultural game as a Muslim.” (Designer A). Designer A uses his multi-faith background (Islamic and Hindu) to design a game that would be marketable to both Hindus as well as Muslims. The benefit of this is a wider audience, capable of generating more profit than if the game were marketed to one religion within the Indian culture. This designer is a good example of how a person’s cultural background is beneficial to the marketability of the game, especially in global multi-faith cultures such as that found in India, or in an increasingly integrated world. A designer’s experience is also of utmost importance; the need for a designer to be able to understand and implement the needs of the market is invaluable. The designer needs to be able to include cultural aspects without impeding the overall strategy of the game. The designers experience affects how well this can be utilised within the game, and how culturally accurate the finished product will be.

Designer I uses cultural bias to impart beauty upon the game, rather than to influence, or complement the story. Albeit beauty is subjective, and dependent upon user or player of the game. “In our games, cultural accuracy is not very important because we are not constrained by a particular culture because it is fantasy, so whatever works or is beautiful and it doesn’t throw the player off their aim. Even though the game is fantasy, we still keep it grounded enough in respect to culture” (Designer I). While it is possible to portray a culture for the intention of beauty in a positive way, it may ultimately detract from the cultural significance of the item, object or environment used. It loses its original meaning

simply becoming a kind of marker for the player to denote a location within the game, rather than for cultural influence.

This cultural bias seeps into all aspects of the design of 'The Witcher 3', as the game is fantastical, the cultural consciousness on the behalf of the designer is used to develop the culture far enough to be physically recognisable, whilst remaining separate enough for the player to develop their own sense of the game's cultural impetus. "Culture does have an impact, but only in a very subtle way. Each environment needs to be distinct enough for a player to be able to inject a part of himself and his work into that environ" (Designer D). Environment takes precedence over culture, while the player's own culture is used to supplement the cues in each game location.

To produce a game, teams are required to achieve specific aims and aspects of the final product. To achieve these goals, the work is often outsourced to specialised companies. Companies with expertise in regional cultures are often a part of these projects, in order to achieve the greatest cultural accuracy possible. Evidence from within the interviews suggests a series of situations where designers have worked for multiple games development clients in the production of materials for localised markets, or in the production of culturally relevant materials. For example, "I have been involved in more than 6 games for the consumers, and on a corporate mode, we have 7 developers and 3 designers, and it took us 1 year and half as they didn't dedicate the full team to the project as we do sell our services to other companies and this is why the one year and half seems a long time" (Designer, B); "The one in our company is in our small team of three otherwise when working in cooperation with other companies it is on a big team scale" (Designer, C); "Our customers are mainly from Middle East and United States, our top and number one customer is from Egypt, we also had a Pakistani customer for an

application Holy Quran related to a religious quiz”. Multiple teams from an array of companies design most games; this is often the result of the large-scale projects most modern games require to be completed. The use of many high skilled companies to focus on one project is a time consuming and costly process, albeit it can be necessary for the game to be developed to be highly marketable. Many small design companies are often involved with multinational game corporations to complete projects. In some cases the size of the company can be insignificant, if the employees are capable of providing the product needed, smaller local companies often fulfil the specialised cultural material aimed at niche markets. For example, the company Designer B works for is capable of providing game material for Islamic communities within a multitude of different cultures, from the United States to Pakistan.

While cultural bias is beneficial when describing an area known to the local designers, in the case of (Designer B) in Cairo and Alexandria, it does not aid in attempting to create a landscape unfamiliar to the designers. This can lead to cultural inaccuracies in items and artefacts of the cultural areas that the designers are trying to recreate, often due to inexperience with the areas in question, but also because the designer is trying to create a cultural landscape, using their own cultural norms. The bias is therefore a hindrance to the production of the game, and using teams of locals for their expertise is more often than not the most effective way of reducing the possibilities of error. Culture also affects investment opportunities, depending on region. For example, a European investor may take a risk on investing in a game if there is a possibility that it will make a profit. While a Middle Eastern investor is likely to be cautious in investing in a game, unless games of a similar type have proven successful in the past.

“Middle East region investors culturally don’t like taking risk and invest in the initial stages of developing the games as the cost can be high designing a game that can not be successful first, second, third time and still not sure if it will be successful on the fourth attempt, however in Europe investors do take the risk because culturally they do understand as soon as the game is successful they may triple the income to the utilized cost of the design phases.” (Designer, C)

These cultural differences can affect how and if a game is produced. If an unproven idea is suggested for development, a European investor is more likely to fund the project if they believe a profitable return can be made. While a Middle Eastern investor is more likely to be cautious of such ideas, as a definitive, rather than a speculative return is the culturally accepted method of investment. Inevitably, this affects the scope of the games which each region produces, European produced games may be more varied in regards to concept, while games produced in the Middle East may follow a similar vein of design and objective to each other.

Culture also affects marketing needs on a global or local scale. The culture of some game companies is to create local environments to be consumed by the local population. This can result in a smaller scope for a game, and therefore provide limited profitability. On the other hand, some companies create local environments, but to be consumed on a global scale. Inevitably, this also affects how the culture is represented in the game. A local game produced for a local audience requires an incredibly high degree of cultural accuracy, as the players will know the real world environment and culture well. A regional environment developed for a global audience requires culturally identifiable locations, but may not require the same ‘street by street’ accuracy. Designer B’s quotation in the above paragraph, extends to suggest that the game was successful as “the market

loved it because the items used exists in Egypt and are well known, this helped in achieving the required results and above” (Designer, B). This game has been designed to be consumed by the limited population of Egypt, and therefore will have the limited market goals of an Egyptian populace, yet will requires a higher amount of detail with regards to representation of cultural artefacts, items and locations.

For a game to develop, there needs to be a marketable business scope. Scope helps to define the individuals who the game will be marketed for, in terms of age, location, culture, religion etc. The business scope needs to achieve a level of success dependent on the market demands of the game’s intended audience. Therefore, culture is affected by the demands of the market; depending on which culture the game is marketed for. The marketing of a game can affect the culture that it is intended to be sold too, as games are often a reflection of the culture they are representing. “I am always working with my Engineers, as a Director of the games I lead the E2E project and put forward ideas based on market needs and design as and per the storyline of the games, thus to include cultural aspects or designs of character features” (Designer, D). In this case, firstly, the company studies the market needs of their intended audience, usually by doing research into which games, and game genres, are most popular for their target public. The marketing teams often attempt to target the culture of the society they are selling to, with the intention of making their games more profitable through increased sales, and to guarantee the game’s success. The information gathered is then passed onto the design teams, in an effort to create the game to be most desirable to the population they wish to sell to.

To supplement market demand, history is often manipulated to create a more interesting and marketable game. For example, certain characters may be changed to fit in with modern cultural beliefs, as well as the story of the game. Often, religion is de-emphasized in order to increase appeal. Different denominations of religion often have stark

differences in beliefs, therefore the game needs to remain as neutral as possible, in order to be inoffensive to groups with varying beliefs. “[In] our game we used Faris as the good night cavalier in the game and we also try to avoid any religious facts... as the objectives and the aim... [are] not to teach users about how to pray or rather to play and enjoy the game” (Designer, D). The use of a more intelligent Faris, and an emphasis on the non-religious aspects of the game enabled the marketing team to sell the game to both Sunni and Shia denominations of the Islamic religion, without excluding any particular culture related to either group.

New phenomena are also often exploited for marketing purposes. As these new phenomena are often hugely popular, they are able to attract a large amount of attention to a game design based upon them, if culture is a major part of the game as well; it needs to be represented correctly. “*Tok-Tok Drift* was designed for Egypt only and targeting Cairo and Alexandria because as the *Tok Tok* is new in Egypt and only found in Cairo and Alexandria you will see in our environment design the famous monuments of Cairo and Alexandria (Egypt National Museum, Tahrir Square ...etc.)” (Designer B). The designer has taken advantage of the new (and vastly popular) vehicle seen on the streets of Cairo and Alexandria, the ‘*Tok-Tok*,’ and used it to advertise the two cities. This means the aesthetics are required to be as close as possible to that of the streets of Cairo and Alexandria, and their major landmarks, in order to sell their cultural and physical heritage.

When developing a landscape, such as that in the *Tok-Tok* games, a certain degree of cultural bias is beneficial for the designer. Due to the nature of the games projected outcomes (accurately portraying a city), local cultural bias is invaluable in producing an accurate representation of what driving a *Tok-Tok* around the streets of Cairo (for example) may be like. This means employing local teams with knowledge of local

cultural diversity to represent the streets to a degree of accuracy that would otherwise be unlikely.

“We have a team in Cairo and Alexandria who goes to the ground and go around the two big cities in Egypt to take photos and enhance the design idea by what they see in the street, where the *Tok-Tok* is found thus they can achieve realistic result when playing the game, also they use the massive contribution from the team members who are native to the two cities (Cairo and Alexandria), they know totally the cities [inside out], we also use the net and Google earth to add elements to our design.” (Designer, B)

The use of stereotypes to depict elements such as characters, cultures and environments are often used in gaming contexts, in similar forms to other media forms (e.g. Blockbuster films). Often well defined stereotypes are used, such as using people of middle eastern origin as terrorists, and the use of an ‘all American hero’ protagonist. Such stereotypes are used as mechanisms to enable the end user to recognise and understand a story better, without the game having to go through a complex narrative journey. The character of *Duke Nukem (1991-2011)* is a prime example, intentionally designed to be a stereotypical over the top American, he is an amalgamation of many Hollywood action heroes and instantly recognisable for his catchphrases and appearance. The *Batman* game series (1986 - 2015) also uses the much used and stereotypical action hero of Batman as a reference point for gamers. Granted the Batman series of comics are arguably now entrenched in American culture. Although stereotypes do aid the developers, they can also lead to negative connotations of various cultures. This often means there can be cultural misrepresentation, as a stereotype does not represent the true identity of the society they are trying to portray.

This cultural inaccuracy ultimately affects the culture itself, as games, which are made for international audiences, are often a major source of cultural exposure for players. Given the background of a number of the designers interviewed and their focus on creating games rich in their own cultural heritage multiple issues were raised in the interviews around stereotyping. Conversation with Designer E focused on the offensive nature of the representation of ninjas', in their black body suits and aggressive 'kungfu' style, which whilst purporting to represent historic Japanese culture has limited roots in reality. A "Ninja with the usual black uniform and fighting with samurai swords as per his statement is stereotyping of Japanese Ninja by movies [and games] from other countries who has no knowledge of Japanese culture" (Designer, E). A "Ninja is a normal person like me and you and doesn't wear black Kimono, and doesn't fly like it has been injected into our mind, therefore in my opinion if the culture was respected we would have avoided creating a fictional character relating it to the real Japanese culture" (Designer E). Games, as a possible source of information about cultural realities, therefore, have a duty to inform the player on culture to a degree of accuracy that is at least deemed respectable by the culture being portrayed.

Designer A expressed their opinion clearly regarding stereotyping. They perceive that steps taken to represent culture in video games, in as representative a form as possible are important to deliver, primarily as through this "we can avoid stereotyping of people, race, faith or other cultural subject, as an example for the Middle East we find many games now betraying Arabs as Terrorist and usually using Arabic cultural figures as the violence". Such stereotyping is problematic and is probably rooted in issues such as those portrayed by Designer G when they state "when I am faced with some different cultural projects I will definitely find it hard as I don't know how to approach the subject matter to avoid mistakes on the real culture of the main story source". This difficulty in sourcing

knowledge can lead to inaccurate decisions being taken on the material to include, with some based on popular culture rather than a positive representation. The issue may be that Hollywood has instilled a stereotype so heavily in their consumer; that it is hard for a game designer to change the perception without a huge amount of effort.

If organisations are willing to use such stereotypes in video game contexts then this may also mean that other items, which may cause cultural offence, are present. Even minor items can have a cumulative overall impact on cultural representation in a video game context. For example: items such as an out of place accent (or poor representation of an accent by a voice actor); or an error in the written language. If a player plays a game such as '*Call of Duty Black Ops 2*' (2012) or '*Uncharted 3*' (2011) and discovers Arabic writing is wrong or upside down, then they may feel and think that the developers, designers, and the management do not value the material and as such have a lack of value for the location and people they are representing. The limited approach to checking cultural inaccuracies by designers can incite anger in the culture they represent. Checking that the spelling, grammar or even writing placement (e.g. placing the writing the correct way up) is correct is a simple task, one which, can be easily performed. Sadly, such tasks similar to the movement away from stereotypes require an amount of effort that some companies seem unable or unwilling to perform.

Designers are now making an effort to counter stereotypes on games by replacing them with a close representation to the cultural reality. Although often not exactly right, it is a far sight better than an imposed stereotype. Creating this kind of cultural accuracy is, therefore, a key to the success of a games global approach, as it broadens the audience to those areas, which may have been cut off by offensive (even if not intended) stereotypes. "In my opinion, it is important. Thus, we can avoid stereotyping of people, race, faith or

other cultural subject, as an example for the ME we find many games now betraying Arabs as Terrorist and usually using Arabic cultural figures as the Violence” and “the culture in the game is not 100% taken with the design because the game story line is based in Hindu Mythology, however saying that we do include some Indian (Hindu) designs items to the background and we are also careful not to use any offensive cultural materials” (Designer, A). The ability to move away from stereotypes, even if they make the story easier to understand for certain cultures, is key in creating culturally accurate and inoffensive games that can be marketed for the benefit of cultural representation. Even if this is not the main aim, it can prove to be a marketable gain if a culture is represented without offensive connotations. Bias in video games more often than not comes with negative connotations, Designer I uses it to create a sense of difference between environments, going no deeper than the façade to depict beauty, rather than the accurate representation of a culture. While this is cultural inclusion, the impact can be significant for the community in question; environments, items and artefacts are virtually used as empty vessels, holding no more cultural accuracy than their physical presence, no matter how grand that may be. The damage comes in the place of context; physical presence is often significant to a culture due to its context within the environment. If you remove a holy site from its location and place it within a location to which it has no context, it will inevitably lose a significant portion of the meaning and power (ideological) of its original environment.

6.3.4 Designers see the game world as different from the real world. Therefore, this drives the designers to a world, which limits cultural representation in video games. This also impacts the development of structures that support cultural tourism.

To separate a virtual world from the real world, designers often include elements that are not represented in reality, superheroes (e.g. The Batman games) or the undead (e.g. Dead

Island) are common examples used by designers due to their popularity. This shift in focus away from a real world design, to the addition of something fictitious, reduces the accuracy of cultural representation by influencing the meaning of the game for the player. The culture in the game can become artificial, often no longer representing its counterpart in reality. During the interview, some video game designers suggested that they see culture in the context of a video game as completely different from the real world, while others saw the game world as an extension to reality. These factors have an impact on the approach video game designers take to the construction of cultural items in video games.

Looking at the matter from a virtual world perspective, the design of video games neglects or even ignores cultural elements; therefore less attention is given to the cultural aspect. “It is not important and we don’t give too much importance to the accuracy of the cultural artefacts, if we are accurate therefore we are trying to teach history via a game, but in here we are not trying to do so” (Designer A). Designer A believes culture is only to be used as an educational tool in video games, but the reality is that culture sets the context and atmosphere in a video game, which aids the player in understanding in game locations. Respectfully implementing cultural artefacts and items in the game world isn’t a way of teaching the player directly, but can be used to inform them of the story and background of what the game is trying to portray.

Designers often begin the planning of a game with no cultural context in mind, usually conceptualising characters, items, or structures without consciously using culture as a reference. “We brain storm the subject matter and start the planning phase without paying attention to culture” (Designer, I). Designers should implement culture in the early stages of discussions, if it becomes a conscious part of preliminary design, then the representation and accuracy can increase. If cultural representation is included during these first stages of design, cultural tourism, and historical accuracies will be conspicuous

to the player. Inevitably, this creates an effective and embedded impression on the player, who will be able to use the game as a reference point for the culture included in the game.

Mythology, while an essential part of most cultures, is a malleable tool for the designer. While representing an actual community or society, the designer needs to be careful in getting cultural details correct, as not to offend anyone from said community or society. On the other hand, myths are stories that often have disputed meaning, and as a consequence their context and events can be manipulated by the designer to freely represent a culture with less chance of offending the associated people. “We are not taking in consideration the historical and the cultural facts as the subject matter is mythological stories” (Designer A). Mythological stories are always a representation of a culture, even if they are not considered the main focus. Minotaurs are a prime example of mythological connections to culture, when the creature is introduced into a game, players are immediately reminded of Ancient Greek or Babylonian culture.

Where others see the game world as an extension of the real world, a number of designers confirmed that cultural aspects are taken in consideration; seen as important, and provided with more attention to the subject matter. Although giving this consideration is often a difficult task to adhere to, as culture is subjective, depending on the designer, and intended audience. The difficulty therefore lies in creating a cultural source that is linked to, and associated with the main story of a game, whilst maintaining its relevance to the culture it originates from. “When I am faced with some different cultural projects I will definitely find it hard as I don’t know how to approach the subject matter to avoid mistakes on the real culture of the main story source” (Designer, G). The amalgamation of culture and story can positively or negatively impact on cultural awareness and tourism of the area(s) the game is presenting. Of course, this depends on the value of cultural representation within a game, as some games are more dependent on the accuracy of their

cultural representations, than others may be. The difficulty of the task, as well as the marketing needs, may encourage designers to create a game world with less cultural representation than desired; this is to refrain from overcomplicating matters such as offending societies or changing the story of a game beyond recognition to be applicable to cultural intricacies.

If a game is based on a real life event, series of events, or story, then cultural representation can be of more importance, than in a game based in fantastical worlds. This is driven by culture being an integral part of everyday life and events, no matter how historically important or well known. In the light of this, a game based on fact and history may need to accurately portray the culture of the time, so as to give the player the full effect of the story, as culture is an essential part of immersing yourself in a surrounding, whether physical or virtual. “As the game story is based on factual historical background, thus the game will be developed taking into account the accuracy of the story” (Designer H). The ‘story accuracy’ the designer is referring to, also includes how the characters, environment and atmosphere are influenced by the culture that the story is based upon. The limit to how the culture is represented is broader in games based on real stories, as the focus is more often than not, the story itself. Games, which are story driven in this sense are designed to be as immersive as possible for the player, in terms of story, characters and environment. Unlike large sandbox games in which the focus is often more on exploration of the environment, story-driven games require a large amount of detail to the intricacies of the story. Therefore, the cultural influences on the way that a character acts and interacts with his surroundings may need to be a priority, creating an experience for the player that enables them to feel a part of that environment and culture.

As with the example of a sandbox game, game type also heavily influences how much cultural influence is required for the game to be considered marketable. Of course, this does not diminish the fact that any culture in any game should be represented as accurately as possible to the player for the sake of fair representation. “Some are deeply filled with cultural events and heritage some are medium and some are with low cultural input.” (Designer, F). Role playing games (RPG, Role-Playing Game) and adventure games are naturally going to have more cultural influences as they tend to be story-driven; First Person Shooters (FPS, First Person Shooter) and fighting games such as Counter-Strike (1999) and Mortal Kombat (1992) often have far less cultural influences, as they are purely focused on the gameplay itself, rather than a story. There is a limited need to increase the integration of cultural items into the latter of the game types as they tend to only have one focus; shoot to kill, or fight to kill. While there is evidence of some culture, as it is inevitable, there may be little need for it to be an implicit part of the game itself.

Due to the differences between the game world and the real world, the influence of culture can either be seen to diminish, or flourish, depending on the type of game the producers are trying to create. The fact that culture is seen by some designers as a tool for education has led to their games underrepresenting culture, or having little thought given to the integration of culture in the game. When culture is prominent in the early stages of design, the effect can be seen to percolate and disseminate throughout the rest of the production of the game; this leads to a richer and more comprehensive game in terms of story, as games driven by story are often driven by the culture of the period the story is set in. When the complexities of culture are too difficult for the designer to implement effectively in a game, the use of cultural myths becomes an essential tool in their arsenal. The ability to manipulate mythology allows the designer to portray the culture of their game in their own fashion, through bending realities to fit the needs of the game. This can be especially effective for games based on historical stories and events; due to the

effective need to build a historical culture, without overburdening the game with impossibly small cultural details. While story-driven games require a large amount of cultural input to fully and effectively immerse the player in the story line; there are some game types that require little to no culture whatsoever, such as most multiplayer FPS'. Yet these games do have cultural influences, with respect to who is fighting who (Counter-terrorist versus terrorist in Counter-Strike (1999) for example), yet these cultural influences tend to be stereotypes to avoid depth, or distraction away from the true intention of the game. Overall, the cultural representation in video games is dependent on the type of game, and the intention of the designer, although invariably, more needs to be done to increase the cultural accuracy in games.

6.3.5 Elements such as the narrative of a video game substantially impact the selection of cultural objects. In some cases, particular elements require the inclusion of specific cultural items; for example, in any game, which depicts Christianity, the use of a crucifix will be required. In other cases, games will include a mismatch of cultural resources.

There are differences between games that include historical events or cultural background, and games with limited cultural aspects. Narratives oblige the designers to use cultural material, thus to enable them to represent the storylines throughout the game. With regards to the narrative of video games, there are quite a few differences between: representing a real story; narrative representing a known society; narratives collecting different aspects of different cultural elements to be in a game which have references in the real world; and narratives having different cultural elements, but which are different from the real world. In this case the designers are dealing with different narratives according to the accuracy of a game's narrative. For instance, if a narrative has a background in reality or has sources to use such as books, then the designer could try to model the real item as much as possible because the game includes an aspect of the real

world. “The game was related to the real story of Ibn Batuta” (Designer D) within this instance the game represents some aspects of reality of the story with regards to how the game depicts the real world events. Therefore, the role of the designers are restricted to selected items that have an ability to best represent aspects of the story whether these be places, characters or more, and the degree to which they simulate reality. This requires the use of objects, places and items that represent a story in a meaningful way. Often the best way is to create items in a game, which have broad cultural and physical meaning to the story that the designer is trying to recreate. Using the locations Ibn Batuta visited, and recreating them through historical knowledge allows the designer to build the story with as much cultural and physical accuracy that they can possibly afford. The focus on cultural accuracy through the use of real world locations with meaning to the story adds to the feasibility of the narrative of the game, as it becomes obvious the designer has attempted to create the story with as much respect to precision of items, artefacts and elements as is possible for the experience of the player. “The game was based on studying many cultural facts of the different places he went to and even the way of life at around this time to achieve realistic facts of his time as close as possible to the many countries he explored” (Designer D). Of course, when trying to depict several different cultures, there needs to be common links between the cultures in order for the game narrative to flow effectively. The designers had to find common links between Dubai, Egypt and the city of Tangiers in Morocco for the game; to do this, each place was studied carefully in their modern, as well as historical context, in order to recreate the differences and similarities between locations. Due to commonalities such as language, clothing and behaviour, the designers were able to create effective links between each culture, whilst maintaining their individuality. This is essential for the flow of the game’s story, and subsequently the narrative due to familiarities in the common links, but also the obvious differences that each culture holds.

While a game does more often than not follow a story, some parts of the narrative aren't essential to the game's story, but are instead used to supplement the cultural accuracy and relatable locations for the player. Therefore, a designer will often include buildings, locations or events that while holding no place in the main campaign of a game, are usable as location markers for the end user. The most common form is by including world famous buildings and landmarks, such as ancient historical structures or places with cultural significance. The pyramids in Egypt, the Statue of Liberty in New York, or Big Ben in London are some examples that designers may use as common landmarks for the player to recognise. “[you] will see in our environment design the famous monuments of Cairo and Alexandria (Egypt National Museum, Tahrir Square ...etc)” (Designer, B). The designer needs a strong background knowledge of the cultural items they are trying to represent, no matter how famous. This is due to the fact that accurate representation is often only displayable through an intimate knowledge of that which is being displayed. For a designer to represent something of cultural significance, be it a building, person, event or historical context, they must have an understanding of what that significance is, allowing the culturally symbolic item to have a full and effective meaning in relation to its real life counterpart.

Designers need to have the understanding of the items they are trying to display in order to create a game with utmost precision in cultural meaning. This is done by conducting research; usually through the medium of historical texts, books or images. If the designer has an in depth knowledge of what they are trying to portray in the game they are able to afford the item maximum accuracy in terms of cultural significance and aesthetic meaning. Simply copying an image from a photo and including it in the game does not present the item as effectively as it is possible to do, but with additional background information and knowledge, the designer is able to create the item with the most relevance

to the story and narrative as is viable. This can then also be used to signify the difference between common and unique cultural items. The designer will need to select items in order to be displayed as background information, as well as ones, which are relevant to the narrative. In order for this to be done, a cultural understanding of the importance of each item being illustrated is required of the designer, who can then apply the item in a meaningful context within the game. The subtle use of common cultural items, or the conspicuous applications of unique items have their effectiveness entirely based in the understanding of the person who designed them. “Constructing the background in Egypt was taken from different books and photos existing we also used Google earth to extract few real pictures of the desert in an area in Egypt called ‘Al Hurghada’ (Designer, D). The drawback of using so much cultural knowledge and their representative items is that a designer may often try to include too much detail from a single nation, and condense the culture into one area. This means representing and encapsulating the many complexities that comes with the culture of a country in a single area, often a city within a game level. In the process of applying all this culture to one area, each culturally significant item can become blurred, losing their intended meaning, then overwhelming the player as an over complication of a whole culture invariably leads to an oversimplification.

To create a game that is marketable, designers often include an element of fantasy in their real world creations. This allows the designer to manipulate the culture into something mythological or to provide an exaggerated form of the reality that is being designed. This creates a new and/or different significance to the cultural items brought from reality into the virtual world, as the fantasy element is often used to emphasise the importance of different elements the designer has introduced to the game. Inevitably this changes the relation between the narrative of the game, and the culture used in the game, but does not

necessarily create a negative impact on the culture that is being interpreted by the designer. Designers often exaggerate cultural traits in mythology and stories to emphasise the meaning of what was originally used.

“Sun script Sura - A daemon We used the concept of the story to design the character from a villain to a hero... we just thought of a daemon therefore we selected the Evil (as per his culture he believes that the devil is the only character who can be the nearest match to an angry person, therefore as a character for the game it was fantastic, thus we can make it much more engaging, and the fire is to revenge.”

Designer A, has used a Devil from Hindu culture, “Sun Script Sura”, to create a new cultural concept, in which an evil being transforms into the hero. In order to fully display the emotions and personality of the character, certain cultural traits are used. Sun Script Sura is portrayed as a muscular, semi-naked being with red skin. This depiction is used to show the anger of the character, and its relevance to Hindu culture. It also applies to many other world cultures, meaning the game is transferable in its meaning and understanding to cultures not necessarily related to that of the Hindu religion.

However, some designers through interview acknowledged the difficulties faced during the design phase, to represent culture, ‘Working on games with cultural heritage will be very challenging’ (Designer H). The challenges are varied, selecting different cultural items from a plethora of possibilities means the designer has to be careful about which items represent the culture they are trying to envisage as best as possible in their game. In addition, the items they selected can have two functions, either as a background element to the game, or something the player can or must interact with. This is a challenging prospect, as cultural items may hold a different importance to different

communities, and selecting the correct (or best representable) ones for the player to see and interact with can be a frustrating dilemma for the designer. The items they include must then be represented as accurately as possible to avoid insulting or upsetting the culture they are taken from. If more than one culture is used, then this task becomes much more difficult, due to the need for the narrative to flow, the cultures used need to be linked, which is often done through the items the game uses.

Furthermore, some designers see video games as not providing a good place to bring the world's reality into it, "The culture in the games will not provide the users with the full reality of what the true story will provide, rather a small start, or a very reduced background of the real story" (Designer B). Culture can never be portrayed one hundred percent, it simply isn't possible to introduce reality to total precision. Aspects of reality are used to present parts of culture in video games in order to create increased value and marketability for the game. Once again, this places utmost importance on the meticulousness of what is portrayed, as the items are used to represent a wide range of cultural aspects than may normally be expected of them. On the contrary, some designers believe that books and movies or television have greater ability to bring more realistic content, "Books and movies will provide much more details about the reality" (Designer B). The different mediums can be used to represent the culture in intrinsically different ways. Books can be used to represent a culture more accurately than other mediums due to the nature of writing; much more information can be included in a book as much of the physical representation is left down to our own memories or experiences with what is written on the page. Movies try to portray certain aspects of a culture to deliver a story in a linear motion; therefore, much of the culture on display is a recorded version of the reality of the everyday people, communities and items that represent the culture. Actors used can also have an in depth knowledge of what they are attempting to portray, therefore

increasing the feasibility of what is on the screen. The difference with video games is that the story is designed so the player can manipulate it while being a part of the culture in a virtual context. This is an additional element to what movies and books can provide their end consumer. The difficulty therefore lies in using culture to create an interactive dimension for the player, rather than being introduced to the culture via a chronological or continual story narrative.

Using cultural items to depict narrative is more often than not a difficult notion for designers to comprehend and implement. The complexities of stories used, and how to implement them in an interactive world often vastly alter the way cultural items are able to be displayed. Therefore a lot of research is required from the designers to be able to represent the cultural item with as much precision as possible, and to fully understand the importance in terms of the in game culture and its relevant real life counterpart. For designers to make this concept more palatable, they often introduce some form of fantasy or mythology. This allows the creator to manipulate the cultural items to effectively represent the story used, and for the element of fun to be applied to the way the player interacts with the story. The inevitable effect is that culture cannot be applied to complete accuracy, but designers are able to create a game as culturally relevant and significant as is possible, whilst maintaining an aspect of entertainment and dignity that is digestible by the end user. The story is used as a guide for the designers to choose and represent the cultural items in the game; the designer needs to depict the items in different ways, often through structures, people or objects. The challenge is creating a balance of these to effectively portray the culture (or cultures) in the story of the game. Therefore, whatever cultural items are more applicable to the real life story should be used to utmost effect in the game itself. The introduction of different realities (through the form of myths,

exaggeration of the reality, or fantasy) enables the designer to mould and introduce cultures through more attractive standpoints for the player.

6.4 Conclusion

Designers, above all else, need to create a game, which is enjoyable. This includes many elements, with a major focus on the gameplay, aesthetic and mechanical function of the game, based around the design strategy. In light of this, culture is often afforded a backseat in the production of a game, used akin to a second-class citizen. Many designers use cultural locations as major landmarks in their games, but purely as aesthetic instruments. The result is cultural misrepresentation, which causes animosity amongst the communities, which the game is trying to represent. This is also true of how the game mechanics function, if culture impedes, or affects the mechanics beyond that of the designers want, then it is either reduced, or removed, to create a game that may be deemed more desirable to the target market. However, when culture is an essential part of a game's story and design, i.e. the use of the *Hijab* in 'Unearthed: Ibn Battuta' (2013), then cultural items, artefacts and detail are produced to a high degree of accuracy. Due to the marketing demands of the desired audience (Middle Eastern public), the accurate use of the *Hijab* was essential for a cultural understanding to be developed between the intended player, and the historical culture. The degree of aesthetic representation of the item is only possible if the designers comply to the cultural design, in the most realistic sense; creating a bridge between the desired player and the in game character.

The vast array of sources available to designers allows the designer to create cultural items, artefacts and environments to a degree of accuracy that can fairly and justly represent the culture the game is trying to portray. Personal knowledge, secondary sources and primary experience all play a part in the developer's ability to create this accurate

representation. Most designers use this combination of tangible and intangible research to embed culture in their games. Tangible sources include books, the Internet, and visual information (e.g. maps), which the designer can meticulously study in order to create, and apply culture in game as an essential part of the player experience. Intangible evidence is the personal knowledge and experience of the designer. These inform the ability of the designer to knowledgeably create a game world that can be marketed, while maintaining the cultural accuracy needed for the target audience, even in games where the portrayal of culture is not intended to represent the real world, but to provide some form of fantasy. This is due to the relation between a designer's knowledge and their cultural understanding, creating a world with tangible and intangible links to one in the real world enforces familiarity with the player, which in turn is favourable for the end user as there are markers for them to relate to.

Designers are continually improving their efforts to remove cultural stereotypes and bias within games in order to represent a cultural reality. Stereotyping is often the result of the bias of the design teams, as well as market demands. Marketing a game to an audience unfamiliar with the culture that is being portrayed in a game is a difficult task for designers; therefore globally recognised stereotypes are used by design teams in order for their players to understand the context of the game. However, movement away from cultural stereotypes can mean games portray cultures as close to their real life counterparts as possible, rather than as a series of stereotypes; which is essential to creating close cultural understanding on a global scale. Properly representing a culture has proven to be a benefit to the marketing of games, as it creates a broader audience for the designers, by including and not excluding cultures.

The difference between game worlds and the real world is often hard to link for designers. The type of game is often essential in the amount and style of cultural representation on

offer. Game types, such as action and adventure, often feature far more cultural intricacies than other games, such as first person shooters or fighting games. This is because historical events and stories are often the focus of action and adventure games, in which culture is an integral part. Being able to effectively create the historical culture in such games is an important part of the how the story develops, due to characters and environments inevitably being influenced by culture as a whole. Effectively creating a story with a high degree of cultural accuracy affects the potential for virtual tourism of the locations used, persuading players to think of, and possibly visit the locations they play in. On the other hand, games such as multiplayer first person shooters often require limited cultural input, as the intent of the game is not to portray a character or location, but rather focus on the shooting aspect. The environments are created to be tactical obstacles for the player, while adventure games have an environment designed to immerse the player in that location or time period, and therefore require cultural accuracy in the items, artefacts and structures used to represent the in game locations, and imitate real life environments.

The relationship between narrative and gameplay is often a difficult notion for designers to comprehend and implement in their game designs. Complex narratives and stories affect the degree and amount of use of cultural items, both as background information and interactive objects. To remedy such issues, a large amount of research and development is required for designers to include culture to a level of precision to justify the narrative. To lessen the time consuming impact of something as complex as culture, the use of mythology and fantasy becomes an essential part of the game. While this reduces the cultural accuracy, it allows the designer to creatively alter a world to be more palatable for the player without impeding the player's enjoyment. The difficulty is balancing the reality and mythology in the game to sufficiently portray a culture with precision, whilst creating something new and exciting for the player.

7 Chapter Seven The Game Development Process

7.1 Introduction

This chapter is a result of analysis of the case studies and interviews, and how the designers can use the information to rectify cultural misrepresentation. The initial section is a series of definitions relating to specific aspects of the design process, and how culture influences (where possible) each aspect. Culture has no influence over some of these parts but they can potentially influence the inclusion of culture. Finance is one such area, where the amount of money may force designers to devote less time to certain game development procedures, such as cultural accuracy. Although culture realistically has no influence over the financing of the game. As a result, some aspects of the first section are included not to be changed from the point of view of culture, but how they can be effectively used to maximise cultural representation. This chapter, or indeed Thesis, does not attempt to solve unchangeable issues such as time or money due to their incredibly complex nature; in turn, it aims to provide perspectives and recommendations on the subject in order to help designers develop their understanding of misrepresentation. Although undisputedly, these elements have an impact on how culture is represented in a video game because it places pressure on design teams to include or exclude items or game atmosphere, when in an ideal world they would not need to make such decisions.

7.2 The Impact of the Cultural Artefact Through the Production Process

Two processes influence the production process of a game, practical and theoretical. Practical refers to the actual physical actions taken by the designer in terms of how the game represents and includes culture. Theoretical is the maximum potential inclusion of culture by the designer; the produced result does not necessarily reflect the theoretical

ideal. The first section primarily deals with the theoretical process; how the designer can maximise the potential use of each section. The section that follows is concerned with the practical implementation of culture on the design lifecycle. Generally speaking, the designer is aware of the limitations of the theoretical process and understands that the practical process will be different.

The theoretical process deals with how the designer can manage their time, money, the overall management of the team, etc. Ideally, the designer will be able to efficiently use the money and time they have to amplify how the game portrays culture. If the designer is required to create an item in a particular manner, e.g. an aggressive character; theoretically they can produce an item with exceptional cultural representation within the given constraints.

The physical process is the entirety of the game's creation and the completed end product. Potentially this can be compared to the theoretical ideals to see how effectively the design process accurately included culture, with the resulting lessons learnt for future productivity in the production lifecycle.

7.2.1 Finance

The amount of money a design team has to spend on creating a game directly impacts on the effectiveness and quantity of cultural representation. For example, a game with a small budget might forgo including cultural items and objects as they may not be essential to the primary objectives of the game plan. The quality of cultural representation often requires someone who is very knowledgeable in that community; hiring an expert is usually an expensive process, possibly reducing the allure of including cultural items when money and time are an issue. If there is no desire for an expert, then travelling to

the culture to experience it first hand is an alternative; yet again, this is a monetarily expensive, as well as time consuming. Creating cultural items may also require bespoke software or tools to be represented in the game effectively; these are often developed for a niche market, the result can be a huge increase to the bill of the game, as well as costing the team in terms of taking time to train in the specific software or tool. According to Rich Hilleman, EA Chief Creative Officer the budget of *Battlefield 4* (2013) was \$100 million to make (Hilleman, 2014). Possibly the most expensive financial burden for a game is time; a game must be completed within a reasonable time frame for the scale of the game. Any delays or extra work results in additional expenses for the team. In this Thesis one of our aims is to give the designers a fair amount of time to understand at least the essential cultural background of the game before the financial cost is factored in. In terms of the monthly salary game designer salaries start around \$45,000 annually for under three years' experience to \$78,000 or more for plus six years' experience (Bay, 2016). Some cultural misrepresentation within a video game context occurs when the designers do not give enough time and attention to culture, which inevitably leads to mistakes. While ideally finance should not affect the inclusion of culture in a game, it unavoidably does, as a result designers have to find the most cost effective method to include cultural artefacts to at least a degree in which the culture being represented would deem it acceptable representation.

7.2.2 Narrative or Design Consistency

The narrative helps to control the consistency of the environment and items of the game; ensuring the game is in the same style throughout. A game designed to represent modern London, using exclusively Japanese architecture would be an extreme example of a lack of workflow throughout the game. Each section of the game must work in unity in order to ensure cultural consistency; the design team is required to concentrate on ensuring the

game's cohesion does not falter. The consistency of the language in the game is where cultural representation may fall short; using an incorrect accent, dialect, slang or expression impacts the realism in a game (if that is the intent). The resulting inconsistency may appear minor to people who are not familiar with the culture, but those within it may be offended and confused. The game environment is a range of elements gathered from different aspects (it may be an amalgamation of different cultures) in a specific place to support the game plot. Sometimes the elements which are collected have different styles that may force designers to make some modifications to give the style consistency. For example, the game '*Call of Duty Modern Warfare 2*' (2009) has a level set in Karachi "the map has Arabic written all over, even though that isn't the country's language" (Saad, 2009). Karachi is in Pakistan, and in Pakistan there are two official languages, English and Urdu, but because Pakistan is a Muslim majority country Arabic is used as the in game language. So cultural misunderstanding came from the designers, but also from the testers, who realistically should have been able to spot such a mistake. The plot should help a player develop their understanding of a specific culture, often through dialogue and actions. For this to occur, a design team must have sufficient knowledge of a culture in order to portray it effectively throughout the whole plot of the game in order to supplement (or create) the player's knowledge. Any form of misrepresentation throughout the plot may lead to the player being misled; which directly contradicts the concept of a game, as it is not intended to mislead a player through cultural mediums.

7.2.3 Management

Management is how well a team can focus on culture throughout the process of developing a game, and how the designers effectively implement culture. If a design team can delegate jobs effectively when it comes to developing culture, then the quality will be high compared to a team that poorly manages their cultural inclusion. If the team is

large enough, then lead designers can use part of their team to focus specifically on how culture works and how it should be represented in the game. As a result, the accuracy of such items should generally be much higher than other teams or items. It is not necessarily how managers influence a team, but how the team manages itself within specific parts of the design process to do with culture. If a design team can be influenced to think of, and therefore manage culture more effectively, accuracy across the board should improve through a relatively easy and simple level of effort.

7.2.4 Time Length

Time length is the amount of time a design team is given to create a video game. Inevitably, the longer it takes to produce a game, the more money it will ultimately cost. There are issues that arise from such time constraints, or lack of; larger companies can generally fund a game's production with a large injection of cash. For example, *Watch Dogs* (2015) cost \$60 million and 6 years to make (Ryan, 2014), which is a huge blockbuster budget. The result of such large budgets is that games are required to sell large volumes to recuperate costs. Therefore, a release date is usually set far in advance of the actual release to generate hype; however, this places pressure on the designers to create and develop a working game, capable of living up to expectations before the release date and within budget. The length of time a game is given to be created can also create contention within the design teams; the more time allotted allows more ideas to be developed, which can lead to more arguments about game direction and design. Such arguments cost time, undoubtedly leading to a high cost. There are positive effects of a time constraint, a well drilled and professional team can use the completion date to effectively set out a plan for how the game will progress with time, and how it will stay in budget. Without being able to predict the future, unforeseeable issues and circumstances can arise, but an effective plan delineating from the time limit can

minimise the resulting negative effects. In terms of culture, development length has different connotations. If a team is well prepared, then time length may not be an issue, as the team has a clear idea and they don't require much time to implement it. If the team has not effectively used their time, then cultural representation may cause an issue; the amount of time allocated to get the culture correct may not be enough for the design team. Time is a problematic issue in the production of a video game. Designers always need more time particularly when they come to support the main character(s) and the game idea background. Therefore, the time the production takes can depend on the size of the company; for example, if working on an individual game (Indie game) then three or four people are generally considered enough to create a game. If a company is working on a next generation console video game then they will need more than a hundred people (Chandler, 2014: 14). Generally speaking, the more people who work on a game the more time it will take to produce a game, through the size of the production and the amount of work needed to be produced by a large team. If more people work on the design of a game, then there is more chance of misrepresentation as each person adds additional factors into the production. The larger the number of elements a game has, then the more that can go wrong; which is as true for cultural representation, as it may be for hidden bugs or errors.

7.2.5 Team Constitution

Team constitution is how 'healthy' and effective the design team works. How effective the knowledge, skill, experience and communication of the team are utilised; and how consistent it is. Essentially it is how well organised the team is throughout the production process, originating in the effectiveness of delegated work from the team managers. The size of the team has an effect on how easy it is to manage; and therefore, provides increased chance of a negative effect on the overall 'constitution'. Consequently, good

lines of communication are paramount to the quality of the work produced; large teams need to continually communicate in order to produce and develop their ideas, this is especially true when it comes to culture. As culture is fluid in how it is interpreted by individuals; different members of the team can have different or even conflicting ideas on how items belonging to a culture being portrayed are designed and created. If these conflicting ideas are implemented throughout the game, it has a negative impact on the culture due to inconsistency. If a team is spread across international offices, good constitution is essential to the team. Discussion and information must be readily available at all times to the team to ensure consistency through all areas of design, not just cultural development.

7.2.6 Importance of Cultural Representation

Cultural representation, from a media standpoint, is how communities, ideas and topics, experiences (personal or otherwise) or groups are portrayed through whatever media is being consumed. With a video game being a form of media, this definition generally applies to how the game characterises culture throughout its creation. Therefore, game mechanics, art, actions, video and audio, etc. all play an important part in how the player interprets the culture the video game is imitating, adopting or creating. In light of this, a design team must ensure any cultural inclusion is effectively represented through the game production process and final release. Like any media platform, the game can only show the culture from a limited point of view, any misrepresentations are generally open to scrutiny, which in turn can be bad press for the game and its parent company. These misrepresentations are often intensified by the limited cultural scope of a game, as there are only a finite number of cultural artefacts a game can use to represent a culture. Misrepresentation in this respect often comes from a lack of knowledge from the designers who use cultural artefacts incorrectly; of course it isn't simply black and white

and culture is very hard to define (which has been mentioned previously). To effectively immerse a player in a video game, representation needs to be accurate, which comes from a better understanding. The more designers understand a culture, the better they can represent it in their video games, and the more immersive and enjoyable the experience will be for the player. The character of Barret in Final Fantasy VII is a prime example of misrepresentation; the character has a different accent (in text form) to all other characters in the game. Even other people from the slum he lives in, or his long time best friend Dyne. Simply because he was black he was given a different accent. In fact, many Square Enix games base their black characters on Hollywood stereotypes (Castro-Garcia, 2013). This is blatant misrepresentation in an obvious way, this lack of sensitivity unfortunately reduces the enjoyment and otherwise high standard of Square Enix games. Enough at least for it to be brought up as a major issue in an article.

7.2.7 Sources

Sources are the inspirations and knowledge that feed the design team to formulate ideas. Sources are invaluable to the team in terms of culture. There are distinct types of sources in this Thesis; people, electronic and traditional mediums. People in terms of game designers or those with a cultural and historical knowledge. Electronic sources are digital, such as google maps, GIS systems, digital cameras, movies and television, etc. Traditional mediums are books, newspapers, physical maps, oral traditions (e.g. verbal stories passed down generations), etc. While sources are the basis of game ideas, they can be misused, misinterpreted, vague, or sparse. This is why careful scrutiny of sources is a valuable skill for designers and their teams to have. While people generally provide insight into the workings of a culture, it is often only a handful of opinions on the understanding of that culture; usually this comes in the form of qualitative data.

A game cannot interpret a culture in full, usually only portraying a small part. Digital sources can be very unreliable depending on where they come from; using Wikipedia is often cited as a mistake when it comes to information as it is easy for the community to edit and manipulate the information. Although some electronic sources have been a blessing for designers; The *Batman: Arkham Asylum* (2009-2016) series of games are one such example. The designers exploited the popularity of the movies to create a series of games that sold in high volumes. On the other hand, sometimes cultural items and locations in games are misrepresented. *Assassin's Creed* (2007) uses Alamut castle as one of its symbolic locations. Unfortunately, there is little physical evidence remaining of how the castle actually looked; ergo, the designers had to use their imagination and written descriptions to try to reimagine how the castle may have looked. Designer I who was interviewed, believed visiting a location is the best possible source, although if not, electronic digital sources are widely available. "If we can't get items first hand from our multi-cultural staff, because our staff come from all over the world, we get it from the internet. "We consult our colleagues on the time period of game we are producing, is it from the middle ages or the renaissance?" (Designer I 2016).

Sources are the method in which games gain and present any cultural understanding; the better the quality of sources, the more accurately the game can represent the culture. Poor sources, or sources which are misused, cause problems in terms of culture for the designer and the player alike. A culture which has a limited range of accessible sources will lead to a design team misrepresenting that culture, not because they want to, but because there is limited information available for a designer to fully understand the significance of what items they use. Viable and well researched sources may even be overlooked via the use of stereotypes, such as the example given in "Importance of Cultural Representation."

The use of sources, and the effectiveness of their use, depends on several factors influencing the design team; factors such as time and budgetary constraints.

7.2.8 Decision Making

Decision making is how the design teams come to make a decision on particular, or all, aspects of the game; ideas, elements, environment, sound, conversations, etc. Like many businesses, decision making comes in the form of group discussions, and managerial decision making. Group discussions are good for generating and proposing ideas so all members have an insight into game direction; but the ultimate decision usually lies with the managers, although it can be defined by a democratic process such as a vote. The approval of decisions is almost exclusively in the hands of a managers. Designer I a designer interviewed, is part of a large game development company, they “work like a democracy; if someone thinks it’s their calling to create a prop, then other teams will tell them if it looks too much like another culture, or if it’s good” (Designer I). After all, it is a team effort creating a game and the team should have input, although the decision may not be made as a unit.

Decision making effects the culture in a game, as the decisions made may, or may not, include an impact on cultural items. The mission statement is the primary influencing factor in making any decision for the game; the decision may be made to use culture as a major aspect of a game, while the decision could also be to use culture as a space-filler, or to grab attention. There may be some middle ground, culture can be included in a very subtle but powerful way, depending on the designer and the decision they make on environments and items. “For example, we have an artist from Britain, but when I was driving around city outskirts in Britain, what they had drawn was what I saw, but you could tell there were cultural influences that were very subtle, only someone from that

area could have designed them. So when our French artist creating gardens, I immediately recognised them as looking like gardens from Versailles in Paris. These two examples show very generic, but also very subtle cultural influences.” (Designer I) is describing the process of creating an environment, using an artist from the culture the environment is based upon. Even if culture is not the main point of the work, it’s subtleties can be included either consciously or subconsciously; it is dependent upon the decision made for the design team.

7.2.9 Game Play

Gameplay is how the player interacts with game functions, such as challenges (overcoming them), the rules and laws of the game and how the player interacts with the plot; this does not include graphical or audible aspects. Culture interacts with gameplay through actions, ideas and the plot, which the player can then link with, or learn about. This is done through including culturally recognisable rules and plots for the player to follow. Following a much used story trend is often a basic method for designers to follow, e.g. betrayal and inevitable revenge by the player’s character. Often, these cues can be recognised by multiple cultures in order to enforce familiarity across an international market.

Games such as *Medal of Honor: Underground* (2000) follow the popular story of the heroic French resistance in Vichy France being aided and liberated by the all-American hero. The game follows and adapts real life battles and key points in the war (the defence of Crete, the siege of Tobruk); giving the player a sense of taking part in these famous battles. Misrepresentation in gameplay can lead to a negative experience for the player, especially if said misrepresentation is obvious. The depiction of darker-skinned races in many games is an obvious fault that many players deem offensive and insensitive.

“Another kind of stereotyping can be seen in fantasy titles where dark-skinned races are often depicted as being less intelligent, barbarous, prone to violence, and less civilized than their fair-skinned neighbors.” (Castro-Garcia, 2013). Designers may or may not be following stereotypes intentionally with regards to “darker-skinned races” but it is a problem that is rife, especially in fantasy games. If it is consistently followed throughout many games, then players may feel the stereotype has become culturally ingrained, or fear that the stereotype may influence their behaviour. A solution could simply be to place all races on an equal footing, although this would force designers to find depth of story or lore elsewhere, this could be regarded as a positive step in game development.

7.2.10 Entertainment

The primary purpose of a game is generally to entertain the player; it is the most important aspect and goal of a game’s development. Therefore, a game must challenge and excite the player, causing enjoyment so they continue to play. The game type and team heavily influence how culture is represented in a game in order to achieve maximum enjoyment. Many designers use culture merely as a decorative aspect, a convenient subject to fill the empty spaces of a game environment. In the physical world, culture can play a huge part in how we perceive enjoyment; this should be transferred into a game world wherever possible and to the highest degree of accuracy possible. Respectively, culture should be discussed and included as early as possible to achieve maximum precision in the final iteration of the game. If the creation of a game focuses too heavily on the challenges of a game at the expense of environment, atmosphere and culture; then much of the message may be lost. If a game supplements challenges with culture and environments, then a richer experience can be felt by the player.

Due to the ever increasingly popularity of games as an entertainment medium and source of fun, the more they could possibly be used as source of knowledge. Of course, this is not to say that games must compromise their entertainment value for educational value, but wherever possible, it is good for designers to use their existing knowledge and sources to reduce or remove inaccuracies in the representations of communities or people. In *Call of Duty: Black Ops III (2015)* the main objective of the game is to kill waves or groups of enemies; considering this as the main source of entertainment for the player, most other factors, such as cultural accuracy, take a backseat. While it is forgivable that every aspect of a culture is not included in such games, as it would bog the player down in semantics, it would be preferable for them to at least include culture as a major source of entertainment for the player.

7.2.11 Purpose

The purpose is the goal of the game. This ranges from the overall purpose of the game, e.g. to defeat the final boss and beat the game; to specific levels and tasks, e.g. to find a switch to open a door in order to progress. From a cultural standpoint, the overall purpose of the game has a greater effect on what is or will be included; this usually applies to how the environment is altered and recreated to match the overall purpose of the game. *Grand Theft Auto 4 (2008)* is set in an alternate New York City, and includes world-famous landmarks such as the Statue of Liberty. While the in-game statue is designed to match the real version, it has been altered in order to fit into the game's environment enough to be deemed inexact. One of the most obvious omissions from the in-game design is the writing on the plaque the statue is holding; most likely due to the historical nature of the writing (the date the thirteen colonies declared independence) having no relevance to the in-game purpose. This omits an extremely important cultural element from the statue, the purpose of it being in New York is to signify independence and freedom; the in-game

statue is simply there to represent familiarity. An issue of this is that the true purpose of the regalia is not supported by the virtual representation, leading to possible misunderstanding in the player if they don't know the history behind the real world artefact. While not directly a purpose of the game, the statue inhabits an environment in which several game-levels are based; becoming a part of the in-game goal. A designer may use culture in the context of a video game to further the purpose; by creating well developed cultural items to present cultural importance through visual, audio and narrative means.

7.2.12 Complexity of Cultural Understanding

Due to the highly complex nature of culture, (e.g. being very difficult to define due to the huge amount of different things culture can be perceived to be), creating or recreating culture becomes a very difficult job for game designers. Using experience, time, symbolism through tangible and intangible cultural mediums, designers can, and do, attempt to portray culture in a relatively accurate light (relative to time and monetary restrictions, sources and technical/technological limitations). Therefore, it is far more logical to attempt to only use a small part of culture, or simplify culture without compromising integrity too much. This means omitting specific culture items or systems; the task becomes choosing the most suitable cultural items to include. *Watchdogs* (2015) attempts to portray Chicago through such simplifications, while it does not include items such as 'Soldier Field Baseball Stadium' or the 'Shedd Aquarium', it does include enough iconic architecture to be recognisable. Although individuals often highlight problems associated with attempting to portray nations and cultures on a large scale (Sisler, 2008). Being selective is a skill in and of itself, potentially the more choices a designer has, the better the chance of accurately representing a culture effectively. The counter argument to this being that if there is too much choice then the designer may simplify all the cultural

items in an attempt to include them all, reducing the overall impact of each item. These complexities can make it exceptionally hard for a designer to realistically portray a culture; the aim is to include enough culture in a video game to generate enough knowledge of a culture, without compromising the integrity of either the game or the culture.

7.2.13 Beautification

Beautification is the process of ever-improving graphical design in order to create increasingly attractive artwork. Continually improving artwork equals an ever improving possibility of accuracy in terms of the representation of cultural items. The more able a designer is able to create an object that looks real, the more detail that can be added and the more effect that object has on the player. The issue here is that a designer may choose to substitute culturally significant artefacts with objects they find more beautiful. The ever present Minaret in *Assassin's Creed (2008)* being a prime example. The designer may also be less willing to model a real item for game purposes as localisation can diminish the cultural meaning of the item. For example, creating as true-to-life character models as possible may lose their authenticity when localisation changes the language and dialogue enabling local communities to engage with the game (Balela & Mundy, 2015). Therefore, the designer may focus less on creating a perfect model if its significance could get lost in translation. If a designer is aware of the significance of a cultural item, then perhaps they would forgo its substitution with an item deemed more beautiful and keep the culturally significant artefact. In light of this, a designer with good knowledge of cultural artefacts would be able to take steps to minimise the method of replacing items for the purpose of beauty, for a more immersive or atmospheric experience for the player using culturally relevant items.

7.2.14 Idealism of Game World Design

Idealism should be viewed by seeing the game as a perfect outcome from the designer's point of view. That is to say that the ideal version of the game is the end goal of the designer when creating the game; although it will most likely remain an ideal, meaning achieving this goal is not achievable. The benefit is that the design team can continually adjust and evolve the ideals of a game world to fit into a realistic working model.

When the designers made a decision to include cultural artefacts in the game, it is better to select the items, which represent a strong aspect of the environment. The mission of the team is to identify the important figures that distinguish characters in this society from another. In modern video games, there are similarities to some extent between videogames and film, another videogame, or even with comics, regarding the narrative, characters, location, etc. Balela and Mundy, explain how modern video games have been influenced by Hollywood movies and how these influences drove the video game designers to use such media as an idealistic model to create games. "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" (Balela and Mundy, 2015). Idealism, for all intents and purposes in a video game, is creating a medium of entertainment in which a player can experience realism. That is, as close to the reality of an area that it is possible given the restrictions a designer will face; of course this is, as previously mentioned, an impossible task, given that humans are incredibly complex beings to understand. What is perfect for one player could not work for another.

7.2.15 Platform

The platform is what device a game is intended to be played on. Platforms are typically consoles, desktop PCs and laptops, mobile phones, arcades, etc. The possibilities of

cultural representation vary from platform to platform. A game developed for a mobile phone will generally have a low level of cultural representation due to technological limitations and a small production team; focusing mainly on one or two simple aspects of entertainment. Knocking over pigs in *Angry Birds* (2009), for example. On the other hand, a game designed for a console or PC is much more open to scale and interpretation. Large companies can create games with a huge array of features, and culture can play a major part; Ubisoft and their culturally diverse teams of hundreds of people can develop games with accurate and representative culture. Games such as *Assassin's Creed* or EA DICE's *Battlefield 1*. Whatever the platform may be, designers have a range and array of possibilities for cultural inclusion.

7.2.16 Unity / Style

Style typically refers to which school of art will be used to graphically represent the game e.g. realism or surrealism (cartoon). The majority of games are attempting to recreate a culture or create a situation which is as representative of real as possible, as a result realism is most often used in big budget games. Although some designers may create a game in a surreal fashion if it fits the purpose, e.g. the designers of *Borderlands* (2010) decided to create their game in a cartoon-like fashion, creating a surreal and entertaining “shoot ‘em up” which graphically stands the test of time. Unity is the consistency of artwork in the game; have all environmental elements being created using the same method? Are all the characters and in-game items designed in the same way? While artwork may change significantly from area to area, they tend to follow a consistent school to create a feeling of continuity. *Unearthed: Trail of Ibn Batuta* (2013) changes artwork and time period as the player moves from area to area; there is no link between each area in terms of art or time, leading to possible confusion, or a sense of changing game altogether. The style of artwork in a game hugely affects how culture is perceived

by the player, as it is the visual means by which a player experiences the game. If a designer can understand how artwork affects cultural representation, then they should, theoretically, be able to minimise loss of understanding through unusual forms of artwork.

7.2.17 Localisation

During localisation processes, individuals may make decisions which change elements of a game's construction e.g. transformation of written or spoken language, inclusion of different sounds, change of visual elements. This process has the potential to impact on representation. As an example (required through necessity) games depicting Nazi memorabilia have needed to be significantly altered for those markets where depiction is not legal or is likely to cause considerable offense. Altering items inevitably changes the cultural meaning resulting in the player understanding the items in a way not intended by the culture or designer. This is negative as altering an item further increases the risk of misrepresentation; reducing cultural satisfaction for the player or people of that culture.

There are many factors which affect how culture is impacted in a video game, rather than simple designer ignorance or technical inability. Every game takes time, money, skills and a whole host of competing factors which restrict a designer from including what they would like in their 'ideal' game. The inevitable effect is that a designer must compromise on how much culture, and its implications, a video game will have in its final release. For this reason, a designer must develop an effective middle ground between cultural accuracy and all other factors in order to do justice to the communities being represented. This Thesis doesn't aim for the unrealistic goal of perfect cultural representation (due to that being an impossible task), but to make designers aware that culture is a huge part of

a player's experience in a game; and it should not be a side note in the face of many possible negative impacts on the production of a video game.

7.3 Perspectives on Improving the Production Lifecycle with Respect to Cultural Representation.

The amount of issues that designers can encounter during the production of a game vastly affect their cultural input. There are various ways in which culture can be considered by designers throughout the production lifecycle of video games; and how they can improve complications such as a financial burden or a lack of time. At which stage the designers can begin to think about how culture inclusion also has a major impact on the resulting accuracy. If the design teams consider culture in depth early on, then culture will be a major part throughout the whole lifecycle of the games design. The following statements set out ways in which a designer can potentially increase their cultural accuracy largely without compromising on time or money; and remain within the technical level available to them. While there is depth of how to increase culture in the following statements, they do not set out to define in depth each stage of designing. The statements will also inform on the issues that designers face from external issues, which arise out of their control. The purpose of each statement is to comment on an area of development in order to define existing issues and how to reduce the risks of repeating the problems. The statements provided form a component of the overall contribution of this Thesis to the field. They effectively summarise the analysis of results from the case study and interviews section into key strategic considerations for design teams in developing games with cultural artefacts.

7.3.1 Culture should be considered throughout the Game Production Lifecycle.

Culture should be an integral part throughout the whole process of game production, from concept, pre-production, production, post-production and even marketing. This statement sets out to define each stage relatively briefly, and how culture should be integrated into each section as standard practice.

The concept is the basic thinking of the game idea that studies the fundamental nature of knowledge, reality, and existence of different aspects of the game. The concept outlines the themes of the game, the intended audience, potential locations, points of reference, etc. Jim Lewis an expert in project management points out, “think about the concept as finding a solution to a problem” (Chandler, 2014). In video games the concept starts off as a simple question, in preparation to solve a problem. Naturally, the concepts defined in video games, as in any production process, start off fuzzy and the task of the game producers is to flesh them out in a way in which the team can clearly understand the principles and goals of the game. These humble beginnings could be anything from designing a futuristic 3D street racing game with hovercrafts with a setting akin to the currently important tuner street racing scene of today's world; to a simple action/adventure game where you control a ninja. A concept does not have to be unique, it can also start as simply wanting to make a follow-up or sequel to an existing title, a game based on existing non-gaming characters, stories or franchises - from other mediums such as television, comic books, board games, movies, folklore, or history. The team seek to clarify the basis of the game such as what the game is about, what the targets are, what are the elements of gameplay that are needed to support the strength of the game. In addition, Chandler defines suggests that at the conceptual stage decisions are made regarding the “genre and hardware platform because these decisions will shape how the concept grows” (Chandler, 2014). When the concepts of the game are determined

plainly, core developers communicate these to the rest of the team by defining a mission statement; which is the range of tasks given to everyone in the team involved in the game's creation.

The process for building a video game after determining the concept is the preproduction phase. Many authors have included the concept (or the idea phase) in the preproduction stage (McCarthy, Curran and Byron 2005, Dunlop, 2014); because preproduction forms the phase of planning the game, and the concept is the primary ideas and planning stage before work on coding the game begins. On the other hand, others have used the game concept as a separate entity (Chapman, 2016); due to the concept stage only requiring a small initial team who come up with the idea for the game. In this Thesis the conceptual stage is separated from the preproduction phase in order to keep a clear definition between the starting ideas for the game and the inaugural physical constructions. Whether or not the concept stage is a separate entity to preproduction for a design team, culture is an integral part and should be included wherever concept is placed within the designing of a game. Throughout the whole of the concept stage, the designers must be thinking of how culture will make an appearance in the game and to what degree it affects all aspects of the game.

Pre-production: The previsualisation of the game, where the designers decide how to implement the game concept by testing ideas, designing possible artwork, planning the budget, staffing and time management of the game as well as the scheduling of production. Dunlop, (2014: 27) explains the preproduction stage as the “planning phases of a project and the forms of everything to come”. Preproduction is where the full scope of work is defined, and possible point of failure identified” (Dunlop, 2014: 27). This stage ends when “the funding agency gives the game the green light to proceed to full

production” (Chapman, 2016: 46). A portion of the design work is often completed during the pre-production stage, as funding agencies or individuals require a working version (prototype) of the game to be satisfied with the skill and design of the teams producing the game. Although the design work included in preproduction does not necessarily make it to the final cut.

Preproduction commences when the concept of the game is determined and real planning begins. Among video game authors, designers use the same processes used by film production teams; Renee Dunlop outlines and explains the difference and similarities between film and video game pipelines. “Films whether live action with visual effects or full animation, rely on similar technologies to games. Both require models, textures, animation, lighting, particle effects, post production and audio” (Dunlop, 2014: 5). A similar process occurs in video game production,

“a game requires input data. This data comes from controllers, touch screens, webcams (some with depth information) microphones and multitude of other input devices. Unlike a film, a game must process all of these streams of information to generate the appropriate output” (Dunlop, 2014: 6).

Preproduction should outline all the requirements of a game to go into full production, as well as providing a preliminary version of the game. As a result of these needs preproduction should serve as a “roadmap for finishing the game.” (Chandler, 2014: 5) This essentially means the expected time it takes to complete the game, how much it will cost, and how many people (with the necessary skills) it takes for the full production process to conclude will be defined at the pre-production stage. Game requirements and a game plan should effectively cover these needs, with risk assessments performed at

each stage (Chandler, 2014: 6). One of the major parts of preproduction in respect to these two fields (game plan, game requirements) is to discover the areas of possible failure, and remove or correct them as efficiently as possible. A team needs to “create concept artwork, build test assets or shoot footage” (Dunlop, 2014: 27) to decide whether ideas are feasible for inclusion within the production phase. Often, ideas that appear to be good within the concept stage prove technically impossible or relatively dull when the team begins testing the waters in preproduction. (Chandler, 2014: 28) Therefore the stage can be used to tweak ideas developed in the concept stage to fit into the production of the game; as well as to appease any potential financiers who may deem a project to be overambitious. This stage is often the most hectic due to ever changing, or additional ideas, which can increase pressure on the preproduction team. “Structure your pipelines so that you can accommodate these changes without invalidating the work you have already done” (Chandler, 2014: 29).

Whenever a designer is in the preproduction phase they can follow a checklist to ensure they remain on track. They can also follow this checklist during the conceptual stage as a gentle reminder of how much progress should have been made. For the conceptual stage there are many questions on the checklist defined by Chandler in her book *The Game Production Handbook* (2014: 9), they are: Is the initial game concept defined? Are the platform and genre specified? Is the mission statement completed? Are the basic gameplay elements defined? Is the prototype completed? Is the risk analysis completed? Is the concept Pitch ready for approval? Have all stakeholders approved the concept? Is the project kick-off scheduled?

For the game requirements section, there are also several questions which can be asked to generate maximum efficiency in the crucial preproduction stage. They are as follows:

Are “must have”, “want to have”, and “nice to have” features defined? Are the constraints defined and accounted for in the feature sets? Are the milestones and deliverables defined? Has the technology been evaluated against the desired feature set? Are the tools and pipeline defined? Is the basic design documentation completed? Is the basic technical documentation completed? Is the risk analysis completed? Have all stakeholders approved the game requirements? (Chandler, 2014: 9) If the designers have these questions on their mind at all time, especially with reference to culture, then the focus will remain centred around the desired outcomes of the developers.

For the game plan, in which staffing and fiscal ideals are set, there is a shorter list of questions to remain on the designer’s mind, although each may bear more importance to lead staff members, the questions are: Is the budget complete? Is the initial schedule complete? Is the staffing plan complete? Have the core team members approved the schedule and staffing plan? Have all stakeholders approved the game plan? (Chandler, 2014: 9) While these questions are most likely to be playing on the mind of the director of the project, all staff should consider them as well, in order to keep on track with the scale of the game and any possible issues that may arise.

As the team during preproduction usually only consists of around five or six core staff members, each and every one of these questions will likely weigh heavily on their minds as they try to finish a working version of the game in order to propel their game into full production.

Production is the phase of implementation of the idea of the game. The production phase comes after the preproduction, signalling the team is ready to begin developing a working game. Initially there can be a slight bit of confusion when transitioning between the two

stages, as ideas still flourish when the team begins to produce the game, ideas, redevelopment and production often take place at the same time during this period of change. Challender (2014), confirms that designers can be able to start production on some features while others are still in preproduction. It is during this stage that assets and code are created in order to develop a working game or possibly a more advanced prototype.

During the production phase, a large group of producers, designers, artists and programmers take part in the construction work. Often in this stage the team are working together on the same line, and also on same page of the game design. This is where a more advanced prototype may be created by the team in order to test ever changing ideas. A prototype is an initial model and to enable the perfection of the process before implementing the elements of the game on a large scale. A prototype is a vital part of the design process because it allows designers to see and test the product in action, therefore, the developers have the opportunity to see what works and what does not. Initially, in the prototyping process designers should attempt to model reality instead of a fantasy world, therefore, they can use primary sources or secondary sources to imitate aspects of real life and then they will choose to change designs gradually in order to be in line with the game concept. Moore highlights that

“it can be easier to design such a simulation because it isn’t necessary to create a fantastic world populated with fabulous creatures and extraordinary technology or magic. On the other hand, trying to create a simulation that feels close to the real world while not overwhelming the player with too much detail presents its own challenge” (Moore, 2011: 31).

In this case, if we can guarantee that the elements of the game have reference to reality or history, then, the represented environment should theoretically become more accurate.

Post production is when the game's main features are considered complete, and the game can be put into alpha testing. During this phase of testing, all major bugs are documented and the game is sent back to the artists or programmers to iron out the issues. Once this has been completed beta testing can begin; throughout this stage of testing the game is picked at for every fine detail, and all bugs, major or minor are reported whilst the design teams attempt to solve the problems. The time allocated to testing is usually based on budgetary and time restraints that the designers may have. Once a game has gone through testing and the production team or publisher is satisfied; a 'release version' of the game is created and sent to the appropriate retailers. Once the game is released, the design team goes through a 'post-mortem'; this is where the design team reviews and discusses all aspects of the game to decide what was good and bad; thus ensuring the team learns from the production and has more experience when working on their next project. It is also a very good way to ensure cultural requirements have been met; and if not, why they were unable to meet them. A post-mortem basically provides a useful way for the team to wrap up their project and talk about their overall experience.

Throughout the whole of the production phase of the game, in some game development environments there is a 'Lead Quality Assurance Tester' and a 'Quality Assurance Tester' (Chandler, 201: 32). These people are usually heavily involved with the design team and continually test the game for bugs and issues; this role can also be diversified for cultural means. A major role of the testers is to decide just how much time alpha and beta testing will take, and if it is financially viable to include many mechanics and features as the design team may wish to include. For example, "if the game is going to feature 50

variables for creating a character, the lead QA tester will estimate how long these variables will take to test and then most likely suggest the number be greatly reduced to save on testing time” (Chandler, 2014: 32). Throughout the game, as culture develops, the QA tester could potentially aid the designers in deciding whether or not cultural requirements have been met, and if there is time to redesign or improve in the case of misrepresentation. This could save the designers valuable time, as it removes them from finely combing through the game as they create it for cultural accuracy; leaving the QA testers to decide if the representation is substantial enough. Although this does create an issue of cultural experience and expertise in the QA lead/tester role; if they do not fully understand a culture then they cannot possibly comment on the requirements of that culture in a video game. Consequently, this significantly reduces the pool of potential QA testers for a game, as they must possess specific cultural knowledge beforehand, or at least be afforded the time to gain the appropriate knowledge.

7.3.2 There should be a defined philosophical understanding of the games approach to representation

Before a game is put into production, design teams have to develop a prototype based upon a feasible concept. During this initial stage, the design team should clearly state their intention towards cultural implementation and understanding so the cultural theme can be implemented throughout all periods and sections of a game’s production cycle. The philosophical understanding is paramount in order for the designers to effectively replicate a community, due to the intangibility of many facets of culture (e.g. spoken stories, atmosphere, etc.). At the initial stage it is critical to determine the philosophical intention of the level of representation within the game. It is important to answer the question, how important is cultural representation to the games design and development, and why?

In the conceptual design stage there are three subsections; determination, definition and function. To fully identify the concept in its theoretical form we must determine what the idea of the game is in its clearest iteration. Therefore, determination is primarily used to set out what genre the game is going to be and exactly how that will influence the story. To explain this further, we use definition to explain the depth but also the limitations of a game. Setting the limitations at this early stage keeps focus on what the game can and cannot do; if the limitations are clearly defined then there is less chance of major problems when the actual production of the game begins. Subsequently risk assessments are used to reduce the risk of time and monetary loss through over ambition and mistakes. Function explains exactly how the game will work, with a focus on the game mechanics, environment and how the game's mission will be implemented; this is the theory behind the technical side of the game in terms of coding. As an example, when the concept of gameplay is being developed, a location must be decided. When a location is decided, setting a time period is necessary (or vice versa). Throughout these initial stages a style is usually developing in the minds of the developers; which leads to the representation of a community. A community in this location and time is required in order for an appropriate culture to be chosen; from this community, characters, structures, gestures etc. must be created to be representative of the time period and culture.

When all these sections have developed into a basic idea, the elementary interactions between the player and the game begin to make sense. Designers usually keep these steps logical, but simple, at this early stage due to the nature of the concept; if a concept is too complicated for a team to follow, the idea is almost certainly doomed to fail. Another example is the concept of art. The determination (in its simplest form) at this stage is simply the idea to include art. The definition is therefore what style or schools of art the

game will use; i.e. classical, cubism, surrealism, etc. Function in this case is how the player will see the game world through the art and how it influences the player's experience of the game. The concept of art heavily influences the technological requirements of a game, as more complex, and in depth art forms require more powerful equipment, time, and skill to create resulting in a higher budget.

The virtual environment is how the concept develops into a working game, although still from a theoretical standpoint, it defines how to implement the theory in a practical manner; hopefully making it easier for the designer via a simplification of ideas. This stage defines where the inspiration behind the concept comes from and where cultural influences begin to take shape. The real world is most often used as a basis for many games. For example, the game can be created directly from the real world i.e. a specific real society, or culture, and apply it directly to the game. For example, using London in a game and specifically using the area of Westminster as the initial idea of the game's environment. If the immediate real world is not going to be used then inspiration can be drawn from existing sources which includes movies, existing games or comic books.

Movie franchises are often used as they are a safe bet for financial investors as they can exploit an existing fan base; for example, the Batman series of games. The issue with this is that the designer's imagination and influence is limited by the legal restrictions of the copyright holders. In a similar vein, creating a game based upon a pre-existing franchise, or a pre-existing game design is also limited by legal copyrights and artistic freedoms. For example, most multiplayer first person shooter games use the original Quake (1996) as a basis for their mechanics, while there are obviously some variations and continued development between games; they all follow the basic first person view and point-and-click actions.

Comic books are also a valuable and much used inspiration as they are created as a storyboard in their original format. E.g. using *Marvel's Avengers* comics as a storyboard and method to create a game based upon the publications, or using *The Walking Dead* comics to create a game which is designed in a similar fashion to the paper version. *The Walking Dead* (2012) plays on the horror genre's character focus by relying more on the player being immersed in the story, rather than puzzle solving. Different game types heavily influence philosophical understanding for both the designer and player due to the nature and portrayal of the game, following the examples given. It is paramount for the designer to define, in its simplest form, exactly how culture will be used within the game so the represented people or community are respected.

7.3.3 The Game Design / Development team should consider all elements of Cultural Heritage in terms of representation.

The complex nature of culture makes representing a cultural artefact a difficult task; there is not one simple understanding of an item, it may mean and represent different things to different people. Considering all elements of a cultural artefact requires time, expertise and effort if it is to be done properly; making the representation all the harder if a team is short on time and money. Once again, early consideration of how artefacts will be approached is imperative for the design team, as it will make the task clear and less difficult for the team come production.

At the conceptualisation stage, the main idea of the game is developed including developing an understanding of the games context, themes, the intended audience, potential locations, points of reference, approaches to gameplay etc. The requirement for cultural representation will depend on ideas put forward in this initial phase; the idea of

the game edifies the cultural potential based upon four possible categories. Games which are set in a historical or modern location (and/or environment) require a high degree of cultural accuracy to represent the proposed setting with precision. The *Assassin's Creed* series (2007- 2015) of games are one such example, in which all the titles of the series are set in historical locations and follow or involve key historical events. The first in the series uses many locations, characters and environments of the Third Crusade; in the light of this, the designers were required to include many cultural items and artefacts from the late 11th, and early 12th centuries, in order to represent the historical period and locations accurately.

Games in the second category use real locations and environments which are taken out of their original context to create something new, although still highly representative of the true location. *Grand Theft Auto 4* (2008) uses New York as the basis of its location, keeping key cultural locations such as the Statue of Liberty and the Empire State Building, but the game does not follow any historical or present day event which has taken or takes place in New York, the city is even renamed 'Liberty City'. *Dishonored* (2012) uses a skewed vision of Victorian London as its primary location and backdrop; with buildings such as Big Ben designed to be representative of the real structure, albeit with a steampunk influence. The city is named 'Dunwall', although there are clear references to the symbolism of the British monarchy of the time, once again re-designed in a steampunk manner. The benefit of this category is that a game can be designed with a high degree of cultural influence, but the story is far more malleable than a game set in a definitive time period.

The third category encompasses games, which have no reference to one culture, location, time period of environment, and use a mixture of many cultures to influence game play,

or simply as props and decoration. *The Witcher 3: Wild Hunt* (2015) uses many cultures from mainland Europe in its development and design, heavily influenced by Southern French architecture, Renaissance Italy and Poland, as well as Swedish and Scandinavian cultures.

“The first stage is to find the closest real region of the world, e.g. the south of France or Italy. Then we discuss the time period and put the two together, e.g. renaissance Italy. So then we are trying to put Italian renaissance with the south of France but still need some aspects of Polish culture in it” (Designer I, 2016).

While there is still cultural influence and reference, the game isn't set in a defined time period or location, simply borrowing different cultures and attempting to amalgamate them into the workings of the game.

Finally, games may be produced where designers intend to make them with an absence of existing cultural references. Designing in fantasy spaces, creating elements with limited cultural reference. It can however be quite difficult to create this as even where the game is designed to be absent of culture, a design may still demonstrate influence. For example, the game Tetris in and of itself could be deemed to be absent of cultural influence. However, the music and graphical styling are of clear Russian influence.

In order for a team to represent the culture effectively they need to break down their approach to each item, decide its relevance and importance, and exactly where in the game it will be implemented. Using a table as a possible method, design teams can approach items with a critical eye and decide whether the artefacts are feasible, require improvement, or should be scrapped:

Table 7.1 Determining Cultural Representation and its Importance

The degree of cultural representation required	Cultural representation is an essential part of the game
	Cultural representation is important for elements such as the location, characters, environment of the game
	Cultural representation is used to provide aesthetic influences within the game
	There is no requirement for cultural representation

If all elements have been considered, then each item should (theoretically) represent the culture it intended to as effectively as possible within the constraints of a video game world and the game development budget. Teams can use the same table used by the researcher in developing the case studies to clearly consider how culture can be represented across the multiple dimensions in order to highlight issues to resolve or to make design decisions. For example see Table 7.2 below:

Table 7.2 – Use of the Cultural Dimensions in Practice

Arts & Artefacts
Architecture
<p>No requirements: Issue: Adjacent generic housing does not represent the time period effectively in which it is set. The structures are not sufficiently accurate in terms of culture to have any considerable impact.</p> <p>Solution: scrutinise generic architecture more carefully; research and explore additional opportunities in order to create a more authentic feeling.</p>
<p>Limited requirements: Issue: The generic two story structures have used (Roshan) windows, yet the style is incorrect. An Egyptian rather than a local style has been used on all the generic structures in the game, to create an image of an indistinct Middle Eastern area.</p> <p>Solution: Research and implement local window styles, via internet research or, if plausible, visiting the area. Using images is a viable method to research the style of each structure.</p>
<p>Satisfactory requirements: Issue: There is evidence for the use of Palmyra in Syria, yet only a limited section of the overall structure has been used. Only the Arch of triumph was placed in the</p>

game, while the rest of the temple has been ignored.

The use of Al Khazneh from the city of Petra has being created to a high degree of graphical accuracy. The issue is the location; the treasury has been removed from Petra in Jordan and placed under the area of the Al Aqusa Mosque in Palestine.

Solution: Due to the nature of the issue being location rather than structural accuracy, it is recommended that the design team finds more suitable cultural items from the environment used, if possible.

Significant requirements:

Issue: The game has selected important buildings relative to the cities on display, with a high degree of architectural accuracy in relation to their real world counterparts, for example: Al Aqusa Mosque, Church of the Holy Sepulchre, Jerusalem City Walls.

Solution: N/A

For example, if a game requires climbing, then an environmental object or item from the represented culture can be used, i.e. if a game was set on a tropical island, then a coconut tree can be used as an intractable climbing object. Another example would be the representation of weapons in a game; if a game is set in the Second World War, the weapons should be representative of that time period. Using modern guns in such a game would detract from the cultural understanding, as well as the feasibility of the game concept. In a similar vein, the depiction of characters is essential in showing how the culture of the time developed and worked, due to culture being a fundamental part of all human interaction. Another table can be used to assess how unique non-player characters (NPCs) and generic characters are used in their cultural context:

Table 7.3 Dimensions Used to Ascertain Design Decisions Regarding Player Characters and NPC's.

Name	Character description	Time period and context	Cultural factors
<p>AL Mualim (game)</p> <p>Rashid ad-Din Sinan (factual)</p>	<p>Appears in the game as an old man with a white beard. The leader of the Assassins during the Third Crusade (12th century). His physical characteristics are that of an Arabic man of the period. His clothing appears to be that of a Japanese Sensei, wearing black and red robes. His shoes appear to be modern, and his hood is designed to appear as a hawk's beak.</p>	<p>12th century event, with a particular focus on Syria. Born in the Abbasid Caliphate.</p> <p>Head of the Levantine Brotherhood of Assassins.</p> <p>Jerusalem Damascus Acre Masief</p>	<p>The accuracy of the clothing is questionable. The style is more closely associated with Japanese culture; the design, colour and embroidery has a modern visual appearance.</p> <p>Although the cultural accuracy is fractured, his clothing is authoritative to depict the importance of the character to the video game.</p>
<p>General People</p> <p>Soldiers and Civilians (male and female)</p>	<p>Most general population in the game have little detail. There are two models for men, soldier and civilian. While the women are confined to one model. All their clothing, features, skin colour and mannerisms are the same as one another.</p>	<p>12th century Levent.</p> <p>Jerusalem Damascus Acre Masief</p>	<p>There are two main soldier factions, Christian and Saracen. The Saracen army was represented in a fashion similar to that of Genghis Khan. White clothing for soldiers was commonplace during the period, yet the soldiers in the game are colourful. Similarly, most male clothing at the time was white, while in game the clothes generally have many colours. Male characters are often portrayed using North African fashion from the time as well, rather than Syrian.</p> <p>The female clothing is also improperly represented. The use of the modern <i>hijab</i> to cover the face, and incorrect colouration of clothing meant that each woman in the game was an identical copy.</p>

The table above is useful in judging how characters portray and imitate that of the relevant historical figure, how similar the character needs to be to the real life counterpart balanced with other game factors. Other factors often run counter-narrative to the cultural needs of a game hindering the accuracy; the use of the table sets out a clear and easy to understand method in which the designer can assess the balance of culture and mitigating factors. This applies equally to the general and non-distinct NPCs in a game as much as it does to the specific characters, as the designer is able to view all characters in a single and simply defined location. Subsequently, the above table is also useful for the designer in showing the development of videogame characters, from their origins in reality through to the requirement of the game itself. This means the designer needs to map the changes to the appearance of the character using the table in order for the player, or other design teams, to see how the character is different from reality; or more importantly how the character is culturally similar. As the examples above show, simple differences in clothing can have a huge impact on cultural portrayal in a game. While the Crusaders are generally accurate in their appearance, the Saracen army has been recreated in a fashion similar to Genghis Khan's army, wearing heavier and darker clothing than the Arabic soldiers of the time would have naturally worn. As Assassin's Creed is designed to immerse the player in a historical location in order to re-live the life of one of its inhabitants, cultural accuracy in clothing is an important factor to attain precision in. The table can show the designer where they have faltered so they can develop more ideas to increase cultural accuracy before the full production stage.

The actions, appearance and other styles of characters within the game are key factors in the display of culture, as it is the primary medium through which culture is imparted upon the player. As a result, the purpose of the culture also needs to be decided during this

stage of development. Is culture an integral part of the game, or is it used as an aesthetic element only? If culture is an integral part, then the accuracy of the artefacts and items is far more important and valuable to the designer. To reduce the possibilities of mistakes in these circumstances, the table of cultural heritage dimensions can be used by the designer to decide whether, or not, everything required has been included. Is there enough relevant architecture, or are the people wearing culturally and historically relative clothing? The game can use the culture as an aesthetic element; the item can be designed for heightened visual stimulus, allowing the player to take a break from the intensity of the game to admire the environment around them. This can be utilised as tourism for the designer and players, as recreating a real world environment can subconsciously influence the player's perception of the area.

Table 7.4 General Design Decisions Linked to the Dimensions of Cultural Heritage.

Music	Music must be linked to the location the player is currently in. Therefore, local language, instruments and style must be included to promote the feeling of the area.
Language	Language is often difficult to represent accurately within a game. As the language of a game is often designed for the target audience regardless of game location, more often than not this is English. Although local language is often used as background conversation to involve a "feeling" of locality, while the main game conversations take place in English. As a consequence, accents are often used to define the origins of a character. I.e. Crusaders may possess a French accent due to the Knights Templars originating from France.
Costume	How the clothing and fashion style are used to represent the point in time the game is set. E.g. if a game is set in Elizabethan England, you would expect men (and some women) to wear a ruff; or the use of white robes in Arabic countries around the times of the crusades.
People	How people behave in relation to their cultural counterparts in the age being recreated. E.g. Greetings and mannerisms and how communities differ in customs. An example of less cultural accuracy is Altair (Assassin's Creed) pushing people as he moves, which would cause far more of an issue in real life than it does in the game.

One designer interviewed (Designer E) believes that culture can be excluded entirely from game design; although as discussed in statement one of the previous chapter all games have roots in the culture(s) of their designer, even if they are not directly representative of any real world society. This connection often takes place in the form of aesthetic cultural traits, i.e. An item or artefact that the designers culture finds intrinsically evil will be represented in a similar fashion in their video game even if not instantly recognisable. To remedy this issue, analysing the cultural dimensions can improve the accuracy and relevance of cultural inclusion by examining the proposed items and linking them to any evidence of real world culture.

How the items are represented is dependent on the strategy of implementing the idea(s) of the game. There are some basic requirements when creating the visual and audio aspects of the idea; the camera angle, field of view (FOV), environment, atmosphere and non-physical characteristics (atmospheric sounds, music, chatter, etc.). The concept of the game defines which camera angle will be used (e.g. first person or over-the-shoulder), this in turn affects how the environment, atmosphere and non-physical aspects will be created. Therefore, how cultural items are represented is dependent on which camera angle is used to display the idea of the game. Once the camera angle has been decided upon, the design teams are given items to create, there is a discussion on how to represent the items in the most effective manner given the viewpoint of the camera(s). “Basically when creating something like pots or carpets I advise how we will create them in terms of culture. I discuss with my team how these items should be made, then the final plan is sent to an outsource team to be designed.” (Designer I)

When the discussed item is agreed upon, it needs to be placed within a context. This involves adding additional items (objects) to the environment to fill the space; giving a

better perspective and atmospheric feel to the purpose of the original item. At this stage, the importance of cultural accuracy is reduced, giving way to the volume of additional objects. The use of the cultural dimensions can improve upon the accuracy of these extras; this can be done by evaluating each object based upon its category (architecture, landscape, clothes, etc.) and how much cultural consideration has been afforded to it. If a specific type of building, a market stall for example, is used to fill the space, the cultural dimensions can be used to judge their relevance to the surrounding environment after which necessary improvements can be made to increase the cultural accuracy. Ultimately, if this is applied to each additional object the game will represent the intended culture with far more precision than originally given.

The design teams discuss the additional items with reference to physical and nonphysical sources; the cultural accuracy of which is usually decided upon during this discussion. Nonphysical sources are the designer's existing knowledge and experience of the item being produced, while physical sources result in active research, such as visiting the location for visual inspiration or using the internet and books to garner more information. These additional objects are used to reference the understanding and reality of a culture, inevitably this means that the more accurate the reference items are, the more accurate the cultural representation becomes. If the designers intend to portray a known culture, then this precision is paramount to representability of the genuine community. Designers A and B used their own experiences and knowledge to represent their own cultures in games they created; mainly to create representative environments for the player. Designer B used his knowledge of Cairo to create a *Tuk-Tuk* game for cultural tourism, while designer A created *Asura*, which includes many parts of his native India's Hindu and Islamic culture(s) to relate to a modern Indian market. Hence why cultural discussion at the preproduction stage is important, as it is where most items are designed, and approved;

due to culture being a major part of how the player relates to the game (through customs and recognisable objects) the cultural dimension table can be used to improve the accuracy of items. This applies to additional items just as much as important cultural items in a video game.

After the reference item(s) have been discussed and confirmed, the designers must decide on how the item itself will be used in the context of its environment. The item will either be used to mimic reality, or it will be modified to assimilate them to the game's atmosphere and environment. Assassin's Creed uses the Minaret to conform with the former; recreating the structure as close to its real counterpart due to the nature of the game; that is to recreate a historical environment to embellish the story of the game. Dishonored uses the latter with one of the world's most recognisable structures; Big Ben (The Elizabeth Tower). The structure has been distorted into a wooden structure on stilts, this is in consistent form to the rest of the game's bleak, steampunk environment.

“The first stage is to find the closest real region of the world, e.g. the south of France or Italy. Then we discuss the time period and put the two together, e.g. renaissance Italy. So then we are trying to put Italian renaissance with the south of France but still need some aspects of Polish culture in it. First of all, we will have concept art generated of the subjects involved. Various departments are involved, but the art department tends to be one of the first. When the idea has been generated and the initial premise developed, we begin to design the area.”

(Designer I)

Designer I uses individual real world locations first of all to generate the item, then modifies them to be inclusive into the culture of their game (in this case, the Witcher 3).

This means the context of the item has lost some of its innate cultural value to attain coherence in the games. While this is a cultural inaccuracy, the intention of the game is not to represent the culture in its entirety, but to use these aspects for their cultural reference so that players understand the context of the area.

This stage of the production is fundamentally a discussion on how the culture will interact with the game and its role in the game's story and visual design. The previsualisation is the overview of how the game will look and work; the type of game, mechanics and artistic style, are several important areas at this stage which have an influence on the importance of cultural representation. The implementation of culture with respect to the concept is the overarching theme when designers are discussing how they will depict items and game themes, the mapping the cultural dimensions in the table can be used to refine the process of cultural accuracy and inclusion. The discussions on the items therefore needs to focus, in some part, on whether or not the game is using culture for aesthetic reasons only, or to be an intrinsic part of the game.

7.3.4. Games Design teams should develop their understanding of approaches to representation in connection with Cultural heritage.

When the key designers make decisions about the ideas or concepts of the game the designers prepare themselves to understand how the game will be built and how the space within the game will be used. Furthermore, the game narrative often carries some of characteristics of the cultural artefacts that will be used in the game, in the first phase of game production. For instance, if a game is based around a historical setting, the designer must use the history to support or guide the narrative of the game in order to naturally keep accuracy in the story. This method must be followed throughout the whole

production process of a game for the accuracy to remain constant; that is because it must be ever present to be on the mind of the designers.

For example, if a game is based in the First World War then there are certain historical accuracies the game must follow; like major events (battles such as the Somme or Gallipoli), technological restrictions of the time in terms of weapons and clothing, etc. This is relatively easy in a single player campaign, or a game designed exclusively to be single player; *Battlefield 1* (2016) is very good at representing varying perspectives of cultures (nations) that fought in World War 1.

“That’s due to EA DICE’s commitment to historical accuracy, with operations in the campaign mode portraying legitimate historical moments from the war... [we] were playing as soldiers from the Ottoman Empire, defending their territory against the British troops; our weapons ranged from zeppelins to bayonets, in keeping with the period.” (Frank, 2016).

The single player campaign (bearing in mind the article refers to a demo, and therefore a small part) in *Battlefield 1* uses historical accuracy to create curiosity in the player; while not strictly designed as a history lesson, the game may well provoke a player to research the period of history. This historical accuracy also spans into cultural accuracy, due to the levels portraying a single battle or event, they can focus solely on cultural aspects that were present at the time of the battle. Mannerisms, clothing, weapons, etc. can all be created to very accurately represent the events of the key moments the designers are trying to recreate. This is an effective method of cultural representation, instead of trying to show many aspects of a culture throughout a period of time, the designers have a few small parts of culture to work with over a very short time period; consequently, the heavy

focus on these items (parts) requires a large amount of attention to detail and accuracy. This results in a very high level of cultural representation, and the player is able to enjoy an experience unmarred by a plethora of inaccuracies due to over ambition.

Specific to Battlefield 1, the vehicles, clothes and (for the most part) weapons are all accurately represented. The use of biplanes, triplanes, zeppelins, bolt action and level action rifles, horses, national dress, etc. are all well represented in the game. The importance of this was not lost on the designers, they decided to move away from the humdrum of trench warfare and portray the battles later in the war which were often fast paced and open. “The perception of slow trench warfare, it isn’t really true It was a war that spanned the world... really big perspectives” (Frank, 2016). Unfortunately, the game loses some of its historical accuracies in its multiplayer mode, where player versus player takes precedence and the designers must adhere to balancing gameplay values ahead of historical portrayal.

There are several areas of consideration for design teams in connection with cultural heritage. The first consideration is the diverse range of features which influence a games culture: politics, religion, ethical and historical differences. When developing politics from a cultural standpoint, design teams must be wary of the complexities of how culture influences political and historic systems. The *civilization* series (1991-2016) attempts to represent major world leaders from the past and present through their known personal characteristics. For example, Ghandi would generally be a peaceful character in the game, using diplomatic means over war to resolve conflicts. On the other hand, Attila the Hun will resort to violent means in order to achieve his goals. The way historical figures are portrayed in the series generally follow the stereotypes of the leader; while this may be deemed inaccurate, it would not be feasible for the designers to develop incredibly

intricate personalities for each leader as it would take too much time and money. So general attributes should be considered a cultural success in terms of depth, as the leaders are meant to represent a diverse array of personalities and difficulty for the player, rather than teach a history lesson.

Religion is a considerably large part of any culture, so its accurate portrayal is paramount, especially in respect to games with a global reach (in terms of design and player consumption). Games based in Religious myths or legacy are a sizable part of the industry, which has had time to develop the way faiths are represented; games often use this basis to inform an altered religion or belief system, such as the *God of War* series (2005-2015) in which the player controls a deity themselves. While there is an array of games based in religion, most are capable of avoiding topics of contention within the religion itself as well as inter-religious debate. Ethical decisions can inform a game, and can be used in a game so the player has to make tough choices. The *Grand Theft Auto* series (1997-2016) often use stereotypes as a method of highlighting injustices in societies and to mock the established order. While not strictly accurate cultural representation, it is an effective way of highlighting a culture's flaws in an attempt to make people think and attempt to understand such flaws.

The second area of consideration is understanding culture from the point of view of culture itself rather than from the mediums of films, comic books or video games. This entails immersing oneself in the community itself, viewing it first-hand; developing a personal understanding, rather than a possibly biased opinion from one of the aforementioned entertainment sources. The benefits and negative aspects of such visits have been discussed elsewhere in this Thesis.

The next area of consideration is consistency of respect in regard to cultural representation throughout video game production. If a design team places a considerable amount of emphasis on culture throughout the entire production of a game, then the accuracy of representation will naturally be higher.

The fourth area of consideration is considering the players that are located in the culture being represented. If a designer can develop items to the point which a player from the designed area would be happy, then the rest of the player base may be able to consider the cultural accuracy a success.

The whole process of considering how and why culture will be represented is relatively complex, for example, if the designer focuses too much on how a building looks, then they may forget about the sounds that go with the structure, or how the community interacts with the building. This is just one of the complexities facing design teams when attempting to represent cultural heritage; focusing on all areas is time consuming, and costly, therefore selective measures must be employed in order to be representative overall, rather than being too specific.

7.3.5 Consideration should be made of how teams are constructed with respect to Cultural Awareness.

The make-up of a design team is incredibly important when producing culturally influenced games. The more diverse a team, the more authentic and varied a game's culture can be, if that is the intent. Ubisoft is an example of a culturally diverse global success story; ensuring their studios are not mono-cultured, Ubisoft has been able to create games, and series of games, which entice players to play, and play again. "Authentic culture is a reflection of our teams at the studio, and by defining it together, it

ensures it continues to inform our decisions and actions, while propelling us towards the kind of success we strive for” (Parizeau, 2016). The diverse cultural structure of a team leads to a collective understanding of how a game may portray culture; the more diverse a team, the more perspectives designers have on how to create culture, understanding the cultural elements and logical representations in video games. Having many cultural backgrounds essentially creates respect for the culture in a video game due to the fact that the team designing the game can be so culturally different. A monoculture team may ignore, forget, or not understand something culturally significant as the designers most likely think in the same way.

A team with multiple cultures represented provides multiple angles of respect for a culture, ensuring all members think critically in order to keep a diverse team content

“the exceptional diversity of perspectives, with people coming from several different studios from all over the world, turned into an incredible asset. We were able to leverage the best ideas, learn from our colleagues, and grow together. Embracing that diversity became something that defined who we were.”
(Parizeau, 2016).

Diverse teams allow cultural understanding to flourish, more accurately selecting cultural elements for Ubisoft’s games. Another benefit is that there is a reduced risk of stereotyping and misrepresentation in the games, because the teams are far more informed on a greater array of cultures, due to the make-up of the teams. With a diverse team, designers can begin to understand their own culture more as they have to understand how their cultural norms may affect others in the team; this increases cultural awareness in

general and possibly leads to more accuracy as there is more consistent thought (Quappe & Cantatore, 2007).

Game teams vary in size depending on the size of the company and the scope of the game they are producing. Most indie developers tend to be small teams of people, possibly as little as four. As a result, the members have to take on multiple roles in game development; a designer may have to be a coder, as well as an artist, for example. This limits the scope of game development as there simply isn't the manpower to focus heavily on all the areas that a global mega company is capable of. Thus, focusing on cultural inclusion is far less likely to occur in indie games; one of the most popular indie games, *Minecraft* (2011), is a good example of a game which has no cultural focus. This is because it was developed by a small scale team, and its focus is almost purely on creating a new world, it's success comes from its simplicity. Though it is the main source of success, it's simplicity means that there is little room to focus on anything other than building, as a result there is no culture, complex narrative or any form of cut scene in the game to tell a story. Mobile and browser games are affected by the same issue; a small team means a much smaller area of focus. *Angry Birds* (2009) has been downloaded more than three billion times as of July 2015 (Yongwen Xu, 2011: 10) and much like *Minecraft*, its success comes from its simplicity, but it also suffers the same drawbacks which come with a small team of developers. It can also be said of arcade games developed in the 1980s, *Pac Man* (1980) for example is a simple game which has the objective of eating as many white dots as possible; it is impossible to fault the success because the game has a very basic input and output. The size of the team almost doesn't matter in these earlier arcade games due to the limitations of technology and the relatively new nature of the business.

Local developers who work for small companies are also affected by a single market ideal. Companies often aim for a single market or a limited scope of players due to the size of their time and budgetary constraints. *Lumba Inc.* is a developer that is based in San Francisco, but aims at producing games for an Arabic speaking market almost exclusively. The design team is almost exclusively comprised of native Arabic speakers, therefore their knowledge of the varying cultures of the region is high, yet their knowledge of other cultures may be limited. While this is beneficial to the Arabic market, it almost alienates other markets which may provide a decent player base; but the restrictions of the size and nature of the team, and scope of the games make it a difficult task to expand the player base outside of their original Arabic market. These are the restrictions which plague most local video game producers, although the local cultural representation should theoretically be incredibly accurate.

Finally, global video game producers are able to call on huge international teams to develop games. These teams can consist of over one hundred people who can have very specific tasks to fulfil (Chandler, 2014: 17); large teams can be as problematic as they are beneficial, the positive and negative aspects of global teams have been discussed elsewhere in this Thesis, and shall not be repeated here. Developers such as EA DICE and Ubisoft employ huge global teams to develop their games, using people of many cultural backgrounds to complement cultural game development.

A culturally diverse team also aides with effective localisation. Many designers just directly translate the text, but this means context is lost due to the cultural differences in language (Henderson, 2016). A multicultural team can effectively counter this issue, if members are from areas that will have a localised version of the game. The team members from that community can help in translating context, not just directly translating text.

Then confusing language issues such as “destroy the mother brain the mechanical life vein” would not occur (from the video game *Metroid*, in Henderson, 2016). In order to effectively counter such issues when localising, a design team must ensure “imagery, casting, text, subtitles and voiceovers” are capable of being effectively interpreted by different cultural contexts and norms (Henderson, 2016). One of the best possible ways of doing this is investing time and money in an expert provider for the locale; although many developers may see this as a luxury rather than a necessity. Fortunately, design teams are beginning to understand that people other than white males play video games, and are attempting to change the way they present protagonists to reflect this, possibly as a result of the diversification of the teams themselves.

The diversity of a team has many effects on how a game represents culture and cultural understanding for the player. Whether it is using a global team to create a video game for a variety of audiences or a small team of local designers, diversity is virtually always beneficial. Diversity also breeds respect and understanding within a team, which is ultimately portrayed through their finished product; this is due to the nature of a melting pot of cultures working on one project. Designers have to be culturally aware of their co-workers, which in turn makes them more conscious of the culture they are representing through their videogame. It is much harder for small scale developers (such as indie game creators, or app developers) to create a culturally diverse team because of the limitations of size and finance, so they tend to focus less on complex narrative or artwork, and use one or two simple areas of gameplay to satisfy a players need for entertainment, such as *Angry Birds*. In such instances, designers tend to focus on one specific society, such as the Arabic world, or continental Europe. Ultimately, any game created and distributed must be localised for players of each marketed area, which in itself causes issues for designers as they often have to spend money and time with experts from a local

community in order to deliver context and meaning. While financially burdensome, it is culturally beneficial for global players.

7.3.6 There are multiple stages of decision making with respect to representation these decisions should be guided by underlying philosophy.

The inclusion of a cultural item isn't necessarily a simple one stage process, it can often take multiple design teams to decide and agree upon an item. Teams often work like democracies, allowing input from multiple sources then deciding whether or not the item is an acceptable fit. If a member of the team is from the culture being recreated, then more often than not they will be the ones creating items and props, as they are more likely to understand the subtleties of how to represent that item (Designer I). Decision making in itself is not a simple black-and-white problem of 'to include or not to include', it always takes personal experience, reasoning and intuition. The larger a design team the more input there is which can slow the decision or change the reasoning behind including an item; this reduces the effectiveness of the decision. The diversity of the team also has an impact, but more opinions can delay the time it takes to include an item of cultural importance, which may lead to the item being rushed (due to time or budgetary constraint) increasing the risk of misrepresentation.

As a possible method of reducing the inaccuracies of cultural representation, designers could place items into three categories of importance: primary, secondary and tertiary. Below is a description of what each of these categories entail, and how they can support the philosophy of a game's production and progression.

Primary – These are items which hold importance within the narrative of the game and are of great significance to the overall experience for the player. Players can interact with

these items and they change or influence the progression of the game, possibly through the choices players make in relation to the items. These items are not only significant to the game but more often than not to the culture being represented; the result is that accuracy and respect to the item are of vital importance to correctly support the requirements of the game and the culture. A good example is the use of the Dome of the Rock in *Assassin's Creed (2007)*; the player can climb it to view the city of Jerusalem, it is also included in game missions. The player can see the playable character and NPCs providing respect to the item by praying at the structure. The surrounding area is decorated in accurate detail; such as relevant Arabic script and items in vicinity of the shrine. Due to the important nature of these items there are often few of them in a game, but this only increases the need for the accuracy of each item.

Secondary – Items which are culturally relevant but are not as important to the plot, narrative and interaction of a game belong in the secondary category. They are usually added into a game for purposes of beautification; not serving the same role as primary items, but still important to the culture and continuity of a game's artwork and consistency of design. This doesn't diminish the importance of accuracy and representation, but designers often pay less attention to such items and there may be some unintentional misrepresentation of the realia they recreate. *Battlefield 4 (2013)* recreated several maps from earlier versions of the game; one such map was the Gulf of Oman. The environment is designed in a way that is representative of the Omani coastline, with bare rock mountains and open desert plains; the environment also changes with the addition of a sandstorm. The active changes of the environment add additional experiences for the player, as they must adapt to the new environment, but also represents the real environment of the country. The reason this is secondary and not primary is that the features are not essential to the experience of the player. They are additions that in some

way affect the player's actions, but only for a brief period of time, they also keep in the context of the environment the game is portraying.

Tertiary – These are items which do not represent a portrayed culture, or are completely out of place and context within their environment. These items have little or no thought placed into their creation and inclusion; and are merely used to fill the available space which the designer may find. Here are where the most numerous cultural issues arise in video games; due to the nature of the items these concerns are numerous. The items are for the most part small, but the amount causes huge concern; as they are usually background items they may not be consciously recognised, but subconsciously they may be wrongly informed by this information. *Hellgate: London* (2007) uses generic terraced housing to represent the streets of London, the duplication creates a feeling of repetition in the player. This creates a relatively uninteresting atmosphere for the player, as all areas of the game become very similar to each other. Iconic, or famous locations used lose any sort of cultural significance as the repetition of houses removes any sort of unique aspect for the area. The decision to forgo cultural accuracy brought much attention to the game, mostly negative in terms of scenery. The goal is to reduce the use of such generic tertiary items in a game by replacing them with items of cultural relevance; this does not mean spending large amounts of money and time but simply to give background items a thought in respect to appropriate cultures.

Decisions made need to be informed by three avenues of resources that are readily available; experience, sources and an action plan through prototyping. These avenues have been discussed before in different contexts (chapter six), in this context they are driven by philosophy. Experience can come in a variety of forms, these range from individual experience to team experience through an array of different mediums such as

personal background, education, testing and playing games. Individual designers can use a variety of experiences to help them create items of cultural accuracy; they often use their own personal experiences to help inform their decisions on designing an item. For example, if a designer from New York is recreating the city, they are much more likely to be able to implement cultural accuracy in greater detail compared to someone who has never visited the city. A person can also be taught the experiences they are trying to create; this often comes through some form of education. A person from outside of New York can be taught how to recreate the city for example, without ever visiting it, although it is preferable to experience a location in order to fully understand all possible effects, such as atmosphere and mannerisms. They can also have the experience from work as a game tester, meaning they are capable of seeing any errors which may occur during the production of cultural items, as they have experienced the testing of environments and gameplay via their work. Playing a variety of games is also good experience for a designer as they are capable of seeing any errors which may be a common occurrence throughout the industry. Team experience usually benefits from a pool of different individual experiences in order to generate many ideas which can be narrowed down and assimilated into a game's design. If a team is made up of different kinds of individual experience, then a large amount of differing expertise can inform any single item in order to generate criticism and praise from many perspectives.

Experience itself generally isn't considered enough to generate cultural representation, as a result, sources can be used to reinforce existing ideas, or create new ideas for the design team to use. There are four possible branches in which sources originate, traditional sources, electronic (digital) sources, location or site visits and people themselves as source of knowledge. Traditional sources come in the form of written documentation, maps, pictures and photographs, etc. electronic sources are generally online journals,

digitised interactive maps, websites, etc. Finally, people as sources include bringing in the expert knowledge of someone from that culture to inform the designers on their creations. Sources are a great addition for fleshing out items within a game as they provide depth and history, which personal or team experiences may not be able to provide. In a similar way to which experience can bring benefits to and from a team, sources can be researched and analysed by all members of the team. The more sources there are and the larger the team, then the more people that are available to learn from the sources and inform their experiences and decisions on culture; this is especially true when it comes to visiting locations for inspiration. The larger the team out on expeditions, the more first-hand information available to the team to inform cultural items; benefitting experience and sources alike.

A prototype can be created as part of the action plan, which the designers can use to judge how representative the culture is at this early stage of the game. The designers can then get an overview of what direction the game might be taking and alter the items and environment appropriately. For example, when creating Altair in *Assassin's Creed* (2007), the designers originally drew the character in a Persian style, representative more of *Prince of Persia* (2008) than a man from the Levant. Therefore, they learnt from the prototyped character and redesigned Altair to blend in more with local communities; but also to make him distinct by designing his clothes to look somewhat like an eagle. The way they design and redesign these characters isn't a simple one step process of adding the character straight in, firstly they must create high resolution artwork to represent the culture as accurately as the artist's talents will allow before reducing the resolution to something capable of the average gamer's computer. An artist can create a model that is five hundred thousand or one million polygons, but the finished model in the game will only be three or four thousand polygons (Hodgson & Knight, 2007: 54). Generally, these

models can be scaled down without loss of overall detail, therefore the artist's accuracy in the high resolution models is paramount to the accuracy in the game itself. The more models a prototype includes, the more choice of artefacts the team has when it comes to choosing items and direction for the final version of the game. This is in essence the action plan working on the micro level and it is an effective way to whittle out the undesirable items from the important ones; although it is a considerably lengthy process.

All decisions made in respect to culture are influenced by these three areas of knowledge and learning; which ultimately inform the decisions on which items to include. The decisions also influence how many of the cultural items are primary, secondary or tertiary in the finished product of the game.

7.4 Conclusion

Many of the areas defined before the statements place external pressure on how a game is designed and its ultimate release version. While some have a larger effect than others (time, finance, marketing, company size, etc.) on the finished product, they all ultimately influence cultural representation within a game. While it is not possible for this Thesis to remove the fundamental issues which in part define these areas, it is possible to influence them in a way which designers give more thought to culture, and how it is accurately represented within video games. The statements have expanded on specific areas of design in the hope that each significant phase of production affords more time and effort for cultural focus in order to reduce the risk of misrepresentation and the resulting problems which arise. It is possible to influence some areas more easily than others, such as improving team constitution or management of individual teams. If a team has better communication and health, then it is possible to use time and money more effectively. While changing the budget with this Thesis is impossible, the way in which teams use the

money to focus on culture more effectively is entirely within reach. The earlier a team thinks about culture and involves it within the production cycle the more accurate the finished game will be, and there will inevitably be less inconsistencies. For a team to do this from the initial phase of ideas through to prototyping then full production is the ultimate goal; if it is a factor of importance from the very beginning it will remain important throughout the whole process. The importance of cultural accuracy is a factor which should be given a high level of importance within the production cycle; and for the teams working within narrative and visual design, simply increasing knowledge on culture should be enough to permeate into the rest of the design process.

8 Chapter Eight Critical Evaluation and Conclusion

8.1 Critical Reflection

Video games now dominate large parts of our life, through playing a phone game to dedicated gaming systems. As video games continue to grow in popularity and use they are increasingly a medium through which people learn about history or cultures. Many games are used to portray real life events, or pseudo versions of these events, in virtually constructed realities designed to mimic real life locations and cultures. Many of these games contain misrepresentations of such cultures and their artefacts, and therefore give a skewed or incorrect portrayal of a culture. This Thesis has attempted to provide solutions to improving the process through which these errors are constructed. While there are some dedicated researchers into culture in video games, such as Sizler, and El-Nasr et al. the main focus of previous research has been on interpretation of where the issues occur within specific video games, this Thesis further explores how such misrepresentation occurs and extends this to examine how the current design process leads to this. Culture is a learned and transmitted concept fundamental to humans and is passed down from generation to generation. As with any kind of knowledge, learning it inaccurately leads to a loss of understanding or cultural modification. Due to the significance of video games as ambassadors of culture (although the player may not realise this) the information should be appropriate to prevent such loss or modification. The framework devised seeks to remedy some of the issues raised throughout this Thesis. The proposed framework seeks to simplify the process of understanding an artefact's cultural representation by dividing this into sections. Firstly, this is done by linking an artefact to either a tangible or intangible method of portrayal, and then secondly by further refining this into individual categories. Examples of these are environment, music,

sculpture, characters, etc. Each item is graded according to its accuracy with reference to putatively real objects, which the designer attempts to represent.

As a result of the inaccuracies within video games the researcher endeavoured to ask two questions, the first of which was split into two sections. The first section was ‘If misrepresentation of cultural artefacts is present in video game contexts, then where does this occur, and what are the components which outline its presence?’. The second was ‘How does misrepresentation occur in relation to current video game design processes?’. The first question was explored through the two game case studies provided in this Thesis, those of *Assassin’s Creed* and *Unearthed: Trails of Ibn Battuta*. Although both games are accurate to a degree, the focus of the Thesis was on the misrepresentations, and their potential impact on the player’s perception of the culture. These two games were chosen due to their location; with both being set in the Middle East and in addition were set to explore how Western society portrays the Middle East in video games and how the Middle East portrays itself. There is a particular focus on how the designers of *Unearthed* used predominantly Western themes (Hollywoodisation) for their main character in an attempt to produce a game designed for a global market, based on familiarities with other leading games.

In Chapter 2, the researcher defines the key concept of culture in relation to the Thesis. Culture is so complex that it still does not have a single, unifying definition. As a result, the research in this Thesis takes two definitions as its basis, those provided by UNESCO and ICOMOS. Cultural Heritage, for the purpose of this research, is the cultural knowledge that is passed down from generation to generation and how this has either changed or remained the same. This is further divided into two definite segments, the tangible evidence that is passed down (e.g. ancient structures) and the intangible (e.g.

body language). The purpose of this Chapter, was to determine exactly what culture is in the context of video games, and using this determination, begin to develop the framework for designers to use in the future. The framework is further developed through its application to the development of the case studies in Chapters 4 and 5. Misrepresentation in the games are presented through an analysis of the framework's subdivisions. There is a focus in Chapter 2 on how the media misrepresents culture and how culture is represented on a global scale. Using these topics to judge the case studies and earmark the origins of the misrepresentations and as partial explanation for why the misrepresentations occur.

In Chapter Three, the methodology section presented a general discussion of the broad methods and techniques available to researchers, with clear linkages to the scope of investigation within this Thesis. The usual approaches were covered, in both quantitative and qualitative research. This included the philosophies of ontology and epistemology, together with the branches of positivism, interpretivism, and realism. This led on to a discussion of research logic from both a deductive and inductive perspective, and thence to a consideration of quantitative versus qualitative analysis.

The rationale for the preferred methods is explained in Chapter Three. A qualitative approach was adopted within the Thesis, with an emphasis on interpretivism: the chosen techniques were the use of case studies and interviews, with the former employing close reading and observation, while the latter made use of a pre-tested list of open ended discussion items followed up by thematic analysis. This choice was determined by the nature of the phenomena under study. Given that the objective of the Thesis is a critical and coherent understanding of the misrepresentation of cultural artefacts in video games, quantitative analysis would fail to reveal the nature of the data and its significance to the

designers and the customers. In particular, the tools made available by an interpretivist analysis allow for a fully informed qualitative investigation to occur.

In Chapters four and five, the researcher critiques and analyses the presence of cultural artefacts in video games using the case studies as the starting point. The motivation for this, from the author's perspective, is to gain a clear understanding of the presence of different forms and approaches to representation of cultural artefacts within video game contexts. Given an understanding that there are different levels of accuracy delivered in the representation of cultural objects this feeds into a critical analysis of how this occurs. The intention here is to devise, test and critically evaluate a mechanism to map an understanding of the items of cultural heritage contained within video games and the level of representation achieved, this can then be used across a multitude of different games at different times in the production cycle.

Video games portray greater or lesser degrees of reality, which is to say objective, external reality in the non-game world ("real life" as it is often referred to by gamers) at the same time employing cinematic techniques of complex, interacting narrative arcs and character-driven storylines. Indeed, a powerful attraction of the adventure game genre in particular is the plausibility of physically realistic environments combined with engaging, if idealised, narratives and characters. From an understanding of this basis, the Thesis gives insight into the phenomenon of cultural misrepresentation from the six perspectives of: cultural misappropriation; Hollywoodisation; selectivity; beautification, game dynamics and ideological constraints.

The case studies provided the author with an invaluable opportunity to explore the limitations and extent of his knowledge of the video games industry and to gain a deeper

understanding of the motivations and mechanics of the design process. They also provided critical insight into the game experience from both the perspective of the independent researcher and of the developer.

In Chapter six the researcher details the findings from the interviews carried out with a selection of ten designers (from a range of cultural backgrounds) all of whom have experience of commercial video game development. The intention of the interviews was to gain an understanding of the approaches designers use to construct artefacts representative of culture in video games. The findings of the interview have been condensed into five main statements covering the understanding of dealing with cultural artefacts in the video game industry. The statements are first considered from the perspective of the importance of cultural representation as balanced against gameplay, aesthetics and other elements which have to some degree an impact in the process of representation. It is suggested that developers employ a strategy whereby initial focus on the game script leads on to aesthetic and marketing considerations, some of which relate to the game mechanics, while others are used to develop the narrative, or to create associations with well-known locations.

The second consideration relates to the resources available to developers in the construction of cultural artefacts and ranges from personal knowledge, to secondary sources, to external primary sources. A combination of these sources governs the final representation of the artefacts as they appear in the game. If this process is successful (and, as one interviewee admitted, this can only be partially achieved at best), an immersive virtual environment is created which not only facilitates smooth gameplay, but may also instil an appreciation and understanding of the culture portrayed, perhaps even encouraging the player to visit the real world locations. Furthermore, even in cases where

the game world is entirely fictional, the addition of realistic cultural artefacts can help the player relate to the game environment.

Thirdly, the author addressed the consideration of cultural bias and stereotyping, and the influence that marketing demands exert on the likelihood of these being present in representations of culture. Bias and stereotyping can often be unconscious, and computer games designers are no exception to this. In order to market games on a global basis, companies are required to be aware of the need to be conscious of cultural bias and of the offense it may cause, with consequent impact on sales.

The fourth statement relates to the fundamental dichotomy between representations of virtual reality and the real world. The tendency for designers is to see the environments they create as independent entities in themselves, separate from the outside world. There are consequences for cultural representation when this happens. When culture is poorly integrated into the game design, problems can arise. In certain genres, this may not be too important. For example, some FPS games make little or no use of historical or cultural realism (Doom, Halo). However, when real cultures are incorporated into game design a more rewarding experience can result, as the player is able to better connect the real and virtual worlds. In games which are explicitly based on real historical locations, and which imply a degree of authenticity, the responsibility to adhere to criteria of accuracy is significantly greater.

The last statement covers the narrative behind the game. Such narratives can influence cultural artefact portrayal in both positive and negative ways. A complex narrative may demand considerable research on the part of the designer, which is time consuming and will always be incomplete, but other compromises are inevitable, too. The game must be

fun for the player, so designers are careful not to incorporate too many details which are irrelevant to the narrative. The danger is that compromise can lead to inaccurate or inappropriate use of cultural artefacts in order to meet narrative necessities.

In Chapter 7, the researcher represents the factors that can potentially influence the representation of cultural artefacts in video games, based on analysis of the case studies and interviews. Some of these factors are associated directly with video game designers and some are related to the culture of the video games industry. The intention here is not to address insoluble problems of necessary limitations due to time constraints and finance: rather, the aim is to provide insights and advocate practical steps which can be undertaken in order to encourage designers to gain an awareness of the issues surrounding cultural misrepresentation. In an ideal world, designers would not need to make compromises when decisions are made to include or exclude specific items, or when creating the general atmosphere of the game environment. In practice, however, such limitations are always present, whether for the individual developer or as part of the company culture. When we look into the game production process itself, there are two distinct aspects that can potentially influence the way in which it is carried out. On the one hand, there are the low level, practical decisions independently taken by designers in the course of their daily work. On the other hand, there are the higher level design objectives to which they may aspire but which are likely to remain largely ethereal.

These higher level, objectives determine the context within which the production managers must manage their time, money and colleagues. Ideally, the production manager will be able to efficiently use the money and time that they have and so enhance the game's portrayal of culture. For example, if a designer is required to create an element with a given characteristic, such as an aggressive character, or an aesthetically pleasing

architectural feature, it is important that this is done with the correct emphasis on and respect for authentic real objects (historical figures and buildings) and without exaggerating their characteristics to an excessive degree. To fail to do this is to run the risk of cultural misrepresentation.

The solution advocated here is to ensure that an awareness of and respect for authenticity in cultural artefact representation is incorporated into the design process from the beginning and is applied rigorously throughout the game design cycle. That is to say, the process should begin at the concept stage, when the idea for the game is suggested, and then continue through to post-production testing. At this initial concept stage, decisions need to be clearly made as to what the importance of cultural representation is, whether cultural artefacts are to be used and, if so, how they should relate to the other elements of the game. There are multiple dimensions, on a spectrum from pure reality to pure fantasy, through which we can use to determine whether the developer has successfully conducted this process.

As indicative examples we have suggested that, firstly, if the narrative is based on accurately portrayed cultural and historical elements derived from reliable sources, then the degree of authentic representation will be high. Secondly, if the narrative is partly based on reality and partly based on fantasy and pure creative imagination, then the developers need to be fully aware of this and to clearly distinguish between the two. Thirdly, if the narrative is entirely derived from fantasy or from unreliable or biased sources then the developers are at risk of a high degree of cultural misrepresentation, if the game is portrayed, as having any direct relation to real times, locations, and people. By explicitly adopting a formal process, based on a philosophy of respect for cultural

accuracy, and by ensuring that this process is adhered to throughout the design cycle, the developer is more likely to avoid cultural misrepresentation.

Chapter 8 in this section has critically reviewed the research journey associated with the Thesis and will in the final few sections consider the contributions, further work which could be delivered and concludes the Thesis.

8.2 Further work

The following sections outline six future directions for research connected to the work presented in this Thesis.

8.2.1 Examine cultural artefacts from the player perspective

To develop the research presented in this Thesis further, the inclusion of cultural artefacts in games could be analysed from a player's perspective. Rather than taking a straightforward approach of cultural analysis, similar to the approach taken across other forms of media (Kellner, 2011; Caldwell, 2008 etc) an approach which would be interesting and innovative would be to analyse players and production contexts. For example, the analysis of virtual representations of game environments through players from the appropriate physical locations e.g. analysis of cultural artefacts in *Grand Theft Auto IV* through engaging with native players from New York examining their inclusion and overall cultural perspective on the environment produced. The player would look in depth at how cultural artefacts are integrated, and critique the game using personal knowledge of the location.

Qualitative research could be utilised in this area of interest and implemented through the distribution of questionnaires to players. Several open-end questions could be asked, such

as ‘what experience do you have of NYC?’, ‘What is your knowledge of cultural artefacts in NYC’, ‘Is the accurate portrayal of NYC important to you?’, etc. These questions would be designed to determine the importance of accurate portrayal of artefacts within the game to the player, and whether or not they believe it has successfully accomplished appropriate cultural representation. Investigating both the accuracy of each item in the game and its location will be the two main subject areas followed. The accuracy of the item itself is important in terms of detail, does a player feel the item should be represented in a similar way to its real life counterpart? The location is of concern as the item itself can be accurate but it may be placed incorrectly; serving to confuse a player or at least reduce the feasibility of the environment through a dislocation of reality. This could be conducted across a range of environments represented as virtual environments with a selection of players from each physical location. Enabling an understanding to be drawn on the impact of representation in local contexts. Will the location portrayed have an impact on sales of a game in a particular location? Are game players from locations depicted in games particularly critical of the environments constructed etc. The result of such analysis should add weight to the need for game design companies to carefully consider cultural representation in the production of new games.

8.2.2 Implementation of the framework presented in this Thesis within a design company

Attaining access to a design company to implement the cultural dimension’s framework would be another avenue of further research. To gain actual experience of implementation of the framework would provide insight into the impacts on the design process and if cultural representation can improve as a result of additional consideration in process. There are two ways in which the framework can be tested within a company; one is theoretical implementation of the work, the other is practical. Theoretical comprises of group discussions (for example, focus groups) with varying design teams. The teams test

the implementation of the system on paper for the whole design process; from pre-production, to post production, and theoretical release. The focus groups would be recorded and a critical examination would apply to the opinion of the viability of implementing the framework within design contexts. This could also lead to further improvements of the mechanisms. The data gathered would also help to further understand how a design team functions, and exactly how representation decisions are made through the reception of the framework in the focus groups. The area of the process where the framework will be most effective may also be gleaned from a focus group as the whole process is discussed; informing where in the process the design team would most likely use the framework.

Practical implementation is understandably harder to achieve, as it requires a company, which would be compliant with a researcher being amalgamated into the corporation for an entire project. This would be the best method through which to test the framework as it would be applied to a real project allowing the researcher to see first-hand the effect of the framework on the team, and representation decisions made in production of the game. If possible, testing the framework in a large-scale company with a global reach, as well as a small indie developer would be ideal. The reason would be to test whether or not the framework has universal implication for any design team. Similar to the focus group, the framework should be used throughout each stage of the design process, from pre-production to post-production, in order to gauge usefulness at different levels of the design process.

8.2.3 Compare with other media

Unsurprisingly the video game industry is a massive business; many games are translated into Hollywood blockbusters, such as Prince of Persia, Resident Evil and the recently

produced *Assassin's Creed* movie. Although more commonly movies are turned into video games, perhaps most famously the Batman franchise. With the film industry being one of the primary sources of cultural exportation, the way culture is represented in films has been researched extensively by academics. Perhaps remarkably, considering the popularity of video games, that research in this field is scarce. As a result, more research needs to be done to compare cultural representation in video games and film in order to fill this gap.

An area of interest could be in these areas where film and video games cross over. For example, a researcher could analyse from a cultural perspective differences between the translation of video games into movie equivalents and vice versa, determining whether attention to detail in cultural representation is increased or decreased when working between these different media platforms. Through this research it may enable a determination that one or the other form of media platform is better informed through design processes regarding cultural integration or may inform that the affordances of one platform over another offer advantages in cultural representation.

8.2.4 Cultural artefact integration for educational and tourism purposes

Some academics have employed the use of films to help with educating students regarding intercultural communication; stating that it can greatly benefit a classroom and ease students into cultures they may be uncomfortable with (Briam, 2010: 384). Carol Briam considers seven factors when analysing a movie for her classroom: demonstrate cultural concepts, avoid simplistic cultural caricatures, fit in with a culturally conservative environment, have a connection to business, offer a connection [to other cultures], provide a cross cultural experience and entertain and motivate (Briam, 2010: 385-386). These areas provide a basis for teaching cultural interaction through film, so as not to

offend, or repel any aspects of the particular culture being represented; her film of choice is *Outsourced* (2006). Further research could potentially be to apply these seven factors to a video game as a source of inter-cultural teaching to be used in a classroom. Judgement of suitable games would be to use the seven aspects (to judge cultural artefacts) in order to decide which game would be appropriate.

Educating the player in history or in respect to a particular location, is also worthy of further research. How cultural inaccuracies misrepresent histories and impact on the educational aspect of a game and how misrepresentation may negatively affect an understanding of a certain location can be further researched. Whilst there is already a substantial base of research into the historical representation of video games, it is hard to claim that there may be any ‘formal pedagogical implications of historical video games or their impact on popular culture’ (Chapman, 2016: 8).

The representation of cultural artefacts from history may impact on the way a player perceives the historical period and key actors within it. This has the power to influence both positively and negatively; through appropriate representation. Therefore, further research into the misrepresentations of cultural artefacts and their practical implications on the teaching of historical events and locations should be further studied. On the other hand, as games are designed to be played repeatedly, it may be possible that a player builds an understanding of the history through multiple plays of the main campaign, in which the player gains a more complete understanding of a version of the historical events. As mentioned, while the area of historical representation has been thoroughly examined, it has not in terms of cultural artefacts in relation to teaching history as an education subject.

Films are also known to be an effective promotion of tourism; the Harry Potter series of films is just one example which has had an impact on an increase in tourism (e.g. Platform 9 ¾ at King's Cross Station is a very real example of film tourism at work). 'Recent researches suggest that films can have a strong influence not only on decision making for short-term holiday, but affect tourism revenues and long-term prosperity of destinations.' (Tuclea & Nistoreanu, 2011: 27). There is abundant evidence from film tourism; e.g. "the year after the release of Braveheart, visitors to the Wallace Monument in Scotland increased 300%" (Tuclea & Nistoreanu, 2011: 28).

Research into the cultural tourism of video games appears scant; as a result, research following on from this Thesis would seek to examine cultural tourism from this perspective further. Due to the ever-increasing popularity of video games, the effect on cultural tourism may be approaching that of the film industry. A game can be seen as a form of 'tour' of a culture or place. *Assassin's Creed: Brotherhood* (2010) uses the colosseum for the purpose of beautification; through this tourism in Rome unintentionally benefits through peoples associating the world famous landmark to the game. As Tuclea and Nistoreanu (2011) evidence, the implementation of culture through film media can have far reaching influence; with many studies outlining the positive and negative effects of culture through film. Video games are far more interactive, and as a result the cultural interaction between player and media platform is much higher. Therefore, tourism or education from a video game could have as much if not more impact in these areas; yet there is little research to support the claim.

8.2.5 Further research into Middle Eastern video games

The way Arabic people are portrayed in video games leaves much to be desired, especially from a Western perspective. This is often referred to as 'digital Orientalism',

which is the idea that Middle Eastern (similar to other cultures seen as ‘other’) settings in video games, usually refer to terrorism, or some form of insurgency (Shaheen, 2015: XVII). Adventure based, first-person shooter (FPS) and role-playing games (RPG) are the most prolific offenders in terms of this misrepresentation. Adventure and RPGs usually misrepresent through the form of saving a princess from an evil vizier, and the most common local settings used are ‘bazaars, harems and the desert’. (Shaheen, 2015: XVII). First-person shooters, on the other hand, use real Middle Eastern conflicts as the basis of some game aspects; unfortunately, this can lead to grouping Middle Eastern people and cultures under the banner of radicals, militants or terrorists. This highly biased cultural perspective is generally evident in games produced in the West, such as in the Call of Duty series, Delta Force and Conflict: Desert Storm (Shaheen, 2015: XVII).

As Western games (arguably) problematically portray the Middle East, many designers from the region have created games in an attempt to right the wrong. Games such as *Al-Quwwa al-Khasa* (Special Force, Solution, 2003) or *Tahta al-Ramad* are designed to counter the misrepresentation (Sizler, 2006). While much of this current work focuses on responding to years of misrepresentation by Western games, designers are also now moving onto creating original work. Although, as *Unearthed: Trail of Ibn Battuta* has shown, games from Middle Eastern designers often borrow (or imitate) ideas from international game corporations in order to boost potential sales of their product on a global basis. Potential further research is to analyse games based exclusively or heavily in the Middle East. Using Middle Eastern designers as well as Western designers to compare and contrast the way different cultures portray a specific area. Are Western designers now more conscious of their misrepresentations? Can using this Thesis as base work aid design teams and corporations in their efforts to correct issues in cultural representation?

8.2.6 Video game management and business

The way video games are managed, as well as the way a game is funded can affect the game in a variety of ways. Further research into the aims of this Thesis can focus in depth at these two areas and see exactly how they affect cultural representation.

In terms of management, many major production companies employ international design teams to create their games. More research needs to be done into how this affects culture and cultural representation in video games. Larger teams require a bigger budget, and the possibility of conflict in decision making regarding cultural integration in a multicultural team may be understandably higher than a mono-cultured one. These factors could impact upon cultural representation in video games. Questions around whether multi-cultural teams help or hinder representation may be useful to consider. Another possibility is that budgetary constraints from large teams spread over multiple countries strains the budget to a degree where culture is forgone to improve gameplay. The research into these areas is underdeveloped and therefore could benefit from attention to help designers streamline and improve representation prospects.

Another avenue of research is from a business perspective, how does a game's funding affect the representation of culture in general and within previously discussed constraints (from a management standpoint). Crowd funding is becoming an increasingly popular way of generating capital to produce video games. The method in which a designer markets their game differs from that of more traditional private funding. A designer has to sell and market their game to the general public who may have different ideas and knowledge on the game production cycle. Therefore, to crowd-fund a game design teams need to market their game in a way similar to that of a completed version. Issuing

promises about game content, design and direction. Research into whether this affects how a design team includes culture is needed; and how does it compare to traditional funding methods? Is there noticeable impact on cultural artefacts, if indeed there are any? More research also needs to be produced on how traditional funding sources affecting cultural representation and if this has evolved over the years to cope with increasing demand for cultural inclusion and other sources of funding for design teams.

8.3 Contributions

The principal contribution of the research provided in this Thesis is that through the design, and creation of a framework enabling analysis of cultural artefacts in video games, the research can help designers improve upon their cultural misrepresentation through greater foresight and knowledge. Contributions linked to this come in the form of theoretical and practical aspects.

From a theoretical perspective, the research in this Thesis contributes to the field through:

- Critical analysis and evaluation of cultural representation through the examination of tangible and intangible cultural artefacts in video games contexts. This leads to an understanding that there are representation issues (through the case study analysis in Chapter 4 and 5) and these can be rooted in the game production process (through the game designer interviews in Chapter 6).
- Identification of a series of issues (Chapters 5, 6 and 7) which impact on video game representation through case study analysis and interviews with video game designers. This provides awareness of concerns to be overcome in the video game production process.

- Provides contributions to video game design literature in the area of cultural analysis (Exploring approaches to the generation and representation of heritage artefacts in video game contexts, Balela & Mundy, 2016). In addition, materials presented in the Thesis have been presented at a series of events; highlighting the research problem (Analysing Cultural Heritage and its Representation in Video Games. Balela & Mundy, 2015); the case study (Representation of Cultural Heritage Within Modern Video Games. Balela & Mundy, 2015); misrepresentation in video games (Understanding the Realisation of Cultural Heritage in Modern Video Game Contexts. Balela 2015).

From a practical perspective, the research in this Thesis contributes to the field through:

- Providing a framework for the analysis of dimensions of cultural heritage to help video games designers make informed design decisions regarding the representation of cultural artefacts (Chapters 2, 3 and in the Appendix). Through such a framework a designer can further reduce misrepresentation of culture; or improve upon existing representation.
- Determining perspectives on and practical considerations for video game designers and production teams with respect to the identified concerns (Chapter 7).
- Provides a series of interview transcripts with video game designers, which demonstrate engagement with the issues of practical concern to this Thesis. These

transcripts may be used by other researchers in different ways to the ways presented in this Thesis (in the Appendix).

8.4 Conclusion

Misrepresentation in video games evidently occurs, as demonstrated through the case studies in this Thesis. As with the plethora of examples shown during the case studies, the misrepresentation specifically occurs in the elements of the game, which are generally regarded as being cultural artefacts.

These problems occur through several components of video game production. ‘Cultural appropriation’ of artefacts showed us that the designers of *Assassin’s Creed I* and *Unearthed: Trail of Ibn Battuta* appropriated many items from locations relevant to the environments recreated, although not from the location itself. Either through lack of knowledge or for the sake of appearances these cultural inaccuracies negatively impact on cultural portrayal in video games via false representation. The case studies have also shown that errors arise from the perceived need of ‘Hollywoodisation’; the idea that using similar ideals to that of Hollywood movies is required to enhance a game’s enjoyment prospects. Localising character voices with distinctly American accents is an issue that has often arisen throughout *Assassin’s Creed I* and *Unearthed*. In a similar vein, ‘beautification’ (the concept that items need to look good to enhance player enjoyment) is employed heavily throughout both games in order to improve the visual effects of previously simplistic cultural artefacts.

The question of which artefacts are selected also arises throughout the case studies. Technological constraints prevent the inclusion of many potential cultural items, the method and ultimate choice of which artefacts are selected can be called into question.

Assassin's Creed I, has a viable selection of cultural artefacts in terms of cultural involvement, but the selection is also to enhance a feeling of belonging, or level of importance to an area. Thus, some cultural items may be ignored or replaced by ones considered more appropriate to this end goal. *Unearthed* chooses to represent locations of significance from the Arabic world; but falls short at which items best represent an area in lieu of more significant artefacts.

Game dynamics ruling design decisions has also evidently impacted upon the decision to include or alter items of cultural significance. *Assassin's Creed I* has to balance the need for authentic items and clothing with the practicality of the game dynamics, most notably the ability to climb the majority of environments. Similarly, architectural reality in *Unearthed* is betrayed to complement the gameplay style of environmental interaction.

Much like any kind of cultural representation, game design teams cannot escape ideological constraints. The case studies showed that even a game designed by a predominantly Arabic team had a heavy Western focus due to the size of the European/American market. Resulting in the forgoing of cultural depth and relevance to bring comfortable similarities to Western audiences.

The evidence gained from the interviews with the designers portrays how complicated cultural inclusion and selection is during the production of a game. Designers are influenced by a multitude of different elements, which affect the eventual representation, such as the aesthetic, gameplay demands, design strategy and market demand. Each of these areas impact on the level of importance culture is afforded in a game; with roughly half the designers agreeing culture is important, while the other half did not. Herein lies a fundamental issue of cultural misrepresentation, the importance of which is undermined

by the attitudes of many designers. Further research could be utilised to show designers the benefits of cultural accuracy to reduce the stigma attached to its importance. Positively, many of the designers interviewed did see the benefit of the accuracy of culture (especially designer D) leading to increased representation within their games.

Sources used were also proven to have an impact on the effective use of artefacts. While it is virtually impossible for designers to achieve complete accuracy (due to technical limitations of varying interpretations of an item); it is evidenced (designers D and E) that increased precision of representation allows the player to feel closer and more immersed in the culture. There is of course a need to create a point of reference for a player, resulting in aspects of cultures, which may not belong in the society being represented.

The cultural bias of a designer or design team inevitably impacts on effective depiction of a culture. Designers A, B and D created games using their own culture as a primary focus, thus the accuracy of representation was generally higher than that of a designer creating a culture foreign to them. It should be noted that even with a personal affiliation to their culture total accuracy is still impossible to achieve due to previously mentioned limitations. The negative impacts of cultural bias can be complex, as a culture's interpretation of another unsurprisingly differs from that of the other culture. Therefore, the way in which a design team portrays a foreign culture can be an unintentional negative stereotype. Regardless of a team's intent to remedy these cultural misgivings, the unavoidable shortfall is that culture must be able to fit in with the potential market of the game. Each designer interviewed struggled with balancing accuracy with marketability, an unfortunate side effect of the need to sell games for profit.

The interviews show that no matter the cultural intent of a design team for their video game, mitigating factors will always affect how culture is integrated into games. The need to market and finance a game is often balanced with proven factors which improve game sales (aesthetics and a gameplay focus) these choices can negatively impact on how cultures are represented. In light of this, the interviews also showed an increased intent to implement as much cultural accuracy as possible within current bounds.

8.5 Recommendations

Several areas can be improved upon to increase the accurate representation of culture:

Design teams should have an increased focus on culture throughout the whole production lifecycle. With more cultural focus during production, scrutinisation and selection of cultural artefacts there is an increased likelihood of higher levels of accuracy.

Design teams should clearly define a philosophical approach to cultural use. A philosophy of cultural importance ought to permeate all aspects of a design teams approach to production. If there is an underlying belief in cultural use, then there will be an evident increase in representation with a game.

Design teams should consider all elements of cultural heritage throughout the production process. Using the framework, a team can more clearly examine cultural heritage for use within a game. This should help to reduce the risk of misrepresentations or under-representation of cultural artefacts.

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Appendices

Appendix I Interview Questions

The interview includes 20 questions starting with general question to specific question. Some questions include an example or more information in order to explore further the issues in relation to the answer. The questions are:

Demographics questions:

1. Male / female
2. Ethnic Background – How would you describe your ethnicity?

Questions regarding the individuals Questions regarding the individuals experience:

3. How many years have you been working in the games industry?
4. Do you work for a specific company or a range of companies? Which company/companies?
5. Do you work principally as an individual or as part of a larger team?
6. Roughly how many games do you estimate you have been involved with?
7. How many of those games would you estimate have involved historical or cultural items?
8. How would you describe your role in games production? Has this varied over time? You roles in those projects?

Questions exploring work processes:

9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?

10. Which are the most important resources you use to inform your understanding of cultural items?
11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion.
12. How do you make decisions about the inclusion or non-inclusion of cultural items?
13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?
14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?
E.g. In Assassins Creed items may be added to historic buildings in order to aid the player climbing them.

Questions regarding the designer's perceptions:

15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?
16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?
17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?
18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?
19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?

20. Where will the future take us in relation to cultural representation in video game contexts?

Appendix II Interview Transcripts

Transcript: Designer A

1. Male / Female?
Male
2. Ethnic background
Hyderabad India, Indian culture mixed Muslim and Hindu.
3. How many years have you been working in the games industry?
He has more than 5 years of experience in Gaming Developer & design. He also worked in the movies companies and worked as a freelance before the game (contractor).
4. Do you work for a specific company or a range of companies? Which company/companies?
He works both as individual artist and video game designer for range of companies (in India and outside India).
5. Do you work principally as an individual or as part of a larger team?
The team of Ogre Head Studio works individually in different companies and projects and now have a core team of 3 members of Ogre Head Studio, sometimes also we request support from free lancers for some individual projects.
6. Roughly how many games do you estimate you have been involved with? Number of projects?
Between 12-14 games, but before Ogre Head Studio he uses to sell his services of his field of expertise mainly the 3D artistic pre-visualisation.
7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?
Not many however, the latest game Asura is the only game with a cultural matter and he did look into it but not in great detail.

<p>8. How would you describe your role in games production? Has this varied over time? Your roles in those projects?</p>
<p>Artist, designer and founder of Ogre Head Studio in India.</p>
<p>9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?</p>
<p>Asura is based on a Hindu cultural game, as a Muslim I have great knowledge of the different cultural and religion background in my country, therefore it was easy and simple to take into consideration all cultural aspect without going through many books, because we have been educated at school on such matters as they very important in our country. However, when I am faced with some different cultural projects, I will definitely find it hard as I don't know how to approach the subject matter as to avoid mistakes on the real culture of the main story source and the aim in the design of the game.</p>
<p>10. Which are the most important sources you use to inform your understanding of cultural items?</p>
<p>Well for the game Asura for example, I didn't need any research into the cultural background of the story, as it is Indian and my cultural level is outstanding as I am a Native.</p>
<p>11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?</p>
<p>Sun script Sura = a Daemon we used as the concept of the story to design the character from a villain to a hero, as he comes out for revenge, trying to show that he is a hero as he has been put into hell, by starting up from reading the story and we started thinking of an angry person or character, we just thought of a daemon therefore we selected the Evil, as per his culture he believes that the devil is the only character who can be the</p>

nearest match to an angry person, therefore as a character for the game it was fantastic, thus we can make it much more engaging, and the fire is to revenge. In gaming industries Indian mythology is not used widely in comparison to Greek, Chinese and Japanese mythology, although recently it has started and is taking a positive direction. We don't take such characters too much into consideration but in the Greek mythology. We brain storm the subject matter and start the planning phase (the story is not used 100% at the beginning rather is to create an engagement dialog about the design of the game with the team), the game play is a character to fight in an arena and you simply play the game as it is and as a user, however the other side of the coin is to think deeply of the steps and the stages of the game to include the level of how hard the game will increase or change from easy to hard, taking in consideration the cultural and story side of Asura.

12. How do you make decisions about the inclusion or non-inclusion of cultural items?

As partners we agree on the character (the colour and the state of the character) angry, happy, the hair style in this matter he actually provided us with two pictures of the character and he explained the changes taken are based on, checking if the character is repeated from previous games, or not in this case he did find changes of the character is needed as similar characters were used previously and he changed the hair to Mohican hair style and inserted two horns, thus the expertise and the cultural awareness was a big factor to this design change of the character.

13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?

His methodology studies were very good, he learned about the Greek Mythology, Chinese etc., that was a big factor in his cultural awareness of other backgrounds around the world, also during the design to not divert from the reality to much he uses the internet to find out about the places where the characters are from and read about

the background of the stage on how to set it up, to keep the characters and the background of the places as realistic as possible.

14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?

It depends on the game play; for argument sake, if we ask why the daemon is nearly naked (wearing a covering cloth same as Tarzan), because in the game you will be able to use Amazon weapons etc., as the stages and levels progress, the culture in the game is not 100% taken into the design because the game story line is based in Hindu Mythology, however saying that we do include some Indian (Hindu) designs items to the background and we are also careful not to use any offensive cultural materials.

15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?

It is not important and we don't give too much importance to the accuracy of the cultural artifacts, if we are accurate therefore we are trying to teach history via a game, but in here we are not trying to do so, therefore we are not taking in consideration the historical and the cultural facts as the subject matter is a mythology stories, our game in this case is a "Myth" based hack and slash game to achieve the goal, but in the case of a historical story game, we will of course take in consideration the cultural and historical background in our design of the game.

16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?

The main aim is to have a game as a winner and not the culture. The game aims to achieve objectives which are related to: how enjoyable the game is, e.g. Prince of Persia (is a written story with a background, and they made it successful to some of jumping and the climbing that made the game enjoyable and the culture and the graphic design

<p>was taken into consideration like the clothes, buildings etc. that is related to Middle East Culture.</p>
<p>17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?</p>
<p>As you know our first game is a Mythology story therefore through the game we don't really try to be accurate on the culture, however in the case of the Japanese game (Samurai), therefore the accuracy of the history and culture must be taken in consideration as the game story is based on factual historical background, thus the game will be used for the accuracy of the story, thus will be successful and not a failure as people might reject it depending if your from Japan or from another country with high level of cultural awareness.</p>
<p>18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?</p>
<p>No because we didn't work on games with where culture was important, because we work on futuristic and fictional games, therefore the culture is not important in our case because we use neutral and logical characters (like the devil as the angry character and not white or black person).</p>
<p>19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?</p>
<p>It is all dependent on the type of games (factual or fictional, future or past), therefore the balance will always be present and it all depend on the designers and the management strategy including the market need.</p>
<p>20. Where will the future take us in relation to cultural representation in video game contexts?</p>

The cultural will be shown in the video game in the future, but also depending on the type of the game story.

Transcript: Designer B

1. Male / Female?
Male, Egyptian Technical Innovation Director since February 2012 (Background Telecommunication Engineer).
2. Ethnic background
Egyptian Arabic.
3. How many years have you been working in the games industry?
Since Feb. 2012 (2 Years), we in corporate we developed More than 6 games for consumer we made two, and 3 in the back pipe, we use English and Arabic as a language for our games design.
4. Do you work for a specific company or a range of companies? Which company/companies?
Yes, I am working in an Egyptian company, the team is exclusively Egyptian (apps innovate, located in Egypt). Some games were targeted for the Middle East market and others existing markets, like in the case of Tok-Tok, which was targeted to people from Cairo and Alexandria.
5. Do you work principally as an individual or as part of a larger team?
I work with a large team of people and we all work together to achieve our target.
6. Roughly how many games do you estimate you have been involved with? Number of projects?
I have been involved in more than 6 games for consumers and corporations, we have 7 developers and 3 designers and it took us 1.5 years as they didn't dedicate the full team

<p>to the project as we do sell our services to other companies and this is why the 1.5 years seems a long time.</p>
<p>7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?</p>
<p>Only one, Tok-Tok, focusing mainly in Cairo and Alessandria.</p>
<p>8. How would you describe your role in games production? Has this varied over time? You roles in those projects?</p>
<p>As Innovation Director I work closely with my Technical Designer Team, where I manage the Market needs with the design of the games, our customer are mainly from the ME and USA, our top and number one customer is from Egypt, we also had a Pakistani customer for an application involving the Holy Quran related to a religious quiz.</p>
<p>9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?</p>
<p>Tok-Tok Draft was designed for an Egyptian audience only and targeting Cairo and Alexandria because as the Tok-Tok is new in Egypt and only found in Cairo and Alexandria [in Egypt]. you will see in our environment design the famous monuments of Cairo and Alexandria (Egypt National Museum, Tahrir Square, etc.)</p>
<p>10. Which are the most important sources you use to inform your understanding of cultural items?</p>
<p>Personal experience by knowing and living in Cairo where in every corner you will find the three wheeler called Tok-Tok, the same goes for Alexandria, therefore it made the design of the environment easy by taking photos of famous monuments and places around the two cities and applying the design accordingly, in regards to the extra characters they are all based on Egyptian cultural heritage, like the people dress code, street market, traffic, etc.)</p>

<p>11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?</p>
<p>We have a team in Cairo and Alexandria who goes to the ground and go around the two big cities in Egypt to take photos and enhance the design idea by what they see in the street where the Tok-Tok is found. Thus, they can achieve realistic result when playing the game, also they utilize the massive contributions provided by the teams native to the two cities (Cairo and Alexandria), they know the cities inside out, we also use the net and Google earth to add elements to our design.</p>
<p>12. How do you make decisions about the inclusion or non-inclusion of cultural items?</p>
<p>Famous monuments, places, cars, old historic roads, all these elements provide a massive contribution to my decision on how the game should be designed. Thus, we can show a somewhat realistic environment in the Tok-Tok game. One example that can be shared is the Coobry [bridge] Alexandria, the famous Alexandria fly over, the motorway was used in the game for the Tok-Tok to race and do all the tricks.</p>
<p>13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?</p>
<p>We actually used Google, experience and field visits to take photos of the needed objects and element to design the game to be the most realistic possible interface.</p>
<p>14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?</p>
<p>They had an idea to add a historic fort to the game, unfortunately when they tested it did not provide the needed excitement and the enjoyable interface required for the game, therefore they decided to cancel this idea of such a cultural and historic fact of the city and opted to use other places within the city.</p>

<p>15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?</p>
<p>Our aim at this stage is to achieve a name of our company in Egypt, the selection of the character used to drive the Tok Tok were Egyptian by look and by clothes but not designed to represent a known person, instead we opted for a 'generic' Egyptian gentleman. They do consider the culture as important as the game because one of the aim is to share and publicize the Egyptian Culture globally by using the historic monuments of Egypt and not necessary the Pyramids but using any Egypt assets of the Historical artifacts.</p>
<p>16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?</p>
<p>The game was successful in Egypt because culture was represented in the game, the market loved it because of the Item used exist in Egypt and are well known, this helped achieving the required results and above.</p>
<p>17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?</p>
<p>No, because all the team members are Egyptians and the culture used to design the game was also Egyptian and well known to the team members.</p>
<p>18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?</p>
<p>Just we used the culture as an important factor to design the game.</p>
<p>19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?</p>
<p>It was not difficult to design the game as the full team lives and breath every cultural aspect of Egypt, they had brain storming sessions and they did a survey by asking</p>

people they selected to test the game questions prior to the game launch. The feedback was very positive.
20. Where will the future take us in relation to cultural representation in video game contexts?
Our aim in the future is to be a big and good competitor in the Video game industry and will use the Egyptian Culture to share with the world and greater international knowledge of our culture.

Transcript: Designer C

1. Male / Female?
Khaled Born in Al Quds Palestine. I worked with American companies as Integration Engineer and Integration Manager not on gaming, in 2011 I decided to establish my own company to design video games. Unfortunately I was alone and couldn't make it financially successful enough to carry on, I decided join a partnership and establish another company where we are working on a video game: "The Kingdom", which is a card game. For previously established games see our website.
2. Ethnic background
I am a native Arab, from the University of Bir Zeet in Palestine.
3. How many years have you been working in the games industry?
Since 2011 in the game industry as one of the main shareholder of the company.
4. Do you work for a specific company or a range of companies? Which company/companies?
I work in my own company.
5. Do you work principally as an individual or as part of a larger team?
We are a small team of three, otherwise when working in cooperation with other companies it is on a big team scale.

<p>6. Roughly how many games do you estimate you have been involved with? Number of projects?</p>
<p>Our own we worked on 4 projects and many more with other companies.</p>
<p>7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?</p>
<p>Maybe the last game (Al Mamlak = the kingdom). From the idea, the color, and strategy.</p>
<p>8. How would you describe your role in games production? Has this varied over time? You roles in those projects?</p>
<p>Our co-founder of the game Basel had the idea and he shared his strategy and we aligned to get it to the successful stage, our game for instance is taking in consideration that we play to not compete, but rather work together to achieve the aim of the game.</p>
<p>9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?</p>
<p>Tranquilo is an Idea that came from Basel who had the overall idea he designed the game strategy and his idea was a two players game with main and principal idea of working together to achieve the goal and not to compete against each other and we had a brain storming meeting and we achieved a good game, we start with an idea, than we look into the depth of the idea study it and develop from different sources the game to the enjoyable level required by the market.</p>
<p>10. Which are the most important sources you use to inform your understanding of cultural items?</p>
<p>We look into many source prior of starting the design to relate them to our ideas, for instance the game Spermania we watched scientific documentaries on how the sperms travel and surround the egg it really enhanced our idea of some kind of a very competitive game and a war game between the sperms and it developed to Spermania,</p>

<p>we studied the documentary deep to decide on the graphics and the design of the main characters and add hurdles and competition to achieve the target required.</p>
<p>11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?</p>
<p>The dynamic is to establish the story yourself or the other way around to construct the game first and insert the story, however at the Engineering level they look to the dynamics of the game first and after establish the story, however if we have the artistic engineer he will take a story and develop a game related to the story.</p>
<p>12. How do you make decisions about the inclusion or non-inclusion of cultural items?</p>
<p>The culture side on the games is not in our pipe line at this early stage of our company as it needs higher level of software and further investment, however if I can be honest the culture on the games will not provide the users with the full reality of what the true story will provide rather small start or a very reduced background of the real story, it is like books and the movies, reading the book will provide much more details in comparison to movies as the director and the designers they will highlight main cultural matter without going to details, stating all this cultural in my opinion is a must to design historical games, the same when you make the game from a movie, the game will reduce even further the cultural details shown in the movie, as users will concentrate on the speed, actions and dynamics of the game even if the background of the graphics are repetitive.</p>
<p>13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?</p>
<p>See 12.</p>
<p>14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?</p>

Culture is important when designing the game, for instance the expectation of the Americans is different from the EU citizen or ME citizens, therefore we do look into the culture to prepare the expectations and align our design accordingly, e.g. designing the background, stage of the game to an EU Citizen will be more artistic and less flashy to that of an USA Citizen.

15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?

As an example of our last game (Al Mamlak = the kingdom), we design all the background and stage of the game taking in consideration the Arabic architectural heritage, even the colors used had a lot to do with the taste of the ME region (Gold, Dark red).

16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?

The cultural side is very important on the design and must be taken in consideration, as it could be the winner on the market and you will have a successful game to the market, saying that I must say that games also can be used in different countries even if the cultural side is related to different country.

17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?

The users usually rely on the marketing aggressively to try and play the games, however the quality of the graphics, designs and dynamics is a massive contributor to the users, therefore studying the market and taking in consideration the cultural side of the users will definitely be a big factor to the success of the game.

18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?

The business cultural factors between regions in world has been a big factor to the gaming industry, i.e. in the ME region investors culturally don't like taking risk and invest in the initial stages of developing the games as the cost can be high designing a game that can not be successful first, second, third time and still not sure if it will be successful on the forth attempt, however in EU investors do take the risk because culturally they do understand as soon as the game is successful they me triple the income to the utilized cost of the design phases (mass market will bring good profit when the game becomes successful), the challenge is to convince the investor to trust on the product until we hit gold after a year or two, as the majority in the ME regions don't have the full understanding of the gaming industry (still early).

19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?

Working on games with cultural heritage will be very challenging, as it will need many resources from historians to the developers and the designers, therefore the investment will be high and this it self will close the door on us to compete on the cost of the game.

20. Where will the future take us in relation to cultural representation in video game contexts?

The future in the gaming industry is very positive and it is leaning towards culture and the history of the Arabian peninsula as the big gaming companies are starting exploring the study of the gaming market and started investing in designing games with an Arabic heritage stories

Transcript: Designer D

1. Male / Female?
I started developing games at the age of five, on a Dos based platform using my fathers computer, my father was the key to my success in sw development, he use to encourage us to always try to improve the games we use to play on his PC and to not just accept the result as it is, we use to think of alternative solution to win the games for instance, as an example.
2. Ethnic background
I am Muslim, Arabic background.
3. How many years have you been working in the games industry?
Games are programming and art, different from the movies, as they are pre-Mediated and picture based, I have 7 years' experience. In order to develop games you need to master programing and art, I focus on the programming side of the visual design, media, and backgrounds characters.
4. Do you work for a specific company or a range of companies? Which company/companies?
I work for Cimaphone since 2007.
5. Do you work principally as an individual or as part of a larger team?
I do both work on my own on the visual design, art, backgrounds and character, but on the integration I have to work with the team and do a brainstorming meeting to finalize the game and try to understand the level of enjoyability of it, made by our team.
6. Roughly how many games do you estimate you have been involved with? Number of projects?
I started my own company initially called Vantext, prior of working for Cimaphore , we started developing few games and we had funding from few investors, however in 2008 the global recition hit us hard and investors started pulling out and due to that fact

we started going through a turbulence time and we decided to move forward and terminate the company and it's venture, this is when I started with. Initially I worked on educational electronic gaming and media with Cimaphone and in 2010 I moved to the Cimanoor, video gaming and we started 'un-earthed Ibn Batuta', the game was very good and enjoyable, it did hit good reviews for the graphics, story line and characters, unfortunately the programming did let the games movement badly down. I was involved in 3 successful games and many more of the small and unfinished games.

7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?

Video game we had to take the culture into consideration and was made to be seen in our visual design, characters, background, places graphics art and history and many more, the game was related to Ibn Batuta real story a religious scholar who decided to do his Haj (pilgrim to Makah), he become hooked to traveling and discovering the world he decided to go further a field and become one of the great Arab (World) explorer's who travelled from Tangiers in Morocco and around the ME and went further on to India and China, the game was based on studying many cultural facts of the different places he went to and even the way of life at around his time to achieve realistic facts of his time as close as possible of the many countries he explored, the game was named (un-Earthed Ibn Batuta).

8. How would you describe your role in games production? Has this varied over time? You roles in those projects?

My role is generalist I am not a specialist in one subject, however for detailed expertise I am always working with my Engineers, as a Director of the games I lead the E2E project and put forward ideas based on market needs and design as and per the story line of the games, thus to include cultural aspects or designs of character features.

9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?

Certain cultural items that you need to convey during the design of the games but you don't let it stop your progress, we need to achieve equilibrium between business and culture and take in consideration the capabilities of your team, thus to keep the cost aligned to the budget agreed, our progress will always turn around the capabilities of our engineers expertise, we try the best to avoid external free lancers to progress or to achieve the cultural need in the game. As an example what actions we take to develop the understanding of the cultural meaning, I speak about some games that needed the Arabic writing calligraphic Othman Taha, he went on a business trip to meet up with Othman Taha who's calligraphic writing is used in 90% of the existing holy book of Quran around the world to just write for him the logo of the game and the writing that needed to be included in the game, thus to take the real thing from the source and achieve the cultural realistic outcome in the game.

10. Which are the most important sources you use to inform your understanding of cultural items?

Took in consideration the old fashion way: books about Ibn Batuta, Web sites (internet), traveling to the concerned places, my experience, we invited an external expert in the subject matter, therefore we do take in consideration many items and sources to do our research to start with the draft design of the game and initiate brain storming meeting after every stage, thus experts opinion from our designers and developers will be added into the plan of execution.

11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?

The idea of the game is un-earthred ibn Batuta (Arikaz), basically looking for the buried treasure, after which they chose the explorer Ibn Batuta story to lead the game including the cultural heritage of the regions he explored (Using the Book written by the explorer him self Ibn Batuta, the book called Arihla), this book was the main source for our game, and we found this book has been tempered with as some important section been censored and taken of the book, a theory on why it has been taken of the book and hidden, is all to do with the treasure that has been hidden and buried somewhere, this is what make people want to know where the missing chapter is and what are the content of this chapter.

12. How do you make decisions about the inclusion or non-inclusion of cultural items?

Selecting Treasure Hunting as an example, was developed and extracted from the Islamic Zakat of the person wealth (usually a certain defined percentage of the wealth, from Gold to food), therefore hunting for the treasure was really looking for the donations (Zakat) of gold, Silver expensive artifacts ...etc. In the game he created two characters from ME, looking for where Ibn Batuta hid the treasure, therefore as the market is mainly to ME we achieved a success required outside market was good as the game is enjoyable. For example Fares the local character who plays the treasure hunter he was to start with somehow reckless, therefore we introduced a lady character as his sister to assist him and help him find the hidden treasure, therefor a female character well known in the video game is usually a Lara Croft look like, however for our game, we had to align our culture to the real facts of the story line and opt to use a Middle Eastern (ME) female character and in order to achieve a balance between the culture and business we dressed her with if we may call it modern *hijab*, thus it can be practical when she is going for the adventures exploration to treasure hunt with her Brother Faris, and the *Hijab* had to be practical, thus make it realistic to the users that she will be able to overcome obstacles or going into caves or any other objects and

show that her clothes are as practical as possible, with total respect to the cultural heritage we used the needed cloths even if her role in the game is mainly as a mentor and the guidance to her brother Faris avoiding any fighting or shooting ...etc. The reason behind such decision of dress code and no fighting is down to the cultural side of the ME families as ladies are not supposed to fight or shooting rather being the family guidance as it is her main role on game to her Brother Faris. Selecting Faris as a name, was not just coincidental rather his father was a real Faris = a Night Rider, therefore the name was Faris and his sister's name was Dania extracted from a verse from Al Quran (Muslim Holly book), same with the third characters name Rasheed = the wise man, and as a conclusion for choosing such name thus it can all in sync with the game and it's objectives, also his clothes was accurately as per his role (the guide in Morocco), his clothes was traditional known Moroccan clothes, therefore his knowledge is automatically known and accepted by the game players. In regards to Fares clothing I selected an American knight clothes, with the Palestinian scarf to keep it with the ME regional traditional and cultural story line, further more we decided to choose a Compos (Bosola) as a logo for the game due to the fact that the compos is an Arabic invention.

13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?

Constructing the background in Egypt was taken from different books and photos existing we also used Google earth to extract few real pictures of the desert in an area in Egypt called "Al Hurghada", however the main sources of our game from a book called Al Rihla (The trip = The voyage) describing in deep details to the explorer views and what he saw and met during his trip around many countries.

14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?

We always want the game to be fun to play, therefore the dynamics must be to top thus it will be fun to interact with (game needs to have levels and not too fast to get to end of the level, providing the detailed plan to the dynamic artist, thus to create the environment of the area (building's, parks, market places, type of people ...etc.

15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?

In most cases we can't achieve the 100% accuracy to represent the real cultural event or environments, therefore we take the liberty to design the game to the nearest accurate picture of the place and peoples cultural heritage, thus we can adjust them to the requirement of an enjoyable game.

16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?

I feel that the cultural side of any game is very important and can be a good business breaker, by assuring the achievement of the needed equilibrium between business and culture, as a player if my culture is not respected I will feel bad about it, it can even be taken as an insult, thus I will not enjoy the game, therefore I will not purchase it. As an example if I play a game (Call of Duty "Black Ops 2" or Uncharted 3 in Yamane) and find that some Arabic writing is wrong or upside down, I will feel and think that the developers, designers and the management are lazy to even have it checked and it give me a bad impression about the understanding or respecting the people of the region, same with the accent of the people in the game was not taken in consideration properly and was badly taken, the game should be based in Yemen it should have been done with a Yemeni peoples accent when they converse, in this case they used Syrians accent and that it self is a bad example of respecting the heritage and cultural facts of the real game story.

<p>17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?</p>
<p>In my opinion it is important thus we can avoid stereo typing of people, race, faith or other cultural subject, as an example for the ME we find many games now betraying Arabs as Terrorist and usually using Arabic cultural figures as the Vilene, however in our game we used Faris as the good night cavalier in the game and we also try to avoid any religious facts in the game as the objectives and the aim of the games are not to teach users about how to pray or rather to play and enjoy the game.</p>
<p>18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?</p>
<p>Our company is trying to represent the Arabic culture. We are concerned with the cultural. If you see all our games, they have relation with the cultural heritage. We believe represent the cultural is an important factor for our games.</p>
<p>19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?</p>
<p>we are actually put the element of the culture in our plan to be more close to the reality</p>
<p>20. Where will the future take us in relation to cultural representation in video game contexts?</p>
<p>it depends on the type of game, but I think the cultural artifact will be seen more accurate in future.</p>

Transcript: Designer E

1. Male / Female?
I am from Japan, 25 years working with a Public company Eniges.
2. Ethnic background
I am a Japanese married to Taiwanese lady.
3. How many years have you been working in the games industry?
I am working with our partners Engines since the past two years
4. Do you work for a specific company or a range of companies? Which company/companies?
I worked for both
5. Do you work principally as an individual or as part of a larger team?
We work as a team, since I started we all work together.
6. Roughly how many games do you estimate you have been involved with? Number of projects?
I have been involved on 25 titles/projects (Games).
7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?
Basically Fantasy games however historical games we don't do. Most of the games are made by our team and we don't take Japanese culture into consideration, his usage of a Ninja with the usual black uniform and fighting with samurai swords as per his statement is stereotyping of Japanese Ninja by movies from other countries who has no knowledge of Japanese culture. As per Mr. Japanese Ninja is normal person like me and you and doesn't wear black Kimono, and doesn't fly like it has been injected into our mind, therefore in my opinion if culture was respected we would have avoided creating a fictional character relating it to the real Japanese culture.

<p>8. How would you describe your role in games production? Has this varied over time? Your roles in those projects?</p>
<p>I am the Producer and the Manager of video games.</p>
<p>9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?</p>
<p>Very hard question, the items has to be related to the titles when we produce Video games, therefore Items and Titles on video games should never be separated, and we always avoid culture and make all games as fantasy and not reality, the Characters always need to be related to title never.</p>
<p>10. Which are the most important sources you use to inform your understanding of cultural items?</p>
<p>We make our own scenarios and we make our own world, nothing from the history, it seems that this company uses on fictional games scenarios and nothing related to real historical events or any history, however he clearly stated that he makes his own culture and add it into the game, this is where I ask again how important the culture is to the video game industry, therefore it is always added consciously or sub-conscientiously, or added as and per the definition of individual, this is where I can highlight the danger of such practices and it needs guidance, put forward similar to movies, However again he is contradicting his previous statement by stating he dies use historical factual stories and develop them into a fantasy and uses the culture accordingly, thus to make the game enjoyable to the users and more attractive, this is where we can say he is trying to achieve equilibrium between business and culture, his mind set to fantasied games and not historical games, but still culture is outside all of the video games type (could be Fictional, real story, action, sporting games, ...etc.), in my opinion culture is always present to certain degree on any type of games some are deeply filled with cultural events and heritage some are medium and some are with low cultural input, however it</p>

is always present, this is where I believe guidance to such rich aspect and topic of our world must be known to the developers, designers and artist's as pre-requisite in order to produce video games, thus to avoid cultural deformation or stereo typing or even hurting peoples, nations, ...etc. feelings

For example Ninja the choice of the clothes the picture is already in our kids mind our parents ...etc., for the scenario it is and will be fantasy, however clothes could be cultural, and our games are fantasy and has nothing to do with historical facts and the clothes will be also chosen on a fantasy criteria's, however I still think that his choice of clothing and environment is culturally related and he uses it with out him admitting culture is present and it is all to do with his mind set on a fantasy mode.

11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?

We work as a team and we organize war room meeting and start inputting ideas and share the character of the game, however the environment is less important because the state and the emotional state of the character will be the main factor for designing the environment, as an example: if the character is angry the sky will not be blue rather black, therefore the way we chose and select the environment is a mind set items, culture has nothing to do with it, because our mind can easily visualize the character status and the same with the environment or the stage set up.

12. How do you make decisions about the inclusion or non-inclusion of cultural items?

My sources to deal with the design of the game is mainly from my experience and mind set and fantasy world.

13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?

<p>For the dynamics it all depend on the stage of the game at the initial stage can be in the house i.e. a wider space and at a harder stages we choose dungeon i.e. smaller space and make the dynamics faster and harder.</p>
<p>14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?</p>
<p>Culture is not important and the accuracy of the cultural heritage into our games, we make our own as we go along on designing the games.</p>
<p>15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?</p>
<p>Yes, I agree that some people and companies will use cultural heritage and include it into video games, but for us we don't as we believe no market for it.</p>
<p>16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?</p>
<p>For me no importance at all as the Ninja is in reality a fantasy character wearing black clothes as I mentioned before and explained how this Ninja character was created by movies, which didn't take Japanese culture into consideration.</p>
<p>17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?</p>
<p>When we like to use Ninja for my game I will design the character as per the country I will use, as an example if I am in Australia I will make the game in the beach in a nice environmental areas.</p>
<p>18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?</p>
<p>No accuracy of any cultural issues in my games, as I said Ninja is a character changed by movies who didn't respect the real Ninja in Japan, Ninja is not a flying person or</p>

spider man or ...etc., we have different Ninja that we use, a fighting Ninja, a secretive Ninja ...etc.
19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?
Represent the culture is important to be in our game “culture” is important because culture is part of our game.
20. Where will the future take us in relation to cultural representation in video game contexts?
The future will have no border or time for games creation, design and developing, therefore in my opinion culture will not be taken into consideration for games as games are fantasy and not cultural reality, I am sure that culture and religion will be wiped out and not used at all because the game people lives in fantasy world people like me lives in real world, but when you use a city of any country make sure to respect the culture thus to not insult the people of that country, this is where I believe there is a contradiction into Mr. Statement, because in order to respect the culture of a country or someone you need to learn it and insert it correctly into the design of your game and if you want to avoid it you also need to learn about the culture thus you can avoid it.

Transcript: Designer F

1. Male / Female?
I am female.
2. Ethnic background
Philippines.
3. How many years have you been working in the games industry?
More than 8 years.

<p>4. Do you work for a specific company or a range of companies? Which company/companies?</p>
<p>I worked with different company in the Philippines, America and then I move to Warsaw, Poland to work with Company Project Involvement, The Witcher 3.</p>
<p>5. Do you work principally as an individual or as part of a larger team?</p>
<p>The advantages of working with outsourcing companies that that you can absorb lots of the technical aspects from different companies. You can absorb the unique techniques and technology from a wide range of companies. You can then apply that when you are going into a natural web company. You build less assets but work more strictly with their culture.</p>
<p>6. Roughly how many games do you estimate you have been involved with? Number of projects?</p>
<p>When working as an outsourcer, I worked on more than 3 games. Although when working as an outsourcer you don't always get credit for the game. I have done many more projects (often micro projects) but not all of them are produced or launched.</p>
<p>7. How many of those games would you estimate have involved historical or cultural items? Number of culture based projects?</p>
<p>About three of the games have involved historical or cultural items. Although when outsourcing, somebody else decides what the game should be like, it was mostly copy this and copy that. While working on "reds" my primary designation was senior environment artist. I coordinate the creation of props and items in the game, I determine what they look like and how they are going to be used. I do put a lot of cultural influence into the final project.</p>
<p>8. How would you describe your role in games production? Has this varied over time? You roles in those projects?</p>

In the company I am the outsource coordinator. Basically when creating something like pots of carpets I advise how we will create them in terms of culture. I discuss with my team how these items should be made, then the final plan is sent to an outsource team to be designed. Basically when an item is needed to be designed, I send the information about what we want to companies from around the world. These companies then design the items and we incorporate them into the game. I also volunteer in the marketing department.

9. When designing games that include items, which may have a cultural meaning, how do you develop your understanding of this meaning?

In Witcher 3, most of the culture is designed around Polish culture. So when designing a house, we decide which region in the Witcher it's going to be in, so if it's going to be like a Scandinavian house, it's probably best to ask a Swedish guy as to how we can be more accurate from a cultural aspect.

We have had problems before in other games where we create a religious item without researching it properly, but luckily when creating Islamic religious items, we have had a guy from Iraq working for us, and I consult him in respect to any cultural violations the design may have. When trying to appease different audiences, sometimes we have to replace items with something less controversial to that culture.

10. Which are the most important sources you use to inform your understanding of cultural items?

If we can't get items first hand from our multi-cultural staff, because our staff come from all over the world, we get it from the internet. We consult our colleagues on the time period of game we are producing, is it from the middle ages or the renaissance? Which time period in the renaissance? Is it the early or middle renaissance? When we find out, we search for props from that time period on the internet or from books.

11. Thinking about a specific item, which you have had to construct, which had some cultural meaning, please describe to us the major stages you undertook in order to deliver your work from initiation through to completion?

The first stage is to find the closest real region of the world, e.g. the south of France or Italy. Then we discuss the time period and put the two together, e.g. renaissance Italy. So then we are trying to put Italian renaissance with the south of France but still need some aspects of Polish culture in it. First of all, we will have concept art generated of the subjects involved. Various departments are involved, but the art department tends to be one of the first. When the idea has been generated and the initial premise developed, we begin to design the area. Firstly, the architecture is designed in the fashion of the region to be used, e.g. France or Italy. When the architecture has been designed, then props (such as carpets) relevant to the structure can be placed; although not everything has concept art attached to it so we just look for broad strokes and copy them.

Cultural items are grounded within the time period and the area, although sometimes we try to go as generic as we can, for example, if creating a pot from the middle ages, we try to keep it as stereotypical as possible. The challenge is to bring cultural items and environment together to create the area we are trying to build, e.g. do these structures and trees fit a Scandinavian environment. For example, barbers existed in the middle ages but they also exist now; if I try to introduce a barber from the middle ages to a game in the present the player will not be able to associate them, this is a cultural issue. They were also surgeons, doctors and dentists, if a barber looks like a surgeon the player will not know what is going on in the game.

12. How do you make decisions about the inclusion or non-inclusion of cultural items?

The teams work like a democracy; if someone thinks it's their calling to create a prop, then other teams will tell them if it looks too much like another culture, or if it's good.

For example, we have an artist from Britain, but when I was driving around city outskirts in Britain, what they had drawn was what I saw, but you could tell there were cultural influences that were very subtle, only someone from that area could have designed them. So when our French artist creating gardens, I immediately recognised them as looking like gardens from Versailles in Paris. These two examples show very generic, but also very subtle cultural influences.

13. What resources were the most valuable in the construction of your understanding about the specific item that you have just described?

Visiting the places is probably the most important aspect. I go the places, stare at the details, take photos of the details and that is what I use to design the in game item. I do sometimes read about the structures I design, but this is not a general practice.

14. What impact do you perceive that game dynamics have on co-modification of design work and can this have an impact on representation and cultural meaning?

Assassins Creed is more character focused, while our game is more about story telling. We use very subtle clues to indicate if a player can interact with a part of the environment, e.g. a very light shade of white (decal) to indicate the building is climbable without interfering with the architecture. We try to create a pattern that is identifiable by the player to indicate it can be interacted with, but it cannot be too obvious.

15. How important do you perceive the accuracy of representation of cultural artefacts in games to be?

In our games, cultural accuracy is not very important because we are not constrained by a particular culture because it is fantasy, so whatever works or is beautiful and it doesn't throw the player off their aim. Even though the game is fantasy, we still keep it grounded enough in respect to culture. The player still needs to be immersed in the

game, so things need to go together, but we are not as constrained as we would be if we were to recreate a city such as Damascus.

16. Do you perceive that cultural representation has an impact on the success of a game and/or on the player?

Culture does have an impact, but only in a very subtle way. Each environment needs to be distinct enough for a player to be able to inject a part of himself and his work into that environ.

17. How important do you perceive it is for multi-faith teams to work on games, which have a cultural importance?

Yes, it is important to have a multi-faith team, although we are not trying to recreate a real location so the cultural accuracy is not important. We pick the most beautiful places from the time period we are basing our game on and use it, regardless of culture or place of origin.

18. Do you have any experience of circumstances wherein inaccurate or inappropriate representation has resulted in negativity towards a game or particular object in a game?

If you're trying to recreate LA, you want people from Los Angeles to feel like they are in LA, if you are trying to create 18th century Paris, you must make sure the player feels like they are in 18th century Paris. If you want to recreate 19th century London, then you need to find out how much it rained during that time period to create a feeling of 19th century London. A good example is Jack the Ripper, there is lots of literature and drawings from this period for us to base our images on. A lot of horror genre games play on minimal sound or silence and darkness in order to inject a mood of fear in the player. You give them psychological cues, such as thick dark fog in order to create a culture of fear; instead of broad landscapes you give the player small confined areas so they feel claustrophobic. We would also use dark greens and blues to communicate a

feeling of horror to the player and refrain from using bright colours, like yellow. This colour technique is often so subtle the players don't even consciously notice it.

19. Do you perceive that we are increasing the accuracy or embracing the cultural understanding in the games that the industry is producing? Why, Why not?

It all depends on the genre, there are games which will be visually timeless and intentionally try not to be realistic. For example, Borderlands, because of their cell shading technology, they will always have a cartoonish look, and it is timeless because 20 or 30 years from now it will still look great because it is not trying to be realistic. On the other hand, with old games (and movies) that try to be realistic, they age and you can see them age. Our game (The Witcher 3) is trying to be more of a stylised realism, it's not trying to use precise colours in the environment to depict real life, it uses colour to exaggerate the real area it is imitating. They use a camera to create 3D models (like in the cinema) so we can create reflections in our games.

20. Where will the future take us in relation to cultural representation in video game contexts?

Currently, it is not possible to render images in video games like it is in a movie due to hardware limitations in household computer and game devices; therefore, accuracy at the moment in games compared to movies isn't possible. I don't believe we will have the technology in the home anytime soon to recreate actual physics in a video game, we are limited by the amount of particles a game can display.

Appendix III Description of Framework Elements Applied to Assassins Creed

Arts & Artefacts
Architecture
No Evidence:
Limited Evidence: The generic two story structures have used (Roshan) windows, yet the style is incorrect. An Egyptian rather than a local style has been used on all the generic structures in the game, to create an image of an indistinct Middle Eastern area.
Satisfactory Evidence: There is evidence for the use of Palmyra in Syria, yet only a limited section of the overall structure has been used. Only the Arch of triumph was placed in the game, while the rest of the temple has been ignored. The use of Al Khazneh from the city of Petra has being created to a high degree of graphical accuracy. The issue is the location; the treasury has been removed from Petra in Jordan and placed under the area of the Al Aqusa Mosque in Palestine.
Significant Evidence: The game has selected important buildings relative to the cities on display, with a high degree of architectural accuracy in relation to their real world counterparts, for example: Al Aqusa Mosque, Church of the Holy Sepulchre, Jerusalem City Walls.

Arts & Artefacts
Sculpture(s)
No Evidence: The crosses used in and around the Church of the Holy Sepulchre are not relative to the Middle East. The designs used are native to the United Kingdom, such as the Moors Cross. The design is more representative of Gaelic design, rather than those historically used in the Middle East.
Limited Evidence: The Persian Royal Guards have been used within the game, yet their location is completely incorrect and while the design is generally accurate, there are some inconsistencies compared to the real world counterparts.
Satisfactory Evidence: Sculptures such as fountains are of a culturally and geographically relevant design. Yet they are indistinct and not placed in exact locations relative to the cities they can be found in game. The variety, size and visuals of the fountains are accurate and used throughout the game, yet their geographical placement has not strictly adhered to those found in the real world locations.
Significant Evidence:

Arts & Artefacts
Visual Image
<p>No Evidence:</p> <p>The use of the game symbol is overused in the virtual world. For obvious reasons, the symbol of Assassins Creed was not present during the Crusades, yet can be seen almost everywhere in game.</p>
<p>Limited Evidence:</p> <p>The Saracen (Muslim) flag is misrepresented in the game; the visual image is a Turkish flag, using colours not evident during the time period of the game. Possibly due to the commonly known link of the Crescent Moon and Star which is important symbolism in the Muslim world.</p>
<p>Satisfactory Evidence:</p> <p>The use of European flags from the Crusades is generally accurately representative of the historically known facts. Yet the inaccuracies lie in the stereotyping of the symbols.</p>
<p>Significant Evidence:</p> <p>The design, use and placement of the rugs (Mats) are replicated from the historical items used during the period the game is set. They are placed in locations in which they would have been at the time, such as in the living room and used for prayer.</p>

Arts & Artefacts
Documents and writing
<p>No Evidence:</p> <p>Nonsensical writing on the arch(way) in Damascus</p>
<p>Limited Evidence:</p>

<p>The game uses Arabic writing as decoration for the minarets but the type of writing belongs to a region of Morocco.</p>
<p>Satisfactory Evidence:</p> <p>The Arabic Writing (Kofi square) used as a decoration in the building, but the calligraphy is unreadable.</p>
<p>Significant Evidence:</p> <p>Arabic calligraphy used with a variety of international languages to explain the apocalypse; and all the international writing written by computer style with the same meaning.</p>

<p>Arts & Artefacts</p>
<p>Performance Art</p>
<p>No Evidence:</p> <p>There is no clear evidence to represent the performance of the Arab in region of Levant such as dancing with the sword.</p> <p>Religious walk, which appears in Assassin’s Creed, is not relevant to the Middle East, but is a Buddhist religious walk.</p>
<p>Limited Evidence:</p> <p>People gathered in marketing talking and negotiating was representative of some aspects of Middle Eastern culture, but the performance was not perfect.</p>
<p>Satisfactory Evidence:</p> <p>The ladies who carry the water clay jars on top of their head and the manner of handling them was reflected the manner of performing in Levant region.</p>

Significant Evidence:

The way people gathered to listening to the speech from the ruler was represented correctly.

Arts & Artefacts

Clothes

No Evidence:

Limited Evidence:

The women's clothes were represented with *hijab* but were in a modern style, not representative of the historical time period in which the game is set.

Satisfactory Evidence:

The soldiers' clothes were representative of the third crusade, particularly for knights of the Christians, while the clothing of the Saracen knights contained faults.

Significant Evidence:

The clothes of some key people were correctly representative of the culture of the Middle East. There are some books and museums that have exhibited such clothes as proof of their origin and meaning.

Arts & Artefacts
Design Ethos
<p>No Evidence:</p> <p>The design Ethos was not appear in the game, in middle Eastern the are many ways to represent the ethos such as waving hand when the people meet each other in</p>
<p>Limited Evidence:</p>
<p>Satisfactory Evidence:</p>
<p>Significant Evidence:</p>

Arts & Artefacts
Other Arts
<p>No Evidence:</p>
<p>Limited Evidence:</p> <p>The jars used in the game are incorrect (or at least inconsistent) in terms of placement, style and quantity. They are used far to often, and women who carry the jars on their head are not necessarily representative of the region.</p>
<p>Satisfactory Evidence:</p> <p>The types of trees used in the game are varied in their meaning. The use of palm trees is prolific, as they are used as a symbol for the Middle East; yet the tree itself is rarely found outside the house in the region in reality.</p>

Significant Evidence:

The rugs (mats) used within the houses are accurate cultural representations in terms of style and placement.

Environment

Place of Scenic Interest

No Evidence:

The space around the Mosques have little to no attention, in the real world these areas are very important to the atmosphere and meaning of the Mosque. These areas also have little representation of their real life counterparts in terms of monuments.

Limited Evidence:

Town/city squares are represented within the game, yet they are usually copies of each other; the reality is that all squares in the region are different to a far more intricate degree.

Satisfactory Evidence:

The representation of marketplaces is accurate, but only as a part of the scenery, or background information. The markets themselves are not accessible, reducing the in game cultural influence.

Significant Evidence:

The views from the Minaret are consistent with historical records in terms of design and landmark placement. For example, the layout of the streets (structured planning) and the use of market squares are highly accurate in these regards.

Environment
Landscapes
<p>No Evidence:</p> <p>There is no meaningful or accurate representation of farming or farmland within the game. The Levant itself is a relatively green land with a large amount of intensified farming, in game the area is portrayed as a desert.</p>
<p>Limited Evidence:</p> <p>The image and landscape of Alamut Castle is a poor representation of the real structure. It has been placed too high in the mountains, and designed to a larger scale than it actually is. This was probably done intentionally to enforce its significance within the game.</p>
<p>Satisfactory Evidence:</p> <p>The view of the street design from a high vantage point is relatively accurate. An example of this is the way the market places and housing are interlinked, much like real life.</p>
<p>Significant Evidence:</p> <p>The landscape of Jerusalem, in a broad sense, is represented to a very high degree of accuracy, including the surrounding areas and the city walls.</p>

History
Historic Sites
<p>No Evidence:</p>
<p>Limited Evidence:</p> <p>Alamut Castle, as previously mentioned, is misrepresented due to its size and location. Although the general design is somewhat accurate.</p>

Satisfactory Evidence:

The representation of the Holy Land (the area generally applied to Jerusalem) has some significant representations of historical sites, but they are merely a small sample compared to the actual region; one church and two mosques, for example.

Significant Evidence:

The cities themselves (Jerusalem, Acre, Damascus, Masyaf and Palmyra) in a broad sense are significantly accurate in terms of design and placement. The large-scale overview of these cities is generally a good portrayal of their historical importance as well as their physical representation.

History

Historical Artefacts

No Evidence:

There is no evidence of the Western (or Wailing) Wall in the game; a very important Jewish artefact.

Limited Evidence:

Minaret of the mosque in Syria was misrepresented, the image used is a design of Egyptian origin, not Syrian (or Persian, as it was at the time).

Satisfactory Evidence:

The representation of the Church of the Holy Sepulchre is generally effectively portrayed; although some of its decorative features are culturally incorrect in design. I.e. the design of the cross outside the building

Significant Evidence:

The Dome of the Rock (mosque) was represented almost perfectly in terms of colouration, decoration (i.e. the style of writing) and the design (in terms of shape).

History
Historical People
<p>No Evidence:</p> <p>While there is a representation of the actual historical people, the names used are incorrect. Some important historic figures are intentionally given the wrong name, or not even written into the game.</p>
<p>Limited Evidence:</p>
<p>Satisfactory Evidence:</p> <p>The character ‘Sinan’ is named ‘Al Mualim’ in game, although he is clearly based on the real historical figure (former name). He is also far more powerful in the game series than he was in real life, once more this will be an intentional tool to supplement the story of the game rather than the events of real life.</p>
<p>Significant Evidence:</p> <p>Richard the Lionheart and Saladin are both accurately represented in the game, to the degree that it is possible from the historical knowledge available to the designers.</p>

People
Characters (Characteristics)
<p>No Evidence:</p> <p>There is a lack of representation of the varying races that would have been present at the time. I.e. there is an underrepresentation of black people, and people with</p>

generally darker skin in the game, for which there is evidence of such variation in real life.

Limited Evidence:

The facial construction of the characters ‘Al Mualim’ and ‘Abbas Sofian’ are incorrect in terms of physiology; as the characters are both based upon Western men in game, while it is known that the men were of Middle Eastern origin in real life.

Satisfactory Evidence:

The use of facial hair on some of the characters is representative of the time period, as it was common for men to have beards in the time period of the game.

The body build of the characters is also in keeping with what we know of the time period, as evidenced by portraits and diet information.

Significant Evidence:

The clothing of the women in game is generally very well represented; the long dresses and *Hijab* style (although there are some modern representations of the *Hijab*) are generally historically accurate.

Intangible Evidence

Arts and Artefacts

Language

No Evidence:

There is a lack of complex and in depth Arabic conversations. Due to the use of simple sentences and their place as background audio, the conversation is kept short and often uninformative.

Limited Evidence:

The pronunciation of Arabic names is often incorrect. While some are pronounced correctly, there are many which have been enunciated for players whose first language is English.

Satisfactory Evidence:

They use an Arabic word to describe the direction of the player. The issue is that sometimes the language is wrong, for instance, the game may tell the player to go right in Arabic, but the player is directed left by the visual cues.

Significant Evidence:

There is significant use of Arabic language in the game, but generally only simple language in terms of sentence structure, grammar and vocabulary. The Arabic language is generally used with non-distinct in game characters, therefore likely used as background information to set the cultural scene for the player.

The conversations are also represented correctly in each language heard by the player; be it English or Arabic.

Arts and Artefacts

Sound and music

No Evidence:

There is no evidence of the Athan (call to prayer); an essential part of any Islamic city, in which it is called five times per day.

Limited Evidence:

The introduction music has the undertone of Arabic music (in the vocals) but much of the music is culturally irrelevant.

Satisfactory Evidence:

The use of an Arabic guitar (oud) is evident, but used incorrectly, in most Arabic music the guitar is played with no other instruments, and generally in a slower tempo. In Assassin's Creed, the instrument is played at a higher tempo and with a variety of support instruments.

Significant Evidence:

Each city and location has music relevant to the culture that occupied the area at the time. For example, the use of Western instruments and vocals in Acre to portray its occupation by the Crusaders from Europe. In a similar vein, Damascus uses traditional Arabic instruments and vocals to represent its status as an unconquerable Muslim stronghold.

Arts and Artefacts

Folklore

No Evidence:

There is no evidence of the life in the castle itself, such as the portrayal of paradise and the use of hashish. For the purpose of the game, there would obviously have to be some omissions from the real folklore. The castle itself is represented, but the true meaning of it is mired by the story of the game.

Limited Evidence:

The characters of Saladin and Richard Lionheart are of major significance during the historical time period, for both Western and Middle Eastern cultures; yet in the game there is limited attention paid to these major historical characters.

Satisfactory Evidence:

Some of the key people in the story of Al Hashashin are either misrepresented or not even mentioned in Assassin's Creed; reducing the cultural representation and significance of the story being told.

Significant Evidence:

Al Hashashin, the story used in Assassin's Creed, is local folklore. The locations, characters and story in Assassin's Creed all follow a similar trend to the real story of Al Hashashin.

Environment

Climate

No Evidence:

Night-time in game is not an accurate interpretation of its real cultural significance. It should represent a time of story telling and reflection around fireplaces (as one example), yet there is no evidence on this sort of behaviour.

Limited Evidence:

The whole game is based in the summer season; therefore each area is always following the same effects of this climate. The time of day is also fixed, leading to the in game lighting always portraying the same brightness and shadowing.

Satisfactory Evidence:

When viewing areas from Vistas or high places in game, there is evidence of the effects of heat on distant objects. This comes in the form of heat hazing of objects, making them shimmer, maybe due to technological limitations the representation of this environmental effect isn't as effectively shown as it could be.

Significant Evidence:

The climate is representative of the real climate of the region. The sun and implication of high temperatures are true to life, this can be seen in the effect of climate on the in game landscape and people.

People

Behaviour

No Evidence:

The greetings are not represented in the game like they should be; there is no evidence of handshaking and waving which are important parts of an Arabic greeting. This is also evident in the verbal greetings of characters; the loud voice (salem) is not mentioned in the game at all.

Limited Evidence:

Altair's behaviour in game is exceptionally aggressive, which is not representative of the actions of a covert assassin.

Altair's behaviour and mannerisms are also incorrect in terms of what knowledge we have from the folklore and evidence of the time.

Satisfactory Evidence:

The behaviour during fights is well represented, although not entirely accurate. This is evident when fights break out between knights of the two warring factions (Christians and Saracen).

Significant Evidence:

The behaviour of the crowds during speeches is exceptionally well represented, in terms of discussion and mannerisms during the speeches themselves, as well post-speech behaviour.

History
Religion
<p>No Evidence:</p> <p>There is no evidence of the Jewish faith within the game, yet it was, and is, one of the main three religions of the region (Christianity, Judaism, Islamic).</p>
<p>Limited Evidence:</p> <p>The behaviour of Altair in the presence of the Dome of the Rock is used to represent religious respect; Altair folds his arms in admiration when approaching the mosque.</p>
<p>Satisfactory Evidence:</p> <p>The use of religious clothing and actions by the women in game is in line with the religious belief of the time, although there is evidence of some modern actions. This is also true of the way religion is communicated within the game.</p>
<p>Significant Evidence:</p> <p>The monks of Christian faith are well represented in the game, not only physically (clothing, hairstyle) but also their chants, sounds and actions.</p>

History
Customs
<p>No Evidence:</p>
<p>Limited Evidence:</p>
<p>Satisfactory Evidence:</p>

Significant Evidence:

History

Time

No Evidence:

There is no evidence of specific year of the Third Crusade, but we can generally allude to which year it is from the in game events.

Limited Evidence:

Satisfactory Evidence:

Important figures from the Third Crusade are mentioned and written into the game; yet their role and effect on the game vary from their real world counterparts.

Significant Evidence:

The way history is represented through the Third Crusade has been accurately researched by the designer and represented through a variety of the previously discussed tangible and intangible evidence. The events follow the timeline of the crusades with precision.

History

Ages

No Evidence:

There appears to be only one age range within the game, which can generally be defined as young to middle age adults. There is no representation of children or the elderly to any meaningful level.

Limited Evidence:

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Satisfactory Evidence:

The age of the knights is similar to the general age of knights of the period in real life.

This is generally quite young compared to the rest of the population in game, possibly mid twenties. This is also true of Altair; his age is appropriate for his personality and in game mission.

Significant Evidence:

The age of Al Mualim is relative to the real age of the person due his importance in the game, and how he is effectively represented through his personality and character.