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Watching video games
Playing with Archaeology and Prehistory.
Retrospectives and perspectives into the image that videogames spread about a scientific discipline and the humankind past.

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Abstract

Video games have become a mass culture phenomenon typical of the West Post-Industrial Society as well as an avant-garde narrative medium. The main focus of this paper is to explore and analyze the public image of Archaeology and Prehistory spread by video games and how we can achieve a virtual faithful image of both. Likewise, we are going to proceed to construct an archaeological outline of video games, understanding them as an element of the Contemporary Material Culture and, therefore, subject to being studied by Archaeology.

Key words

Video games, Prehistory, Archaeology, Contemporary Material Culture

Introduction

From an anthropological and archaeological perspective, video games have become one of the most representative elements of the Twentieth and Twenty First century's material culture. Moreover, from a commercial point of view, they exceed both the film and music industry in benefits. What began as a recreational form of amusement for kids and teenagers appears now as a narrative audiovisual medium open for all ages, which also has a single characteristic that differentiates it among other forms of narration: interactivity. Some video games still present a pure leisure facet, like sports or driving, but a great percentage of them offer a story with characters, screenplay, soundtrack and plot that the player has to unravel and finish, becoming the leading actor of this particular experience. Could we be becoming witnesses of the birth of the eighth art? (*e.g.* García-Raso 2010).

In this regard, some works of this artistic software, in the same way as other forms of audiovisual narration from the popular mass culture such as cinema (Hernández-Descalzo 1997) or television (Boyd 2002; Russel 2002), have pictured both Archaeology and Prehistory offering a certain image of them and permitting the player to turn virtually into something similar to an archaeologist or prehistoric human being. Obviously, most of the cases of this virtual reality parallel the dead wrong popular concept of Archaeology and Prehistory, in which archaeologists are treasure and tomb raiders in the Indiana Jones style and prehistoric human beings coexist with dinosaurs.

However, video games have occasionally depicted correctly some aspects of Prehistory, having though failed in many others. Educational video games have also been published in the recent years, showing, in a trustworthy manner, what working in archaeology really entails, although they lack the quality of the blockbuster video games.

Through this paper I want to achieve three essential aims. First, to define briefly but concisely video games from an archaeological point of view, understanding them as an unavoidable compound part of the contemporary material culture. I will also analyze some video games that have reflected issues concerning Archaeology and Prehistory, focusing on both the mistakes and accuracies. To end this paper, I will try to give suggestions about how video games and the new technologies related to them may help to spread a proper vision of Archaeology and Prehistory.

Videogames as material culture

If an archaeologist of the Twenty Fifth Century were digging a site from the Twentieth Century and/or the early years of Twenty First Century (for instance, a household or a mall), he or she would regularly find some of the machines in which we can play video games (personal computers or video game consoles), other technological media like DVD Players or television sets and video game discs. In his or her desire to know the meaning that such artefacts could have had to the society that made them, he or she should adopt a holistic perspective to analyze it, combining this procedure with the search of written sources and bibliographical references relevant to the object. This is the canonical method of Archaeology to study the recurrent material culture that usually appears in archaeological sites, either prehistoric or historical. However, a basic difference in this imaginary situation of studying video games as material culture would be that they would have to arrange a new kind of experimental archaeology: play them!

This new perspective of dealing with material culture, that expands the case studies of Archaeology, is not original and is understandable within a new branch of the discipline, Contemporary Archaeology. This field of study treats, among other issues, the historical repression of minorities and armed conflicts of the Contemporary Past (Epperson 1999; González-Ruibal 2007, 2008; Jarman 1996); furthermore, there is a cross-discipline within Contemporary Archaeology known as Material Culture Studies that is also concerned with the meaning that our everyday stuff demonstrate. Reid, Schiffer and Rathje (1974: 126) already forecasted that Archaeology was going to broaden its work topics, suggesting that we could apply the method and theory of Archaeology to our modern and industrial world and society with the positive purpose of extracting universal explanations about human behaviour. They summarized their theoretical proposal in three main points:

> *(1)Archaeology need not be limited to the study of past cultural systems (2) As a branch of anthropology and as a member of the larger social sciences, archaeology may indeed contribute to the analysis and explanation of modern cultural behaviour (3) Archaeology as a unique discipline need not disappear with the last excavated prehistoric site. Archaeology can build on its core of method and theory to study material culture and its behavioural correlates in any cultural setting.*

Thus, mass material culture appears now as an empirical reality to archaeologists and anthropologists (*cfr.* Miller 1987), an aspect manifested in the numerous monographs and journal papers published in the recent years from the Processualist perspective as well as the Post-Processualist perspective. Processual Archaeology´s most notorious and famous researches concerning this topic are the studies of Schiffer (1991, 1994) about the social and ideological significance of the electric car and the portable radio to the American life of the Twentieth century, and the projects of Rathje (1974; Rathje & Murphy 1992) on the importance of garbage to understand modern human behaviour and environmental aspects such as biodegradation. However, Post-processual Archaeology has worked in a more productive way on this topic, perhaps with a decrease in quality, analyzing artefacts and social processes like soft drinks (Miller 1997); Internet (Miller & Slater 2000); home furniture and decoration (Clarke 2001); Vietnam Zippos (Walters 1997); windsurf (Dant 1998); fridges and freezers (Shove & Southerton 2000); new technologies (Lehtonen 2003); or the cosmetics that Japanese people use to whiten their skin (Ashikari 2005).

Such studies have a strong sociological orientation, and many sociologists work in them with anthropologists and archaeologists. Together, they have started to decipher the historical, ideological, social, emotional and environmental meaning of this kind of material culture that was not at all clear before. In this way, Material Culture Studies have opened new windows through which to observe and to comprehend, by means of its palpable and empirical materiality, the behaviour of the Post-Industrial and Post-Modern human beings. I feel obligated to ask: why can we not use this method with video games?

As an undeniable part of contemporary material culture, video games have their own history, dating back to more than forty years ago, and have become a particular narrative audiovisual medium that possesses a special trait of identity: a creative and inventive interactivity between a subject [the player], and a virtual universe [the video game] (*cfr.* Gee 2005); historical contexts or philosophical, social and emotional worries are expressed consciously or unconsciously through this interactivity, apart from simulating sports and other activities such as playing music, driving or flying. This fact has prompted the distinguished awareness of the academic sphere (Sociology, Psychology, Anthropology, Arts or Literature among others), culminating in a new cross-disciplinary branch of research known as Game Studies (Boellstorff 2006; Steinkuehler 2006; Turner 2006; Williams 2006; Wolf 2006). Likewise, a number of journals concerning this new field of science have appeared, such as *Games and Culture* or *Game Studies*.

In this manner, Psychology has contributed to the extinction of the traditional stigmatized vision about video games, understanding, after their analysis, that they are not damaging the education of kids and teenagers, and that they even are beneficial in various cognitive aspects such as the development of intelligence, memory, imagination and creativity (Estallo 1995). Nowadays, video games have lost their image of a socially restricted plaything for very young people, to arise as a cultural passion for all ages that finds its place in the mind and behaviour of Johan Huizinga´s (2007 [1954]) *Homo ludens*.

As a product of History, and understanding them as part of the contemporary material culture, video games saw the light of their plugged existence in 1958 when William Higinbotham, an American physician, used an oscilloscope from the National Brookhaven Laboratory where he worked to create *Tennis for Two*, a simple game that consisted of an horizontal line representing the game field and a vertical line representing the net. Players only had to choose the side of the playfield

where they wanted to start playing and try to hit the ball when it was coming back. Technically, this game was not a video game because it was not run in a computer and did not show true interactivity, but it is traditionally mentioned as the first video game of History, although it never became commercialized. Before *Tennis for Two* it is common to talk about video game prehistory, with clear precedents like pinball games and other electromechanical entertainment devices.

The first real video game, in other words one that was run in a computer and showed true interactivity, was *Space War* created by MIT student Steve Russel in 1961. In *Space War*, two players had to handle a space ship and battle to destroy each other, trying to keep away from the gravitational force of a nearby star and avoiding a probable fall; also they could use hyperspace speed to elude the projectiles. *Space War* was the first video game to be involved in the economic cycle because an arcade version called *Computer Space* started to be placed in pizzerias and other similar businesses. On the other hand, the first domestic video game was *Pong!* (Figure 1), an enormously simple representation of a tennis match (*cfr.* Kent 2001 to read more about video games history).

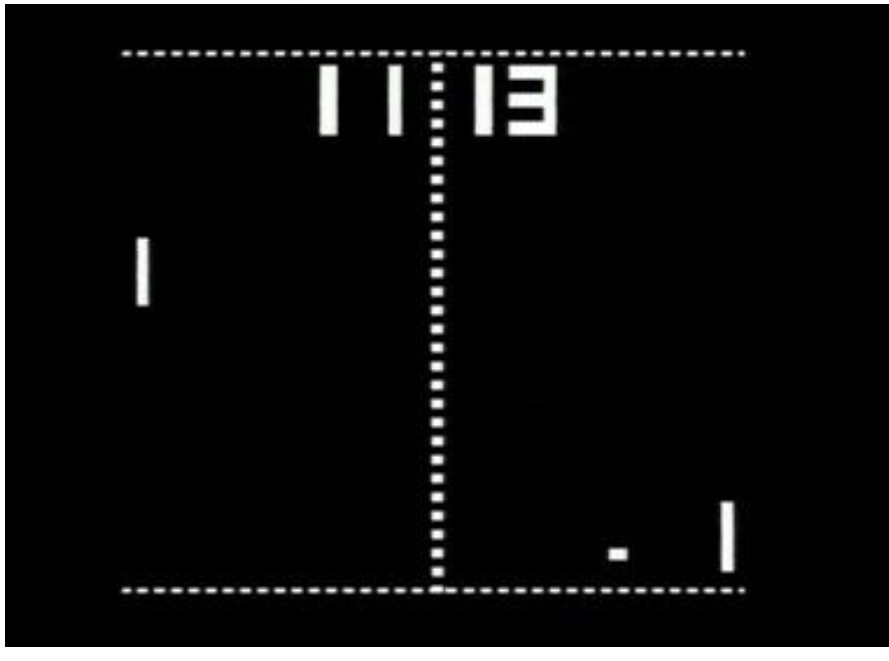

Figure 1. *Pong! The first video game that invaded every household.*

We should stop here for a while due to the fact that I think that a great part of the meaning of video games as material culture lies

on his early years. Thus, we should follow the Schifferian concept of criptohistory (Schiffer 1991), a term used by this author to refer to the hidden historical significance embodied in material culture which archaeologists are sometimes unable to decipher. In this sense, I would like to postulate that the historical background of the Cold War (1945-1991) exerted certain influence in the emergence of video games as a cultural reality. It seems conspicuous that video games (both the early and the latest) always display a confrontation between two well distinguished parts: one human player against the artificial intelligence of the machine (the CPU), or one human player against another, like we saw in *Tennis for Two* and *Space War*.

Nonetheless, it was with the progressive development of the storyline, characters and symbolic concepts of video games when this evidence became much clearer. In this regard, an essential aspect of a video game plot is to introduce the player to one or various main characters controlled by him, immersing them in a confrontation against a diehard foe, which may be characterized by one or various characters, an alliance, a national state, the inhabitants of a far planet, the members of another civilization, or by a particular group or faction. Two conceptions of the video game cosmos are opposed to each other and only one of them can obtain victory, establishing its own political, social and economic control. This is what we see in several video game sagas such as *Mario Bros*, where two picturesque plumbers face the tyrannical Bowser; the various videogames of *Sonic*, a blue hedgehog that must fight against the wicked plans of a mad scientist who wants to turn animals into machines; the *Resident Evil* saga, where the characters controlled by the player have an apocalyptical battle against fictional pharmaceutical companies to save humankind from extinction, because in the pharmaceutical industry´s secret agenda there is a scheme to experiment with living organisms aiming to create mass biological weapons; or in *Space Invaders*, one of the classic video games, in which we have to defend the Earth from an alien invasion.

We could call these phenomena "The Never-Ending Rivalry of Video games", a power game so Manichean that resembles the historical state of affairs that the liberal world led by the United States of America and its communist counterpart led by the Union of Soviet Socialist Republics held during forty six years. I do not mean to suggest that video games represent the interest of the western and liberal power to defeat its ideological opponents, but the constant atmosphere of a potential military confrontation between these two powers, which took place during the Cold War years, left an abstract and historical print in

the birth and subsequent development of this material culture. This is an aspect still visible in many of the current video games.

However, it was almost exclusively in the West World where arcade centres were created and home video game consoles were sold, becoming the most popular attraction for kids that were going with their parents to shopping malls and in a great demand for Christmas or birthday presents. This fact unavoidably put video games into people´s social life and mass popular culture. Atari 2600, Nintendo Entertainment System, Spectrum, Sega Master System, Amstrad, Game Boy, Super Nintendo, Amiga or Mega Drive have been some of the most famous video game consoles and computers, while *Pac-Man, Donkey Kong, Mario Bros, Sonic* or *Street Fighter* represent video games whose characters became cultural icons of an historical period, the 80´s and 90´s of the Twentieth Century.

These first video game consoles and computers generated simple and repetitive graphics and music from diskettes, audiotapes and cartridges; nowadays, however, we can play video games run on powerful hardware such as Xbox 360, Playstation 3 or personal computers. These read the artistic data contained in DVD or Blue Ray discs to perform genuine virtual universes full of characters, plots and cinematic sequences, whose artistic beauty and orchestral soundtracks absorb the player. The list of video game genres is extensive and varied: sports, action, adventure, strategy, role playing game, music, fight and simulation among others; likewise, genres can be mixed, producing the so-called subgenres, for instance, survival horror or terror adventure. In accordance with this great variety of genres I should mention that the melodramatic and narrative sense of video games is not the same in all of them, being more obvious in those with a long and elaborated story.

I will give only a selected relation of video games that I consider high-quality examples of artistic and conceptual works, but I should declare that every single piece of existing hardware and software related to video games constitutes contemporary material culture, because following the Schifferian concept they contain a crypto-history in their material existence. On the other hand, the amount of video games available is so vast that it would be absurd to consider a holistic overview in this paper, which has specific purposes.

For instance, the *Call of Duty* saga from Activision, is a series of action video games that recreate with absolute faithfulness a great part of the Twentieth and Twenty First Centuries wars, sometimes in

a non-fictional mode, like those that deal with the Second World War, and sometimes with a trustworthy approach, like those that represent a fictional version of the Cold War or Iraq War (*Call of Duty: Black Ops* and *Call of Duty: Modern Warfare* respectively). In these video games, we can be virtual witnesses of the terror that warfare represents to Humanity.

In the *Silent Hill* saga from Konami Japanese Company, a series of video games belonging to the survival horror subgenre, the player must confront the most disturbing and bothering feelings of human mind. Thus, we always find, in every part of the saga, an emotionally distressed character who must survive in the streets of this sinister and macabre town, where countless monsters, demons, psychos and all kinds of nightmare creatures want to kill him or her. The town of Silent Hill is understood as a symbolic representation of human guilt and remorse, home of some minds tormented by something they did in the past (for instance, the murder of a close relative or the death of a beloved person which they feel responsible for). In its places, buildings and avenues we have to face our deepest fears with every moral consequence.

Finally, *Shadow of the Colossus* developed by Sony Computer Entertainment and designed by Fumito Ueda, which obtained the applause of the critics as one of the most innovative works in the history of video games, makes us think about a classic philosophical question: is the end really justifying the means? In this video game we control a young man, Wander, who by chance finds a dying girl named Mono. After he arrives at an ancient temple, a spiritual voice tells Wander that if he wants to save Mono's soul he has to defeat and kill the sixteen giants (or colossi) that live in different areas of the Forbidden Land. Once Wander agrees to the terms of the mission, we have to seek and destroy the sixteen colossi, at first not aggressive beings, who are not responsible for Mono´s bad health condition. The only fault of the colossi is that they exist. We have to carry out a morally questionable sacrifice to rescue Mono, a person who Wander had not seen before, from the hands of death. This conceptual video game contains a constant dramatic sense because, beside the fact that Wander has the only company of his horse Agro in the adventure (there are not any other inhabitants in the Forbidden Land except the colossi), which increases the reflections about our acts, we sometimes find ourselves feeling a deep pity each time we have to kill an innocent colossus.

In sum, I think that these final three examples (which represent a derisory percentage of the available video games and their artistic and narrative quality) and all the information previously exposed constitute an excellent empirical lure to examine video games as a constituent part of the contemporary material culture. As such, they are meaningful to the history and behaviour of humankind and, in the same manner as other popular mass culture phenomena, they deserve the scientific interest of Archaeology, the discipline which traditionally studies material culture.

Retrospectives: many mistakes, scarce accuracy

Before we proceed to analyze the image of Archaeology and Prehistory that video games have spread throughout our society, I have to give some explanations about the video games I have selected to analyze. History has been an unquestionable source of inspiration in the creation of video games. In this regard, there are video game sagas such as *God of War* in which a Spartan general called Kratos should confront Olympian Gods; *Medal of Honor*, set in the Second World War; or *Gun* and the two parts of the Red Dead saga which are historically located in the United States of America´s Wild West. Likewise, there are other video games in which some archaeologists appear as characters, such as *The Dig* or *Dead Space*, examples of the science fiction issue of Exo-Archaeology (*cfr.* Walsh 2002 to know more about this lucubration). I am not going to analyze any of the video game adaptations of the adventures of Indiana Jones, the anti-archaeologists par excellence, because I consider that this popular icon has been object of many of the studies about the popular image of Archaeology (*Vide Supra*. Hernández-Descalzo 1997).

We also know that Archaeology is based on the material culture of these ages to obtain additional data not found in historical written sources. Because of the specific purpose of this paper, I am only going to focus on those video games whose characters represent some sort of archaeologist. Likewise, I am only going to examine those original video games that exhibit a prehistoric context on which its recreational offer is settled, avoiding other fictional characters which also have video game adaptations, such as The Flintstones. Concerning our selective filter, I have to admit the amount of video games chosen is a bit low, but not their qualitative value.

First, I have to emphasize *Tomb Raider* saga, a series of action/adventure video games developed first by Core Design Company to video game console and computer in 1996 and later by Square Enix

Company. The title of the video game already discloses the image of Archaeology that we find in it, starring Lara Croft, a character introduced to us as an English archaeologist. In every title of the *Tomb Raider* saga we have to control this female *alter ego* of Indiana Jones, who is fully armed with guns and weapons, to find various treasures and objects related with real ancient cultures and/or civilizations, such as the Inca Empire, the Classical Antiquity triumvirate (ancient Egypt, Greece and Rome), ancient China, ancient India or ancient Cambodia, or fictional cultures such as Atlantis, confronting villains, colossal animals, armed enemies or supernatural forces (figure 2). We never see her digging up an archaeological site from dawn to dusk, measuring an archaeological trial pit or analysing the artefacts that she finds, being far from spreading the results of her "research"; but we can jump and shoot to face the dark secrets that the mysterious artefacts hide!

Figure 2. *Lara Croft exercising her archaeological profession: in front of the sphinx of Gizeh, confronting a giant crocodile and in a temple of Southeast Asia. Notice the obvious graphic evolution from 1996 (top left) to 2008 (below).*

Broken Sword, a graphic adventure series created by Charles Cecil for Revolution Software, is a quite similar case to Tomb Raider. In

the *Broken Sword* saga not even the main character, George Stobbart, is introduced to us as an archaeologist but as a Californian tourist who gets implicated in a puzzling plot to unravel mysteries connected with the Templar Knights or the Mayan Culture. In the same manner of Lara Croft, but unarmed, George Stobbart will find gloomy enemies who are trying to obtain the enormous power that certain archaeological artefacts concede.

Eternal Darkness: Sanity´s Requiem, a Lovecraft-style survival horror created exclusively by Silicon Knights for Nintendo Game Cube video console, is slightly different. The plot is about how Alexandra Roivas tries to solve the intriguing murder of her grandfather. After discovering an arcane book, The Book of Eternal Darkness, she will get immersed in a time journey with stops at stations such as the Persian Empire, Ancient Rome, the Middle Age or the British colonies of the Eighteenth Century in America, to discover the conspiracy of archaic and malicious deities who again desire to establish their terror command around the world. The principal storyline still focuses on an ancient object that holds a supernatural power. However, there is something different in this video game, because we can play as an archaeologist loaded with his work tools; during one stage of the video game we control Edwin Linsdey, who is contracted by a patron to travel to Cambodia to find a relic in an old temple. Indeed, the so called aura of mystery is not very different to the one seen in the previously mentioned video games, but in this example the character Edwin Livingstone holds a brush that he uses to remove the dust from the walls of the temple and read the inscriptions in a clearer way. This example is the most similar parallel to true archaeology that we have found in a famous video game.

As we have seen, the image that video games have spread about archaeological science is alike to the one broadcasted by other narrative audiovisual media from the mass popular culture, like cinema or television: an old-fashioned and idealised vision picturing the archaeologist as a treasure raider that gets involved in an epic adventure to decipher the secrets of past civilizations embodied in artefacts. This image, popularized by Indiana Jones, meets the detective nature that some archaeologists from the Nineteenth Century or early years of Twentieth Century, like Heinrich Schliemann or Howard Carter, wanted to present as typical of Archaeology. In these video games, as we can see in various films or books, we encounter the Artefact/Context Opposition. By means of this dual opposition the archaeological object by itself acquires more informative value than the whole archaeological site;

this could be the most erroneous idea ever spread about Archaeology. This opposition is manifested symbolically in the supernatural qualities and power that the artefact exhibits, becoming the main inorganic protagonist of the past. The people who make the object, as well as the techniques utilized to manufacture it or the source of the raw materials that it is made of, are not mentioned. All by itself the object explains the past; a misty and strange past that causes to all of us a primitive fearful enthusiasm. I wish that the past and Archaeology could be so stimulating, but the fact is that this image is an absolutely untrue vision of Archaeology: this image is to Archaeology what *The X Files* series is to Science.

The image of Prehistory that we find in video games is not very different, in its absence of rigor, to that seen of Archaeology. In this regard, those video games set in the Prehistoric Age commit the classical mistake, in the style of films like *One Million Years B. C.*, of placing our ancestors in a world full of dinosaurs. We can observe this unscientific aspect in *Chuck Rock* and his sequels, a work from Core Design launched in 1991 to home video consoles, and in the arcade machine *Prehistoric Isle in 1930*.

Figure 3. *Some screenshots from Joe and Mac: Caveman Ninja: the kidnapping of the women of the group by hairy and rough hominids (top left); Joe saving a woman from the jaws of a Tyrannosaurus rex (top right); Joe expiring because he has not fed himself (below).*

We can witness this chronological error in the Data East work *Joe and Mac: Caveman Ninja*, a video game originally developed as an arcade machine that afterwards got its domestic versions made.

The storyline of the video game also shows what nowadays would be considered to be a sexist view. Thus, in the introductory sequence of the plot, we can watch how some less evolved bipedal hominids (more hairy and with a rougher appearance) sneak in at night in the *Homo sapiens sapiens* main characters' village and kidnap the women of the tribe, taking them out of the huts while dragging them by the hair. The mission of the heroes, Joe and Mac, is to rescue the helpless women, making use of weapons such as stone hand-axes and wheels, bones or fire; with all these weapons they have to defeat the kidnappers who keep an anachronistic and unnatural alliance with dinosaurs as well as with other enormous living beings such as carnivore plants (figure 3). At the end of each stage, and after they have beaten the final boss, a rescued woman kisses one of the two timid characters who consequently blushes.

Aside from this vision of Prehistory full of interpretive mistakes, there is one aspect that deserves our special attention, because I consider it a good reflection about prehistoric life. In this respect, throughout the video game we can observe how the life-bar of Joe and Mac is continuously decreasing unless they ingest some of the food (vegetables, fruits or meat) that appear when an enemy is killed; if we do not feed Joe and Mac they lose one of their three lives, patting their bellies and crying out some suggestive words: *I'm hungry!* This virtual evidence implies that the video game takes into account in a very correct manner the importance that subsistence activities had in the Prehistoric Age, when the survival of the individual and his social group or band was closely related to the nutritional resources they could obtain, an omnipresent aspect in the monographs concerning the most classic prehistoric sites (*e.g.* Binford 1981; Domínguez-Rodrigo Barba & Egeland 2007; Potts 1988).

This aspect of subsistence also appears in the first part of the *Wonder Boy* saga, a video game developed by Escape in 1986 as an arcade machine. In this work, a blonde, blue-eyed troglodyte boy, named Tom-Tom, must rescue his girlfriend, Tanya, who has been kidnapped by a monster. To accomplish his mission, he has a stone hand-axe to kill his enemies (various kinds of animals and other creatures). In the same way we saw in *Joe and Mac: Caveman Ninja*, the life-bar of Tom-Tom decreases continuously unless we eat some of the vegetables or fruits (there is no meat in this videogame) that we can find dispersed along each stage. If we do not feed Tom-Tom, a sententious phrase appears in the screen when he dies: *no vitality!*

If we forget the incoherent appearance of dinosaurs, and focus on how *Joe and Mac: Caveman Ninja*, and *Wonder Boy* as well, reflect the importance of subsistence in the Prehistoric Age, we can see a very reliable depiction of this important issue from the most distant past of our species. Likewise, both video games show, in a very appropriate manner, the natural dangers that our ancestors faced in order to survive in prehistoric times, such as the struggle for resources against other organisms (other hominids and/or mammals) or the inclemency of the weather and environment (hard rain, extreme cold and heat, rough terrains).

In summary, I have to say that the image of Archaeology spread by video games is traditionally erroneous. However, in the case of Prehistory, although some classic errors are still present in recreating this part of our story as species (*i.e.* dinosaurs and humans coexist in the same chronological context), we can also find a very accurate portrait of some of the aspects of our ancestors everyday life (*i.e.* the essential issue of subsistence). There is no doubt; Joe, Mac and Tom-Tom are hunter gatherers. Thus, I think that video games on account of their typical interactivity possess a very significant potential to narrate and make people understand concepts, a trait that should be used to spread a trustworthy public image of Archaeology and Prehistory. This is something that has never been done to Archaeology and only in an anecdotal way to Prehistory, but it also is something that video game developers should consider for future projects.

Perspectives: the shape of things to come?

So, what can we expect about the image of Archaeology and Prehistory spread by video games in the years to come? To be honest, a vision not very different from the one shown in the previous epigraph, unless something change. Because of their nature of audiovisual spectacle and entertainment system, video games tend not to be realistic, with the recurrent appearance of colossal and supernatural enemies, which defy physical and biological laws as well as mythologies and fantasies. Moreover, we cannot forget that video games are commercial products, and a strictly realistic and faithful product about Archaeology and Prehistory would not generate considerable benefits. Nonetheless, the current technology of video game consoles and personal computers, combined with the possible advice from Archaeology and Prehistory specialists would make the design of completely accurate video games of these two branches of knowledge possible. Following the examples of *Joe and Mac: Caveman Ninja* and *Wonder Boy*, in which an essential

aspect of Prehistory is represented correctly, video game developers could create works in which dinosaurs are replaced by real dangers to our ancestors, like other real living beings or the search for food or fire.

The problem is that this idea lacks the commercial appeal necessary to launch a video game and, surely, would be rejected by software companies. It is very simple; education is not as important as benefits. For this reason, educational video games are usually developed by small companies without sale expectations, and their products are normally not found in video games shops but near virtual encyclopaedias and other similar products instead. Also, on account of their scarce commercial value, these video games have a very low quality compared to the ones of the great companies.

Roman Town, a video game created by Dig-It! Games, a company oriented to educational games, is one of these examples. However, *Roman Town*, presented as the premier archaeology computer game, is a real video game of Archaeology; neither monsters nor mysterious artefacts with supernatural power or armed to the teeth archaeologists appear in it… We simply find the archaeological site of a roman village, called Fossura, which we have to dig to extract every possible kind of data. An area of the archaeological site and the management of the archaeologists in it are assigned to the player, who has to choose the appropriate tool (shovel or pick) to work on the soil. When any of the archaeologists finds an object that deserves our attention, we have to carefully handle the trowel to dig it up and if, for example, the object is a roman coin an explanatory video about this type of material culture is automatically played. When we have finished investigating the designated area, we must classify the materials found in different typologies, such as bone, pottery, metal or glass; reconstruct mosaics or vessels in a likely puzzle game; and compare all the material culture found to its corresponding modern form (figure 4).

Roman Town is a video game designed exclusively for kids, with a pure educational value, although it takes a recreational form. Nevertheless, we know that not only kids need to be educated about Archaeology… It is very unlikely that a video game like Roman Town would ever be played by an adult, who looks for a better *gameplay. Gameplay* is a term used in video game jargon to define the quality of a work, from its working rules to its design. Basically, we could say that *gameplay* represents the process through which the player feels greater or less attraction to play a video game; in this sense, if a

video game has a bad or very simple *gameplay* it becomes a mediocre work, although the video game is superb in audiovisual terms. *Roman Town*, besides from having a very easy *gameplay*, without true levels of difficulty, presents poor graphic and audio features.

Figure 4. *Some of the activities that we can execute in Roman Town: digging up bones with our trowel (top left); reconstructing a vessel (top right); comparing ancient and modern objects (below) (http://dig-itgames.com/index.php/archaeology-computer-game-roman-town/).*

In short, I think that the only way to create video games that faithfully represent Archaeology and Prehistory would be a productive and creative interaction between the best video game developing companies and the academic sphere of Archaeology and Prehistory. Furthermore, with new video game console technologies, such as *Wii Motion* from Nintendo, *Move* from Playstation 3 or Kinect from Xbox 360, the interactive possibilities to make great quality video games about Archaeology or Prehistory are vast; we could dig up an archaeological site or de-flesh bones full of meat with the movements of our hands, without the need to press a button or a key. Especially for kids, this turns into a more practical knowledge, though virtually, of our most distant past and the scientific process by which we can know how it was.

Conclusion

Video games are an artistic product of Pop Culture as well as an achievement of digital technology. This cultural nature permits them to

contain social and ideological information about our current historical time, becoming a meaningful example of the Western Post-Industrial World material culture. Therefore, Archaeology, in the same way as other scientific disciplines, such as Sociology or Anthropology, can participate in the new cross-disciplinary field known as Game Studies focusing on the goal of its scientific purpose: the study of video games to unravel the role that they perform in our society and culture.

Understanding video games as information carriers, it becomes obvious that they have spread a certain image of the Archaeological Science and Prehistoric Age. In both cases, the vision is very similar to the one broadcasted by other narrative audiovisual media, like cinema or television, falling into classic errors when trying to represent the archaeological profession or the human prehistoric context. Thus, the image of archaeologists is one of an idealist and old-fashioned tomb and treasure hunter who faces the intriguing and mysterious powers contained in the past and symbolized in artefacts. In the same way, Prehistory is represented as a historical context within which our ancestors coexisted with dinosaurs. What is really surprising is that these communicative dysfunctions are the consequence of an absolutely avant-garde narrative medium, characterized by a pedagogical interactivity, which also holds an enormous social influence and attractiveness. Due to this fact, I think that a great opportunity to bring Archaeology and Prehistory closer to society is being wasted.

However, some video games (*Joe and Mac: Caveman Ninja* and *Wonder Boy*) have shown that some aspects of Prehistory, such as the importance of subsistence, can be represented in a reliable manner, although they still commit other terrible errors. At the same time, there are educational video games (*Roman Town*) that are totally faithful to the real image of archaeological work, even though their poor quality as commercial products determines the success to achieve an educational function.

On account of this duality, I think that a creative collaboration between the video game developing companies with more artistic prestige and the academic specialists in Archaeology and Prehistory would produce high quality video games, which could represent with high conceptual fidelity what Archaeology and Prehistory are for human knowledge. These potential works would spread an image of Archaeology and Prehistory that would be absorbed by the whole society through an ever-stimulating playing experience. Maybe my proposal is nothing but a naïve wish, but I hope that this paper contributes to

this possible alliance between video game developers and Archaeology and Prehistory researchers, as this is the only way to spread a correct image of these two scientific subjects.

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