

INTERPRETING DIGITAL HERITAGE

Considering the end user's perspective

HAFIZUR RAHAMAN and BENG-KIANG TAN

*Department of Architecture, School of Design and Environment
National University of Singapore
hafizur@nus.edu.sg, akitanbk@nus.edu.sg*

Abstract. Present virtual heritage projects are mostly focused either on ‘process’ or ‘product’ but rarely consider ‘user’ (end user’s perception of the content) with project contents predominantly developed with an ‘ocular-centric’ tendency. There is no significant interpretation method or principles for interpreting digital heritage unlike other disciplines such as archaeology. This paper argues that, for better interpretation and experience of a digital heritage site, a comprehensive interpretation method is required, which should address multicultural background of end-users and overcome the linearity and subjectiveness in content creation. This paper also argues that instead of pre-determined instructional sequences or descriptive interpretation, the interaction setting can be participatory and contributive, where the visitor and environment may interplay mutually with each other. As a methodology, ‘Interpretation’ is first conceptualized by assimilating definitions from heritage scholars and organizations. Notions of interpretation-practice and level of interaction were identified from reviewing some online digital heritage projects. By identifying weaknesses, this paper finally proposes a few suggestions for overcoming and possibly developing a comprehensive interpretation method for future digital heritage projects.

Keywords. Heritage interpretation; end user; digital heritage.

1. Introduction

‘Heritage’ is a broad term that refers to the study of human activity not only through the recovery of remains (as in archaeology), but also through tradition, art and cultural evidences and narratives. It is a process of engagement

(Smith, 2006) rather than a condition; “it is a medium of communication, a means of transmission of ideas and values and a knowledge that includes the material, the intangible and the virtual” (Graham, 2002). On the other hand ‘*digital heritage*’ UNESCO (2003) refers to unique resources of human knowledge and expression “created digitally or converted into digital-form from existing analogue resources”. Whereas, ‘Virtual heritage’ (VH) is commonly used to describe works that deal with virtual-reality (VR) and cultural-heritage (Roussou, 2002). So far digital heritage has three major domains, i.e., *documentation*, *representation* and *dissemination* (Addison, 2000) and one of its major objectives is to disseminate knowledge of history and culture to general people (Tost and Champion, 2007).

2. End user’s perception

Built heritage is not just about ‘tangibility or materiality,’ but comprises cultural and socio-spatial attributes related to built environment. To understand the inherent significance of a culture heritage site, mere watching or navigating through 3D virtual model is inadequate. As digital heritage deals with cultural artefacts, demographic differences always influence users’ value judgment. What we see our concept-oriented brain tells us about it, not only through our eyes but also our previous experiences filter the perceived meaning (Preece et al., 1993). Therefore, experience and interpretation of prehistoric artefacts and landscapes largely depends on our own embodiment, subjectiveness and cultural positioning (Thomas, 2004). Hence, content without relating directly to how we perceive the world does not impart any meaning; rather it causes ‘heritage dissonance’ or ‘disinheritance’ (Tunbridge and Ashworth, 1996).

Yet in most cases, digital heritage projects are developed as an afterthought of some research or to demonstrate new technology (Gillings, 2000) and contents are often built in a ‘descriptive’ manner rather than ‘interpretive’ (Affleck and Kvan, 2008). Tan and Rahaman (2009) claimed that present digital heritage or VH projects are mostly focused either on ‘*process*’ (authentication of data, site survey to epigraphy) or ‘*product*’ (closer to reality and technical artistry) but do not necessarily consider ‘*user*’ (end user’s perception of the content). As a consequence, ‘interpretation’ has always been understood as a linear process, “a single and universal viewpoint about the past” (Thornton, 2007) supposing everyone should learn and understand similarly. But in reality everyone’s thought and reaction to action and situation are unique and it is not possible to reproduce events exactly as ‘actual’ in any sense (Kaptelinin, 2006). So, digital heritage should address the ‘cultural uniqueness’ of end-users and overcome the linearity and allow multiplicity in interpretation.

3. Heritage interpretation in archaeology

In archaeology, *interpretation* has always been seen as an effective learning, communicating and management tool that increase visitors' awareness and empathy to the site and artefacts. Tilden (1977) defined *interpretation* as "an educational activity which aims to reveal meanings and relationship through the use of original objects by *firsthand experience* and by illustrative media, rather than simply to communicate factual information." Therefore "the chief aim of interpretation is not instruction but provocation." However, generally *interpretation* is often used to indicate the storylines, adopted to help visitors to engage with and understand the place or objects. According to ICOMOS's mission statement, '*Presentation*' denotes the carefully planned arrangement of information and physical access to a cultural heritage site. As such it is largely a one-way mode of communication. '*Interpretation*' on the other hand, refers to the full range of potential activities intended to heighten public awareness and enhance understanding of cultural heritage site (ICOMOS, 2007).

A compilation of definitions of 'heritage interpretation' from diverse authors and institutes have been presented in table 1. Notions presented in this table elucidate that archaeological '*interpretation*' has always been considered as a method or tool of presentation or communication with visitors for (i) *learning* (conveying symbolic meaning), (ii) *provocation* (facilitating attitudinal or behavioural change) and (iii) *satisfaction* (enhancing enjoyment of the place). Regarding archaeological interpretation, these considerations actually refer to a passive mindset of 'experts'; here archaeologists have always been considered as the interpreters of past and present, whereas visitors are treated as consumers with petty knowledge "to make sense of the information" (Moscardo, 1999). Heritage is not a concrete object; meaning evolves and is updated by subsequent generations, e.g., in relation to the interpretation of 'scriptures'. *The Oxford advanced learner's dictionary* (2009) defines interpretation as "the particular way in which it is understood or explained." This definition points to an inherent duality underlying the terms. 'Explained' indicates 'presentation' or 'communication' factor (Moscardo, 1999), i.e., more as an act of the interpreter or interactive interface; while by 'understood' indicates self-interpretation or self-learning, or rather as a reflexive phenomenon. In this, the understanding of interpretation may differ between archaeology and hermeneutics. Interpretation can also be seen as a reflexive process; instead of considering it as a medium of communication with passive audience. The process of interpretation should be dialectic and hermeneutic to empower social groups to tell their own stories (Hodder, 1991). In this way interpretation can allow more flexibility in the process and portrayal of

multiple viewpoints of the past, which is often absent in many digital heritage projects.

Table 1. Definition of heritage interpretation.

Affiliation	Definition of Interpretation	
Heritage Scholars	Uzzell (1994)	Interpretation is that it opens a window on the past.
	Harrison (1994)	The art of presenting the story of a site to an identified audience in a stimulating, <i>informative</i> and <i>entertaining</i> way to highlight the importance and <i>provoke</i> a sense of place
	Beck and Cable (1998)	Interpretation is an educational activity that aims to <i>reveal meanings</i> about our cultural and natural resources.
	Moscardo (1999)	Interpretation is a special kind of communication
	Howard (2003)	Interpretation is deciding what to say about heritage and how and to whom.
	Goodchild (2007)	Interpretation is, in fact, only one aspect of the broader topics of ' <i>Presentation</i> ', ' <i>Supplementary Education</i> ' and ' <i>Visitor Satisfaction</i> '.
Interpretation Associations/Authorities	Interpretation Association Australia	Interpretation is a means of communicating ideas and feelings which help people enrich their <i>understanding</i> and <i>appreciation</i> of their world, and their role within it. (source: http://www.interpretationaustralia.asn.au)
	The National Association for Interpretation, USA	Interpretation is a mission-based <i>communication process</i> that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource. (source: http://www.interpnet.com/)
	The Association for Heritage Interpretation, UK	Interpretation is the process of communicating messages and stories about our cultural and natural heritage, providing the audience with <i>inspiration</i> and a wider <i>understanding</i> of our environment. Or quite simply, interpretation is about telling stories. (source: http://www.ahi.org.uk/www/)
	ICOMOS Ename Charter (2007)	Interpretation refers to the full range of potential activities intended to heighten <i>public awareness</i> and enhance understanding of cultural heritage site.
	ICOMOS Charleston declaration (2005)	Interpretation denotes the totality of activity, reflection, research and creativity stimulated by a cultural heritage site.

4. Survey of some online digital heritage projects

Digital heritage (or especially virtual heritage) is an active area of research throughout the last decade. With the advancement of technology, digital heritage projects have enhanced their capability from linear limited interactivity to non-linear immersive environment. Due to cheaper computer hardware and the growth of World Wide Web, present trends in virtual reality applications are motivated towards the use of immersive technology for real-time interaction with high detail.

Table 2 presents a short list of projects regarding various technologies used as a media to interpret digital heritage. This study reveals that early projects

were typically focused on ‘faithful’ representation and visual realism; thus most of them were static, descriptive and inflexible for further interpretation. Even though the problem of large file size and free movement inside the virtual world were solved through VRML and gaming software, interaction as the core of embodiment largely remained limited in terms of exploration and manipulation. Descriptive nature of interpretation was dominant in most projects. Nevertheless, a few recent cases demonstrate the possibilities of heritage-interpretation through shared annotation-basis like ‘wiki’; such as ‘Memory Capsule’ (Affleck, 2008) and ‘Digital Storytelling’ (BBC, 2009). These projects indicate new frontier in interpretation while opening up possibilities of creating multi-vocal, shared and heterogeneous perspective of past through active participation by end-users.

Table 2. Survey of online examples.

Adopted technology	Examples	Interaction level		
Multimedia based	- ArchiWAIS (Choi, 1992)	■		
HTML + Apples Hyper Card Data Base System or Quick Time	- Columbia University History of Architecture - The Chang’an project (2006)	■		
VRML	- The Glasgow Model (Ennis and Maver, 1999)	■		
Game Engine	- Palenque Project (2003) - Virtual Notre Dame Project (Moltenbrey, 2001)	■	▲	
Location-based Augmented Reality System	- Ename974 (2000)	■		
Portable augmented Reality System	- LifePlus (2005) - Archeoguide (2001)	■		
Immersive virtual reality system	- CREATE (2003)	■	▲	
Stereoscopic 3D projection	- Place-Hampi (2006)	■		
Multi user virtual environments (MUVes)	- The Forbidden City: Beyond Space and Time (2008)	■	▲	
Web 2.0	- Memory capsules (Affleck and Kvan, 2008) - Moving Here (2005)	■	▲	●

Legend: ■ = Exploration, ▲ = Manipulation, ● = Contribution

5. Points to ponder on present limitations

Present days digital heritage scholars and professionals are trying to enhance heritage interpretation through different approaches, such as (i) *Hermeneutic environment* though game-style interaction (Champion, 2003; Champion and Dave, 2002) (ii) *Embodied interaction* through somatic impulse (Flynn, 2008) or haptic devices (Roussou, 2008) (iii) *Multiple user virtual environment* (MUVes) with dynamic content (e.g. 2nd life, virtual Forbidden City) (iv) *Greater immersion* through augmented stereographic panoramas (Kend-

erdine, 2008) or immersive displays (Tan, 2007). Still some limitations are quite evident and hindering the process of achieving a comprehensive interpretation method for digital heritage can be defined hereafter.

(i) Historic knowledge and subjectivity. The knowledge of ‘past’ is limited because it is always a selection of events and not ‘complete.’ To paraphrase Lowenthal (1985), every time we make a new statement about an artefact or an event, we make a new interpretation and then something new is born, different from the original. In that sense, the past is thus a cultural construction; it is more aesthetic, intuitive and subjective (Huizinga, 1998). Similarly digital heritage cannot also avoid the charges of subjectivity as heritage objects are mostly reconstructed out of long-lost ruins. Again, media experts (e.g., modellers, animators, programmers) who remain involved in reconstruction processes may not be aware of the intrinsic cultural values of particular artefact or environment although having a myriad of technical know-how. This way, the ‘apparent’ cultural preservationists and their implemented methods may well reflect their personal ‘inappropriate’ assumptions that Kalay (2008) referred as ‘*image of practice.*’ A comprehensive understanding and reconstruction of past history is only possible when the interpretation framework will allow multiplicity. Perhaps a collective interpretation of the past may overcome this subjective and linear viewpoint.

(ii) Linear process of content development. According to Fitch (1982), interpretation constitutes two levels, ‘Professional’ and ‘Popular’. The first is carried out from available evidences (excavations, ruins, artefacts, documents) as professionals (archaeologists, historians and architects) examine and verify for authenticity, and document them to feed interpretation for public. Public is only imparted information in second level, described as ‘popular’ level (figure 1); where limited or no scope remains for ‘firsthand experience’. From case studies (table 2), it is evident that digital heritage projects followed the notion of archaeological interpretation (i.e., professionals interpret and visitors consume), even though digital media possess capability of developing

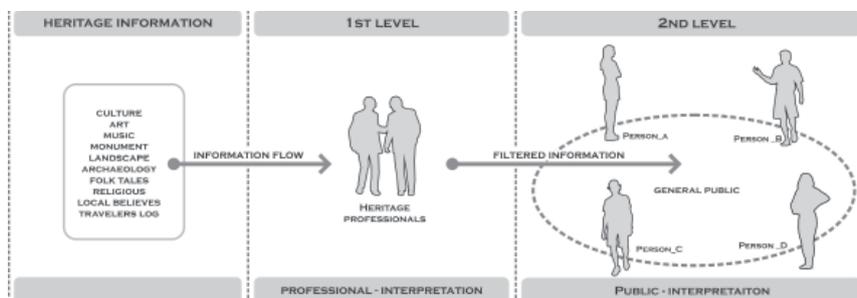


Figure 1. Fitch's model of interpretation

dynamic polysemic content by allowing active participation in content creation, development and dissemination.

(iii) Missing the potentials of collective cultural memory. The main objective of UNESCO's convention in Paris 2003 was to safeguard the intangible cultural heritage (UNESCO, 2003). Intangible cultural heritage such as oral traditions, knowledge and practice concerning nature and beliefs – transmits between generations and hence provide a sense of belonging, identity and community. Present digital heritage projects however, miss the potential of cultural transference and value placed on collective cultural memory; which could easily be supported by allowing a platform for dialogic interactivity and further capturing those to a knowledgebase. Undoubtedly the 'insiders' or the natives value their heritage (tangible or intangible) differently while showing more concerns, when compared with the reflections of outside experts.

6. Approaching the problem

Referring to section 3, 'interpretation' should ensure three aspects, i.e., (i) *learning*, (ii) *provocation* and (iii) *satisfaction*. As digital heritage has the potentials of 'dialogic interactivity' and multiplicity in content creation, we suggest the interpretation framework should also consider 'polysemic' viewpoint of past. '*Popular participation*' in the interpretation process as reflexive embodied interaction may overcome the linearity and subjectiveness of

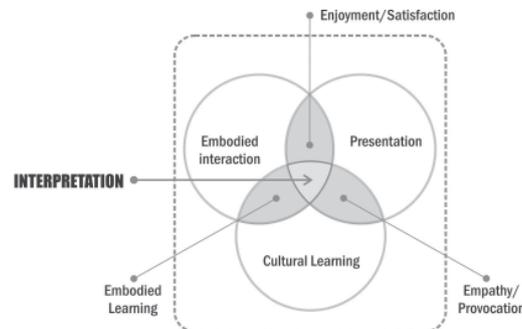


Figure 2. Proposed conceptual model for interpreting digital heritage

the past reconstruction, hence will enhance interpretation. For comprehensive interpretation of digital heritage, the process must consider three issues (figure 2), i.e., (i) embodied interaction, (ii) learning of culture and (iii) an effective presentation (Moscardo, 1999).

(i) Embodied interaction. According to Dourish (2001) *embodiment* is the property of our engagement with the world that allows us to make it meaningful and *embodied interaction* is the creation, manipulation and sharing

of meaning through engaged interaction with artefacts. Embodiment plays a key role of designing interaction as user's response to the environment; their engagement and understanding of the space and enjoyment depends on it. Allowing end-users to contribute or create content and share with others can enhance the interaction process. While through practical action, task accomplishment and getting feedback from the interface will allow greater embodiment.

(ii) Cultural learning. In most cases 3D environments are typically reproductions or reconstructions of archaeological sites or monuments. So it is important to know how a digital object can express cultural value and how that value is perceived by the viewer. From cognitive science perspective, our learning occurs through a reticular way rather than a linear pattern (Bateson, 2000). Referring to 'ecological approach,' Bonini (2008) explains 'learning' as a process that starts through perception and interpretation of the differences between the ecosystem and us. The feedback process simulates continuous and various levels of perceptive and cognitive interaction, as information transforms into knowledge. Hence, the interface should allow user to establish '*some relationship*' with the context and at the same time should have the '*feedback*' ability to satisfy viewers query. Champion and Dave's (2002) suggested cultural agency, personalisation of artefacts and role-play to ensure personal relationship with the context and having feedback from the environment or other participants.

(iii) Effective presentation. Tilden (1977) suggested a set of six principles for an 'effective or correctly directed' interpretation practice. Later different heritage professionals and scholars such as Richard Harrison (1994), Beck and Cable (1998), Moscardo (1999) and Copeland (2006) proposed their own principles which are actually an elaboration and clarification of Tilden's principles. These interpretation principles, developed initially for archaeology may also work as a good source for developing possible guidelines for presentation and communication for digital heritage.

7. Conclusion

This paper has set out to investigate the importance of end user's perception of digital heritage. It has argued that in order to minimise heritage dissonance and enhance understanding of inherent significance of cultural heritage, we need to consider 'end user' as a multicultural phenomenon. That is to identify how heritage interpretation can be considered as a continuous process and at the same time how to ensure multiplicity in understanding the past. This paper has pointed out some limitations of assuming a straightforward method for interpreting and transferring heritage knowledge in present practice. It argues

that meaning making is a dynamic process. Meaning emerges while being contextualised, from some kind of reflection of being involved and through action. This paper also suggests that past is culturally constructed, as well as should be reconstructed in a pluralistic manner, thus considering multicultural background of users and at the same time overcoming its present linearity and 'professional image'. Eventually, the paper proposes some suggestions for developing a framework for comprehensive interpretation of digital heritage. It outlines how the user as an active participant in content creation (i.e., in the process of knowledge formation) and how dialogic interactivity may leverage multiplicity in viewing the past cultural heritage. Overall, the paper raises a larger question rather than provide any specific answer. Developing a comprehensive interpretation method for digital heritage requires further theoretical development and attention through tailoring of methods of practice and prototype development.

References

- Addison, A. C.:2000, Emerging trends in virtual heritage, *IEEE Multimedia*, 7, 22–25.
- Affleck, J. & Kvan, T.:2008, Memory capsules: discursive interpretation for cultural heritage through new media in Y. E. Kalay, T. Kvan, and J. Affleck (eds.), *New heritage: new media and cultural heritage*, Routledge, New York.
- Archeoguide: 2009, available from: Open Source Repository <<http://archeoguide.intranet.gr/project.htm>> (accessed 10 April 2009).
- Bateson, G.:2000, *Steps to an ecology of mind*, University of Chicago Press, Chicago.
- BBC: 2009, Digital storytelling, available from: Open Source Repository <<http://www.bbc.co.uk/wales/audiovideo/sites/galleries/pages/digitalstorytelling.shtml>> (accessed 24 October 2009).
- Beck, L. and Cable, T.: 1998, *Interpretation for the 21st century*, Sagamore Publishing, Champaign, Ill.
- Tan, B. K.:2007, Virtual Bawa: unbuilt masterpieces of Geoffrey Bawa, CASA, National University of Singapore.
- Beng-Kiang, T. and Rahaman, H.: 2009, Virtual heritage: reality and criticism, *CAADfutures 2009: joining languages, cultures and visions*. Montreal, Canada.
- Bonini, E.: 2008, Building virtual cultural heritage environments: the embodied mind at the core of the learning processes. *International journal of digital culture and electronic tourism*, 1, 113–125.
- Champion, E.: 2003, Applying game design theory to virtual heritage environments, *Annual Conference, Graphite*, Melbourne, ACM, New York.
- Champion, E. and Dave, B.: 2002, Where is this place? *22st annual conference ACADIA 2002: thresholds between physical and virtual*. 24–27 October 2002, Cal Poly Pomona.
- Choi, J.: 1992, Archiwais: a multimedia-based architectural information system for teaching and learning architectural history and theory, *Reconnecting: ACADIA 94*, 161.
- Copeland, T.: 2006, Constructing pasts: interpreting the historic environment, in A. Hems and M. R. Blockley (eds.), *Heritage interpretation*, Routledge, London.
- Columbia University History of Architecture: 2009, available from: Open Source Repository <<http://www.mcah.columbia.edu/ha/>> (accessed date: 03 November 2009).
- CREATE: 2009, available from: Open Source Repository <<http://www.cs.ucl.ac.uk/research/vr/Projects/Create/>> (accessed 10 April 2009).
- Dourish, P.: 2001, *Where the action is: the foundations of embodied interaction*, MIT Press, Cambridge, Mass.
- Ennis, G. and Maver, T.: 1999, Visit VR Glasgow, *ECAADE 1999: Education for Computer-Aided Architectural Design in Europe*.
- Ename974: 2009, available from: Open Source Repository <http://www.ename974.org/Eng/pagina/archoo_concept.html> (accessed 10 April 2009).
- Fitch, J. M.: 1982, *Historic preservation: curatorial management of the built world*, McGraw-Hill, New York.
- Flynn, B.: 2008, Augmented visualisation: designing experience for an interpretative cultural heritage, *12th international*

conference on information visualisation.

- Gillings, M.: 2000, Plans, elevations and virtual worlds: the development of techniques for the routine construction of hyperreal simulations. *BAR international series*, 843, 59–70.
- Goodchild, P.: 2007, Interpreting landscape heritage, International symposium 2007 on “Interpretation: from monument to Living Heritage” and 2nd ICOMOS Thailand General Assembly, Bangkok, Thailand.
- Graham, B.: 2002, Heritage as knowledge: capital or culture? *Urban studies*, **39**, 1003–1017.
- Harrison, R.: 1994, *Manual of heritage management*, Butterworth-Heinemann, Oxford.
- Hodder, I.: 1991, Interpretive archaeology and its role, *American antiquity*, **56**, 7–18.
- Howard, P.: 2006, Editorial: Valediction and reflection, *International journal of heritage studies*, **12**, 483–488.
- Huizinga, J.: 1998, *Homo ludens: a study of the play-element in culture*, Routledge.
- ICOMOS: 2007, The Icomos charter for the interpretation and presentation of cultural heritage sites, *Proposed final draft*.
- Kalay, Y. E.: 2008, Preserving cultural heritage through digital media, in Y. E. Kalay, T. Kvan and J. Affleck (eds.), *New heritage: new media and cultural heritage*, Routledge, New York.
- Kaptelinin, V. and Nardi, B. A.: 2006, Do we need theory in interaction design? in B. Nardi, V. Kaptelinin and K. Foot (eds.), *Acting with technology: activity theory and interaction design*, MIT Press, Cambridge, Mass.
- Kenderdine, S., Shaw, J., Favero, D. D. and Brown, N.: 2008, Place-Hampi, in Y. E. Kalay, T. Kvan and J. Affleck (eds.), *New heritage: new media and cultural heritage*, Routledge-Taylor and Francis Group, London.
- LifePlus: 2009, available from: Open Source Repository <http://lifeplus.miralab.unige.ch/> (accessed 10 April 2009).
- Lowenthal, D.: 1985, *The past is a foreign country*, Cambridge University Press, Cambridge.
- Moltenbrey, K.: 2001, Preserving the past, *Computer graphics world*.
- Mosaker, L.: 2001, Visualising historical knowledge using virtual reality technology, *Digital creativity*, **12**, 15–25.
- Moscardo, G.: 1999, *Making visitors mindful: principles for creating quality sustainable visitor experiences through effective communication*, Sagamore Publishing, Champaign, Illinois.
- Moving Here: 2005, available from: Open Source Repositor <<http://www.movinghere.org.uk>> (accessed 23 January 2010).
- Palenque Project: 2003, available from: Open Source Repository <<http://nzerik.googlepages.com/palenqueproject>> (accessed 10 April 2009).
- Place-Hampi: 2009, available from: Open Source Repository www.place-hampi.museum (accessed 10 April 2009).
- Preece, J., Benyon, D., Davies, G., Keller, L. and Rogers, Y. (eds.): 1993, *A guide to usability: human factors in computing*, Addison-Wesley, Wokingham, England.
- Press, O. U.: 2009, Advanced learner’s dictionary online, available from: Open Source Repository <http://www.oup.com/oald-bin/web_getald7index1a.pl> (accessed 31.09.2009).
- Roussou, M.: 2002, Virtual heritage: from the research lab to the broad public, *Virtual archaeology*, 93–100.
- Roussou, M.: 2008, The components of engagement in virtual heritage environments, in Y. E. Kalay, T. Kvan and J. Affleck (eds.), *New heritage: new media and cultural heritage*, Routledge-Taylor and Francis Group, London.
- Smith, L.: 2006, *Uses of heritage*, Routledge, London.
- The Chang’an project: 2009, available from: Open Source Repository <http://www.arch.nus.edu.sg/casa/projects/hck_changan/pages/Content.htm> (accessed 03 November 2009).
- The Forbidden City: beyond space and time: 2009, available from: Open Source Repository <www.beyondspaceandtime.org> (accessed 01 November 2009).
- Thomas, J.: 2004, The great dark book: archaeology, experience, and interpretation, in T. Earle and C. S. Peebles (eds.), *A companion to archaeology*, Blackwell Publishing.
- Thornton, M.: 2007, Think outside the square you live in: issues of difference and nation in virtual heritage, *Proceedings of 13th international conference on virtual system and multimedia (VSMM 2007)*, 23–26 Sept. 2007, Brisbane.
- Tilden, F.: 1977, *Interpreting our heritage*, University of North Carolina Press.
- Tost, L. P. and Champion, E. M.: 2007, A critical examination of presence applied to cultural heritage, *The 10th annual international workshop on presence*, Barcelona, Spain, 25–27 October 2007.
- Tunbridge, J. E. and Ashworth, G. J.: 1996, *Dissonant heritage: the management of the past as a resource in conflict*, John Wiley and Sons, Chichester.
- UNESCO: 2003, Charter on the preservation of the digital heritage, *32nd session: the general conference of the United Nations Educational, Scientific and Cultural Organization*, UNESCO, Paris.
- UNESCO: 2003, Convention for the safeguarding of the intangible cultural heritage, *32nd session: the general conference of the United Nations Educational, Scientific and Cultural Organization*, UNESCO, Paris.
- Uzzell, D.: 1989, *Heritage interpretation*, Belhaven Press, London.