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# Lighting historic properties to enable immersion and enchantment

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**Keywords** Lighting; historic property; visitor experience; immersion; enchantment

**Abstract** This article discusses visitor experience as a central consideration for interpretation designers, and demonstrates how film production techniques implemented in lighting several spaces at National Trust properties in the United Kingdom help to enhance the visitor experience. The author proposes that using a film production approach to light for the right narrative and genre enhances the visitor experience, makes the experience more authentic, and plays a part in creating opportunities for immersion and enchantment. The design of such lighting schemes should consider the overall interpretive scheme of the property, and the 'spirit of place,' the historical context and atmospheric requirements balanced with authenticity and practical aspects around visitor safety and visibility of surroundings.

**About the Author** Sanna Wicks is an Assistant Professor in Film Production at Coventry University with research interests in cultural heritage media. She previously co-directed Treehouse Media Productions, working on a variety of heritage related projects from lighting historic properties to film production and 3D visualizations.

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## Introduction

Much of the debate in heritage interpretation once centered around learning (Graburn 1997:1; Rahaman 2018: 210) with a more recent drive to prioritize the visitor experience. Today many museums and heritage sites are shifting their focus to become visitor centered rather than collection centered, focusing on visitor experiences and in meeting visitors' needs and expectations (Falk 2016a; Ballantyne and Uzzell 2011). In this article I argue that designing and implementing a historically authentic lighting scheme at a historic property has the potential to further improve the visitor experience. While many studies have looked at architectural lighting and the lighting of historic sites, this has been done mainly from an exterior perspective (Schaeffer 2015; Valevičius and Levickaitė 2011). Many researchers have also written about LED lighting in relation to energy efficiency and preservation of historic artefacts (Garside, Curran et al. 2017; Richardson, Wolley et al. 2020), but the role of lighting in visitor experience has been under-explored. Consequently, the aim of this article is to offer an original and complementary analysis of interior lighting of historic properties, and specifically how the use of film making practices can help in the design of such lighting schemes to generate atmosphere and authenticity.

Audience researcher Randi Korn (2015) writes about the need to move away from providing an educational aim and a set way of learning through museum exhibits, to a more experience-driven visit. To examine what an experience-driven visit might look like, Korn cites anthropologist Nelson Graburn (1997), who identifies the need for a 'reverential' experience

- referring to visitors needing to experience something out of the everyday, something more sacred than what they can experience in their everyday lives. Other researchers have identified this as a 'numinous' experience at heritage sites and museums (Cameron and Gatewood, 2003; Latham 2013). The terms 'reverential' and 'numinous' may seem outdated, referring to respect and mysticism, respectively, and often used in a religious context. Critics of the term suggest that visitors do not need to quietly contemplate, but can have experiences which are instead loud and fun (Fleming, n.d.). But, while the notions of reverence and numinosity need to be approached with caution, many would agree that being in the presence of historical buildings and artefacts can evoke feelings and an opportunity to experience something out of the everyday, often related to an 'aura' of authenticity around historical objects and art works (Benjamin 1935/2008 p/X).

Kotler and Kotler similarly argue, 'Great museum exhibitions offer visitors transformative experiences that take them outside the routines of everyday life' (1998: 5). They cite psychologist Mihaly Csikszentmihalyi who called these 'flow experiences,' experiences that are totally absorbing while simultaneously transforming perceptions and understanding. McLaughlin (1998) also argues that museums have the capacity to lift us out of our ordinary lives and help define us. This ties in well with the emphasis on research around emotionally engaging experiences discussed below.

Recent research into heritage experiences has included emotional engagement as a key part of the experience, and sought to unpack what part emotion and affect play on visits. Smith and Campbell (2015) argue that there has been a lack of consideration for emotion and affect in heritage studies. 'Overall, it is quite clear that museums and heritage sites are places where people go to feel' (Smith 2014a, cited in Smith and Campbell 2015: p.4). Hoare (2018) writes that the interest in the emotional component of heritage and cultural experiences has increased. Perry (2019) argues that cultural heritage sites have the power to enchant and engender wonder. She suggests that enchantment is generated by what she calls 'emotive engagement,' which, she argues, are feelings that lead into action, whether visible, invisible, physical or conceptual. Enchantment, Perry explains, is a state of wonder that entails surprise, pleasure, uncanniness (discomfiture), presence, or sensory agitation.

### **The role of lighting in the visitor experience**

Against this backdrop of theories and frameworks describing visitor experiences, I argue that lighting can play a role in creating a better visitor experience. Experience is not a spiritual quality as described by some (Graburn 1997; Cameron and Gatewood, 2003; Latham 2013), even if on an emotional level there is some similarity, but is closer to what Roberts (1997: 7) lists as reminiscence, fantasy and personal involvement; and what Kotler and Kotler (1998) and Perry (2019) describe as enchantment and transformative experiences.

I further propose that heritage site visits are similar to filmic experiences: both film viewers and heritage site visitors experience something out of the everyday—they are able to experiment and try out new feelings and social situations (Canudo 1908; Casetti 2009: 58), or reminiscence and relive feelings and social situations others would have lived through. Both film viewers and heritage site visitors are immersed in the world of the film or of the site, while maintaining a safety barrier of being able to walk away. Both experiences are, to some

extent, narrated for us, while films are what McLuhan describes as ‘hot’ media and heritage site visits ‘cold’ in the sense that visitors are deeply participative in making choices, moving in the space and required to use their own imaginations (McLuhan 2003: 24).

However, audience viewing habits are also changing the filmic experience, which once meant sitting in a cinema surrounded by other people, to now more frequently sitting at home with a multitude of choices. In both experiences, visitors become part of the scene and can feel like being part of a simulated reality. In film production, this is achieved by the combined craft skills of the various production crew members; and at heritage sites, curators, interpreters and craftspeople use interpretative and scenography skills to present an environment which enables the visitor experience.

Lighting plays a role in creating environments which are more immersive and more visually striking, and as such, accommodating enchantment - prompting wonder, surprise and even uneasiness. Lighting design, therefore, supports my own understanding of visitor experience, allowing visitors to become part of a scene—close to a simulated reality as we see with films. The more senses are engaged, the more immersive the simulated reality becomes, and the further removed from the visitors’ everyday experience it is. Enchantment and immersion are part of human nature, with our history in oral and visual storytelling. While an experience may come across as pure entertainment, new understandings, not based solely on knowledge but on emotional engagement, can offer new perspectives and lead to transformation.

A lighting scheme can replicate the lighting of the space as it was in a historic time period that the interpretation is based on, and thus needs to be based on a historical understanding of the building. The experience becomes less like the visitors’ everyday experience, and more immersive than a space simply lit with modern lighting fixtures, thereby transforming perceptions and understanding of what life was like for the inhabitants of the time. As such, a lighting scheme can facilitate visitor experiences by adding both historical accuracy and atmosphere, helping tell the story of the property in a more authentic way. The experience is more historically accurate, not only in terms of lighting fixtures and fittings, but the visual experience in relation to the level of lighting and brightness, as most modern lightbulbs are much brighter than historic light sources would have been and are a different color temperature. This simple change aids in transforming the visitor experience from one where visitors merely walk through exhibits to one where visitors are immersed in the historic surroundings as they once were.

### **Lighting historic houses**

The lighting work discussed in this article has been conducted by Treehouse Media Productions, of which the writer is a Company Director. We were first approached to light a set of rooms at Attingham Park, a National Trust mansion in Shropshire in the United Kingdom, because of our background in filmmaking and our technical director’s experience of technical installations. This combination of creative skills to light a ‘scene’ in a similar fashion to what is seen in films, and being able to implement it technically, are the key aspects of the work.

For filmmakers, lighting is one of the main tools of communication in order to establish an aesthetic and narrative context for viewers. Lighter and darker areas of a frame can help guide

attention to different areas of the shot, with lighter areas highlighting key information, while darker areas and shadows can create suspense by concealing detail (Bordwell & Thompson 2008:124). In horror films, for example, cinematographers use shadows to make a scene look more dramatic. Famous examples include the shower scene of Hitchcock's *Psycho*, where he uses light to highlight the killer's body, but shadow to hide his face (Fu, 2016: 30). As such, lighting provides tools for both leading the viewer's eye and letting the dark lead their imagination.

Lighting also shapes objects, by creating highlights and shadows on them, helping to highlight key objects and shapes in a film, or when translated to lighting a historic property, highlighting objects and shapes in a space. In most fiction films, the light sources in a scene, for example table lamps, are not the main light source, but they provide a reason and a perceived source for each light and assist viewers suspend disbelief. Cinematographer Ben Smithard explains that in the film version of *Downton Abbey* (2019), lighting is hidden in fireplaces, table lamps, and standing lamps to avoid scenes looking fake (Marchant 2019). This same idea can be utilized in lighting a historic space, whereby a lighting fixture provides an atmospheric, not only a functional reason for the light in a space. 'It is the feeling for image and light that helps guide a cinematographer to choose the look to create for a film or any given scene. It is their technique that allows them to create it' (Hoser, 2018: 287).

As part of another project for National Trust-owned Kinver Edge Rock Houses in Staffordshire UK, we installed oil lamps retrofitted with flickering LED fittings (Figure 1). Visitor Experience Manager Helen Selkirk explains '... we commissioned these replica oil lamps to add atmosphere to our cottages, which otherwise felt a little lifeless and gloomy without any other form of light. In winter in particular, when the daylight draws in, the flickering of the oil lamps plays interesting shadows across the texture of the rock-cut walls and helps to highlight the unique construction of these homes' (2020).



Figure 1. The pantry lit with LED retrofitted oil lamps at National Trust-owned Kinver Edge Rock House in Staffordshire UK. Photograph by Gary S. Crutchley.

In films, colors created by lighting can convey particular meanings or can create the required mood to tell the narrative (Grodal, 2007: 162). The repetition of a particular color throughout a storyline creates an associational meaning, and the use of color changes can show transition within a character in a film. Further, lighting defines and supports the genre of a film, with different colors and lighting levels associated with different genres. 'Comedy and romance are in high contrast, and have bright warm colors. Sci-fi, action, and horror are low in contrast and have dark and cold colors (Chen, Wu and Lin 2012)'. This translates particularly well to lighting different historic houses and spaces, where creating an appropriate atmosphere for each space can be compared to a film's genre.

The lighting fixtures designed and installed at Attingham Park were part of the Attingham Re-Discovered project. Sarah Kay, Attingham Park's curator, explains that the project's aim was to improve historical accuracy and conservation performance, as well as to '...increase

atmosphere and draw out the property's "spirit of place" in order to deepen the visitor experience' - and lighting was a key part to accomplish this (Kay 2012). The atmosphere, and lower-level lighting in historically accurate fittings in particular, facilitate immersion and enchantment and help retain 'the spirit of place.' For the National Trust 'the Spirit of Place defines the very essence of a property, and it's the one thing we want every visitor to understand and take away with them' (Berry and Beer 2013).

Drawing out the 'spirit of place' is not only relevant for the main rooms on display, but also for the commercial and visitor facilities to an extent. At Attingham Park we designed and produced lighting for the butler's pantry, the grooms' room book store, the stables, and even the toilet facilities. The curator explains: 'The butler's pantry, for example, is a recreation of the butler's historic rooms combined with an atmospheric shop that doesn't feel like a shop' (Kay 2012). This consistency helps retain visitor enchantment longer, particularly where retail spaces are in the middle of the visitor journey. Visitors do not distinguish between different parts of their visit, but rather think of the experience as a whole (Falk, 2016b: 174-175). In 2020, the National Trust strategy uses the slogan 'experiences that move, teach and inspire' (National Trust, 2020). The strategy explains that visitors' tastes are changing while their expectations continue to grow, and the National Trust works to provide visitor experiences that are 'emotionally rewarding, intellectually stimulating and inspire to support our cause.' Enchantment and immersion fit well with this strategy, albeit missing on the last part of supporting the cause of the charity, even if that might be a natural alignment.

While lighting a historic home is different from lighting a film set, the design process is much the same. Each room or space needs to be assessed with consideration given for both lighting needs and historical context. As with film production, we carry out a 'recce' (reconnaissance) of the site, where we assess the lighting needs and discuss the interpretative scheme and historic details with the curator. This is followed by a schematic drawing of the space, with lighting fixtures fitted into it and visual suggestions for different lights and designs. We then use either historic or custom-built replica fittings, including lanterns, oil lamps and electric lights, and associated fixtures and fittings, so that they align with the historic period, the whole property, or the particular room or space in question as much as possible. This process also takes the particular context of the space into consideration, with different types of fittings used for different rooms, such as a dining room, a servants' room or an outbuilding. As with film production, there should be a historic source for the light in the room to help visitors suspend disbelief and immerse them in the experience. The butler's pantry consisted of two rooms, a homely sitting room lit with warm colors (fig. 2) and the actual pantry, which also used warm colors, but with higher lighting levels for a functional space. The actual light source is an LED bulb, which is hidden and programmed to flicker if required. We used braided heritage design cables for electric lamps and concealed cables for replica and retrofitted lanterns and oil lamps. In certain places, extra lighting is required to light specific features for example for safety; this is usually done with spotlights and LED strips.





Figure 2. The lighting in the butler's sitting room, which also acted as a shop at National Trust-owned Attingham Park in Shropshire, UK. Photograph by Sanna Wicks.

There are limitations to consider as well. Low light levels will be a hindrance to some visitors. As the level of lighting is lower than we are used to today, it may be hard for visitors to see their surroundings as clearly as they are used to. This of course, would have been the case for the historic inhabitants, too. They would have needed to peer down and look carefully, just as visitors do now. This leads to an experience which is out of the ordinary, more immersive and authentic, but might also be unsettling and surprising. The aim is for this to lead to enchantment, but it may leave unprepared visitors dismayed. Visitors and volunteers with poor eyesight might struggle to safely move around with low light levels and be unable to take in the surroundings and the objects on display. Uneven floors, doorsteps, low ceilings and other such features need to be assessed for safety in lower level lighting, and exceptions need to be made to ensure visitor safety. Here lighting designers may consider additional spotlights to highlight any such features for visitors, or to locate historic fittings strategically to shed light in the right places. Other creative solutions are possible, for example visitors or tour guides carrying custom built lanterns to further illuminate their surroundings, as required.

## Discussion

Reflecting upon our work lighting historic properties with a filmic approach, I offer some suggestions for others seeking to similarly use LED lighting and filmmaking techniques to improve the visitor experience. First, in order to draw out the property's 'spirit of place,'

consider the overall interpretative scheme. What time period is presented and what lighting fixtures would have existed at that particular time and location. Establish if the building is presented at a specific historic moment or occasion, and what the stories and details are that surround that occasion. Determine who would have inhabited the particular space and what lighting fittings they would have used.

At Attingham Park we worked with the curator to find and recreate suitable lamps and fittings for the butler's pantry as it would have been between 1880-1930. This included oil and electric lamps with appropriate lampshades and Victorian furniture, which would have been appropriate to a butler's pantry and sitting room, and which we could drill holes into to hide electric cables. Where it was not possible to hide electric cables, we concealed battery packs in furnishings that were appropriate for the rooms. In recent years, the National Trust has moved to use sacrificial substitutes, replicas or less significant objects to enable visitors to experience their surroundings more freely (Staniforth and Lloyd 2013) while conserving more valuable items. While the lighting fittings are altered from their original state and as such not authentic from a materialistic perspective, using historically accurate fixtures and fittings and lower lighting levels makes the visitor experience more immersive, enabling visitors to experience the space similarly to previous inhabitants.

If not designed and implemented carefully, lighting reconstructions can risk of resembling a theme park. Whenever safe and feasible, original light sources are preferable. A real fire in a stove, a real oil lamp, or a real lantern at an entrance will look better than a reconstruction. This is, however, often not safe, so reconstructed lighting effects should resemble the authentic ones as closely as possible. Technology in this area, like many others, is constantly improving.

Second, consider the required atmosphere for the space and how lighting can help to further develop that atmosphere. For the butler's pantry, we created a dimly lit homely space, and selected LED bulbs with a color temperature of 2000 kelvin or less, in order to imitate the warm glow of candles and oil lamps. In filmmaking terms, these first two considerations could be summarized as lighting for the right narrative and lighting for the right genre.

Third, consider any objects or features that need additional highlighting for interpretation purposes. In film production, also, key clues to the narrative are highlighted to help audiences understand the plot. At the Kinver Edge property, the rock wall of the cave dwellings was important to highlight, but designers may need to consider health and safety. All of the above has to be balanced, designed, and implemented with practicality in mind. Possible obstructions such as low ceilings, uneven floors, doorsteps etc., may need to be highlighted if lighting levels are low overall. If additional lighting is required, consider how it could be subtly added to the space, ensuring that visitor safety and inclusion are considerations throughout the design, as well as practicalities for property guides and for volunteers operating the lights.

## **Conclusion**

In this article I have argued that visitor experience is the central consideration for heritage sites, and that designing and implementing interior lighting schemes at historic properties can play a part in improving visitor experience, particularly in terms of enabling immersion and

enchantment. Although lighting historic properties involves challenges as described above, film making lighting techniques for narrative and genre are helpful tools for designers to utilize. Lighting also plays a part in drawing out the property's 'spirit of place' and fits well with heritage organizations, such as the National Trust, strategies. I suggest further considerations for research around the use of lighting to enhance the authenticity of the visitor experience and a more in-depth study of lighting in relation to the 'spirit of place.'

## Figures

Figure 1. The pantry lit with LED retrofitted oil lamps at National Trust-owned Kinver Edge Rock House in Staffordshire, UK. Photograph by Gary S. Crutchley.

Figure 2. The lighting in the butler's sitting room, which also acted as a shop at National Trust-owned Attingham Park in Shropshire, UK. Photograph by Sanna Wicks.

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