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The Efficacy of Heritage Interpretation at the Lalibela Rock-Hewn Churches in Ethiopia: exploring the need for integrating ICT-mediation

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The inscription of a property in the World Heritage List serves as a recognition of its Outstanding Universal Value (OUV). Such recognition gives visitors the expectation that visiting the site would be a unique experience that would fulfil their visitation goals. Need therefore exists to ensure quality heritage interpretation at the particular World Heritage site. This is both beneficial to ensuring adequate presentation of the site's OUV and visitor satisfaction. This paper seeks to investigate the level of visitor satisfaction with heritage interpretation at the rock-hewn churches of Lalibela one of the most visited attractions in Ethiopia. The study is based on an analysis of online travel reviews of the site using Qualitative Content Analysis. The findings of the study indicate that heritage guiding and interpretation at the Rock hewn churches of Lalibela is provided mainly by the local guides. The study however, finds a number of reported / perceived challenges related to visitor satisfaction, including perceived visitor exploitation by local guides and church workers, visitor harassment, dishonesty by the guides when dealing with clients, language barriers and lack of signage and site maps. It thus argues that there is room to expand the scope of heritage interpretation beyond human guides, and recommends adoption of ICTs-mediated interpretation services at this World Heritage destination.

Key Words: heritage interpretation, Lalibela Rock-Hewn Churches (Ethiopia), UNESCO World Heritage Sites, tourism in Ethiopia, ICTs and tourism, eTourism

Introduction

World Heritage Sites (WHSSs) continue to be leading tourist attractions drawing significant visitor numbers to destinations in which they are located (Buckley, 2004). Such global appeal stems from the inscription of a property in the World Heritage List that serves as a recognition of its outstanding universal value (OUV) (Edroma, 2004). Subsequently, this status often attracts attention from tourism players including tour operators, tourism developers and tourists themselves. Specific to the visitors, such recognition gives them the expectation that visiting the site would be a unique experience that would fulfil their visitation motives (Kerstetter, Confer and Graefe, 2001).

Whereas a number of motives for visiting a heritage site exist (Kerstetter *et al.*, 2001), visitor satisfaction constitutes the single most important outcome of why people visit attractions. Satisfaction is therefore an

important determinant of the quality of the visit as well as that of the attraction itself (Bigne, Sanchez and Andreu, 2009). It influences the choice of destination, the consumption of products and services, the decision to return, and the intention to recommend an attraction to others (Kozak and Rimmington, 2000).

In Ethiopia, the rock-hewn churches of Lalibela is one of the most visited attractions in the country. The Property was among the first twelve sites to be inscribed by UNESCO on the World Heritage List in 1978 (Negussie, 2010). Being a living heritage, the site consists of a range of material and non-material cultural components that constitute an important part of the local community and their traditional way of life (Pankhurst, 2005). Accordingly, the churches, the sacred ecclesiastical objects and the spiritual practices, the vernacular buildings, the town, the topographic impact on settlements, the cultural landscape and the spirit of the place, all form an important part of the

local community's way of life. More importantly, such attributes are of great significance to the World Heritage Site and the visitors to it (Pankhurst, 2005). The churches have therefore continued to attract thousands of visitors annually, both domestic and international (Mitchell and Coles, 2009). For example, important religious festivals including Ethiopian Christmas (*Genna*) and the Epiphany that are held at the site attract large numbers of pilgrims and tourists each year (Assefa, 2013).

With this growing popularity, need exists to ensure quality heritage interpretation at this World Heritage Site. This is both beneficial to ensuring adequate presentation of the site's OUV and visitor satisfaction. This study therefore, seeks to investigate the level of visitor satisfaction with heritage interpretation at the rock-hewn churches of Lalibela. In view of this overall goal, the study interrogates the efficacy of guiding and presentation at the site with the aim of exploring the need for ICT intermediation in heritage presentation. Specifically, the study seeks to answer four research questions (RQ):

- RQ 1: What is the typology of heritage presentation modalities available to visitors at the rock-hewn churches of Lalibela?
- RQ 2: What is the justification for the use of human guides at the rock-hewn churches of Lalibela?
- RQ 3: What challenges related to heritage presentation are encountered by visitors to the rock-hewn churches of Lalibela?
- RQ 4: Are there any gaps in heritage presentation that justify the need for ICT-based interventions at the rock-hewn churches of Lalibela?

Literature Review

Significance of heritage interpretation to visitor satisfaction

Visitors to heritage sites travel mainly for the purpose of widening their knowledge that results from understanding and appreciating the uniqueness of the particular site (Surebankar and Hadli, 2010). Thus, given the unlikelihood of heritage visitors returning to the same site to gain knowledge that they already obtained, the potential of recommending the site to others and a positive word of mouth underscores the importance of ensuring visitor satisfaction within heritage sites (Pei and Veerakumaran, 2007). The quality of heritage presentation, thus, forms a key component of visitor satisfaction with heritage sites,

helping in communicating the unique value of such heritage. Such importance of heritage interpretation for visitor satisfaction was first articulated in Freeman Tilden's (1968) book *'The Fifth Essence'*. In this work, Tilden noted that:

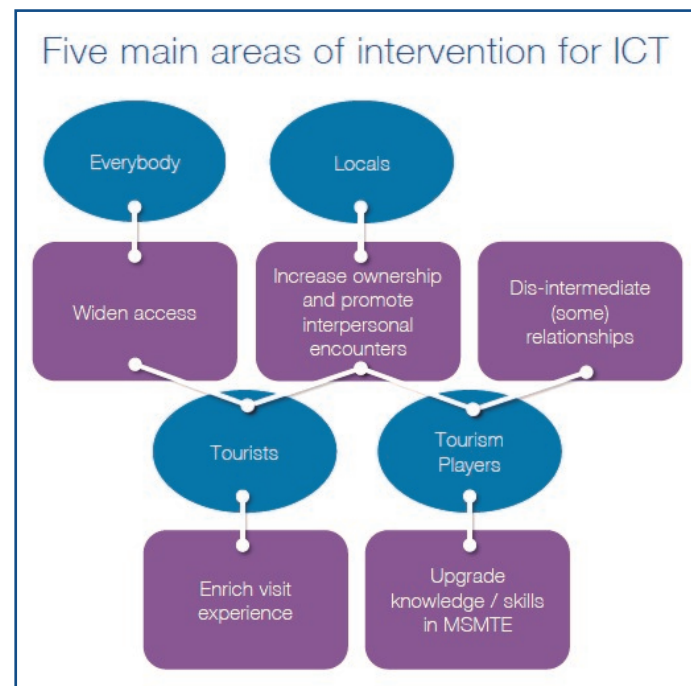
It is true that each preserved monument 'speaks for itself'. But unfortunately it speaks in a language that the average visitor cannot comprehend. Beauty and the majesty of natural forces need no interlocutor. They constitute a personal spiritual experience. But when the question is 'why?' or 'what?' or 'how did this come to be?', [interpreters] must have the answers (Tilden, 1968:56-7).

Stressing this significance at World Heritage Sites in particular, Articles 4 and 5 of the World Heritage Convention identify heritage presentation as being among the main aims of UNESCO (UNESCO, 1972:3). Interpretation should thus, aim at improving and enriching visitor experience at the site by helping one to understand the significance of the place they are visiting and connecting those meanings to the visitors' own personal lives (Tilden, 1977; Thomson and Harper, 2000).

Typology of heritage interpretation media

Central to heritage interpretation is the communication of information about the nature, origin, and purpose of heritage (Littlefair, 2003). Essentially, this can be achieved through the use of personal or non-personal methods (Ward and Wilkinson, 2006). Personal services provide opportunities for visitors to interact with an interpreter in person. Such services include information services (where an interpreter answers visitors' questions at a specific place), guided tours, living interpretation, talks, and informal contacts. On the other hand, non-personal services include those media that do not rely on a person to deliver information (Littlefair, 2003). Visitors thus, receive interpretation through media services such as written materials, self-guided activities, exhibitions, visitor centres, interpretation panels (panels containing text, pictures, illustrations, maps, etc.), interactive kiosks, audio tours, audio-visual media, and exhibit labels among others (Littlefair, 2003; Forist, 2003; Ward and Wilkinson, 2006).

Comparing the efficacy of the two categories of heritage interpretation media, studies have identified non-personal services as able to reach a wider audience than the personal services. Forist (2003) for instance, found out in his study on *'Visitor Use and Evaluation*

Figure 1. How ICT Can Support Sustainable Tourism in World Heritage Sites.

Source: UNESCO chair in ICT to develop and promote sustainable tourism in World Heritage Sites, 2016

of *Interpretive Media*', that personal services reach only as much as 22% of the visitors while in contrast, non-personal services reach over 62% of visitors. Nonetheless, the significance of personal interpretation services remain in that they ensure heritage visitors receive live commentary resulting in increased visitors' understanding and interest in the sites (Thomson and Harper, 2000; Forist, 2003; Ward and Wilkinson, 2006).

ICTs-mediated heritage interpretation

Among the non-personal interpretation services, the importance of Information and Communication Technology (ICT) has been appreciated in recent times as heritage site managers seek to enhance visitor enjoyment, learning and experience (Pedersen, 2002). Indeed, Reino, Mitsche and Frew (2007) observe that the use of technology is increasingly gaining popularity in heritage interpretation over live interpretation. This is attributed to its ability to present visitors with opportunities to imagine and understand the sites in a more complete manner (Tallon and Walker, 2008). ICTs thus, bear enormous potential not only for education and learning purposes, but also as a form of 'edutainment' thus, facilitating visitor experience, learning and enjoyment (Addis, 2005; Naismith and Smith, 2009). Further, the entertainment and interactive components of technology-enhanced heritage interpretation have been noted as able to

enhance visitors' interest and hence enhance mindfulness and learning outcomes (Mellor, 1991).

According to the *UNESCO Chair in ICT to Develop and Promote Sustainable Tourism in World Heritage Sites* (2016), there are five major areas of ICT intervention in heritage tourism,

- (i) widen access to world heritage;
- (ii) enrich visitors' experience;
- (iii) increase ownership by locals and promote interpersonal encounters;
- (iv) dis-intermediate some relationships;
- (v) help to upgrade knowledge and skills of tourism players.

Figure 1 depicts these areas of interventions.

Additionally, online communication can provide more easily differentiated content that is adapted to people with different cultural backgrounds as found out by Mele *et al.* (2015) in their study on localization of online communication. Fundamentally, such localization promotes a better understanding of the heritage itself.

A number of ICTs have to date found application in heritage interpretation. For instance, at the on-site

Priest of the Rock-Hewn Churches of Lalibela



By Anne Saurat via Wikimedia Commons (https://commons.wikimedia.org/wiki/File%3APriest_of_rock-Hewn_Churches_of_Lalibela%2C_a_high_place_of_Ethiopian_Christianity%2C_still_today_a_place_of_pilgrimage_and_devotion..jpg)

stage, translation applications in the form of Personal Digital Assistant (PDA) including mobile audio and visual devices can be used (Grinter *et al.*, 2002). Mobile city or destination guides for example, have found wide usage in heritage environments for years (Tallon and Walker, 2008; Wang and Xiang, 2012). These mobile destination guides provide an integrated overview of *what* a tourist can do in a certain place, as well as *how*, *when*, and *where* to do it (Brown and Chalmers, 2003). The applications may also integrate maps and positioning options and other important functions including educational, planning, personalization, sharing, as well as context-aware services (Kenteris *et al.*, 2009; Brown and Chalmers, 2003). Such functionalities serve to assist travellers before, during and after their visit to a destination. In addition, mobile maps and site-related multimedia content allow visitors to easily interact with the respective place through the acquisition of more profound geographical knowledge and higher location-awareness (Ali and Frew, 2013). Indeed, evidence exists that mobile applications are currently gaining wide popularity in WHSs

According to a study by Schieder, Adukaite and Cantoni in 2014, research on the iTunes mobile apps store revealed that mobile applications for iPhone and/or iPad (iOS) existed for 140 of the 981 WHSs listed at that time. The Majority of these sites were located in Europe and Asia including 70 in Europe and 41 in Asia. Others were North America (13 sites), South America (6 sites), 5 in Africa, 3 in Oceania, and 2 in Central America. Ninety nine properties were cultural heritage sites, 36 natural, and 5 were mixed. In addition,

for 47 sites, more than one mobile application was available and 23 providers offered applications for more than one heritage site (p.22).

Specific to the African continent (home to 137 World Heritage Sites in 2015), a recent report by Görs *et al.* (2015) found out that only 18 websites dedicated to individual WHSs existed. In addition, a total of 26 dedicated mobile apps were found to exist including 14 for iOS and 12 for Android. The study further found the presence of social media on African WHSs to be quite limited.

Augmented Reality (AR) represents another current trend in the application of mobile technologies for tourism and heritage interpretation (Höllerer and Feiner, 2004). AR enhances or augments in real-time, a user's real world environment through virtual, location-based information and multimedia content (Azuma, 1997). The visual augmentation form of AR in particular, finds great usage in tourism and heritage sites as it enhances users' on-trip experience (Höllerer and Feiner, 2004). Yovcheva, Buhalis and Gatzidis (2013) in their overview of the Augmented Tourism (AT) field, emphasize that AR can 'augment' the tourism experience in a number of ways, including boosting context awareness, empowerment, engagement, meaningfulness, motivation, novelty, safety, or surprise. Significantly, the interplay between content (function, form, layout, and placement) and context (spatial, temporal, personal, and technical) creates value-adding augmented tourism experiences and thus enriches the user's on-site visit (Yovcheva *et al.*, 2013).

Furthermore, the self-service information kiosk is another commonly used ICT application at heritage sites. By definition, a self-service information kiosk is a computer-based device that provides an interface medium between users and information providers (Ni and Ho, 2005). The kiosk comprises of a free standing unit with built-in computer and other special features such as touch-screen and printer (Johari *et al.*, 2010). Touch-screen technology enables easy navigation through the system thus allowing users to access relevant information by interacting with the system (Basilo *et al.*, 2006). Some information kiosks may have facilities to enable telephone calls, printing, card swiping, credit card ordering and internet access as well as the option of providing dedicated advertising area on the screen to promote products and services (Basilo *et al.*, 2006). With such features and functionalities, information kiosks find significant usage in heritage interpretation and dissemination of crucial information to site visitors including information on other places of interest (Bennett, 2004). Through these kiosks, visitors may gain an overall sense of the historical landscape as well as other attractions in the vicinity for various experiences, hence helping to induce further interest to visit (Hyde, 2008; Xiao and Smith, 2007).

The Global Positioning System (GPS) has also become a crucial ICT application, able to guide visitors by suggesting location-specific routes. This results in tourists being better informed, able to better interpret,

and being more aware of the visited places (Ali and Frew, 2013). Other technological applications that have found usage in heritage interpretation include cinematic techniques in multimedia museum guides (Rocchi *et al.*, 2004); three-dimensional audio devices (Hatala *et al.*, 2004), mobile Near Field Communication (NFC) (Ali and Frew, 2013), QR codes and iBeacon among others.

From the foregoing literature review on the typology of heritage interpretation services, it can be concluded that both personal and non-personal interpretation services may be integrated in an effort to enhance visitor experience (Ward and Wilkinson, 2006). Further, the integration of ICTs in World Heritage Site interpretation would augment the quality of interpretation of not only the specific property, but also more importantly, of the entire world heritage destination. This study thus, aims to examine the efficacy of heritage interpretation services in achieving visitor satisfaction at the rock-hewn churches of Lalibela as a world heritage destination.

Study Methods

The study takes a qualitative approach to data collection and a holistic, interpretive sense-making approach to its analysis. To respond to RQs 1, 2 and 3, data were collected from the most recent online travel reviews (OTRs) for the rock-hewn churches of Lalibela available on *tripadvisor.com*. A total of 191 OTRs covering the period between January 2014 to July 2015 were analysed using Qualitative Content Analysis.

Initial open coding involved extracting relevant key words from OTR texts in line with the themes identified in study questions 1, 2 and 3. The remaining transcripts were then coded with the preliminary codes that emerged from the open coding. New codes were added - until saturation had been reached - in order to cater for any data that did not fit any existing codes. Similar codes were then grouped into broader, higher order categories that were mutually exclusive. Themes were then ordered according to the number and strength of OTR comments. In presenting the data, meaningful text segments were retained as original quotes.

Findings from RQ1, 2 and 3 provided the baseline information for addressing RQ4. Further, information from extant literature on the use of ICTs in heritage interpretation and presentation was incorporated in

The Church of St. George, Lalibela

By Bernard Gagnon via Wikimedia Commons (https://commons.wikimedia.org/wiki/File%3ABete_Giyorgis_03.jpg)

drawing conclusions on the use of ICTs for heritage interpretation at the rock-hewn churches of Lalibela.

Study Findings

Typology of heritage presentation at the Lalibela RHC World Heritage Site

The study first sought to examine the sources of heritage interpretation accessible to visitors to the Lalibela rock-hewn churches.

Personal guiding services

The study found out that local guides formed the majority of the guides to the site. However, professional guides from tour firms, mainly located in Addis Ababa, and church workers at the site also provided heritage guiding services. In Lalibela, two categories of guides exist, those who are officially certified and thus given an identification card by the local Culture and Tourism Bureau, and those local guides who are not registered.

Apart from the usual guiding services, church workers, especially deacons, were noted as offering additional

services within the site, mainly baptism and organising for special blessings for the visitors. They were also noted as being relatively cheaper than the other guides, preferring to charge a day-rate as opposed to other rate arrangements by the guides such as per-site rate. Being workers at the churches, visitors considered them to be more genuine and knowledgeable than the rest of the guides as the following reviewer noted:

. . . he is a deacon in the church so his knowledge comes from his heart, not a book . . .
[March, 2015 review (1)]

Use of guidebooks

In a few instances, reviewers reported having used guidebooks either solely or together with a guide. The use of a guidebook involved mainly repeat visitors.

Reasons for the use of the personal guiding services

The study found a number of reasons why visitors to Lalibela used personal guiding services.

For better understanding and appreciation of the site.

This was the most cited reason why a guide was needed at the Lalibela World Heritage Site. Specifically, a good guide, especially a local one, was noted as being able to assist the visitor to fully understand everything including appreciating the symbolism, architecture and science of the site. The excerpt below supports this reason

A local guide is a must – otherwise much of the importance of the sites eludes you [August, 2014 review].

Specifically, reviewers noted that it was highly advisable for first time visitors to hire a guide.

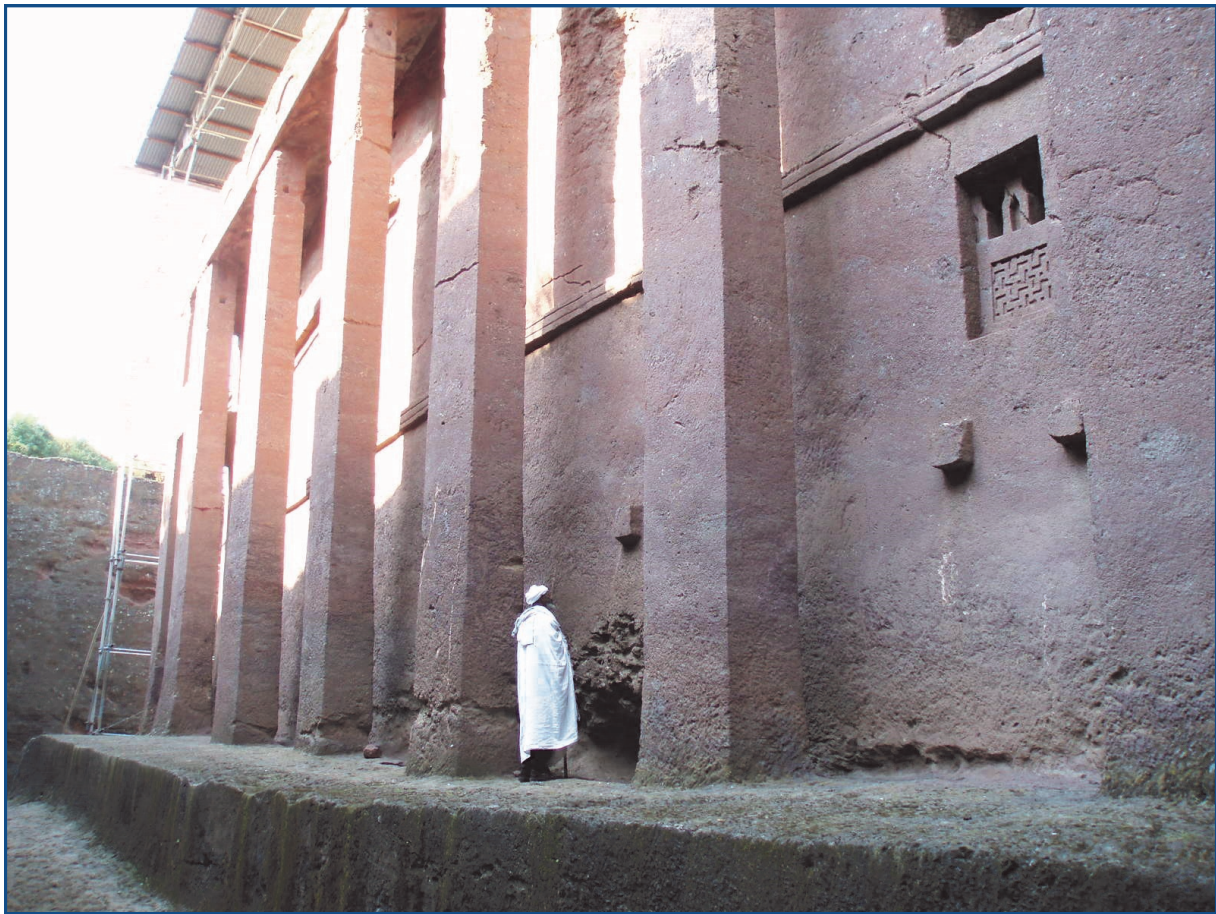
Efficiency and time saving during the visit

Due to the number of churches, the amount of interpretation required for each of them, and the large number of visitors to the site (both foreign visitors and local pilgrims), reviewers noted that a guide would be essential for a successful and efficient visit. The use of a guide was particularly noted as most essential where the visitor had limited time as demonstrated in the following review comments:

There are 11 of these churches carved out of rock . . . You need a guide to successfully and efficiently see them all . . . [March 2015 review (2)].

. . . If you have only one day here, get a guide
[March, 2014 review]

Bete Medhane Alem - Believed to be the Largest Monolithic Church in the World



By Julien Demade, via Wikimedia Commons (https://commons.wikimedia.org/wiki/File%3AEthiopie_Lalibela_Bet_Medhane_Alem.JPG)

Enrich the overall experience of the visit to the World Heritage Site.

Generally, visitors considered the use of guides as having the potential to enrich the overall experience at the site. This was attributed to their

- knowledge of the details and significance of the site;
- knowledge of the timing of important religious events at the site;
- knowledge of the local area including other surrounding attractions;
- relationship with priests and locals, and;
- ability to customize a personal tour. This was particularly noted as being done by guides from established tour firms.

The following excerpt serves to demonstrate the perceived ability of the guides to enrich overall visitor experience at the site

... you can't visit the churches without a guide anyway, but you really need a knowledgeable person otherwise you miss a whole lot of insights, stories, etc. We had an excellent guide for the 2 days we spent in Lalibela ... He has studied tourism, is very knowledgeable of Ethiopia's history, architecture etc. and he is real fun to spend time with as he has wits and humour. We had a wonderful time! [November, 2014 review].

Provision of additional services

In addition to site guiding and interpretation, the guides were noted as providing other services to the visitors. These include:

- meet and greet services at the airport and accompanying visitors to the hotels;
- helping the visitor with finding souvenirs;
- organising tours to the local market thus enabling them to:

. . . see a different side of Lalibela through commerce and trading by locals . . . [June, 2015 review];

- helping negotiate with the shoe watchers at the site;
- organising visits to other attractions e.g. the mountain monasteries, and;
- organising for baptism and 'special blessings'. This is undertaken by the church workers as the following excerpt shows:

This time I used the services of a very friendly and knowledgeable deacon guide . . . He guided us in and around Lalibela and even organized a blessing with the golden cross for my baby daughter in the Beta Medhane Alem church. [April, 2015 review]

Heritage presentation challenges at the rock-hewn churches of Lalibela

While generally the services offered by the guides were noted as satisfactory, a number of concerns were highlighted in the visitors' reviews.

Lack of signage and site maps.

The site was noted as not having any signage whatsoever and worse still, no site maps are available to visitors. As one reviewer noted:

. . . one wonders if this is to encourage the use of a guide . . . [March, 2015 review].

Perceived visitor exploitation by local guides and church workers

Apart from the concern on signage and site maps, the leading complaint pertained to the perceived visitor exploitation by local guides and church workers during the guiding process. On the part of the local guides, instances were highlighted where visitors felt cheated both through the guiding fee charged as well as through the services rendered, as expressed in the following three comments:

Warning . . . be prepared to be a complete tourist target and always asked for more money. Whether it is tour guides asking for more money, taxis / lunches not included in tours, entrance fees, etc . . . you can get a bit fatigued by the end of this trip [March, 2015 review (1)].

. . . [we] felt a little cheated as he [the guide] pushed off the tour till the afternoon, assuring us we'd have time to see all churches in 3 hours but we didn't - really should spend the whole day at it! [June, 2015 review (2)].

We had heard that it's possible to have access [to] the churches but during our visit the local guide denied access to the monuments. Both local guides and guards were so rude . . . pushing us out of the churches. After our complaints about the ridiculously high price (50 USD), they were so arrogant to say that 'We only want your money' . . . The same attitude from all the villagers and local restaurants. They only see you as a walking ATM [January, 2014 review].

Visitor harassment

The local guides were also noted as overly pestering visitors to an extent that in some cases visitors had to opt to hire a guide to escape pestering from the rest as the following review highlights:

The place is overrun with both official and quasi-official guides who will pester you to no end. Some reviewers have suggested to get a guide, just so the rest of them won't pester you. Quite right, but I cannot stomach this sort of blackmail, especially as I watched a number of small groups being dragooned around by a terrible guide [March, 2015 review (2)].

On the part of the church workers, reviewers were unhappy with the constant insistence on tipping by the priests and other church workers even for 'pointing you . . . to the next church' [July, 2014 visitor].

Dishonesty by the guides when dealing with clients

In some cases local guides were further noted as being dishonest when dealing with clients. For instance, while the guides would help visitors to find souvenirs, instances were noted where the visitors were overcharged in the process as the following reviewer highlights:

. . . PS. buy souvenirs at the airport, same stuff. . . they will take you to a shed and claim it's very special, start bargaining for 8 times the price, then you get very happy with your negotiation and patience . . . only to find that is the same price for the same at the airport [May, 2014 review]).

Communication language challenge

Finally, while generally the guides were noted as being able to communicate well in the English language, a concern was highlighted about the guiding services available for non-English speaking visitors, as expressed by the following excerpt

The best the guides can do is speak English. One then wonders what happens to the non-English speakers . . . [February, 2014 review].

Discussion and Conclusion

One of the main roles of heritage interpretation in World Heritage Sites is to present their 'story' to as wide an audience as possible (McGrath, 2003). Through effective communication and explanation of information about meanings related to a given attraction, heritage presentation further forms a key component of heritage visitor satisfaction (McGrath, 2003; Humphries, 2006).

The case of rock-hewn churches of Lalibela demonstrates the importance of personal interpretation services especially human guides, as the interface between a destination and its visitors (McGrath, 2003; Zhang and Chow, 2004). Significantly, personal guiding services possess a number of advantages including being personal and credible, as it permits direct contact between the visitor and the interpreter, thus, allowing visitor involvement, including the ability to ask questions. In addition, delivery can be: flexible, allowing layers of presentation in which information can be tailored to different audience needs; meaningful, as presentations can provide highly memorable experiences of a place for visitors, and finally; effective and efficient (Colquhoun, 2005). From a socio-economic point of view, personal heritage guiding services provide the local community an opportunity to make gainful involvement in tourism development (Gollub, Hosier and Woo, 2003), while cultivating a sense of pride in the community's heritage (McKercher and du Cros, 2002). In spite of these noted benefits, personal interpretation services have been shown to be limited in terms of audience reach (Forist, 2003) and also, it is non-standardised (McGrath, 2003).

The Lalibela case further embodies the situation common in heritage sites within less developed countries. As McGrath (2003) argues, in most of these countries, a lack of key relationships between the bodies responsible for tourism and heritage allows the existence of traditionally un-integrated heritage management. Accordingly, the main type of heritage interpretation is undertaken through human guides (Van de Berghe and Ochoa, 2000; McGrath, 2003).

In the case of Lalibela, while generally the services offered by the guides were noted as serving important purposes and were satisfactory to the expectations of the visitors, the study identified a number of limitations associated with overreliance on personal interpretation services at the Lalibela churches. First, the level of professional and ethical practices among the guides

and church workers was noted as a source of visitor dissatisfaction in a number of ways. Such malpractices highlight the need for training in professional heritage guiding practices to enhance visitor experience and satisfaction at the WHS.

In addition, the ability of the guides to serve a culturally-diverse visitor market from different language origins is limited as they are only able to speak in English. This therefore underlines the need for a multilingual interpretation mechanism to meet the needs of the majority of visitors to the World Heritage Site.

Furthermore, Lalibela churches being a living heritage (see Figure 1), the interconnectivity between the World Heritage Site and the local community's culture and traditions is a significant component of the site's outstanding universal value. Such connection forms an important input to visitor understanding and appreciation of the property. However, evidence from the findings of this study demonstrates that much of the heritage interpretation is concentrated within the site, occasional excursions into the locality are organised, albeit on a rather ad-hoc basis. Need therefore exists, to incorporate other heritage interpretation models beyond the personal services that would facilitate visitor access to information on both the site and the local community culture and heritage in a more wholesome way.

The need for ICT intermediation in heritage presentation at the rock-hewn churches of Lalibela

With the growing international reputation of the Lalibela rock-hewn churches, coupled with the challenges to visitor satisfaction identified in this study, there is need to consider expanding the scope of heritage interpretation beyond human guides.

A very promising option is to adopt ICT-mediated interpretation services at the World Heritage destination. In fact, as of the end of 2015, the digital presence of this WHS is very limited, and no mention at all was found in travel reviews about online resources used to enrich the visit experience through online information sources.

The significance of ICTs-based heritage interpretation in enhancing visitor enjoyment, learning and experience has received wide recognition in recent times (Chiabai, Paskaleva and Lombardi, 2013). Indeed, the entertainment and interactive components of technology-enhanced heritage interpretation have

been noted as being able to enhance heritage visitors' interest, mindfulness and learning outcomes and to present visitors with opportunities to imagine and understand the site in a more complete manner (Tallon and Walker, 2008).

A number of technology-based interpretation options can therefore be adopted at the Lalibela rock-hewn churches. For instance, at the on-site stage, translation applications in the form of a Personal Digital Assistant (PDA), such as mobile audio guides and visual devices could be used. In addition, self-service information kiosks could enhance the availability of information to visitors of different language backgrounds.

In addition to technology-based applications, visitor experience and overall satisfaction could benefit from heritage interpretation centres. Within world heritage destinations, these centres could serve as educational, cultural and tourist tools serving to highlight the significance of local heritage, both tangible and intangible through displays, educational programs and community activities. As Argyropoulou and Malliaraki (2009) observe, such heritage interpretation centres can be of great significance to both the local community and the visitors:

For the local community, whose involvement and support are considered vital, an interpretation centre can play a central role in the improvement of the existing infrastructures and may also have a positive impact on the inhabitants' identity. On the other hand, visitors have the chance to gain a deeper acquaintance with the place they are visiting and its inhabitants (p.81).

In the case of Lalibela rock-hewn churches, the establishment of such centres becomes even more important noting that Lalibela is a living heritage where the local community and their livelihood form an important part of the World Heritage Site.

Moreover, with the emergence of a more diversified visitor profile, interpretation at the site should address the diversity of different motivations and knowledge backgrounds, from the educated and experienced visitors who commonly seek an individualised, personalised, participative experience, to a more 'passive' tourist who hardly acquires any pre-trip information (Hooper-Greenhill, 1992). The goal of heritage interpretation should therefore, not be merely to provide information, but rather to convey the magnificence of the World Heritage Site, pass on its legacy, inspire visitors, and ultimately convince them of the need to preserve the site.

As Hall and McArthur observe, good and high quality interpretation service results in a satisfying visitor experience. Subsequently, when visitors have a satisfying experience, they not only support the philosophy of the site's management, but also create good word-of-mouth marketing about the World Heritage Site (Hall and McArthur, 1996). It is therefore, imperative that efforts be devoted towards enhancing the visitor experience at the Lalibela rock-hewn churches through quality heritage interpretation.

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