

Authenticity and Post-Earthquake  
Rehabilitation of Cultural Heritage.  
Learning from the 2015 Gorkha  
Earthquake and the 2016 Chauk  
Earthquake



Kai Weise

## *About Insights*

*Insights* captures the ideas and work-in-progress of the Fellows of the Institute of Advanced Study at Durham University. Up to twenty distinguished and 'fast-track' Fellows reside at the IAS in any academic year. They are world-class scholars who come to Durham to participate in a variety of events around a core inter-disciplinary theme, which changes from year to year. Each theme inspires a new series of *Insights*, and these are listed in the inside back cover of each issue. These short papers take the form of thought experiments, summaries of research findings, theoretical statements, original reviews, and occasionally more fully worked treatises. Every fellow who visits the IAS is asked to write for this series. The Directors of the IAS – Veronica Strang, Rob Barton, Nicholas Saul and Chris Greenwell – also invite submissions from others involved in the themes, events and activities of the IAS. *Insights* is edited for the IAS by Nicholas Saul. Previous editors of *Insights* were Professor Susan Smith (2006–2009), Professor Michael O'Neill (2009–2012) and Professor Barbara Graziosi (2012–2015).

## *About the Institute of Advanced Study*

The Institute of Advanced Study, launched in October 2006 to commemorate Durham University's 175th Anniversary, is a flagship project reaffirming the value of ideas and the public role of universities. The Institute aims to cultivate new thinking on ideas that might change the world, through unconstrained dialogue between the disciplines as well as interaction between scholars, intellectuals and public figures of world standing from a variety of backgrounds and countries. The Durham IAS is one of only a handful of comparable institutions in the world that incorporates the Sciences, Social Sciences, the Arts and the Humanities.

The focal point of the IAS is a programme of work associated with, but not exclusive to, an annual research theme. At the core of this work lies a prestigious Fellowship programme. This programme gathers together scholars, intellectuals and public figures of world standing or world-promise to address topics of major academic or public interest. Their mission is to anticipate the new and re-interpret the old, communicating across and working between disciplinary boundaries.

Every year, the Institute invites as many as twenty highly creative individuals to spend up to three months in Durham. They are located in Cosin's Hall, a magnificent and spacious 18th century mansion which, together with Durham Cathedral and Durham Castle, forms part of Palace Green, dominating the World Heritage Site of Durham Peninsula. During their stay, Fellows engage with departments and colleges, deliver public lectures and seminars, and, above all, join an international community of researchers to address the theme selected for that year. Further details of the IAS and its Fellowship programme can be found at [www.durham.ac.uk/ias/fellows](http://www.durham.ac.uk/ias/fellows)

## *Copyright*

The design and contents of *Insights* are subject to copyright. Copyright and Reproduction Rights in all submitted contributions remain with the authors, as described in the Author's Copyright Agreement. Copyright and Reproduction Rights of all other material remain with *Insights*.

Except under the terms of Fair Dealing (UK Copyright, Designs and Patents Act 1988), the user may not modify, copy, reproduce, retransmit or otherwise distribute the site and its contents (whether text, graphics or original research concepts), without express permission in writing from the Institute. Where the above content is directly or indirectly reproduced in an academic context under the terms of Fair Dealing, this must be acknowledged with the appropriate bibliographical citation.

The opinions stated in the *Insights* papers are those of their respective authors and do not necessarily reflect the opinions of the Institute of Advanced Study, Durham University, or the staff and students thereof.

## *AUTHENTICITY AND POST-EARTHQUAKE REHABILITATION OF CULTURAL HERITAGE. LEARNING FROM THE 2015 GORKHA EARTHQUAKE AND THE 2016 CHAUK EARTHQUAKE*

*Natural disasters are triggers for the emergence of traumatic circumstances. This paper focuses on the destruction of cultural heritage due to two particular earthquakes: the 2015 Gorkha earthquake in Nepal and the 2016 Chauk earthquake in Myanmar. The emergence of such devastation has raised numerous questions concerning loss of authenticity due to the disasters but also with respect to reconstruction and rehabilitation activities. A study on reinterpreting authenticity to deal with the changing understanding of cultural heritage from being exclusive to becoming inclusive was carried out during my fellowship at the Institute of Advanced Study (IAS) at Durham University. The study also took into account discussions on extreme stress of natural disasters on cultural heritage and its effect on authenticity. This was closely linked to the ongoing preparations for the earthquake that was being awaited in Nepal. Every 80 to 100 years large earthquakes affect the Kathmandu Valley and the previous earthquake had occurred in 1934. A few weeks after my return to Kathmandu from the fellowship at Durham, the Gorkha earthquake struck on 25 April 2015. While I was still working on post-disaster rehabilitation planning in Kathmandu, the Chauk earthquake struck in Myanmar, greatly affecting Bagan. The experience gained in Nepal was used to streamline the response and rehabilitation in Bagan. The research carried out during my fellowship at the IAS was the basis for discussing rehabilitation, particularly with respect to considerations on authenticity. This paper provides theoretical discourse on the concept of authenticity with respect to conservation of cultural heritage as well as its practical application in establishing post-earthquake rehabilitation procedures. The paper also explains the changing definition of heritage, which requires a new approach and understanding of management and conservation. Authenticity of cultural heritage can be maintained through the resilience of communities by ensuring their cultural continuity.*

### *Introduction*

The conservation of cultural heritage is a struggle against time. There are numerous factors constantly affecting cultural heritage that induce change. To stop this process is not possible. However, there are means of dealing with change, managing degradation or alterations, which allow for a certain continuity. This continuity must be understood and defined as the core task of conserving cultural heritage.

Cultural heritage itself is a term that is undergoing regular reinterpretation. This reinterpretation has generally been in the form of expanding the definition from a very material-centred approach to understanding cultural heritage as inclusive of context as well as the intangible. The concept of heritage conservation began in the nineteenth century exclusively dealing with ancient monuments.<sup>1</sup> The focus, though still very much on the grand monuments, has generally expanded to include the site within which they are located as well as intangibles such as related local significance, functions and craftsmanship. This means that even the natural environment is part of cultural heritage, particularly when such landscapes are defined by human activity or projected significance. In many of these sites we find people living and carrying out their daily

activities. There are many sites that actually highlight the normal, the vernacular and the way ordinary people live.

The response to the factors affecting cultural heritage with such broad scope requires the consideration of numerous sectors and their cooperation. For example, community members must be part of a discussion on activities including festivals, rituals and even those related to livelihood. Agricultural landscapes are dependent on farmers continuing their activities. Conserving the natural setting is an important part of ensuring that cultural heritage is safeguarded. On the other hand, the skills and traditional materials are required to ensure that monuments are maintained over time.

Tangible cultural heritage is affected by regular wear and tear through use or from weathering. This leads to the slow deterioration of the structures and the attributes of the surrounding site. Regular maintenance and upkeep is required that is sufficient to ensure that the cultural heritage retains that which is required for its continuity. The same structures or sites could, however, be vulnerable to natural hazards such as earthquakes, floods or cyclones. Such sudden impact causes great stress in a short period of time, accelerating deterioration, depending on the particular vulnerability of the cultural heritage attributes or elements. This requires an entirely different approach to protection, and if necessary rehabilitation, while bearing in mind the need to maintain authenticity. This paper will discuss the challenges of dealing with cultural heritage that has been affected by natural disasters, particularly earthquakes, which can be the cause for emergence of sudden change to the state of conservation whereby authenticity could get lost.

### *Heritage and Authenticity*

Heritage can be defined as ‘something handed down from the past, being of value and worthy of preservation for future generations’.<sup>2</sup> This definition elucidates how an object endures the passage of time and how its value is retained. Here we can clearly recognise that of what we receive from the past only that which is of value should be preserved for future generations. On the other hand, for something to be considered to be heritage, by its very definition, it must be preserved. There are therefore two aspects that create the major challenge for conserving tangible cultural heritage: defining value and determining how this value can continue being expressed to future generations.

The concept of authenticity has played a major role in defining conservation of cultural heritage. Authenticity can be considered to be attained when values are expressed in a truthful and credible manner<sup>3</sup> (UNESCO, 2017, p. 26). The understanding of authenticity varies from culture to culture, both with respect to the overall concept and the available words to express this concept in the respective languages. It is therefore important to develop an overall understanding for the concept of authenticity rather than sticking to a particular word in any specific language.

Authenticity is not considered in discussions on safeguarding natural heritage or intangible heritage. For natural heritage, the concept would be clear that all nature is authentic. This is of course correct unless natural sites are manipulated in any manner by humans. In discussions on world heritage which take into account both cultural and natural heritage, the linkages between the two have become more apparent over time. The category of mixed world heritage property was introduced in the earliest set of operational guidelines in 1977<sup>4</sup> (UNESCO, 1977, p. 16). To deal with this phenomenon of human interventions to the natural environment, the category of ‘cultural landscape’ was introduced in 1992. In 1995 the separate lists of criteria

for determining outstanding universal value for natural and cultural properties were merged into a single list.<sup>5</sup> It is therefore the cultural components that are expected to stand the test of authenticity.

Authenticity is also ignored by the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage. The rationale here is that the intangible aspects of cultural heritage based on human knowledge and skills are ever changing and adapting and should not be confined by the requirements of safeguarding authenticity. As stated in article 2 paragraph 1 of the convention, on the 'transmission from generation to generation', the intangible cultural heritage 'is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history' (UNESCO, 2003, p. 2). The implementation of the convention does, however, seem to run into some difficulty when defining what form of expression would then be considered worthy of ensuring continuity. However, while ensuring continuity, this understanding of transmission over time is a concept that seems most pertinent for tangible cultural heritage, which will be explained further in the conclusion of this paper.

There have also been proposals for removing the test of authenticity for tangible cultural heritage. More importance has been given to the need for ensuring integrity, which could be defined as ensuring wholeness or intactness of the elements expressing heritage value.<sup>6</sup> Taking into account the need for wholeness there is a tendency to argue the need for restoration, which has often been seen as contradicting the need to retain authenticity. To resolve this paradox will require a broader perspective on how we perceive tangible heritage, where its values lie and how it gets transmitted into the future.

This dilemma was initially addressed with the discussions held in Nara in 1995 which led to the Nara Document on Authenticity. They arose out of the conflicting views on conservation of monuments and the concept of maintaining authenticity, particularly between the Europeans and the Japanese.<sup>7</sup> The discussions were seminal in linking the value of tangible cultural heritage to the intangible values defined by the communities that created or continuously cared for them. The Nara document emphasises the need to respect the diversity of cultural heritage which is 'rooted in the particular forms and means of tangible and intangible expression' and therefore ensure that 'heritage properties be judged within the cultural contexts to which they belong' (Lemaire and Stovel, 1994).

### *Changing Approaches to Heritage Management*

The changing understanding of heritage, from single monuments to entire towns and landscapes, has played a major role in redirecting the approach to managing heritage. The general approach to protecting monuments, or in many cases ruins, in their existent form has been to fence in the property. The fencing in of monuments and controlling their access and use reflects the autocratic position that the authorities generally took to fulfil their often newly-acquired rights and responsibilities.

The responsibility for maintaining and safeguarding tangible cultural heritage has in the past been with the community that created or used it. In more recent times this responsibility has been often forcefully taken on by the government. For example, in the Kathmandu Valley the socio-religious organisations called Guthis that were established to take care of monuments using proceeds from land in their possession were nationalised in 1964.<sup>8</sup> The Guthis were then organised under the Guthi Corporation to maintain the monuments and carry out related rituals and festivals. The Corporation was furthermore legally supported by the Department of

Archaeology through the Ancient Monument Preservation Act, 2013 (Government of Nepal, 1956). This has entirely isolated the community from their cultural heritage.

The authoritarian approach to managing cultural heritage might work with such monuments as the Great Pyramids of Giza or the Taj Mahal which have no contemporary functions or related community. In such cases the government would need to step in and take the responsibility to ensure that they are safeguarded. When the cultural heritage encompasses entire settlements, landscapes where people live and carry out their daily chores to ensure their livelihood, the authoritarian approach to conservation is not possible or appropriate.

The position of heritage conservation varies greatly with the constitutions of countries. This in itself is a study worth carrying out in more detail, since it is the basis for governments to set up governance systems that effect cultural heritage. It is, however, obvious when analysing constitutions or similar documents<sup>9</sup> that cultural issues are often difficult to address at national level. For example, provisions for First Nations in the Canadian Constitution or for Scheduled Tribes and Scheduled Castes in the Indian Constitution are the sections of the documents that are most complex and have been amended the most.<sup>10</sup> This shows that though cultural heritage issues might be addressed through provisions for fundamental rights, as specific issues or general responsibilities of the government, governance of cultural heritage can best be dealt with through local governance. Local governance allows for diversity by dealing with the specific circumstances of the area and not forcing a national format for cultural identity, as well as allowing for local level communication.

Based on this understanding, the only way to ensure that heritage sites are maintained is to allow relevant communities to participate in their cultural activities. This move from an autocratic to a democratic means of managing a cultural heritage site has become indispensable. There are two aspects of community involvement that have become essential for safeguarding and maintaining cultural heritage sites: the use of the site for cultural activities and the skills required to maintain the heritage structures along with related ornamentation and artefacts.

### *Response and Rehabilitation after the Gorkha Earthquake*

On 25 April 2015, just before noon, a 7.8 magnitude earthquake struck central Nepal. The epicentre was 80 kilometres northwest of Kathmandu near the village of Barpark in Gorkha district. This was followed by 355 aftershocks in the following three months and a 7.3 magnitude tremor on 12 May 2015. The earthquake destroyed about half a million houses with a further quarter of a million seriously damaged. There had been calculations that energy was accumulating along the Himalayan arc in western Nepal and that, due to a slip deficit, the chances of an earthquake were high.<sup>11</sup> When the earthquake did strike, within a period of minutes thousands of square kilometres in central Nepal turned into a massive disaster site. About 8,000 people died.

The Gorkha earthquake had a devastating effect on vernacular architecture and historic monuments. Listed monuments were affected in 20 districts, with 190 being recorded as having collapsed completely and 663 being partially damaged (ERCO, 2015). The stories of each of these monuments and their fate are closely intertwined with the community and individuals who were either there during the earthquake or had to deal with the immediate consequences. Most traumatic were the cases where monuments collapsed, killing those inside or nearby. The immediate response was for those nearby to rush to the site to save those trapped under the

rubble. In desperation, illogical approaches were taken such as to use heavy equipment to clear the site, putting any survivors at greater risk and destroying the remains of the monument.

One such example is what took place at Kasthamandap, possibly the oldest monument in Kathmandu, where on that fateful morning a blood donation campaign was in progress. Many people were caught under the structure when it collapsed. Excavators were employed to clear the site. Research carried out by the Archaeology Department of Durham University<sup>12</sup> documented the damage caused by the excavators. The research also provided evidence that the cause of collapse was due to lack of maintenance and inappropriate restoration work in the past. The restoration work carried out under supervision of the Nepalese Government Department of Archaeology during the 1960s and 1970s was clearly lacking, so much so that one of the four main timber posts responsible for carrying the structure was not resting on any foundation. This has raised questions concerning the reliability of government agencies to ensure proper maintenance of the historic monuments.

During the response phase great support was provided by local community members to collect important elements of the collapsed monuments. These were generally restricted to important stone and metal statues, metal elements, particularly the *gajur* (gilded pinnacle of religious structures), as well as carved wooden pieces. These elements were stored in a safe place, usually in a nearby courtyard, and an inventory was prepared and signed by a local representative, the police and a government official. This process was carried out without any assistance or prompting, a form of intuitive community engagement. It was a pity, however, that other material such as bricks, tiles, plain timber parts and mud mortar was labelled as debris and was removed from the heritage site.

This is, however, also the point where numerous concerns began to arise with respect to the following steps needed for the rehabilitation of the historic monuments. The international community led by the World Bank and the United Nations Development Programme assisted the government in carrying out a Post-Disaster Needs Assessment (PDNA)<sup>13</sup> in preparation for the donor conference organised for the end of June 2015. The culture sector was included for the first time and therefore the responsible authorities had difficulty with the assessment of damage and loss to cultural heritage, particularly since it had to be done in monetary terms. Rough assessments were made for restoring collapsed and damaged monuments and the entire exercise was carried out within two weeks, despite the deficient network of information collection and in the chaos of the post-disaster response phase. The outcome was a text with calculations for culture sector need amounting to just under \$206 million (Government of Nepal, 2015, p. 72). Much more than this amount was pledged during the following donor conference; however, the rehabilitation process resulted in a further catastrophe. Taking the PDNA document as a rehabilitation plan and the donor pledges as a funding plan, the government tendered out projects to the lowest bidding contractors, who in many cases had no experience with conservation works.

A post-earthquake *Culture Sector Rehabilitation Strategy* document (Weise, 2015a) was prepared and submitted to the UNESCO Office in Kathmandu in October 2015. The strategy was based on a series of workshops and pilot projects in preparation for the earthquake, particularly the outcome of the week-long international symposium on living urban heritage *Revisiting Kathmandu* in November 2013 (Weise, 2015b). The strategy was not adopted and not discussed any further at UNESCO. In the meantime the Earthquake Response Coordination Office (ERCO) was established at the Department of Archaeology, with initial support from UNESCO assisted by ICOMOS Nepal.<sup>14</sup> The Post-Disaster Conservation Guidelines document (Government of Nepal, 2016) was prepared and adopted by the government. However, other

critical documents were not adopted. These include the proposed amendments to the national reconstruction policy for cultural heritage and the post-disaster rehabilitation procedures.<sup>15</sup> Had all these documents been adopted and followed, the culture sector rehabilitation in Nepal would have been carried out in an orderly and efficient manner.

The lack of clear direction for the rehabilitation process soon became apparent. Community groups began protesting against certain reconstruction projects,<sup>16</sup> while many contractors stood in front of their destroyed monuments with no idea as to what they were supposed to do.<sup>17</sup> It is still not clear how some of these conflicts will be resolved.

The concern is not how slow this procedure has been but rather its irreversible effect on heritage. This is where the discussion comes back to authenticity; when rehabilitated sites, monuments and artefacts could have lost the means of expressing their value in a truthful or credible manner. Beyond the fact that there are no agreed procedures or strategies, there are possibly three main factors that have contributed to the disastrous circumstances of post-earthquake rehabilitation in the culture sector.

(1) The lack of clarity with respect to authority and ownership of the heritage sites and monuments has created friction between the Department of Archaeology, the local government and the community groups. Most of the monuments belonged to the community through their *Guthis* as previously mentioned. Through nationalisation of the *Guthis*, the Department of Archaeology took over responsibility of the monuments. Through the Local Self-Governance Act, 2055 (Government of Nepal, 1999) the local government has also been given certain overlapping responsibilities. However, most of the monuments are used and maintained by community groups such as priests that perform rituals or religious groups who are involved in regular festivals. The communication between these various stakeholders is insufficient.

(2) Government regulations often contradict traditional procedures. Most obvious has been the Public Procurement Act, 2063 (Government of Nepal, 2007), which promotes the interest of contractors and is most inappropriate for heritage conservation projects. Standard procedure for the government is to tender out work and the contractor with the lowest bid is successful. There is no pre-qualification procedure to ensure that the contractor has experience in monument conservation. The lowest bid by contractors does not cover the cost of hiring qualified local artisans, which leads to bad quality workmanship and material.

(3) The conflict between engineered solutions and the traditional knowledge of local artisans has raised many questions. Construction codes and laws are prepared for engineered structures, generally of reinforced cement, concrete and steel, with solutions that do not consider the need to endure over centuries. There is a substantial lack of knowledge of traditional building construction and its performance in earthquakes. Focus has been on reconstruction and strengthening without accepting that the value of these structures also lies in the construction technology.

The three factors explained above touch upon the concern that cultural heritage conservation does not involve the community that is de facto owner of the heritage. Government procedures also ignore the skills and knowledge of the traditional artisans in favour of modern engineered solutions. Foundations that have lasted for a thousand years can be considered to be insufficient for the structural stability of monuments. Foreign experts are brought in to teach local artisans timber construction. Complex engineering calculations and modelling are carried out without understanding the timber joints and brick masonry in mud mortar. It is clear that monuments collapsed due to lack of maintenance and inappropriate interventions in the past. Observations

show that the introduction of stronger and more rigid modern materials was often the cause for older parts of the monuments to be damaged. The lack of interest in studying why the structures collapsed or were damaged further questions proposed solutions.

The concept for rehabilitation should be to involve the community and local artisans in understanding the significance of the monument, its structure and ornamentation. Restoration should where possible focus on reassembling the salvaged components of the monument. Just as the traditional chariots<sup>18</sup> are reassembled every year, the monuments could be reassembled if there were standardised procedures, clearly distributed responsibilities and regular training. Authenticity would then lie not only in the reuse of materials but also in the knowledge and skills of the artisans and the support of the community.

### *Response and Rehabilitation after the Chauk Earthquake*

On 24 August 2016, a 6.8 magnitude earthquake struck central Myanmar near the town of Chauk. There were no human casualties; however, large numbers of historic monuments were affected, particularly in Bagan.<sup>19</sup> Using the experience gained from the Gorkha earthquake the response and rehabilitation were systematically planned and executed. The response from the government of Myanmar, as well as the various community groups, was positive with direct support coming from the president, state councillor as well as the senior generals.

The immediate response began with a one-page write-up on the 'dos and don'ts' that was translated into Myanmar and distributed in Bagan within 18 hours of the tremor. This was the only document that was at hand when the president visited the next morning and was therefore promulgated, setting the tone for the earthquake response.<sup>20</sup> This allowed for all the strategies, guidelines and procedures that were prepared for Nepal to be adapted to the needs of Bagan and be meticulously implemented. The main essence of this process has been summarised under the following points:

(1) The concern shown by the local government, communities and experts showed that even though there has been a loss of continuity in maintaining many of the monuments, the heritage site is still one of the most important for Myanmar. Local donations added up to 5.73 billion kyat (about 4.24 million USD) as well as 1.107 million USD.<sup>21</sup> The involvement of communities was not limited to cash donations, for there were many teams that showed up in hired mini-trucks, often arriving with equipment and even generators to help clear up and stabilise the damaged structures. Though not always following internationally recognised procedures, these teams carried out wonderful work with the motivation that only those who feel the close bond to the monuments could produce.

(2) The interest in learning from the response and interventions from the past earthquakes, particularly the 1975 earthquake, allowed certain methods to be discarded while those that performed well were repeated. This transmission of knowledge might usually take place through the traditional communities, but since the artisans of the Bagan period are no more, this has had to be done through newly-trained experts and artisans. International experts who were involved after the 1975 earthquake came together with local experts, allowing for constructive analysis and discussions to prepare the rehabilitation of the monuments.

(3) The approach to rehabilitation was carefully discussed with the communities along with the religious leaders, keeping in mind the local sentiments and traditions. The structures were categorised, taking into account whether they were 'living' or not. Living monuments would be

those with temple trustees who carry out rituals as well as regular festivals. Such monuments, as required by tradition, were to be restored to the state considered most appropriate. This would normally be the state of the monument before the earthquake. However, the structures that were not in this category needed to be assessed based on the degree of interventions, restoration or even new construction that might have taken place in the past. Original fabric was to be protected while new interventions were to be rectified over time.

The collaboration between all the stakeholders, the government, experts, religious leaders and the communities allowed for the creation of an agreeable rehabilitation plan. It was implemented with strict discipline and routine. There were healthy arguments about what the outcome of rehabilitation should be. The question of authenticity arose regularly and the solutions that were sought would have needed to address the possible expression of numerous 'truths'. The agreement was, however, based on a certain consensus. Authenticity of the monuments would be based on expressing their value – possibly not always in a truthful manner but surely in a credible one.

### *Conclusion*

The test of authenticity for the conservation of cultural heritage has been questioned. This has particularly been the case with respect to intangible heritage where any such notion has been rejected. There is mounting pressure to get rid of this concept also when dealing with tangible heritage, since there is a growing understanding that the value of these structures actually lie in the intangible. This means that heritage value depends on the context, the communities, the related living heritage as well as the knowledge and skills that created the monuments and sites. This would mean that it should be up to the communities to determine whether to safeguard or allow for change. It is for the related communities to determine what the value is and how these values will be transmitted to their future generations.

The decision to allow communities to determine the plight of their cultural heritage, however, does raise the question of defining the responsible community. We see that there are many heritage sites that have lost the community that created them. Many of these wonderful places have been claimed by other communities who have reinterpreted the meaning or are using the site for newly-acquired functions (e.g. Durham Castle). The neglected sites, however, do not have any involved communities (e.g. the Pyramids) and are left to the forces of nature. In other cases there are sites with communities that are negatively inclined towards the monuments, such as in conflict areas (e.g. Palmyra), or are contested by different communities (e.g. Jerusalem). It is therefore necessary to define the community that can ensure that the values of the cultural heritage can be transmitted to future generations. In certain cases the government might need to take on that role or new communities might need to be created to carry out this function.

Cultural heritage is put under great strain when affected by natural hazards such as earthquakes. The emergence of a changed state within a short period of time tests the resilience of the structures as well as the communities with the responsibility for safeguarding them. It must, however, be kept in mind that where there are earthquakes, there have surely been previous ones, which means that there will have been a history of dealing with such circumstances. If the monuments and the communities still exist, it would mean that they had the resilience and means of surviving. The experience that they would have gathered in the past would also have been integrated into the structures and their management and transmitted through the generations. The continuity of cultural heritage from the past would therefore need to be further transmitted into the future.

The effects of earthquakes usually have great impact on the material structures. There is loss due to damage, which means loss of integrity with respect to wholeness. The earthquakes in Nepal and Myanmar affected hundreds of monuments. The collapsed monuments ended up being a pile of brick, tiles, wood and earth sitting on top of an original plinth. We understand that such events took place in the past and the communities reassembled the superstructures reusing much of the original materials.

There is an obvious need to re-erect damaged or collapsed structures within a historic site. Criticism has, however, been raised in the simple reconstruction of these structures using modern materials and technology carried out by expert teams who have little or no cultural link. Rehabilitation of such heritage sites must take into account how the community ensures continuity of living heritage such as rituals and festivals, as well as the continuation of traditional knowledge and skills. Authenticity in such circumstances should not deal with finding truthful expression in form and colour as often promoted by experts. It should be the credible expression of values that lie in the material, skills and technology as well as the living cultural heritage that ensures cultural continuity.



*Notes*

<sup>1</sup>One of the early attempts to standardise the conservation of monuments was by William Morris and the Society for the Protection of Ancient Monuments (SPAM), with a manifesto released in 1874 which promoted protection before restoration.

<sup>2</sup>This definition of heritage was formulated by the author from numerous definitions collected and presented during the architecture conservation courses held at Khwopa Engineering College, Bhaktapur, between 2005 and 2011.

<sup>3</sup>This definition is provided in the *Operational Guidelines for the Implementation of the World Heritage Convention* and references are provided in the 'Nara Document on Authenticity'.

<sup>4</sup>The *Operational Guidelines for the Implementation of the World Heritage Convention* have been regularly amended since the first edition was adopted by the World Heritage Committee in 1977.

<sup>5</sup>Article 49 of the *Operational Guidelines for the Implementation of the World Heritage Convention 2017* states: 'Outstanding universal value means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole. The Committee defines the criteria for the inscription of properties on the World Heritage List.'

<sup>6</sup>The definition of integrity is provided in the *Operational Guidelines for the Implementation of the World Heritage Convention 2017*, Article 88: 'Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes.'

<sup>7</sup>The discussion began with the rather European-centred ICOMOS Wood Committee criticising the conservation work of a Japanese team on I Baha Bahi in Patan (Kathmandu Valley World Heritage property) in 1992. This issue was taken to the World Heritage Committee. Japan had only ratified the World Heritage Convention in 1990 and suddenly its traditional conservation practices were questioned. It then demanded that this issue, particularly surrounding the concept of authenticity, be discussed and convened the international meeting in 1994.

<sup>8</sup>The strong social integrity of the Newari community of the Kathmandu Valley was due to the socio-religious organisations called Guthis. There were three types of Guthis: religious, functional and social. Guthis ensured the upkeep of religious, social and cultural activities and traditions. The network of such Guthi institutions bound the Newars together at the three levels of caste, patrilineal grouping and territory. There was also a particular form of Guthi for the maintenance and upkeep of temples and community buildings. The patrons or financiers would donate land which would be the source of income for the maintenance of buildings and cover costs for related festivals and rituals. The Guthi Corporation was established in 1964, consolidating all Guthis into a centrally-organised unit. It was mainly formed to administer lands belonging to the Guthis. The Guthi Corporation Act, 2021 (Government of Nepal, 1964) prohibits the sale of land belonging to temples or spaces for public festivals and worship. The aim of the Corporation was to preserve cultural heritage and ensure that religious rites and festivals are performed.

<sup>9</sup>Documents that would be considered constitutions of a country vary greatly depending on their history, such as the Magna Carta of the UK.

<sup>10</sup>A study of various constitutions was carried out by the author in 2009 for UNESCO, linked to the theme of 'Culture and Federalism', to contribute to the discourse on formulating the new constitution for Nepal. Discussions were held with members of the constitutional assembly; however, there were no reports published.

<sup>11</sup>A study done by Roger Bilham which mapped the time and location of earthquakes along the Himalayan arc clearly indicated that there was a lack of movement or a slip deficit in western Nepal where the last big earthquake had taken place in 1505. This assessment, along with the general understanding that earthquakes have affected the Kathmandu Valley every 80 to 100 years, was the motivation to begin preparations and a countdown considering that the last big earthquake there had taken place in 1934.

<sup>12</sup>A study carried out by the Department of Archaeology at Durham University, under Professor Robin Coningham, on Kasthamandap after the earthquake established procedures for post-disaster archaeological research for urban areas, which allowed for better understanding of the foundations and plinths. Dating showed that the earliest foundations of Kasthamandap were three centuries older than what was generally agreed upon.

<sup>13</sup>The Post-Disaster Needs Assessment is a standardised process for the international donor agencies to assess requirement assistance. The United Nations, European Union and World Bank signed a joint declaration on Post-Crisis Assessments and Recovery Planning on 25 September 2008, which led to numerous PDNAs being carried out throughout the world. The Disaster Recovery Framework and the PDNA volumes A and B were launched at the Sendai World Conference on Disaster Risk Reduction on 14 March 2015 (International Recovery Platform, 2015a, 2015b). The PDNA for the Gorkha earthquake was the first time that the assessment for culture sector was included after a major disaster. The PDNA Guidelines for Culture Sector prepared by Nobel laureate Amartya Sen would have only been disclosed on 1 January 2017.

<sup>14</sup>ICOMOS Nepal is the national committee of the International Council on Monuments and Sites, the advisory body to the World Heritage Committee with the international secretariat in Paris. ICOMOS presently has over 10,100 members with national committees in 110 countries.

<sup>15</sup>A compilation of all documents related to rehabilitation planning has been made by ICOMOS Nepal; however, it has not been published (ICOMOS Nepal, 2016). This compilation of documents will be an important contribution to any future assessment of the rehabilitation procedures after the Gorkha earthquake.

<sup>16</sup>Protests were carried out in numerous projects such as at Rani Pokhari and Kasthamandap, projects that are still stuck without any clear understanding of what needs to be done.

<sup>17</sup>Projects such as Das Avatar and Jaisideval temples were stuck owing to the lack of any clear understanding of what needed to be done by the contractor who got the contract through tendering but had no idea what such a project required.

<sup>18</sup>In the Kathmandu Valley most settlements have traditional chariot festivals. The most well-known ones are the Rato Machhendranath in Patan, the Seto Machhendranath, Indra Jatra and Kumari Jatra in Kathmandu and Bisket Jatra in Bhaktapur.

<sup>19</sup>The nomination process for inscribing Bagan cultural heritage property on the World Heritage List was going on along with the preparation of the Integrated Management System when the earthquake struck.

<sup>20</sup>'Considerations for immediate survey and response' was compiled by Rohit Jigyasu, Duncan Marshall and Kai Weise and translated by Ohnmar Myo. Its content focused on safety of people, capacity of response teams, organisation of required resources, initial damage surveys, protection of monuments, salvage and storage of artifacts, prioritisation of structures, covering to protect from rain, shoring and stabilisation, ending with a statement that conservation work on damaged structures would need to be planned long term and not be rushed.

<sup>21</sup>These total amounts of donations were taken from the speech of the union minister for religious affairs and culture at the one-year commemoration ceremony of the Chauk earthquake at Bagan.

*Reference List*

ERCO (2015) 'Gorkha earthquake: damage to listed monuments.' Earthquake Response Coordination Office, DOA/UNESCO report, Kathmandu, Nepal (unpublished).

Government of Nepal (1956) *Ancient Monument Preservation Act 2013* (latest amendment 1996). Ministry of Law and Justice, Law Books Management Board, Kathmandu.

- - - . (1964) *Guthi Corporation Act 2021* (amendment 1976). Ministry of Law and Justice, Law Books Management Board, Kathmandu.

- - - . (1999) *Local-Self Governance Act 2055*. Ministry of Law and Justice, Law Books Management Board, Kathmandu.

- - - . (2006) *Public Procurement Act 1963* (latest amendment 2016). Ministry of Law and Justice, Law Books Management Board, Kathmandu.

- - - . (2015) *Post-Disaster Needs Assessment Volumes A and B*. National Planning Commission, Kathmandu.

- - - . (2016) *Post-Disaster Conservation Guidelines*. Department of Archaeology, Kathmandu.

ICOMOS Nepal (2016) *Compilation of all documents related to rehabilitation planning*. Nepal national committee of the International Council on Monument and Sites, Kathmandu.

International Recovery Platform (2015a) *Post-Disaster Needs Assessment Guidelines. Volume A*. United Nations, European Commission, World Bank.

- - - . (2015b) *Post-Disaster Needs Assessment Guidelines Volume B Culture*. United Nations, European Commission, World Bank.

Lemaire, R. and Stovel, H. (eds.) (1994) *The Nara Document on Authenticity*. Nara, Japan.

UNESCO (1977) *Operational Guidelines for the Implementation of the World Heritage Convention*. Paris: UNESCO (first version).

- - - . (2003) *Convention for the Safeguarding of the Intangible Cultural Heritage*. Paris: UNESCO.

- - - . (2017) *Operational Guidelines for the Implementation of the World Heritage Convention*. Paris: UNESCO (latest revision).

Weise, K. (ed.) (2015a) 'Post-earthquake culture sector rehabilitation strategy.' Kathmandu: UNESCO (unpublished report).

- - - . (2015b) *Revisiting Kathmandu: Safeguarding Living Urban Heritage*. Kathmandu: UNESCO.

*Backlist of Papers Published in Insights*

No.	Author	Title	Series
<b>2008 Volume 1</b>			
1	Boris Wiseman	Lévi-Strauss, Caduveo Body Painting and the Readymade: Thinking Borderlines	General
2	John Hedley Brooke	Can Scientific Discovery be a Religious Experience?	Darwin's Legacy
3	Bryan R. Cullen	Rapid and Ongoing Darwinian Selection of the Human Genome	Darwin's Legacy
4	Penelope Deutscher	Women, Animality, Immunity – and the Slave of the Slave	Darwin's Legacy
5	Martin Harwit	The Growth of Astrophysical Understanding	Modelling
6	Donald MacKenzie	Making Things the Same: Gases, Emission Rights and the Politics of Carbon Markets	Modelling
7	Lorraine Code	Thinking Ecologically about Biology	Darwin's Legacy
8	Eric Winsberg	A Function for Fictions: Expanding the Scope of Science	Modelling
9	Willard Bohn	Visual Poetry in France after Apollinaire	Modelling
10	Robert A. Skipper Jr	R. A. Fisher and the Origins of Random Drift	Darwin's Legacy
11	Nancy Cartwright	Models: Parables v Fables	Modelling
12	Atholl Anderson	Problems of the 'Traditionalist' Model of Long-Distance Polynesian Voyaging	Modelling
<b>2009 Volume 2</b>			
1	Robert A. Walker	Where Species Begin: Structure, Organization and Stability in Biological Membranes and Model Membrane Systems	Darwin's Legacy
2	Michael Pryke	'What is Going On?' Seeking Visual Cues Amongst the Flows of Global Finance	Modelling
3	Ronaldo I. Borja	Landslides and Debris Flow Induced by Rainfall	Modelling
4	Roland Fletcher	Low-Density, Agrarian-Based Urbanism: A Comparative View	Modelling
5	Paul Ormerod	21st Century Economics	Modelling
6	Peter C. Matthews	Guiding the Engineering Process: Path of Least Resistance versus Creative Fiction	Modelling
7	Bernd Goebel	Anselm's Theory of Universals Reconsidered	Modelling
8	Roger Smith	Locating History in the Human Sciences	Being Human
9	Sonia Kruks	Why Do We Humans Seek Revenge and Should We?	Being Human
10	Mark Turner	Thinking With Feeling	Being Human
11	Christa Davis Acampora	Agonistic Politics and the War on Terror	Being Human
12	Arun Saldanha	So What <i>Is</i> Race?	Being Human
13	Daniel Beunza and David Stark	Devices For Doubt: Models and Reflexivity in Merger Arbitrage	Modelling
14	Robert Hariman	Democratic Stupidity	Being Human
<b>2010 Volume 3</b>			
1	John Haslett and Peter Challenor	Palaeoclimate Histories	Modelling
2	Zoltán Kövecses	Metaphorical Creativity in Discourse	Modelling
3	Maxine Sheets-Johnstone	Strangers, Trust, and Religion: On the Vulnerability of Being Alive	Darwin's Legacy

No.	Author	Title	Series
4	Jill Gordon	On Being Human in Medicine	Being Human
5	Eduardo Mendieta	Political Bestiary: On the Uses of Violence	Being Human
6	Charles Fernyhough	What is it Like to Be a Small Child?	Being Human
7	Maren Stange	Photography and the End of Segregation	Being Human
8	Andy Baker	Water Colour: Processes Affecting Riverine Organic Carbon Concentration	Water
9	Iain Chambers	Maritime Criticism and Lessons from the Sea	Water
10	Christer Bruun	Imperial Power, Legislation, and Water Management in the Roman Empire	Water
11	Chris Brooks	Being Human, Human Rights and Modernity	Being Human
12	Ingo Gildenhard and Andrew Zissos	Metamorphosis - Angles of Approach	Being Human
13	Ezio Todini	A Model for Developing Integrated and Sustainable Energy and Water Resources Strategies	Water
14	Veronica Strang	Water, Culture and Power: Anthropological Perspectives from 'Down Under'	Water
15	Richard Arculus	Water and Volcanism	Water
16	Marilyn Strathern	A Tale of Two Letters: Reflections on Knowledge Conversions	Water
17	Paul Langley	Cause, Condition, Cure: Liquidity in the Global Financial Crisis, 2007–8	Water
18	Stefan Helmreich	Waves	Water
19	Jennifer Terry	The Work of Cultural Memory: Imagining Atlantic Passages in the Literature of the Black Diaspora	Water
20	Monica M. Grady	Does Life on Earth Imply Life on Mars?	Water
21	Ian Wright	Water Worlds	Water
22	Shlomi Dinar, Olivia Odom, Amy McNally, Brian Blankespoor and Pradeep Kurukulasuriya	Climate Change and State Grievances: The Water Resiliency of International River Treaties to Increased Water Variability	Water
23	Robin Findlay Hendry	Science and Everyday Life: Water vs H <sub>2</sub> O	Water

## 2011 Volume 4

1	Stewart Clegg	The Futures of Bureaucracy?	Futures
2	Henrietta Mondry	Genetic Wars: The Future in Eurasianist Fiction of Aleksandr Prokhanov	Futures
3	Barbara Graziosi	The Iliad: Configurations of the Future	Futures
4	Jonathon Porritt	Scarcity and Sustainability in Utopia	Futures
5	Andrew Crumey	Can Novelists Predict the Future?	Futures
6	Russell Jacoby	The Future of Utopia	Futures
7	Frances Bartkowski	All That is Plastic... Patricia Piccinini's Kinship Network	Being Human
8	Mary Carruthers	The Mosque That Wasn't: A Study in Social Memory Making	Futures
9	Andrew Pickering	Ontological Politics: Realism and Agency in Science, Technology and Art	Futures
10	Kathryn Banks	Prophecy and Literature	Futures
11	Barbara Adam	Towards a Twenty-First-Century Sociological Engagement with the Future	Futures
12	Andrew Crumey and Mikhail Epstein	A Dialogue on Creative Thinking and the Future of the Humanities	Futures
13	Mikhail Epstein	On the Future of the Humanities	Futures

No.	Author	Title	Series
<b>2012 Volume 5</b>			
1	Elizabeth Archibald	Bathing, Beauty and Christianity in the Middle Ages	Futures II
2	Fabio Zampieri	The Holistic Approach of Evolutionary Medicine: An Epistemological Analysis	Futures II
3	Lynnette Leidy Sievert	Choosing the Gold Standard: Subjective Report vs Physiological Measure	Futures II
4	Elizabeth Edwards	Photography, Survey and the Desire for 'History'	Futures II
5	Ben Anderson	Emergency Futures	Futures
6	Pier Paolo Saviotti	Are There Discontinuities in Economic Development?	Futures II
7	Sander L. Gilman	'Stand Up Straight': Notes Toward a History of Posture	Futures II
8	Meredith Lloyd-Evans	Limitations and Liberations	Futures II
<b>2013 Volume 6</b>			
1	David Martin-Jones	The Cinematic Temporalities of Modernity: Deleuze, Quijano and <i>How Tasty was my Little Frenchman</i>	Time
2	Robert Levine	Time Use, Happiness and Implications for Social Policy: A Report to the United Nations	Time
3	Andy Wood	Popular Senses of Time and Place in Tudor and Stuart England	Time
4	Robert Hannah	From Here to the Hereafter: 'Genesis' and 'Apogenesis' in Ancient Philosophy and Architecture	Time
5	Alia Al-Saji	Too Late: Racialized Time and the Closure of the Past	Time
6	Simon Prosser	Is there a 'Specious Present'?	Time
<b>2014 Volume 7</b>			
1	Robert Fosbury	Colours from Earth	Light
2	Mary Manjikian	Thinking about Crisis, Thinking about Emergency	Time
3	Tim Edensor	The Potentialities of Light Festivals	Light
4	Angharad Closs Stephens	National and Urban Ways of Seeing	Light
5	Robert de Mello Koch	From Field Theory to Spacetime Using Permutations	Time
6	Jonathan Ben-Dov	What's In a Year? An Incomplete Study on the Notion of Completeness	Time
7	Lesley Chamberlain	Clarifying the Enlightenment	Light
8	Fokko Jan Dijksterhuis	Matters of Light. Ways of Knowing in Enlightened Optics	Light
<b>2015 Volume 8</b>			
1	Valerie M. Jones	Mobile Health Systems and Emergence	Emergence
2	Stéphanie Portet	Studying the Cytoskeleton: Case of Intermediate Filaments	Modelling
3	Peter Cane	Two Conceptions of Constitutional Rights	Emergence
4	Nathan J. Citino	Cultural Encounter as 'Emergence': Rethinking US-Arab Relations	Emergence
5	N. Katherine Hayles	Nonconscious Cognition and Jess Stoner's <i>I Have Blinded Myself Writing This</i>	Emergence
6	Alice Hills	Waiting for Tipping Points	Emergence
7	Margaret Morrison	Mathematical Explanation and Complex Systems	Emergence
8	Tim Thornton	Emergence, Meaning and Rationality	Emergence
9	John Heil	The Mystery of the Mystery of Consciousness	Emergence

No.	Author	Title	Series
10	David C. Geary	Sex Differences in Vulnerability	Emergence
11	Richard Read	Negation, Possibilisation, Emergence and the Reversed Painting	Emergence

### 2016 Volume 9

1	George Williams	An Australian Perspective on the UK Human Rights Act Debate	Evidence
2	James E. Gardner	Can We Get About Volcanic Pyroclastic Flows from Those Who Survive Them?	Evidence
3	John Brewer	Art and the Evidence of Attribution. Giovanni Morelli, Morellians and Morellianism: Thoughts on 'Scientific Connoisseurship'	Evidence
4	Claire Langhamer	An Archive of Feeling? Mass Observation and the Mid-Century Moment	Evidence
5	Heike Egner	The IPCC's Interdisciplinary Dilemma: What Natural and Social Sciences Could (and Should) Learn from Physics	Evidence
6	Barbara Dancygier	Reading Images, Reading Words: Visual and Textual Conceptualization of Barriers and Containers	Evidence
7	William Downes	Two Concepts of Relevance and the Emergence of Mind	Emergence
8	Martin Coward	Crossing the Threshold of Concern: How Infrastructure Emerges as an Object of Security	Emergence

### 2017 Volume 10

1	Ted Gup	America and the Death of Facts: 'Politics and the War on Rationalism'	Evidence
2	Jan Clarke	Back to Black: Variable Lighting Levels on the Seventeenth-Century French Stage, Lavoisier and the Enigma of <i>La Pierre philosophale</i>	Light
3	Heather Douglas	Sexual Violence and Evidence: The Approach of the Feminist Judge	Evidence
4	David T. F. Dryden	What Have Restriction Enzymes Ever Done For Us?	Evidence
5	Jessica Brown	Evidence and Scepticism	Evidence
6	Richard Walsh	Complexity, Scale, Story: Narrative Models in Will Self and Enid Blyton	Scale
7	Julia Prest	Performing the Racial Scale: From Colonial Saint-Domingue to Contemporary Hollywood	Scale
8	Jon Hesk	Greek Thinking, Fast and Slow. Euripides and Thucydides on Deliberation and Decision-Making	Scale
9	Frances Morphy & Howard Morphy	Relative Autonomy, Sociocultural Trajectories and the Emergence of Something New	Emergence
10	Carlo Vecce	The Fading Evidence of Reality: Leonardo and the End	Evidence
11	Andrew Baldwin	Theorising Climate Change and Migration: Affect, Politics and the Future Conditional	Emergence
12	Massimo Leone	Weight Problems: An Enquiry into Scales and Justice	Scale
13	David M. Pritchard	Democratic War-Making in Ancient Athens	Emergence
14	Tim May	Evidence and Insight: In Search of the Distinctiveness of the University as a Site of Knowledge Production	Evidence
15	Matthew Daniel Eddy	Childmade Evidence: A Reflection on the Sources Used to Historicise Childhood	Evidence

<b>No.</b>	<b>Author</b>	<b>Title</b>	<b>Series</b>
16	Barbara Sattler	Measurement and Scale in Aristotle	Scale
17	Kalyan S. Perumalla	Normality, Magic, Miracle and Error: Emergence Along a Reversibility Spectrum	Emergence

*Insights*

Insights is edited by Nicholas Saul, IAS Director and Professor of German Literature and Intellectual History.

Correspondence should be directed to the Institute at [enquiries.ias@durham.ac.uk](mailto:enquiries.ias@durham.ac.uk).