

**“These people saw in colour, light and shade”: capturing colour in the archaeological record.**

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The importance of colour in the archaeological record cannot be overestimated. In terms of providing information about the appearance of a site or artifact, colour also influences the understanding of the evidence. For this reason, it is essential that colours are both recorded correctly and also conserved correctly in order to produce the most meaningful interpretation. Further, if computer generated imagery is to be used to portray these sites and artefacts then the graphics pipeline and the display technology must also be carefully considered to ensure perceptual fidelity.

In order to illustrate the above, this paper will use as an example the work of Adela Catherine Breton whose work is the sole colour record of the Mayan temple of Chichén Itzá and other notable sites in Mexico. In 1900, Adela, a fifty-year-old Victorian gentlewoman from Bath, began her journey around Mexico on an archaeological quest to make detailed watercolour records of the Mayan ruins. For 23 years she dedicated much of her life to recording the subtle nuances in colour found in the frescoes. Adela Breton was passionate about the authenticity of information. She wrote that “making drawings would not require modern artistic skill but the very different capacity of seeing them as ancient Americans did” [3]. Colour plays a hugely important part in this perceptual quest.

From 2006-2010, the Maya Skies Project, undertaken by the non-profit Institute for Study and Integration of Heritage Techniques (INSIGHT), created precise digital visualizations of structures and artefacts from Chichén Itzá. They carried out digital recording using a laser scanner and other computer-based methods. From this they produced virtual 3D reconstructions of the temples with an emphasis on authenticity. The colours of the frescoes, however, had been lost. As INSIGHT director Kevin Cain stated: “Adela Catherines paintings at Chichén (especially the ‘Temple of the Jaguars’ atop the Great Ball Court) are among the only to be made while there was still polychrome left to be painted” [1].

Previous work [2, 4] has shown how changes in perception have led to changes in hypotheses regarding archaeological sites and artefacts. If there is any symbolic meaning in the use of colour then this might be revealed through an exploration of perception, and in order to do this the colour information must be as accurate as possible. This paper will explore the way in which archaeologists try to achieve colour accuracy from capture through to conservation and display, and how this contributes to the understanding and interpretation of past environments.

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## References

- [1] K. Cain. personal communication, 2010.
- [2] K. Devlin, A. Chalmers, and D. Brown, ‘Predictive lighting and perception in archaeological representations’, *UNESCO World Heritage in the Digital Age 30th Anniversary Digital Congress*, (2003).
- [3] S. Giles and J.D. Stewart, *The Art of Ruins: Adela Breton and the Temples of Mexico*, City of Bristol Museum and Art Gallery, 1989.
- [4] Jassim Happa, Mark Mudge, Kurt Debattista, Alessandro Artusi, Alexandrino Gonçalves, and Alan Chalmers, ‘Illuminating the past: state of the art’, *Virtual Reality*, **14**(3), 155–182, (2010).