

## Chapter 04 | Session D3

### Transcoding of Game Design into Museology: An Object-Oriented Perspective

**Serdar Aydin** | Victoria University of Wellington, New Zealand  
serdar.aydin@vuw.ac.nz

**Marc Aurel Schnabel** | Victoria University of Wellington, New Zealand  
marcaurel.schnabel@vuw.ac.nz

**Tane Moleta** | Victoria University of Wellington, New Zealand  
tane.moleta@vuw.ac.nz

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#### Abstract

A reflection of transcoding is projected in the context of museums as cultural heritage institutions that seek innovative ways for converting and tapping into the realm of mass and social media. In parallel with the New Museology movement having been discussed since 1970s critiques of traditional curatorial practices argue that ordinary objects are more informative than precious elements. Based on critical reflections of the novel *The Museum of Innocence* by Orhan Pamuk, this paper presents an analysis of its main stakeholders (object, visitor and collector) in the context of heritage. Hereby the New Aesthetic that employs variety of digital technologies is discussed of how a contemporary curatorship sits in contrast to conventional comprehension of arts in respect of the phenomena itself. Arguably critical to Kant's philosophy, object-oriented ontology suggests to go further than the relations between humans and computers. The argument between opponents and supporters of the movement is whether a machine can define our aesthetic apprehension; whether we can experience the world through their eyes; or rather if transcoding from digital to cultural is worthwhile. Having provided all these background information to ground its focus on its place, this paper is limited to a comparatively analyse of Pamuk's *The Museum of Innocence* and a digital heritage project, *The Museum of Gamers* in terms object-oriented perspective as contribution to the aforementioned knowledge.

#### Introduction: Transcoding from Digital to Cultural

Transcoding argued by Lev Manovich (2002), a pioneer of new media theory, is the fact that methods for digital

solutions permeate into human culture and shape it in a way without notice. Transcoding process can be seen as prompting from the opposite direction, i.e. the influence of human culture on digital. For example, comparing the level of technology that computer graphics have reached today, pixilated forms, patterns and text can be increasingly considered as equal products of aesthetics. In other words, human culture is not discarded completely by the mere impact of new tools. This paper approaches this chicken-egg argument from outside by critically analysing relations found between two works, one from literary; *The Museum of Innocence*, and the latter from digital heritage, *The Museum of Gamers*. In this way, it is essentially aimed to present an object-oriented perspective that links the two together in the context of this conference that challenges "inclusiveness in design" (DCA-E Conference, 2016).

Transcoding means converting the form of a message into another to recognise what the message is. The process is not inclusive of interpretation or evaluation. In a way, it refers to effortless transmission of one state into another within an equilibrium. However, creative authoring requires thought-provoking operations far from equilibrium (Kwinter and Davidson 2007). This is closer to decoding which is, in linguistics, 'understanding the meaning of a word', without being able to encode it but use correctly in sentence of your own (Dictionary 2014). For semioticians, decoding is concerned less on basic recognition and comprehension of what a piece of text says than on interpretation and evaluation of its meaning. As defined by Stuart Hall, a cultural theorist and sociologist, reception or consumption of decoding is more affiliated with construction rather than 'passivity' (Chandler 2002). This paper attempts to transcode an object-oriented perspective on Orhan Pamuk's *The Museum of Innocence* while decoding this perspective for a digital heritage project, *The Museum of Gamers*.

Decoding of Christopher Alexander's design patterns from the context of architecture and urban design into computer science generated a new method, object-oriented programming, for solving algorithmic problems. When Alexander, a pioneer of computational architecture, published his book *A Pattern Language* (1977), specialists in his domain were not as interested in his concept as they are today after almost half a century (Menges and Ahlquist 2011). Being common nowadays, this displays engagement of transcoding from digital to other areas. As architects realised those missing years that were apparently fruitful from computer scientists' point of view, architectural toolsets had already been overwhelmed by software that use object-oriented programming.

Object-oriented programming (OOP) presents four principles; abstraction, encapsulation, polymorphism and inheritance (Bogost 2006). In the context of Building Information Modelling (BIM), ad hoc modelling in Autodesk Revit is an interpretation of these four. The process of designing an adaptive component and its deployment in a project starts with abstract relations of attributes in the form of a family file, which is in a way encapsulation of a component. Its instances in the real project file behave differently depending on the context. With the polymorphism aspect, all components are capable of being linked to the same object. That these components can also be used to design new classes, or components, exemplifies the inheritance aspect. Having said that, intellectual property (IP) issues are discouraging for an 'all-inclusive creativity' as encapsulation of authorisation is a judicial matter. This is seen one of that which slows down integration into sophisticated BIM levels in architecture-engineering-construction (AEC) practices (Race 2013, Eastman 2011).

In this paper, the reflection of transcoding is projected on the context of museums as cultural heritage institutions that seek innovative ways for transcoding the means of exhibition and communication from social media. An example to such endeavour is the RICHES Project which stands for 'Renewal, Innovation and Change: Heritage and European Society'. Its goal is set to 'bringing cultural heritage and people together in a changing Europe and finding new ways of engaging with heritage in a digital world (RICHES 2015) [1]. In parallel with the New Museology movement having been discussed since 1970s (Bennett 1988), RICHES

is interested in contemporary media and its emphasis on personalised forms of information. Critiques of traditional curatorial practices argue that ordinary objects are more informative than precious elements. In favour of a smaller, more humane and joyful museum concept, Orhan Pamuk manifests that "museums—just like novels—can also speak for individuals (Pamuk 2015)". Besides objects and visitors, another aspect to pay attention is the role of the collector. *Kemal*, the main character in *The Museum of Innocence*, defines two types of collectors: 'The Proud Ones' and 'The Bashful Ones'. The former's tendency is on explicitly exposed way of exhibition, 'predominant in the West' *Kemal* adds, whereas the latter's accumulation is cause for inhibition. Building a museum in the novel for his love, *Kemal* proves to be carrying some of the characteristics of his author, Orhan Pamuk, who, in contrast to his manifesto for museums, crowns his novel with a real museum that we will touch later. Therefore, it is worth classifying objects, visitors and the collector that are exposed to different implementation methods although they are linked. Therefore an analysis that focuses on each unit; object, visitor and collector, is as important as a holistic view; *Turkey's Most Creative and Daring Idea* (Ruggeri 2015). If we use the terms of Ian Bogost, an object-oriented ontologist, 'unit operations represent a shift away from system operations, although neither strategy is permanently detached from the other (2006).'

The NewAesthetic is arguably an upbeat contemporary art movement that is about the increasing influence of digital technologies in our lives (Berry). The message carried by James Bridle who coined the term the New Aesthetic is that a critical perspective about 'the network in the vernacular of the network itself' is a contemporary curatorship in contrast to conventional comprehension of arts for the phenomena (Bridle 2013). Phenomena was thought by Kant as to distinguishing our experiences of this world from noumena that is what we cannot experience, although they are linked despite their radical difference (Cole 2015). Arguably critical to Kant's philosophy, object-oriented ontology suggests Bridle to go further than the relations between humans and computers (Borenstein 2012, Bogost 2012). On his Tumblr board is uploaded collages such as satellite images, slit-scanned photographs and pixelated screens (Bridle 2015). The argument between opponents and supporters of the movement is whether a machine can define our

aesthetic apprehension; whether we can experience the world through their eyes; or rather if transcoding from digital to cultural is worthwhile. Having provided all these background information to ground its focus on its place, this paper is limited to comparatively analyse Pamuk's *The Museum of Innocence* and a digital heritage project, *The Museum of Gamers* in terms object-oriented perspective as contribution to the aforementioned knowledge.

### How Innocent are Kemal's Objects?

Similar to the comparative study in this paper, Pieprzak (2014) pairs a novel; *Mother Comes of Age* (Chraïbi 1984) [2], with a real museum; the Ben M'Sik Community Museum in Casablanca. Pieprzak's studies how the novel and the museum celebrates ordinary objects as a statement of identity against modernity's pressure. In the novel, a Moroccan mother of three sons buries innocent objects from her past in a 'beautiful tomb'. The meaning of 'innocent' refers to objects that are ordinary, unforeseen or unknown. Encapsulation of an identity into objects is applied in relationship to the struggle of Moroccan culture against modernity. On the other hand, in a poor neighbourhood of Casablanca where residents' lives and identity are neglected by the state, inhabitants are invited to donate their personal objects to their community museum. It is worth noting Pieprzak's conclusion that "in Chraïbi's novel, the Mother collects and buries her innocent objects in order to save them from the ridicule that they would face in a rapidly modernizing 1950s Morocco [...] The [Ben M'Sik Community] Museum, like the tomb, is a protective space where the non-modern can be placed while room is cleared for the future [object]." They both provoke involuntary memories encapsulated by the innocence of object. By writing a novel and building an eponymous museum, Pamuk takes the risk of contradicting his message by breaking the encapsulated objects in his novel. But he does this swiftly by using different time horizons in exchange of achieving involuntary and voluntary memories (Xing 2013). In terms of collecting, the Ben M'Sik Community Museum is instrumental to understanding of a methodological difference that Pamuk follows in the creation of *The Museum of Innocence*. From a system operational point of view, Pamuk's museum and novel and Moroccan cases are practically the same, evolving into a political statement. Yet, a unit operational perspective can help us understand more details.

So how innocent are those objects offered by Kemal? The answer lies in the last words of Kemal's love, *Füsün*, just before her suicidal act of driving a car to her death: "You didn't even notice the earring." Throughout the story in the absence of *Füsün*, Kemal finds consolation in objects with memories of her. In one of the early occasions of their secret meetings in an old apartment house of Kemal's mother, *Füsün* loses an earring that drops without their notice. Having promised that he will find and give her the missing earring back, Kemal is meanwhile gifted a pair of a very expensive earring set by his father. The new earrings were precious for his father who had wanted to give them to his lover. Having failed to find *Füsün*'s earring, Kemal presents her the new earring set. Denied by *Füsün*, this replacement represents the pressure of modernity on identity (Ertuna 2010). A long love story goes on and Kemal finds the missing earring and sends it back to *Füsün* although he is not sure of its reception. Important to her, the earring becomes a symbol for irreplaceable values in contrast to Kemal's subjective thought of replacing them with a more expensive one inherited from his father. Kemal misses a very critical point by focusing on objects of his imagination rather than the value of an object that *Füsün* dears most.

Pamuk's 'Museum of Innocence' is a reflection of place too, which is Istanbul. Pamuk's use of different time horizons enacts his objects behave differently which can be referred to *polymorphism* in object-oriented programming. When *Füsün* is a part of the scene, objects talk about her and Istanbul is at background. When *Füsün* is disappears, Istanbul comes into front, with objects giving hints from life in the city in late 1970s and early 1980s (Xing 2013). Together with *polymorphism*, Pamuk, so far, uses an *abstraction* of *Füsün* and Istanbul whose *encapsulation* in objects is a typical method in literary. For a museum, these objects become a part of a political statement just as those of the Moroccan mother and the neighbourhood residents of the Ben M'Sik Community Museum. The principle of inheritance in object-oriented programming is that the object itself can be used to generate other objects. This is where *The Museum of Innocence* grounds an argument for this paper.

Although Pamuk's emphasis is that value of identity is irreplaceable, he contrasts to this in his actual museum because of the way its collection is realised. Pamuk appears at the end of the novel as Kemal asks him to

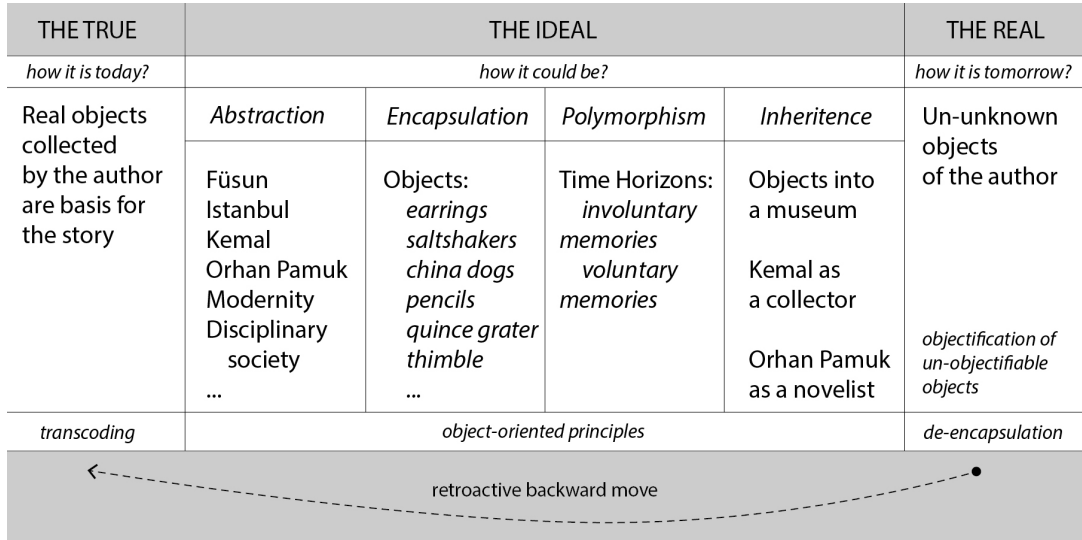
write his love story. Having collected all those objects that are reminiscent of *Füsün*, *Kemal* also decides to make a real museum that would tell the story to visitors and readers who are given a free admission ticket at the end of the novel. The deterritorialisation of objects from the imagination of readers to the real space is a result of associative thinking insofar as it is a retroactive approach that enforces a backward cycle. Here Pamuk transcodes the encapsulation instead of decoding it. Therefore, the inheritance principle in terms of object-oriented programming is not available in his approach. This is related to the definition that is made by his main character in the novel, *Kemal* that there are two types of collectors. While *Kemal* belongs to neither the Proud Ones nor the Bashful Ones, Pamuk as the collector of objects in *The Museum of Innocence* can be categorised within the first group. However, a retrospective approach would refer visitors to the future rather than Pamuk's (false) stability. By providing a protective space for objects within the novel, Pamuk displays the portrayal of a successful Nobel laureate that he has been entitled to even before *The Museum of Innocence*. Yet, in this work, his contradiction is exposed to a viable unit operational analysis.

The Mother in Chraïbi's novel realises the need for a beautiful tomb for innocent objects from past in order to pave the way for the future. Likewise, the

innocent objects of the residents of the Ben M'Sik neighbourhood are donated to their community museum. The objects of the actual Museum of Innocence are no longer unknown, hence innocent. The reader imagination personalises each object throughout the novel. Instead of retrospectively decoding the encapsulation that objects are entitled to, Pamuk retroactively punishes those personalised objects of readers in the name of achieving to awaken voluntary memories of readers (insert Figure 1 here). By a mere transcoding of his objects, the museum is a concealment placed in 83 boxes just as the number of chapters in his book. From the perspective of object-oriented programming, the novel becomes a metadata of the museum. The key aspect to decoding an encapsulation is the way how it is collected. The objects exhibited in the real museum should have been the reader's objects. Their imagination is successfully kept active through the story but it is then stopped at the entrance of the museum that can be visited in Istanbul. Of course, Pamuk exploits his position here as the owner of Turkey's *Most Creative and Daring Idea* (Ruggeri 2015) by de-encapsulating the objects. Is that successful? The answer again lies in Füsün's words: "You didn't even notice the earring."

Eponymous to the novel, the actual Museum of Innocence carry features equivalent to a design-research processes. Pamuk starts his collecting of

Fig 1. Design stages of *The Museum of Innocence*

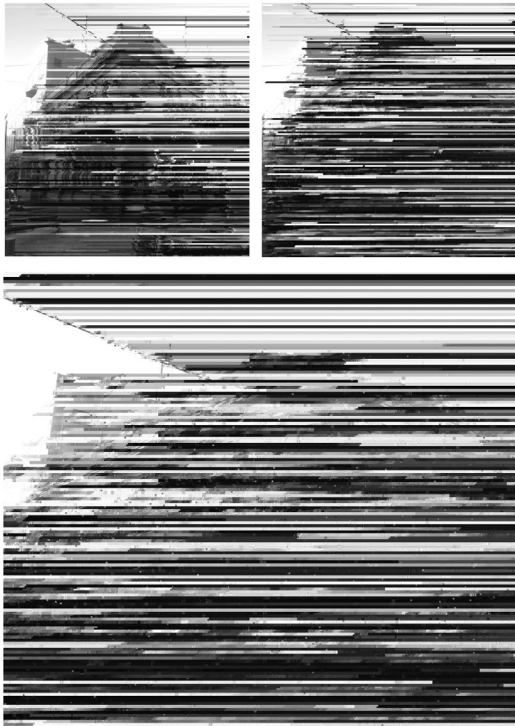


objects in streets of Istanbul. He then designs a narrative around these objects that later an actual museum exhibition is grounded on. As a process model for the unpredictability of design space, Nelson and Stolterman's philosophical inquiry into the "domains of knowing" defines such stages as the true, the ideal and the real that can be reflected upon the design process of *The Museum of Innocence* (Nelson and Stolterman 2003). The framework of the critical approach of this paper is shown in Table I (above). The last column of the table indicates that Pamuk dictates the Future instead of encouraging plurality of individual futures. His approach for the actual museum is therefore akin to transcoding of binary dominance through algorithms in the so-called digital age. Decoding could help alleviate this contradiction by an all-inclusive design approach that is counter-consumptive just as the message given in the novel.

### The Museum of Gamers

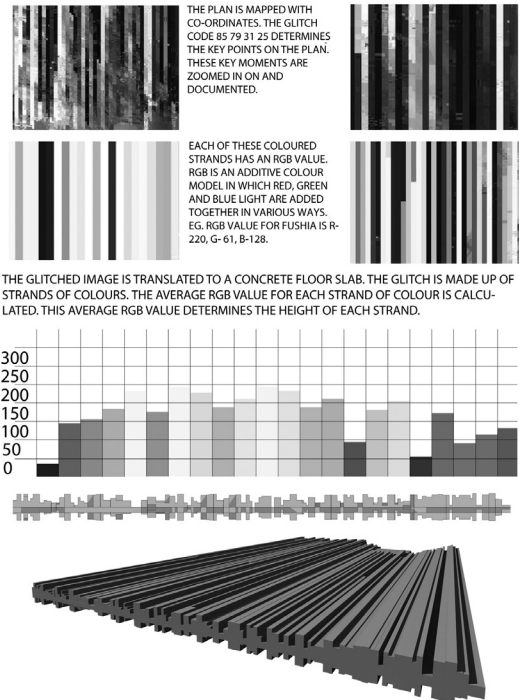
Based on the four principles of object-oriented

Fig 2. A series of glitches is processed over a photo by decoding its HEX codes (Blaire Haslop, 2015).



programming, so far, this paper's methodology has been similar to a transcoding process. This section will be methodising a decoding approach in the context of a digital heritage project, The Museum of Gamers, being developed by Digital Architecture Research Alliance (DARA), a design research group at School of Architecture, Victoria University of Wellington (VUW). The project is not less related to game design and computational architecture than arts, history and museology. To decode ancient brick architecture and narrow alleyways in Kashgar – the westernmost city in China, this project converts messages into an intelligible language for active user/visitor engagement in the 'making' of cultural heritage. Now the question is if such a fully-fledged museum is conceivable. It is more like an open-ended problem in math since we have no idea yet what the pixel, the meta-material of the digital world, wants to be. We need a pixel whisperer like Louis Kahn who could communicate with the brick. DARA's research stream encourages students at VUW to decode pixels' worlds into a language intelligible to architecture. In one of the student projects at the MArch I level, photographs

Fig 3. Innocent pixels are retrospectively committed to transformation and change (Blaire Haslop, 2015)



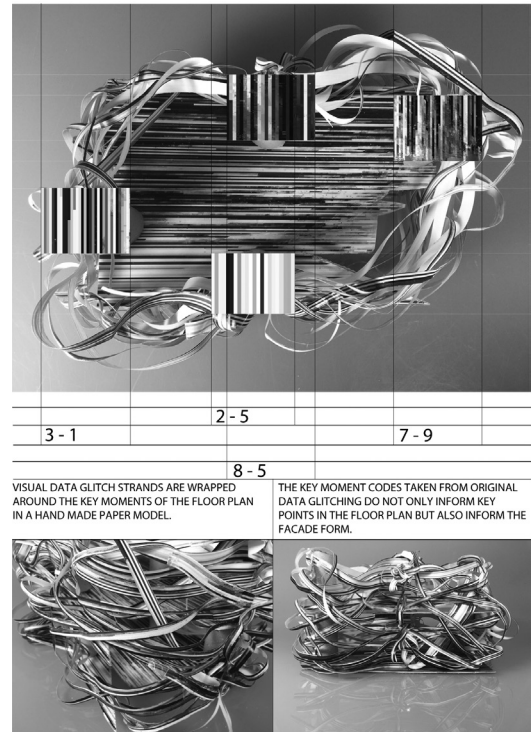
taken from the site assigned are hacked through their colour-codes.

Photography is turned into a platform for a two-way communication between pixels and the decoder. The simplicity of the process is aligned with algorithmic methods of object-oriented programming. Compartmentalisation of a photo into pixels through hexadecimal (HEX) colour codes indicates a procedural generation outweighed by its aesthetics. The innocence of unknown pixels retrospectively changes the image by imposing new outcomes.

Resulting in a floor slab, the glitches are representative to a gap in knowledge that users must project their own understandings in order to complete it. Similar to objects of the Mother in *Mother Comes of Age* and the museum materials donated by the Ben M'Sik community, a glitched image is a commitment to providing a protective space for innocent objects (pixels) to fully engage with its future in the formation of an architectural reflection.

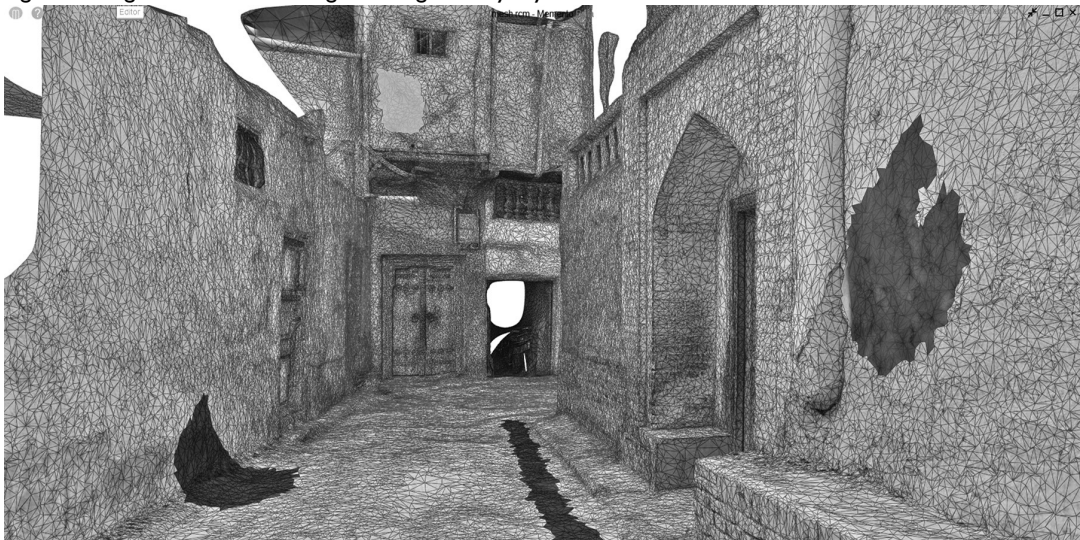
In The Museum of Gamers, photography and glitches play a similar role for generation of a two-way conversation. Kashgar's labyrinthine structure is modelled in photogrammetry software such as Autodesk Recap and Autodesk Memento. The model itself is content for the game that is being designed to deliver cultural heritage information. This project

Fig 4. Translation of an image to architectural elements (Blaire Haslop, 2015)



is less concerned with its medium than offering an engaging experience.

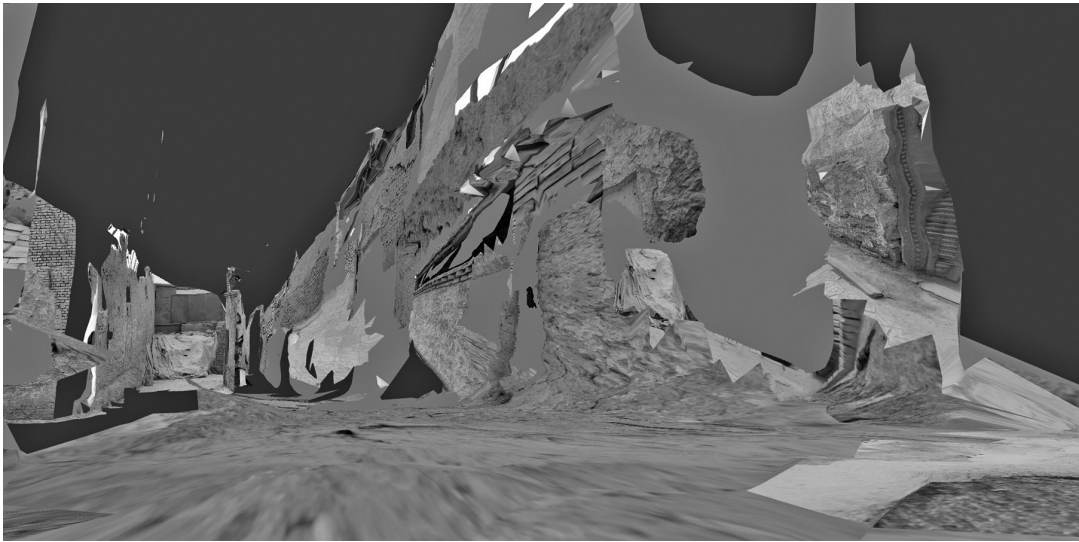
Fig 5. Photogrammetric modelling of Kashgar's alleyways in Memento



Photogrammetric models are resolved by the algorithms of the deployed software. Due to a range of reasons, resulting geometries often end up with holes at different size. Parts of uploaded photos that have dark or very bright surfaces are denied by the solving algorithm. In another case, surfaces may be textured with overlapping images, i.e. no hole is

generated but the surface presents a false texture. However, this kind of errors are welcomed by this project. Each internal error is regarded as a potential driver for communication between the player and the machine. The contemporary understanding of these glitches helps appreciate a new kind of aesthetics that represents Manovich's transcoding.

Fig 6. Glitch aesthetics in photogrammetry



*The Museum of Gamers* are not only visited but also curated by gamers and their inclusion in the making of digital heritage. By and large, it is assumed that games are for relatively young people. Borowiecki and Prieto-Rodriguez's research shows that there are several

determinants for engaging with games (Borowiecki and Prieto-Rodriguez 2015). Their investigation places video game playing as a cultural consumption such as other art activities. Their classification is two-folded; those who never play and those who are likely to play.

Fig 7. Game-play development in Unity3D. Missing parts, glitches provide a basis for gamers to play-act in the making of digital heritage (Modelled by Scott Meekings).



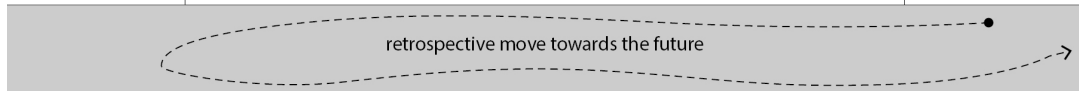
These two groups are also heterogeneous indicating that mere statics of average age of gamers may end up with malfunctions. Their results show that 'affinity with new mediums', i.e. overcoming technological barriers, is a highly significant determinant in engagement with game playing. For example, elderly who play games are healthier and happier than who do not.

In this project, gamers are complementary to the

object-oriented principles; abstraction, encapsulation, polymorphism and inheritance. Driven by the glitch aesthetics, communication is sought between gamers and the objects in Kashgar's virtual museum. The authors design a narrative for all-inclusive digital heritage making and engaging experience. Collages of outcomes which are generated by gamers through digital interactions come to represent a pluralistic view for designing future(s).

Fig 8. Design stages of *The Museum of Gamers*

THE TRUE	THE IDEAL				THE REAL
<i>how it is today?</i>	<i>how it could be?</i>				<i>how it is tomorrow?</i>
Photogrametric model	<i>Abstraction</i>	<i>Encapsulation</i>	<i>Polymorphism</i>	<i>Inheritance</i>	Innocence of gamers
	Kashgar Narrow alleys Uygur people Digital age Societies of control ...	Objects: <i>holes</i> <i>bricks</i> <i>sketches</i> <i>glitches</i>	Time Horizons: <i>involuntary memories</i> <i>voluntary memories</i>	Objects into a virtual museum  Gamer as a collector	Unknown objects as game outcomes
<i>transcoding</i>	<i>object-oriented principles</i>				<i>decoding</i>



## Conclusion

This paper discussed how the main stakeholders (object, visitor and collector) of The Museum of Innocence by Orhan Pamuk sit within the context of heritage. The critical reflection of transcoding has been projected onto the context of museums, who are the institutional keepers of cultural heritage. Recently they are seeking innovative ways for converting and tapping into the realm of mass- and social media. In parallel with the New Museology movement the New Aesthetic that employs variety of digital technologies contrast contemporary curatorship with conventional comprehension of arts in respect of the phenomena itself. The argument is whether a machine can define our aesthetic apprehension; whether we can experience the world through their eyes; or rather if transcoding from digital to cultural is worthwhile. Juxtaposing The Museum of Gamers in terms object-oriented perspective as contribution to the aforementioned

knowledge we argue that the level of authenticity changes and is not defined since the current situation does not allow for a flexible and evolving interpretation of heritage that would allow local people to identify themselves with. Using the sample of Kashgar, how to capture, process and disseminate cultural heritage is a possibly problematic challenge for the digital heritage research. Kashgar's revitalization has already been a controversial issue because of its conflict with the demand for urban redevelopment. The unique methodology applied to The Museum of Gamers helps allegorise the conflicts and limitations involved in the documentation, interpretation and dissemination of heritage information embedded in Kashgar's maze-like structure of narrow roads.

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## Notes

1. RICHES Project is funded by the European Union's Seventh Framework Programme. One of the outcomes of the project is a book with a title Cultural Heritage in a Changing World to be published by Springer in 2016. Authors contribute to the book with a chapter addressing 'mediated and unmediated heritage'. The title of the chapter to be published within the book in 2016 is "The Museum of Gamers: Unmediated Cultural Heritage".
2. Chraïbi's novel is originally in French under the title of *La Civilisation, ma Mère!*... in 1972.

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