

A Note from the Director



For over twenty-five years, it has been the Getty Conservation Institute's great privilege to work with colleagues in China

engaged in the conservation of cultural heritage. During this quarter century and more of professional engagement, China has undergone tremendous changes in its social, economic, and cultural life—changes that have included significant advancements in the conservation field. In this period of transformation, many Chinese cultural heritage institutions and organizations have striven to establish clear priorities and to engage in significant projects designed to further conservation and management of their nation's extraordinary cultural resources. We at the GCI have admiration and respect for both the progress and the vision represented in these efforts and are grateful for the opportunity to contribute to the preservation of cultural heritage in China.

The contents of this edition of *Conservation Perspectives* are a reflection of our activities in China and of the evolution of policies and methods in the work of Chinese conservation professionals and organizations. The feature article offers a concise view of GCI involvement in several long-term conservation projects in China. Authored by Neville Agnew, Martha Demas, and Lorinda Wong—

members of the Institute's China team—the article describes Institute work at sites across the country, including the Imperial Mountain Resort at Chengde, the Yungang Grottoes, and, most extensively, the Mogao Grottoes. Integrated with much of this work has been our participation in the development of the China Principles, a set of national guidelines for cultural heritage conservation and management that respect and reflect Chinese traditions and approaches to conservation.

For this edition, we also asked some of our Chinese colleagues to offer their perspectives on cultural heritage conservation in China today. Tong Mingkang, president of ICOMOS China and, until recently, the deputy director of China's State Administration of Cultural Heritage, charts the strides his country has made in cultural heritage conservation in the twenty-first century, as well as the challenges that continue. Wang Xudong, director of the Dunhuang Academy—an institutional partner of the GCI for decades—describes current work at the Academy and his vision for the Academy's future. And in our roundtable discussion, three leaders in Chinese cultural heritage conservation—Fan Jinshi, Zheng Jun, and Lu Zhou—explore the evolution of conservation theory and practice in the field in China. This edition also includes an article by Neville Agnew and Marcia Reed (an associate director at the Getty Research Institute) describing the 2016 exhibition at the Getty—Cave Temples of Dunhuang: Buddhist Art on China's Silk Road—that comprehensively presents the history, art, and conservation of the Mogao Grottoes.

The GCI's diverse efforts in China constitute one of this institution's most important and comprehensive undertakings. In this work, we have been fortunate to have as partners many thoughtful and dedicated Chinese colleagues, who have enriched our collective endeavors with perseverance, passion, and insight.

Timothy P. Whalen

CONSERVATION PERSPECTIVES

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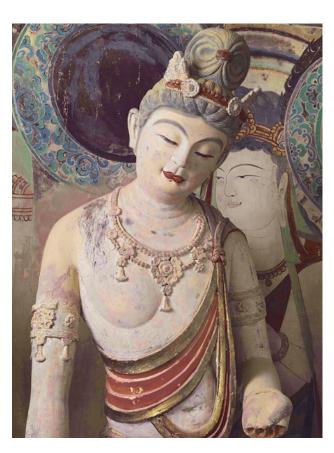
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ON THE COVER

A painted clay sculpture of a bodhisattva, part of a seven-figure sculpture group in Cave 45 of the Mogao Grottoes. Photo: Courtesy of the Dunhuang Academy.



ENDURING COLLABORATIONS IN CHINA 1989-2016

Since its establishment over thirty years ago, the Getty Conservation Institute (GCI) has undertaken collaborative field projects as part of its mandate to address conservation of movable and immovable cultural heritage internationally. Within three years after its founding, the GCI embarked on what has proven to be its most enduring partnership, entering into an agreement with China for the conservation of two ancient Buddhist sites: the Yungang Grottoes, around three hundred kilometers from Beijing, and the Mogao Grottoes, a Silk Road site near Dunhuang about sixteen hundred kilometers west of the capital.

Yungang, an enormously important fifth- to sixth-century site now on the World Heritage List, comprises fifty-three large cave temples and thousands of niches and stone statues carved in a cliff face near the coal-mining city of Datong in Shanxi province. Mogao, inscribed on the World Heritage List in the first tranche of six sites proposed by China in 1987, includes hundreds of cave temples dating from the fourth to fourteenth centuries.

EARLY YEARS AT MOGAO AND YUNGANG

Ratification by China of UNESCO's World Heritage Convention in 1985 was a seminal event in drawing attention to the nation's needs in cultural heritage preservation. In the wake of ratification, the GCI was approached for assistance through the UNESCO representative in Beijing. After a fact-finding mission by the Institute's first director, Luis Monreal, and further exploratory missions in 1988, a memorandum was signed in 1989 by the Getty and China's State Administration of Cultural Heritage (SACH, then known as the National Administrative Bureau for Museums and Archaeological Data).

By then, China had emerged from its long isolation. The country's conservation professionals tried to catch up with developments in theory and practice, but the results, in the early days, were often poor intervention and sometimes harmful practice. Conservation was believed to comprise only "treatment" and to be based on scientific and technological know-how. Monitoring and maintenance were not commonplace, and the idea of preventive practice had not yet permeated policy. Values—expressed in heritage law as artistic, historic, and scientific—were assumed to be self-evident, not subject to discovery through detailed research and analysis, whereas site management was viewed as an entirely separate activity from conservation. Moreover, the emphasis was on materials used in conservation and the "formula" rather than the process.

This was particularly true at Yungang, where concerns about water permeation through the sandstone cliff and severe pollution from both coal mining and burning near the site predominated. Work at Yungang focused on mitigation of water seepage and an intensive monthlong, round-the-clock study of pollutants and airborne particulates by California Institute of Technology environmental scientists contracted by the GCI. The data helped quantify the intrusion of gaseous pollutants and the severe deposition of particulates on the sculpture in the caves. These studies prompted the eventual prohibition of coal mining, transportation, and burning in the immediate vicinity of the site. An objective of early GCI work at Yungang was to promote the adoption of practice that favored decision-making as a final step based on careful assessment, not as the first step. A 1992 site management training course, attended by managers and conservation professionals from other sites in China, including the Dunhuang Academy director, affected the start of this process.

For five years, the Institute worked at both sites before deciding to concentrate on Mogao. For logistical reasons—and because Yungang was not well staffed or led by heritage professionals—the decision was made to focus on Mogao, which, though remote, offered a more sustainable partnership and collaborative opportunities through the site authority, the Dunhuang Academy.

Early work at Mogao laid the foundation for the collaboration that has lasted over twenty-five years. Since its founding in 1944, the Dunhuang Academy had made great progress in site protection and stabilization. The cliff face had been buttressed and stabilized, the flood threat had been addressed, security of the site and its art was effective, and replication of the wall paintings and sculpture of the cave temples was established as a core activity. But at the start of the 1990s there remained profound needs in scientific expertise, control of wind-driven sand, and site management, as well as monitoring climate and environment in the caves and determining deterioration



The Mogao Grottoes near Dunhuang, Gansu Province. This World Heritage Site has been the venue for much of the GCI's work in China since 1989, including the application of the China Principles. Photo: Wu Jian. Courtesy of the Dunhuang Academy.

mechanisms of the wall paintings. The GCI worked effectively with Academy leadership and staff to effect improvements, which were detailed in the first international conference at the site in 1993. Following the formal evaluation of the project in 1995, the collaboration shifted from a focus on external site-wide impacts to wall painting conservation, management planning, and policy issues.

THE CHINA PRINCIPLES

In 1996, after six years of working at the Yungang and Mogao Grottoes, establishing professional relationships and acquiring an enhanced understanding of local and national conservation practice and challenges, the GCI began broadening its engagement with cultural heritage in China. This effort led to a project to develop national guidelines, known as the *Principles for the Conservation of Heritage Sites in China*, formally begun in 1997.

Although strong Chinese legislation existed to protect heritage sites, professionals lacked exposure to international practice and the guiding documents on policy, principles, and planning methodologies. For this reason, SACH felt that external input in formulating principles was valuable, and thus the guidelines were undertaken collaboratively with the GCI, which sought and obtained the participation of the Australian Heritage Commission.

In developing the Principles, workshops were held over a three-year period at diverse sites in China, Australia, and the United States, exemplifying the wide range of issues. An ongoing goal was to illustrate how values assessment led to management policies and decisions about how to conserve, present, and interpret sites and how to develop a planning process that both adhered to international concepts and incorporated procedures long established in China. In the workshops and meetings, much discussion was also devoted to creating a vocabulary of terms and concepts in English and Chinese that were cross-culturally understandable.

The Principles were issued by ICOMOS China in 2000, and the decade that followed witnessed a maturation of practice and

theoretical developments in cultural heritage conservation and management. It was also a time of greater engagement and awareness of international developments related to cultural heritage. In response, SACH and ICOMOS China felt it appropriate to renew the Principles and expand the thematic content. The GCI participated in the revision, whose aim was to update and clarify the principles in light of recent thinking and practice in China and to better reflect the international understanding that now prevails about what constitutes cultural heritage.

As part of the process, the GCI organized a US workshop for core members of the committee charged with the revision. The workshop explored the concepts of historic cultural landscapes, living heritage sites, memorial sites, cultural routes, and industrial and scientific heritage through a series of site visits, meetings, and discussions in Hawaii and the Los Angeles and San Francisco areas. Among the heritage places visited were examples of twentiethcentury industrial heritage adaptively reused (the Ford Assembly Plant in Richmond, California); sites of technological and scientific importance (the 1904 astronomical observatory on Mount Wilson, above Los Angeles, and the Jet Propulsion Laboratory in Pasadena, California, both of which still serve scientific and public roles while recognized as historic landmarks); commemorative sites (the USS Arizona in Pearl Harbor, Hawaii); and sites illustrating aspects of social and cultural history (the Alcatraz Island prison and the immigration station on Angel Island, both in San Francisco Bay).

These visits provided examples of varied and complex management structures and methods of protection, interpretation, and visitor management that helped stimulate an enlargement of thematic content. The revised China Principles document, completed in 2015, contains forty-seven principles, associated commentary explaining and amplifying each principle, and an updated glossary of terms. A bilingual version was prepared, designed, and published by ICOMOS China, with the GCI facilitating and editing the English translation.

APPLYING THE CHINA PRINCIPLES IN PRACTICE

Training professionals in the purpose and use of the China Principles, applying them to real-life situations, and developing regulations concerning master planning for heritage sites were key activities of the Chinese authorities in the decade after initial completion of the Principles. The GCI has been very involved in applying the Principles, beginning in their developmental stage, at the Mogao Grottoes and the Imperial Mountain Resort at Chengde.

The Mogao Grottoes

At Mogao, the Principles were applied at several levels. The partners began by drafting a comprehensive master plan for the site according to the planning process advocated in the Principles. Two major components—wall painting conservation and visitor management—were selected for in-depth assessment and action plans to address specific challenges, followed by implementation.

Beginning in 1997, the collaboration focused on the conservation of wall paintings. From the fourth to the fourteenth centuries, the cave temples of Mogao were hewn into a rock cliff face of soft conglomerate. The walls were plastered with a mixture of clay, sand, and plant fiber, and the paintings were executed as line drawings in ink on a ground layer covering the earthen plaster, then filled in with mineral pigments and washes of organic colorants. For centuries the paintings have suffered deterioration of various kinds, from flaking of the paint layer to progressive loss of adhesion between the conglomerate and the plaster. The latter problem is the most serious and is common in Mogao and other grotto sites. Large areas of the paintings have been lost as detachment ultimately leads to collapse of the painted plaster.

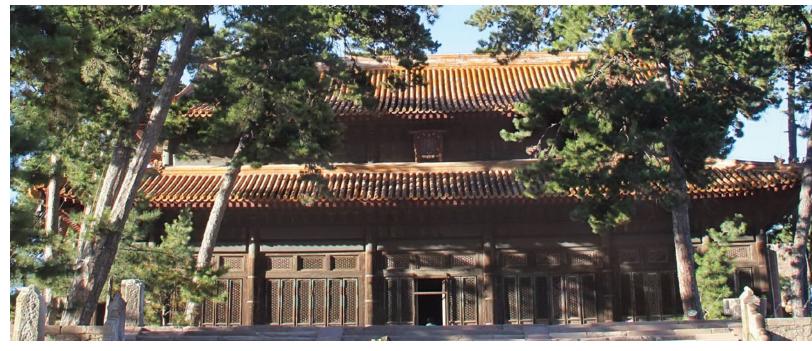
To develop effective measures to stabilize the paintings and to address the causes of their deterioration, Cave 85, constructed in the Tang dynasty (618–906), was chosen as a case study for the development and implementation of a rigorous methodology based on the China Principles. Completed in 867, Cave 85 is among the larger cave temples at Mogao and contains some 350 square meters of the highest quality wall paintings of the late-Tang dynasty. It was selected because the deterioration of its wall paintings—in particular, the widespread exfoliation of paint and plaster detachment from the bedrock—is representative of problems faced in many of the site's caves. Deterioration of the wall paintings at Mogao had never been studied in a way that allowed for development of appropriate conservation interventions and preventive measures to reduce the rate of deterioration over the long term.

The ten-year project involved study and analytical investigations of the painting techniques and materials, comprehensive environmental monitoring to understand the sources of moisture in the cave and walls, analytical work on the salts in the cave, extensive testing to develop an appropriate grouting material for the detached plaster and for other treatment interventions, and development of preventive measures to reduce risk of further deterioration. Conservation of Cave 85 was completed in 2010, and the project's final report was translated into Chinese. The English version was published in 2013.

By the beginning of the twenty-first century, an explosive rise in tourism, predominantly domestic, emerged as one of the greatest problems facing the Dunhuang Academy. Sustainable use of heritage sites was, and remains, a challenge at iconic sites. At Mogao, the situation had reached crisis dimensions, threatening the cave art while simultaneously degrading the visitor experience through overcrowding in the confined spaces of the rock-cut



Crowds in Cave 100 at Mogao. A visitor capacity study to address problems related to mass tourism at Mogao was completed in 2015 as part of a comprehensive visitor management program for the site. Photo: Sun Zhijun. Courtesy of the Dunhuang Academy.



Shuxiang Temple at Chengde. The China Principles methodology was used to assess the temple and to develop a comprehensive program for its conservation, now being implemented by the GCI's partners in China. Photo: Courtesy of Chen Dong, Chengde Cultural Heritage Bureau. **Right: Interior of the temple's gatehouse.** Original sculpture, furnishings and painted decoration survive in the temple with a high degree of integrity, making conservation, rather than restoration, the preferred means of preservation. Photo: Richard Ross, for the GCI.

caves and along narrow access walkways. The site's master plan dealt with all aspects of visitor management and interpretation, but crucial among the strategies proposed was a carrying capacity study, which the GCI and the Academy undertook beginning in 2001. The driving forces for the study were preservation of the art and the need for a better understanding of the causes of deterioration—and whether (and to what degree) visitation contributed to the decay and damage found in the wall paintings. The visitor study sought to understand natural and human-induced deterioration as a prerequisite to determining safe levels for visitation that still provided a good visitor experience. Achieving this balance required a range of expertise and disciplines, including analytical and laboratory investigations, environmental research, analysis of site visitation, physical condition assessments, and development of visitor flow simulation models and visitor management systems.

The capacity study is integral to the larger visitor management plan that includes a new visitor center, opened in 2014, with state-of-the-art presentation and interpretation. Such comprehensive planning has provided the Academy an opportunity to manage tourism growth in a sustainable manner and from a position of strength, rather than on the defensive against tourism pressure. Beyond Mogao, the capacity study offers a methodology and strategies applicable, in whole or in part, to other sites facing debilitating tourism growth. Better integration of management systems and monitoring of operations is an ongoing activity as visitor numbers climb, reaching one million in 2015. Thorough assessment and planning have laid solid groundwork for maximizing visitation while preserving the site and its art.

The Imperial Mountain Resort at Chengde and Shuxiang Temple

To complement the work at Mogao, the GCI sought a challenging architectural project for application of the Principles—one that

addressed how traditional wooden architecture and its decoration are valued and how decisions are made about its preservation. That challenge was found at the Imperial Mountain Resort at Chengde, some two hundred kilometers north of Beijing and beyond the Great Wall. Established as the summer capital of the Qing emperors in 1703, it includes the resort itself—a palace complex with extensive landscaped gardens, mountains, pavilions, and water features, set in a large natural park of some six hundred hectares (twelve hundred acres), and enclosed by a ten-kilometer wall. Outside the wall there were originally twelve Buddhist temples, which primarily served the Qing political interest in uniting Tibetan, Mongolian, and other ethnic groups in the empire's border regions.

As at Mogao, the project began with master planning for the site, prioritizing the problems associated with conserving historic architecture. The temple buildings are extensively preserved and exhibit a variety of styles representing the ethnic minorities, but almost all have been subject to restoration over many decades. The one exception—Shuxiang Temple—became the locus of the application project.

Although the temple was in a state of decay and had lost many of its subsidiary buildings, it retained original, late-eighteenth-century building materials, furnishings, and sculpture in the surviving main hall (Huicheng Hall) and gatehouse, and thus it offered an interesting case for the decision-making process outlined in the China Principles. Any discussion of architectural values and decision-making necessarily leads back to the early twentieth century, when conservation concepts were being formulated for the first time in China by Liang Sicheng, a pioneering architectural historian. It also looks forward to contemporary considerations of Western versus Eastern traditions, a central debate in conservation theory and one in which understanding significance and context is critical to decision-making.

The Shuxiang Temple project has involved historical research, compilation of existing documentation and historic photographs, and



surveying to produce a new site plan; assessment of the site's condition, significance, and management context; and research and analytical investigations into the materials and techniques of construction and decoration, particularly the extant decorative architectural painting.

Assessment of significance placed Shuxiang Temple in its broader architectural context. At Chengde, as elsewhere in China, decades of extensive restoration of Qing architecture have meant that original Qing imperial fabric is becoming

rare. Understanding this scarcity led to the decision to conserve the temple buildings, ruins, and surviving original architectural painting, sculpture, and furnishings in their current state, rather than restore them. Once this decision was made, research and testing were needed to develop conservation treatments utilizing, as far as possible, traditional materials. Shuxiang Temple thus provides a model for a systematic approach to the conservation of Qing dynasty imperial architecture. The plans for the site have been largely implemented by the project partners—the Chengde and Hebei Cultural Heritage Bureaus and the Chinese Academy of Cultural Heritage—with completion expected in 2017.

The China Principles revision workshop in the United States. The workshop explored a wide range of heritage sites, including the 1904 astronomical observatory on Mt. Wilson (left) and memorial sites such as the USS *Arizona* (right), seen here from the deck of the USS *Missouri*. Photos: Neville Agnew, GCI.

PARTNERSHIP: THE MEASURE OF SUCCESS

By every measure, the partnerships established with SACH, and the Dunhuang Academy in particular, have been a sustained success. Collaboration across barriers of culture and language, not to mention distance, is difficult. When Academy director Fan Jinshi was asked what enabled the two organizations to work together for so long, she named common goals, well-defined and clearly stated objectives, a good conservation and management methodology (the China Principles), and the sharing of work. Above all, openness and trust were identified as essentials. Trust is built over time, so new partnerships can be fragile as parties learn about each other and establish a relationship. Critical to the success of any collaboration are the personnel and personalities involved—and in this, the GCI has been very fortunate.

The GCI has also been privileged to have forged and sustained fruitful relationships at both the national and site levels. Zhang Bai, deputy director of SACH, and his successor, Tong Mingkang, have both supported the collaborations on the China Principles, at Dunhuang, and at Chengde. At Mogao, director Fan Jinshi and her successor as of 2016, Wang Xudong, have ensured that the relationship was and is maintained at the highest level. Just as sustainability is important in the relationship, so is stability of partner personnel. A project is unlikely to flourish with frequent leadership and personnel changes. Thus, the leaders mentioned above have been constants in the equation for over twenty-five years.

Relationships have also been sustained through training and capacity building. Advanced training for Academy staff members has taken place at the GCI since 2001, and capacity building for

young and midlevel professionals from SACH has been ongoing since 2007, with visiting staff spending between one and three months at the GCI, undertaking research and working with GCI staff to gain a more nuanced understanding of the GCI and international conservation. The GCI has hosted forty-three visiting professionals from SACH, the Academy, and other institutions in China to date.

A partnership must be a vessel for all the partners. Not all ships complete the voyage, but the best chance for keeping a ship buoyant and on course depends not only on an emphasis on a project's professional and technical aspects but, with equal importance, on attention to the relationship itself.

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CULTURAL HERITAGE **CONSERVATION IN CHINA**

Practices and Achievements in the Twenty-First Century

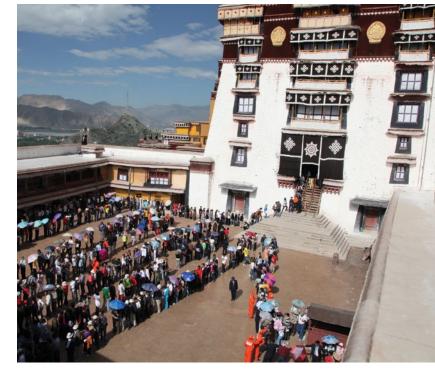
BY TONG MINGKANG

AS AN ANCIENT CIVILIZATION, CHINA ENJOYS A WEALTH OF CULTURAL HERITAGE. The nation's rapid economic growth and social progress in recent decades have presented both challenges and opportunities for the conservation of its heritage resources. Since the beginning of the twenty-first century, cultural heritage conservation in China has experienced vibrant professional development, with new and better practices, greater theoretical work, and increasing exchange and cooperation with the international conservation community.

RECENT PROGRESS

The recent progress in conservation of cultural heritage in China is reflected in the ongoing consolidation of the foundation for its heritage work. China's Third National Heritage Site Inventory, launched in the past decade and lasting four and one-half years, was the largest ever carried out in the country. Special surveys of the Great Wall, the Grand Canal, the Silk Road, and underwater heritage resources were conducted at the same time. As a result of these surveys, the number of registered immovable cultural properties soared from 300,000 to 760,000, while the number of state priority protected sites increased from 750 in 2000 to 4,296 today. In addition, the number of priority protected sites at regional and local levels also increased significantly.

Thanks to recent efforts, a great number of priority protected sites have been effectively conserved with their settings remarkably improved. Valuable experience in protecting cultural heritage in the midst of economic development has been gained through the implementation of conservation campaigns launched at national capital construction sites, including the Three Gorges Dam Project, the South-North Water Diversion Project, and the Project of Gas Transmission from the West to the East. Many important cultural properties have been rescued through major projects for the protection of the Great Wall, the historic buildings prior to the Yuan dynasty in southern Shanxi Province, and the important heritage sites in the Tibet Autonomous Region. Projects for the afterquake rescue and protection of cultural properties in Wenchuan of Sichuan Province and Yushu of Qinghai Province demonstrated the emergency response capability of Chinese conservators to address massive disasters. Foreign aid projects, including the restoration of the entrance area of the Palace of the Bogd Khan in Ulaanbaatar, Mongolia, and the conservation of Chau Say Tevoda and Ta Keo temple of Angkor in Cambodia, showcased the professional ability



of China in the conservation of cultural heritage and the nation's commitment to playing a role in international conservation.

During this period, China has undertaken significant work in the conservation of large-scale archaeological sites and the building of archaeological parks, gaining helpful experience in handling the relationship between urban development and the protection of these sites. Conservation projects and the establishment of archaeological parks at Yin Xu in Anyang, Luoyang City of the Sui-Tang period in Luoyang, Jinsha in Chengdu, and Daming Palace in Xi'an represent new approaches for the protection, utilization, interpretation, and presentation of archaeological sites, incorporating the interests of stakeholders, tourism, and economic growth into conservation. These projects have led to the sustainable development of archaeological heritage and the preservation of cultural diversity, while aiding local communities and generating positive social and economic benefits.

This has also been a period when notable progress was made in the conservation and management of China's World Heritage Sites. In 1985 China ratified the Convention Concerning the Protection of the World Cultural and Natural Heritage. By the end of 2015, forty-eight sites in China had been inscribed on the World Heritage List (China has succeeded in World Heritage nomination for thirteen consecutive years since 2003). This success results from



Honghe Hani Rice Terraces. This cultural landscape in southern Yunnan was inscribed on the World Heritage List in 2013. Photo: Courtesy of the State Administration of Cultural Heritage of China.

the development by the nation of an effective set of mechanisms for nominating, protecting, managing, monitoring, and researching World Heritage Sites. Significantly, awareness of heritage conservation has grown in China, thanks to the spread of World Heritage—related concepts, including outstanding universal value, authenticity, and integrity, as well as practices for protecting massive cultural resources, such as the Great Wall, the Silk Road, and the Grand Canal. Drawing upon these experiences, advanced methodologies and approaches have been applied not only to protect the nation's World Heritage Sites but also to improve the protection of other sites in China.

Since the 1990s—and especially in the last fifteen years— China has been in an active phase of theory development about cultural heritage conservation. Along with a deeper understanding of the conservation concepts of authenticity, integrity, and appropriate utilization, there has been recognition of new types of cultural heritage, which in turn have enriched China's theoretical foundation for conservation. The Notice on Strengthening the Conservation of Cultural Heritage, issued by the State Council of China in December 2005, defines guiding concepts, basic principles, overall objectives, and major measures. Beginning in 2006, the State Administration of Cultural Heritage (SACH) has annually organized the Wuxi Forum on the Conservation of China's Cultural Heritage, focusing on industrial heritage, vernacular buildings, twentieth-century heritage, cultural landscapes, cultural routes, heritage canals, sustainable development of World Heritage Sites, conservation and utilization of cultural heritage, and strengthening the legal system, among other topics.

A number of important international conferences have been convened in China, including the 28th Session of the World Heritage Committee; the 15th General Assembly and Scientific Symposium of ICOMOS; the 2nd International Conference on

Heritage Conservation and Sustainable Development; the International Symposium on the Concepts and Practices of Conservation and Restoration of Historic Buildings in East Asia; the International Symposium on the Conservation of Painted Wood Architectural Surfaces in East Asia; and sessions of the ICOMOS Advisory Committee and Scientific Committee meetings. Out of these gatherings, a series of international documents have been adopted, such as the Suzhou Declaration on Enhancing Youth Education on World Heritage Protection; the Xi'an Declaration on the Conservation of the Setting of Heritage Structures, Sites and Areas; the Shaoxing Declaration on Heritage Conservation and Sustainable Development; the Beijing Document on the Protection and Restoration of Built Heritage in East Asia; and the Beijing Memorandum on the Conservation of Caihua [decorative painting on wood] in East Asia. These international conferences and documents have increased communication and exchange between China and colleagues abroad and have made significant contributions to the enrichment and development of conservation internationally.

MEETING THE CHALLENGES

While China has achieved much in cultural heritage conservation over the last decade, many challenges remain, particularly mass tourism, the effects of climate change, and continuing pressure from development.

To address mass tourism at a national level, in 2013 China promulgated the Tourism Law of the People's Republic of China, which prescribes carrying capacity and management at heritage sites. In addition, SACH organized two major international tourism conferences in collaboration with the Getty Conservation Institute (GCI) and other organizations in 2009 and 2013. The document resulting from the first conference was incorporated into the decisions of the 34th Session of the World Heritage Committee, while

after the second conference SACH issued its Notice on Strengthening Research on Carrying Capacity at Priority Protected Sites as a national policy. The pioneering system of online booking and entry control at the Potala Palace has proven successful and has been applied to many other sites in China. The Dunhuang Academy's new visitor center for the Mogao Grottoes is another good example at the site level of dealing with mass tourism.

To confront climate change, SACH has taken two main approaches: to strengthen sites' defenses against the elements by conservation interventions, and to improve the level of protection by a national campaign of on-site safety and security installations and staff training. Thus far, six groups of state priority protected sites have been subject to these measures. The 2012 Beijing flood, a major disaster made even more severe by climate change factors, tested their effectiveness, and sites that had implemented these measures suffered the least damage. ICOMOS China is currently establishing a national scientific committee on disaster preparedness to advance theory and practice in this area.

Pressure from development is both an opportunity and a challenge. On one hand, development has made more investment in conservation possible. From 2010 to 2015 the overall fund for

heritage conservation reached 140 billion RMB, with an annual increase of 16.5 percent. This investment spurred development in both the practice of and theoretical research on heritage conservation. On the other hand, state capital investment projects (such as the Three Gorges Dam, the South-North Water Diversion Project, and the Project of Gas Transmission from the West to the East) have had major impacts on heritage, and SACH has launched national campaigns associated with these projects to

Shangli Reservoir, Fujian Province. Built in 1925, the site is an example of China's industrial heritage. Photo: Courtesy of the State Administration of Cultural Heritage of China.

rescue heritage resources. Recently, urbanization in the countryside has had great impact on the conservation of historic towns and villages. In this context, SACH has conducted a series of activities, including organizing a conference on the conservation of historic towns at Zhengding, Hebei Province, and promoting the examples of the conservation of historic villages and towns in Anhui and Zhejiang Provinces. ICOMOS China established the Scientific Committee on Historic Towns and Villages last year to address this issue.

Especially noteworthy is the Principles for the Conservation of Heritage Sites in China (the China Principles), developed by ICOMOS China in collaboration with the GCI and the Australian Heritage Commission and approved by SACH in 2000. SACH and GCI have maintained a close partnership for years; a highlight of their cooperation has been the China Principles, a landmark document. This comprehensive summary of practices

of cultural heritage conservation in China has established basic processes and principles, settled some long-existing controversies, improved the level of theoretical studies, set conservation practice standards, and facilitated mutual learning and communication between China and the international conservation community. It therefore has had an extensive and profound impact on the field of heritage conservation both at home and abroad.

With the rapid development of cultural heritage conservation theory and practice in China in the early twenty-first century, it was necessary to revise the China Principles to better respond to new situations. The revision, approved by SACH and co-undertaken by ICOMOS China and the GCI, lasted for four years, and the revised edition of the Principles was released in 2015. The document is more authoritative and forward-looking, with targeted guidelines that incorporate recent achievements in China's cultural heritage conservation. It reflects the knowledge and awareness of China's conservation community about heritage values, conservation principles, appropriate use, and protection of newly defined types of cultural heritage (such as cultural landscapes, heritage routes, and canals). It demonstrates the evolution of conservation attitudes and perspectives: from thinking of heritage sites as places where nothing should

> be changed to viewing them as resources that can be appropriately used to benefit both current and future generations; from caring solely for a site's tangible heritage to also including its intangible heritage and cultural traditions; from considering natural elements of a cultural landscape as solely its setting to treating those elements as integral to the site; and last but not least, from taking a single site approach to developing a serial site approach—moving from viewing a site in isolation to taking comprehensive measures for sites that

are interlinked. Featuring these new elements, the revised edition of the China Principles will play an important role in guiding China's cultural heritage conservation in years to come, hopefully making an important contribution to international conservation.

Since the beginning of the new century, China has emerged as a nation of dynamic development in the field of cultural heritage conservation and an important member of the global cultural heritage conservation system. Moving into the future, China faces significant conservation opportunities and challenges, which will require its continuing vigorous commitment to the preservation of its extraordinary cultural heritage and the ongoing joint efforts with its international colleagues to protect the richness and diversity of human civilization.

Tong Mingkang is president of ICOMOS China and former deputy director of China's State Administration of Cultural Heritage (retired January 2016).

WATCHING OVER DUNHUANG

A Collective Effort



BY WANG XUDONG

THE SILK ROAD DEVELOPED AND THRIVED OVER A PERIOD OF ONE THOUSAND YEARS, resulting in centuries of contact and exchange between Eastern and Western civilizations and peoples. These ancient trade routes also facilitated the development in northwest China of the Mogao Grottoes, a Buddhist site that flourished from the fourth century to the fourteenth century, producing a remarkable collection of Buddhist art. The Buddhist cave temples at Mogao embraced local Han and Jin dynasty artistic traditions while assimilating artistic styles from the Southern and Northern dynasties, as well as the Tang and the Song. The site also incorporated artistic influences from India and Central and Western Asia.

The Mogao Grottoes that visitors behold today displays the journey and development of Buddhist art in China, a record of the history of artistic exchanges between China and regions well beyond its borders. The significance of the Mogao Grottoes and its universal value are reflected in its 1987 listing as a World Heritage Site, meeting all six cultural criteria.

DEVELOPMENT OF THE DUNHUANG ACADEMY

Approximately sixteen hundred years after the first artisans, using hammers, chisels, and other simple implements, began carving cave temples out of the rough cliff face at Mogao-creating a stunning religious realm replete with inspiring wall paintings and sculpture—Chinese scholars and artists rediscovered the site in the first half of the twentieth century. Their interest in the site's preservation led to the establishment in 1944 of the Dunhuang Academy (originally known as the Dunhuang Art Research Institute) to oversee the study and conservation of Mogao. Since

then, the site has undertaken an over-seventy-year journey, led by Chang Shuhong, Duan Wenjie, and Fan Jinshi, and aided by generation after generation of Academy staff contributing to the site's conservation, management, and dissemination efforts.

During the course of this work, the conservation and study of the Mogao Grottoes has been fortunate, gaining the support and interest of many at home and abroad, particularly since the 1980s when the Dunhuang Academy embarked on wide-ranging collaborations both within China and internationally. We have carried out successful joint programs in training, research, site conservation, digitization of the site's art, and dissemination of cultural and educational material on Dunhuang with many international institutions, including the Getty Conservation Institute (GCI), the Tokyo National Research Institute for Cultural Properties, the former Australian Heritage Commission, the Tokyo University of the Arts, the Courtauld Institute of Art in the United Kingdom, and the Andrew W. Mellon Foundation and Northwest University in the United States. The Dunhuang Academy and the GCI have collaborated on the greatest number of and most extensive conservation projects, more than any of our other international partners; this successful partnership has now been recognized as the model for international collaboration by the Chinese government. These collaborative projects have also provided practical models for a range of conservation work at the site and have been utilized in the conservation of many important sites throughout China: in Tibet, Xinjiang, Inner Mongolia, Ningxia, Shanxi, Hebei, and Shandong, among others. The collaboration also provided the Academy with a strong foundation to successfully establish, within its institutional framework, China's National Research Center for Conservation of Ancient Wall Paintings and Earthen Sites.

THE ACADEMY TODAY

The Dunhuang Academy of today has become a comprehensive academic and management organization where conservation, research, and dissemination and education, the three core areas of our work, are undertaken by various sections. The Academy's major responsibilities of conservation and management are reflected in our organizational structure. On the research side, we have established institutes of Conservation, Fine Arts, Archaeology, Documentation, Ethnic Religious Culture, and Heritage Digitization, as well as the Dunhuang Studies Journal Office. For management, administration, and visitor services, we have created the Dunhuang Studies Information Center, the Network Center, the Visitors Center, the Visitor Reception Department, and the Security Section.

The National Research Center for Conservation of Ancient Wall Paintings and Earthen Sites, established at the Academy in 2009, has undertaken projects at the Mogao Grottoes and has assisted with the conservation of ancient wall paintings and earthen structures at many other sites within China. The Center has worked on wall painting conservation projects at the Potala Palace, Sakya Monastery, Norbulingka, and ruins of the Guge kingdom in Tibet; the Yungang Grottoes in Shanxi Province; the Beiyue Temple in Hebei; the Dai Temple in Shandong; and the Maijishan Grottoes, Bingling Grottoes, Tianti Mountain Grottoes, Mati Temple Grottoes, and Shuiliandong Grottoes in Gansu. The National Center also participated in earthen structures conservation projects at the Jiaohe ruins and Beiting ruins in Xinjiang; the Western Xia Tombs in Ningxia; the site of the Yuan capital of Xanadu in Inner Mongolia; and the Yumen Gate, Suoyang ruins, and sections of the Great Wall in Gansu.

The tireless efforts of the early generation of conservators and managers at Mogao have provided the Dunhuang Academy with a strong foundation from which it can continue to expand its domestic and international collaborations. We plan to broaden our horizons through even greater efforts to make our work accessible to others and to work with the general public to galvanize support to conserve and protect this precious site of art and history.

NEW DIRECTIONS

Conservation at Mogao is gradually transitioning from an emergency conservation mind-set to a preventive conservation approach. We are establishing a risk monitoring and early warning alert system based on risk management theories, with routine monitoring, management, and maintenance playing important roles. We are also expediting the Dunhuang Digitization Project. This is an effort to digitally record approximately three hundred of the site's most important cave temples to provide an extensive and precise digital record of the caves, wall paintings, and statuary, insurance against an unforeseen disaster happening at the site. We are also working with Chinese and international colleagues on theoretical and applied research on the conservation of ancient wall paintings and earthen structures and on the management of World Heritage Sites, focusing on cultural properties. We strongly believe these initiatives will play a role in the conservation of China's cultural heritage and of cultural heritage sites elsewhere along the Silk Road.

In order to further Dunhuang Studies, we plan to fully share our digital resources at the site—including the Digital Dunhuang Resources Databank that is currently being created—with academics undertaking research on Dunhuang, both at the Academy and internationally. We will also seek to attract academics from both China and abroad who have expressed an interest in undertaking research in Dunhuang Studies, with a special focus on reaching out to younger academics. This collaboration should result in



Bird's-eye view of the ruins of Jiaohe in Xinjiang. The Dunhuang Academy has participated in conservation of earthen structures at this Silk Road site. Photo: Courtesy of the Dunhuang Academy.



Dunhuang and the Mogao Grottoes gaining a more prominent place in historical studies and will promote a greater appreciation of its contributions to art, culture, and religion. These gains will encourage further research in a variety of disciplines with the objective of attaining an even better understanding of the historic, artistic, and scientific values of this exquisite World Heritage Site.

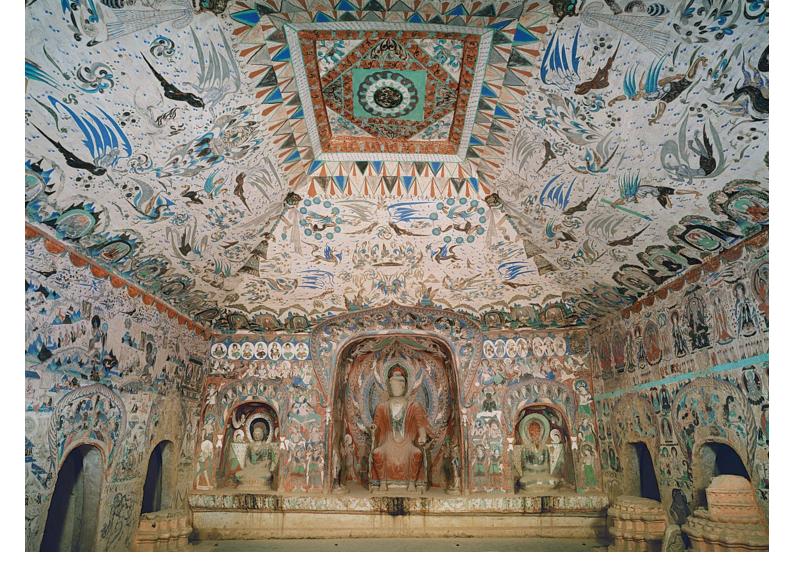
All of this research will make an important contribution to enhancing cultural exchange among different countries, peoples, and religions. The historic international nature of Dunhuangafter all, the town in the age of the Silk Road was a crossroads of cultures, as well as commerce—means that research on Dunhuang Studies must be further internationalized, with the Dunhuang Academy becoming an international base for research into the Dunhuang region and the general conservation of cultural heritage sites. The Academy will provide assistance to Chinese and international scholars, helping them undertake their research in ways that connect their academic studies with their counterparts at the Dunhuang Academy. The Academy is also determined to do what it can to send Chinese academics, particularly young scholars, overseas to study at universities, museums, and institutes in pursuit of their research and to undertake short-term visits and exchanges.

The Academy has established a strong and comprehensive foundation of knowledge and research on the art and conservation of the Mogao Grottoes, forming the basis of our dissemination and public education efforts. We will endeavor to make the best use of our resources to disseminate internationally information regarding Dunhuang culture and arts, so that this cultural heritage site, which truly belongs to all humanity, can contribute to enhancing peaceful development and understanding among nations.

Our approach includes the management of domestic and international visitors at the site according to the principles and notions of responsible cultural tourism. Moreover, the Academy maintains an outreach program, sending staff into schools and communities throughout China to talk about the culture, arts, and preservation of Dunhuang. We also work with our international partners in organizing exhibitions around the world—notably Cave Temples of Dunhuang: Buddhist Art on China's Silk Road at the Getty Center in Los Angeles, organized with our Getty partners and opening May 2016. Finally, in making effective use of the Internet as a tool of dissemination, we will build on the achievements of the International Dunhuang Project, providing the general public with online access to a vast amount of material about—and from—Dunhuang.

In the future, we see both opportunities and challenges for the Dunhuang Academy. We will continue to seek the support and assistance of our colleagues nationally and internationally, as well as members of the public who care about cultural heritage. Over the next ten to fifteen years, the Dunhuang Academy will strive to further solidify its place as an international institution dedicated to the research and conservation not only of Dunhuang, but also of many other cultural heritage sites along the Silk Road, enabling even more people to learn about and appreciate the art of Dunhuang in the context of its place in history. This outreach will undoubtedly enable the Academy to improve its conservation, research, dissemination, and public education work, thereby enhancing visitation and management of the Mogao Grottoes, helping to ensure that coming generations will be able to enjoy and appreciate the site in a condition that reflects its authenticity and integrity.

Wang Xudong is the director of the Dunhuang Academy.



CAVE TEMPLES OF DUNHUANG

The Peerless Caves Come to the Getty

BY NEVILLE AGNEW AND MARCIA REED

ONLY TWO OF CHINA'S FORTY-EIGHT WORLD HERITAGE SITES fulfill all six cultural criteria for inscription on UNESCO's list. The site of the Mogao Buddhist cave temples near Dunhuang is one of them.

Over a quarter century ago, the Getty Conservation Institute (GCI) began what became its longest collaborative relationship, working with the Dunhuang Academy for the conservation and management of the Mogao caves (or "peerless" caves, for that is what mogao means). The focus of work was site conservation and environmental monitoring. Over time, this cooperative endeavor evolved to emphasize policy, site management and master planning, international conferences, visitor capacity research, and implementation of a conservation methodology for the wall paintings in Cave 85—a large Tang dynasty cave afflicted by salt-induced deterioration.

In recent years considerable thought was given to organizing an exhibit whose themes included not only the site and its conservation, but also Mogao's significance as a remarkably intact complex

with architecture, sculpture, and painting, a treasure trove of the first magnitude. Gradually, a core group from within and beyond the Getty came together to focus on mounting an exhibition that displayed the riches of this site both as an important location along the great ancient trades routes known as the Silk Road and—given the growing importance of global art history—as the nexus for diverse cultural exchanges with India, Central Asia, and countries beyond. Previous US exhibitions on Mogao have been more limited in scope and content, and the time seemed ripe for a comprehensive exhibition that would explicate the site's cultural and artistic values for the museum-going public. Enthusiasm for the exhibition grew, and with the essential encouragement of the Dunhuang Academy and the support of the Dunhuang Foundation, the GCI and the Getty Research Institute (GRI) turned the idea into a reality. Whereas other exhibitions have focused on the Silk Road, Cave Temples of Dunhuang: Buddhist Art on China's Silk Road, at the Getty from May 7 to September 4, 2016, places the grottoes in their oasis setting, exhibiting over forty major works of art and devotional objects found at the site—and showcasing decades of conservation achievement.



A Dunhuang Academy artist working on a portion of the wall paintings for the Cave 285 replica. Photo: Courtesy of the Dunhuang Academy

ELEMENTS OF THE EXHIBITION

One of the great archaeological coups of the early twentieth century was the removal from Mogao's tiny Cave 17—initially by Marc Aurel Stein in 1907 and by Paul Pelliot in 1908-of a significant number of ancient manuscripts, silk banners and paintings, embroideries, and documents in many languages, some describing events of daily life in late medieval China. The large cache had been discovered in 1900 by a Daoist priest, the self-appointed guardian of the site. These priceless objects, sealed into what is now known as the Library Cave in the eleventh century for reasons still debated by scholars, were taken to London and Paris. More than forty of the objects have been loaned to the Getty by the British Museum, the British Library, the Musée Guimet, and the Bibliothèque nationale de France for exhibition in the GRI galleries.

Among these gems is a printed copy of the Diamond Sutra from the British Library. The Diamond Sutra is a central text of Mahayana Buddhism and, as such, is not a rarity. This copy, however, is notable for its completeness and the fact that it is exactly dated to May 11, 868; it is believed to be the earliest dated complete printed document yet found. Other exhibited works include paintings on silk and paper, embroideries, banners, and drawings. For instance, the Guanyin Sutra, a tenth-century work of ink and pigments on paper, is a beautiful example of the popular cult in China of the bodhisattva Avalokitesvara, known as Guanyin and

renowned for interceding on behalf of those in danger. The Vimalakirti scripture, depicted in a painting on paper, is another popular Mahayana sutra, recounting the debate between a famously eloquent and wealthy layman, Vimalakirti, and the bodhisattva of wisdom, Manjusri.

A Dunhuang scroll on exhibit, The Magic Competition between Sariputra and Raudraksa, recounts the dramatic contest between a disciple of the Buddha and the leader of the heretics. Three Scenes from the Life of the Buddha, paintings on silk, depict important episodes in the Buddha's life, including two of the scenes, old age and sickness, from the so-called Four Encounters. Another scene, an example of early Chinese landscape painting, displays Siddhartha's departure from his parents' palace to embark on a mendicant's life. The final scene shows the emaciated Buddha in so profound a meditation that a bird has nested upon his head.

Bodhisattva with a Glass Bowl, a ninth-century banner, is an example of an important symbol of Buddhist devotion. The banner's mounting and accessories are among the best preserved from Dunhuang. Two other banners, the Vajrapani Banners, show the fierce protectors of Buddhism who hold the vajra cudgel or thunderbolt. The so-called Mudra Drawings, ink on paper (ca. 851-900), show ritual hand positions used during the performance of rites and incantations; these drawings display forty-nine mudras.

While the preponderance of Library Cave objects and devotional art is Buddhist, other documents bear witness to religious diversity along the Silk Road. Among those exhibited include the Jewish Prayers written in Hebrew from the Book of Psalms and the Chinese Christian Manuscript, which comprises three Christian texts in Chinese, including a version of "Gloria in Excelsis Deo." Attesting to the freedom of passage across Central Asia during the Tang dynasty are Letters of Introduction for a Chinese Pilgrim to India (ca. 900-1000).

In mounting the Cave Temples of Dunhuang exhibition, a challenge was how to comprehensively present the site and its art. Certainly it was imperative to provide selected representations of the magnificent wall paintings from different caves, covering the thousand years from the fourth to the fourteenth centuries over which the caves were excavated and decorated. But to do so at the Getty Center posed practical impossibilities. Not only are the caves located in far northwestern China, but, as they are carved into a cliff face, they cannot of course be transported. Photographic and video representation is a partial solution, and these media indeed play an important role in the exhibit, but a true sense of place is difficult to achieve (although one exhibition component, a "virtual immersive experience," is a state-of-the-art endeavor that attempts to do just that).

The solution was provided by the talented artists of the Dunhuang Academy. Replicas of caves, hand painted using traditional pigments and scaled to original sizes, reproducing the paintings and sculptures in current condition (not as when they were first made, as this would introduce subjective interpretation), afforded an ingenious solution. Academy artists created two new replica caves, Caves 320 and 285, and these, along with a third preexisting replica, Cave 275, have been loaned for the exhibition. The replica



A detail of a printed copy of the Diamond Sutra, 868, ink on paper. British Library. © The British Library Board, Or.8210/P.2

caves, accurate in all detail and significant works of art in their own right, follow the ancient Chinese tradition of copying, or replication, as a means of study and understanding a work of art. The practice of replicating cave art at Mogao began with the founding in 1944 of what is now the Dunhuang Academy. The first two site directors, Chang Shuhong and Duan Wenjie, and their staff were themselves artists who came to study the art, and by copying it they established a tradition that continues to the present.

Work at the Academy on the two new replicas took about three years to complete. Mounted on the arrival plaza at the Getty Center, the replica caves provide visitors with as near an authentic experience as is possible short of traveling the great distance to the grottoes. Cave 275, which dates from the fifth-century Northern Liang dynasty, is one of the early surviving caves at Mogao. While it displays the ravages of time, its beauty and serene Buddha sculpture compel the gaze of the visitor. By contrast, the overwhelming visual richness of the sixth-century Western Wei dynasty Cave 285, with its syncretic religious iconography combining Indian influences with pre-Buddhist ancient Chinese deities, offers a fascinating window on the interaction of cultures and religions. The art of Cave 320, an eighth-century Tang dynasty cave, reflects the sophistication of the Chinese empire at its apogee. A fourth cave with an extraordinary sculptural ensemble, Cave 45, also Tang, is presented using 3-D immersive technology in the GRI's Lecture Hall.

Conservation of the site and its art, particularly the wall paintings, is a cornerstone theme of the exhibition, especially with regard to the conservation of Cave 85, a ten-year project of the GCI and the Dunhuang Academy to research, develop, and implement effective new ways of treating deteriorating walls and reducing harmful salts. Much is known about this large late-Tang cave (constructed between 862 and 867) from the donor portraits on its walls and from Library Cave documents. Wall paintings were created on mud plaster applied to the rock surfaces of the caves, and the making of a wall painting—its materials, pigments, and layered structure—is illustrated in the exhibition. Another

conservation-related aspect of the exhibition is the photographic depiction of the site's pioneering early custodians of the 1940s who determinedly protected Mogao in subsequent decades and laid the foundation for the Dunhuang Academy of today, China's preeminent organization for the study and conservation of wall paintings and the management of sites. Videos about the site in its setting, wall painting and site conservation, and the making of the replica caves provide visual content that enriches the exhibition.

An academic symposium on the Mogao Grottoes is planned in collaboration with the University of California, Los Angeles, dedicated to the life and work of the recently retired third director of the Dunhuang Academy, Fan Jinshi. This event will advance the area of interdisciplinary research known as Dunhuang Studies, which arose from the wealth of material found in the Library Cave. Today Dunhuang Studies is a vibrant international field of scholarship, invigorated by Internet access to the documents and other materials discovered more than a century ago. Public programming for the exhibition comprises a lecture series, film screenings, musical performances, and evening discussions with notable figures in the musical and other performing arts.

AN EXCHANGE OF CULTURES

By considering the past while also looking to the new challenges Mogao faces in the twenty-first century, and by endeavoring to present the artistic richness of the Mogao cave temples in their desert setting, the exhibition strives for a balance among history, art, and conservation. It epitomizes the value of sustained and fruitful collaboration between institutions such as the Dunhuang Academy and the Getty over distance and time. In doing so, the exhibition embraces the spirit of the ancient Silk Road that for millennia served as a conduit for the exchange of cultures, trade materials, and knowledge between the Far East and the West. The routes by which Buddhism diffused into China and beyond can be traced on the exhibition's large-scale map marking cave temple sites such as Kucha, Bezeklik, Maijishan, Yungang, and others located across the immense distances. Most remarkably, all lead to and from the peerless cave temples of Mogao.

Neville Agnew is a GCI senior principal project specialist. Marcia Reed is the GRI's associate director for Special Collections and Exhibitions. They, along with Mimi Gardner Gates and Fan Jinshi, are the exhibition's curators.



AN EVOLUTION IN VALUES

A Discussion about Cultural Heritage Conservation in China

FAN JINSHI is the director emerita of the Dunhuang Academy. For over five decades she has dedicated herself to the archaeological study, conservation, and management of the grottoes of Dunhuang. She was appointed deputy director of the Dunhuang Academy in 1984, executive deputy director in 1993, and director in 1998. She compiled and edited the twenty-six-volume Complete Collection of Dunhuang Grottoes and has authored more than a dozen publications and papers on the grottoes of Dunhuang.

ZHENG JUN is director of the secretariat of ICOMOS China. Prior to joining the secretariat, he participated in a number of conservation projects in China, including the joint Dunhuang Academy-Getty Conservation Institute project for conservation of Cave 85 at the Mogao Grottoes. He has also been active in the revision of the Principles for the Conservation of Heritage Sites in China.

LU ZHOU is professor of conservation and the director of the National Heritage Center of Tsinghua University. A vice president of ICOMOS China, he received the 2013 ICCROM Award in recognition of his contributions to cultural heritage conservation in China, where he has overseen numerous cultural heritage projects. He was instrumental in the development of the revised version of the Principles for the Conservation of Heritage Sites in China.

They were asked by JEFFREY LEVIN, editor of Conservation Perspectives, The GCI Newsletter, to address a number of questions about conservation in China.

JEFFREY LEVIN What are the major issues China faces regarding the conservation and preservation of its cultural heritage?

FAN JINSHI Many people do not have sufficient respect for cultural heritage, do not understand its value and significance, and do not appreciate the importance of its conservation. There is also a lack of awareness of the laws protecting heritage, and these laws are not fully implemented. As a result, heritage can be improperly administered. Since China's reform and opening to the West, the nation has experienced rapid economic development and urbanization, which pose severe challenges to and pressure on cultural heritage. Some heritage has been damaged, and some has even disappeared. There is a great deal of commercialization and urbanization around heritage sites, and if these locations are managed by

commercial enterprises, there can be predatory operations and overexploitation, creating even more problems for their conservation.

ZHENG JUN The two most challenging and pressing issues are building a corps of trained professionals and mass tourism. The growth of the professional conservation community has fallen behind the rapid increase in the demand and investment for heritage conservation and management. In the past fifteen years, the number of registered heritage sites increased from around 30,000 to over 766,000, while state priority protected sites grew from 750 to nearly 4,300. Some of these sites are huge. The Great Wall is over 21,000 kilometers long, while the Grand Canal runs through eight provinces. The larger the site, the more demand for conservation and management. In addition, conservation work has multiplied. In the past, conservation focused on structural stabilization and environmental improvement. Now, conservation planning, safety and security installations, disaster preventive measures, monitoring, and interpretation and presentation are essential parts of conservation. Keeping pace with this demand is the growth of government investment in heritage conservation. In the past five years, government funding was 140 billion RMB or around 20 billion USD. In contrast to these increases is the slow growth of the conservation and management community. By the end of 2015, conservation institutions and companies qualified to work at state priority protected sites were just over 200, while individuals qualified to manage conservation projects at these sites were fewer than 3,600. Capacity building is the most pressing issue for the next decade or so.

With mass tourism, the gap between the demand and the limited carrying capacity of heritage sites is increasing. In the past fifteen years, the number of tourists in China went from under a billion to over four billion. At the same time the number of state priority protected sites—the highest level of designation—has grown significantly. Most of these sites, however, were already open to visitors prior to entering the national list, and thus the total carrying capacity of heritage sites has not actually increased. Along with adopting sustainable development and striving for quality in the visiting experience, more and more site managers have taken strict control of visitor numbers, as at Potala Palace in Lhasa, Tibet. Many site managers have explored ways to increase carrying capacity—for example, by opening more space at the Palace Museum in Beijing or increasing the flow rate at the Mogao Grottoes. While these efforts offer improvements, they cannot



In today's China, many have recognized that we need cultural as well as economic and social development.

FAN JINSHI

fundamentally change the situation. Given that some sites have too many visitors while some have too few, solving this problem may depend greatly on regional government planning.

LU ZHOU An understanding of heritage value is a key issue. Before 2000 art and history were considered the main values of heritage. For these values, heritage is testimony to artistic development and historic events, and conservation meant maintaining material authenticity. With increased economic development, people now pay more attention to protecting vernacular architectural heritage and historic areas. In some instances, local authorities have relocated local people and transformed the function of their homes from residential to commercial for tourism purposes, resulting in a loss of local culture and tradition. With the international movement to safeguard cultural diversity, the value of both tangible and intangible heritage is emphasized. The understanding of cultural value is an important step in improving China's heritage conservation and management. Although there is still a lot of debate regarding the cultural and social value of heritage, this broader understanding has affected conservation and management practice in China.

LEVIN What has been the impact of development on the country's archaeology, both buried and exposed?

Protecting archaeological sites—especially sites of ancient cities such as Xi'an, which are large-scale archaeological sites—is an important issue. During the process of urbanization, undeveloped land is one of the most valuable resources for cities. The pressure of urbanization creates a great need for the protection of archaeological sites. Since 2012 the establishment and development of archaeological parks has been the way to address this. Showing the social value of archaeological sites becomes a powerful tool for their protection. Creating archaeological parks is a way to reduce development pressures and is welcomed by local authorities and residents.

ZHENG Development in China has had three major impacts on archaeology. First, major national infrastructure construction projects—such as the Three Gorges Dam Project, the South-North Water Diversion Project, and the West to the East Gas Transmission Project—have led to many rescue campaigns. With the Three Gorges Dam Project, thousands of archaeologists investigated the flood area. More than 700 conservation projects for sites to be submerged rescued over 250,000 objects. Some projects resulted in technological advancement. For example, the Baiheliang Underwater Museum —a rock at the bottom of the Yangtze River on which hydrological records of over twelve centuries were cut—was protected in situ, maintaining its authenticity of location and its visibility as well. The lifting of the Yuzhen Palace at Wudang Mountain, which would have been submerged by the South-North Water Diversion Project, was another successful effort to save a site. Second, a large number of important archaeological sites have been discovered during the legally required investigations associated with construction work. The Jinsha Site of the ancient Shu State was discovered during such an event in Chengdu, Sichuan Province. The original construction project was relocated to allow construction of an on-site museum to protect the discovery. Third, the protection of large-scale archaeological sites and construction of national archaeological parks have made these places more understandable and accessible to the public and have brought economic benefits to local communities, offering employment, tourism income, improved environmental quality, and increased land value.

FAN Both the investigation of buried archaeological sites and research on exposed archaeology have benefited from recent developments in techniques and equipment for conservation. The application of surveying technology for spatial information has made clear the scope of buried heritage and provided relatively accurate, comprehensive, and visual information about their settings. The use of monitoring and analysis methods involving a variety of technological measures has made it possible to extract and preserve information from unexcavated sites. These developments have deepened our understanding and research of archaeological sites.

LEVIN How well is authenticity being preserved with respect to China's built heritage?

FAN The preservation of the authenticity of cultural heritage varies considerably in different sites. It is possible that only a few cultural heritage sites are managed strictly according to the Law of the People's Republic of China on the Protection of Cultural Relics and the World Heritage Convention. Improper development and use of cultural heritage under the management of local governments will affect preservation of a site's authenticity and make it difficult to preserve.

ZHENG In general, the authenticity of the state priority protected sites has been well preserved, thanks to the national policy throughout recent history. As early as 1932, Liang Sicheng, the pioneer of Chinese heritage conservation, held that the best way to protect a historic building was to preserve it in its "current condition," which can be understood as the earliest principle of protecting authenticity in China. This idea was elaborated upon in national policy papers in the 1950s and 1960s. In 1982, when the first Law of the People's Republic of China on the Protection of Cultural Relics was issued, the principle of maintaining the historic condition of heritage sites retaining the authenticity of a site—was prescribed. Because the term "historic condition" leaves room for different interpretations, the first version of the Principles for the Conservation of Heritage Sites in China—the China Principles, issued in 2000 by ICOMOS China, and approved by China's State Administration of Cultural Heritage (SACH)—made this explicit. This clarified the long debate on "historic condition" and was fully adopted in the revised version of the China Principles. Conservation practice in China has been guided by these principles through a long-established professional consultation system, in which retaining authenticity has been essential for assessing conservation plans, project design, implementation, and acceptance. Along with recent developments in conservation theory, not only is the authenticity of physical remains now conserved, but also that of intangible aspects—the authenticity of use, function, spirit, and traditions is also retained.

LU Built heritage can be divided into two parts: monuments and living heritage. For monuments, as a testimony of human creativity and history, the main values are artistic and historic. The material authenticity is the most important thing for this heritage. If the material authenticity is lost, the monument loses its value as testimony. With living heritage, it is still in the process of creating its values. Its authenticity lies in its cultural spirit and character. Living heritage is connected with a living cultural context, and its main values are cultural and social. What is important to maintain is the cultural tradition.

LEVIN What degree of awareness and support among the public is there for the preservation of cultural heritage?

LU The public includes a wide and complex set of groups, and the degree of awareness of the value of cultural heritage varies from group to group. Generally, people understand the value of cultural heritage and see the need to protect it, at least in a theoretical sense.

FAN Even without a general survey, it can be judged that the awareness and support among the public for the preservation of cultural heritage has greatly increased. We have seen that in visitor

surveys we have done at the Mogao Grottoes and in comments in the media and on the Internet.

ZHENG While there is no statistic on this, in my experience public awareness and support for heritage conservation have increased. In recent years I have seen many volunteer groups formed to protect heritage sites. Ai Ta Legend is a group of architects that organizes trips to villages in Shanxi Province—the province with the most historic buildings preserved—to document buildings and to assess their state of conservation, with reports given to the local government. On Gulangyu Island in Fujian Province there is a volunteer group of residents that seeks to raise awareness among other residents of heritage value and of the necessity for conservation. In the World Heritage nomination process for the Honghe Hani Rice Terraces in Yunnan Province, local people were enthusiastic. Surveys showed that they not only saw World Heritage status bringing them economic benefit, but, more importantly, they were proud that their heritage was recognized by the international community as having values comparable to the Great Wall in China and the pyramids in Egypt. Similarly, during the process of listing the seventh batch of national priority protected sites, many people from Zhejiang Province came forward to nominate their home village. Two decades earlier, the attitude in the region was the reverse. This change is due partly to promotion by the government and partly to the efforts of NGOs and the media. Starting in 2006 the second Saturday of June was officially declared National Cultural Heritage Day by the State Council. ICOMOS China has been promoting the International Day on Monuments and Sites on April 18 every year, while ICOM China does the same for International Museum Day on May 18. Using heritage as a driver for sustainable development, World Heritage nominations also contribute to raising awareness and gaining public support.

LEVIN What is the significance of the evolution of heritage categories in China?

LU The World Heritage List greatly influenced the evolution of heritage categories in China. From 2006 to 2012 the Chinese government organized the cultural heritage Wuxi Forum, which focused on new categories of cultural heritage, such as cultural landscapes, cultural routes, twentieth-century built heritage, vernacular heritage, and industrial heritage. These heritage categories help people better understand the value of heritage and emphasize the connection of cultural heritage to its natural setting. For example, the 2009 nomination of Mount Wutai as a World Heritage Site emphasized its value as a holy mountain for Buddhism and the continuity of Buddhist beliefs. West Lake and Honghe Hani Rice Terraces emphasized the impact of culture on nature. Silk Roads: the Routes Network of Chang'an-Tianshan Corridor, which includes twenty-two sites in China, emphasized cultural exchange and development. The evolution of heritage categories not only improves understanding of heritage value but also enhances the management system, building cooperation

between different local governments and all stakeholders. It also expands the boundaries of heritage to more closely connect heritage preservation to sustainable development.

FAN The evolution of heritage categories has been very important. It can deepen the investigation, research, and conservation of different kinds of cultural heritage and further promote the preservation of each subcategory of similar cultural heritage. Classifying cultural heritage into different categories is a more scientific approach that can improve heritage management and gradually upgrade conservation work.

ZHENG One can see the evolution of categories of cultural heritage in China in the seven batches of state priority protected sites listed by the State Council since 1961. In the first batch were the most renowned sites in China. In 1982 sites of scientific interest, such as Dujiangyan-a still-functioning irrigation system that transformed Chengdu Basin into one of the richest agricultural lands in China two millennia ago-were listed. In 1988 Lingqu Canal was the first canal to be listed. In 1996 the first oil well in China was listed as the first industrial heritage site of the modern era. Also, shared built heritage such as the Bund in Shanghai and Shamian Island in Guangzhou were listed. In 2001 the first nuclear weapon research base was listed. In 2013 Honghe Hani Rice Terraces—a cultural landscape—were listed. The significance of this evolution is multifaceted. Perhaps the biggest impact is in conservation and management, which can be summarized as follows: Heritage sites are no longer seen solely as examples of the past and used by experts for reconstructing the past. Instead, they are perceived as a resource that can be sustainably used to benefit current and future generations. Conservation and management are no longer run by SACH alone, but by SACH jointly with other governmental sectors and the public. There is a shift from conserving important sites to conserving historic environments to provide society with a sense of continuity and stability in rapidly changing times. There is also a shift from the single site management approach to a serial site management approach.

LEVIN How well have cultural heritage managers at sites with both natural and built heritage handled their roles?

FAN These cultural heritage managers have handled their roles very differently. Generally speaking, the managers are not well educated, and their management skills are not sufficient.

LU The new categories of heritage, such as cultural landscapes, demand that heritage site managers have the knowledge and skill to protect both cultural and natural heritage. In China generally, people in the cultural heritage field have a different educational background than professionals in the field of nature heritage management. Capacity building is needed. Also needed is greater cooperation between the different government bodies that are in charge of cultural and natural heritage.

ZHENG There are three major types of heritage sites that have both cultural and natural elements: historic gardens, scenic spots, and cultural landscapes in the World Heritage context. For the first two, their function, defined in 1951, was to provide leisure and enjoyment for people. Their historic value had not been fully recognized, and many historic gardens now look like public playgrounds. At these sites, the managers need to reassess the site's values to reflect their historic value. For cultural landscapes, a concept that was introduced with World Heritage listings, the multifaceted values of these sites have been better articulated.

LEVIN What are the current challenges for site managers—and what challenges will they face in the future?

LU To improve the management of heritage sites, the staff is always key. So their training and morale are the most important things. Sufficient financial support for their work, as well as increasing their income and training, can help. The impact of raising community support is just now being felt in China.

FAN The conservation and management of heritage sites is seriously underfunded. The Law of the People's Republic of China on the Protection of Cultural Relics specifies that revenue from each heritage site should be devoted to its conservation and management. However, the funds for most heritage sites, especially those managed by county-level governments, are not guaranteed. At many heritage sites, especially the county-level ones, insufficient attention is paid to staff training, thus a chance is lost to improve staff conservation capability and management capability. Because of ideology and local financial problems, local governments usually pay more attention to the use and development of heritage sites than to their conservation and management. The problem of uneven tourism at different cultural heritage sites remains unsolved, with an adverse effect on both conservation and tourism. It is complicated to deal with this issue, and it won't be solved if great efforts are not made to understand the problem and carry out comprehensive research on how to manage it.

ZHENG The two major challenges for site managers are capacity building and funding daily maintenance. The majority of protected sites in China have limited staff resources. While they are not required to undertake major conservation intervention at their sites, they should be able to carry out adequate maintenance and monitoring and report significant problems to authorities in a timely manner. To do so, the staff needs substantial training, which is not the situation at most sites. Lack of funds for daily maintenance has been a problem for a long time. With the country's strong economic development, funding for major conservation interventions is often easy to obtain. However, funds for daily maintenance are not included in government budgeting for conservation, and therefore these funds have to be raised by site managers. For sites without many alternative incomes other than government investment, this is a serious challenge for site managers. Still, I do believe that in the future more money will be put into heritage conservation, capacity building will improve,



There is a shift from conserving important sites to conserving historic environments to provide society with a sense of continuity and stability in rapidly changing times.

ZHENG JUN

more public support will be gained, and the impact of tourism will be better managed with a more balanced distribution of visitor loads.

LEVIN Where do you see the preservation of cultural heritage in China in fifty years? China has always been aware of its own importance as a nation, but will this sensibility be strong enough to help preserve the country's rich cultural heritage?

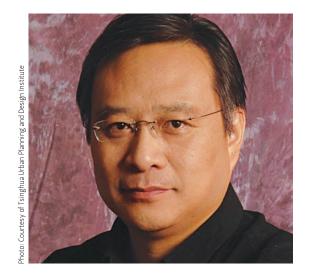
FAN Generally speaking, central government leaders in China have always attached great importance to the conservation of cultural heritage. Laws and regulations for the conservation of cultural heritage have been prepared and promulgated, including the Law of the People's Republic of China on the Protection of Cultural Relics, and administrative offices from central to local levels for cultural heritage management have been established. Lists of cultural heritage at different levels—national, provincial, municipal, and county—have been confirmed and issued, and administration measures for cultural heritage have been developed and implemented. During the past twenty years, administrative institutions in charge of heritage sites have developed conservation management plans, and a lot of rescue work, stabilization, and restoration of heritage has been done. To further improve preventive conservation and reduce risk, modern technologies have been used to guard, monitor, and analyze heritage. Scientific conservation research has been carried out, and conservation training is underway. In today's China, many have recognized that we need cultural as well as economic and social development. Today, more and more Chinese are concerned about the cultural heritage, but it will take some time for the necessary changes to occur.

ZHENG Over the next fifty years, heritage conservation will become increasingly important in China. As a result of continuous efforts of the Chinese government and NGOs to promote heritage conservation, awareness and support from the public will improve, and public participation will be broader. At the same time, along with social development, public demands regarding culture will rise. Younger generations are growing up in a more cultural environment. In schools, more emphasis is put on teaching classical texts, cultural traditions, and old rituals. More museums and heritage sites are doing better at interpreting culture for children. These generations will be more interested in cultural heritage and thus pay more attention to its conservation than did their parents. The cultural industry boom is a boost to heritage conservation, with more money put into conservation by the cultural industry sector.

LU Preservation has become more important in China. Before 2000 it was primarily a government duty and a technical effort. Now it is considered an important social issue. Before 2000 most people thought of preservation as dealing with ancient things, but more people today understand that preservation is important for the quality of life and for improving the living conditions of common people. More and more people are participating in the preservation of heritage.

In China, heritage preservation has proceeded in two parallel directions. One is conservation of monuments-important historic buildings—to protect the testimony of history. The other is the protection of cultural diversity, including local and national diversity. There are fifty-six nationalities in China, and the protection of cultural diversity is now national policy. Since the 1990s protection of the vernacular heritage of many nationalities has been undertaken. In 1994 the Historic Ensemble of Potala Palace was inscribed as World Heritage. Following that, the Old Town of Lijiang, Honghe Hani Rice Terraces, and Tusi Sites have been listed as World Heritage. Also on tentative lists for World Heritage are the Ancient Tea Plantations of Jingmai Mountain in Pu'er, Dali Cangshan Mountain and Erhai Lake Scenic Spot, Diaolou Buildings and Villages for Tibetan and Qiang Ethnic Groups, Dong Villages, Fenghuang Ancient City, and Miao Nationality Villages in Southeast Guizhou Province. In 1998 cooperation between the Chinese and Norwegian governments initiated a project to build an eco park in Guizhou Province to protect local culture.

LEVIN The China Principles have just been revised, and new categories of heritage have been added. What is the potential impact of the revised version on site conservation and management?



The understanding of cultural value is an important step in improving China's heritage conservation and management.

LU ZHOU

FAN The revised edition was very necessary. It adjusts chapters of the original 2000 edition and adds a chapter on use of heritage sites. Such adjustments accord with the present state of cultural heritage work and the challenges facing heritage sites in China. These adjustments are necessary for changing the previous practice of valuing use more than management and for enhancing the management of sites, and they highlight that management is important for improving cultural heritage preservation efforts in the future. In short, the revised Principles for the Conservation of Heritage Sites in *China* improved and deepened the content of the original.

ZHENG Three types of heritage sites were added in the revised China Principles: cultural landscapes, cultural routes, and heritage canals. All are serial sites, meaning that their value is larger than the sum of all their component parts, and that damage to any individual part threatens the whole. This has impact on three areas. First, individual sites should be placed under an overall framework for their conservation, management, and interpretation, with an emphasis on their contribution to the value of the entire site. This requires the establishment of an overall management mechanism, conservation planning for the entire site, and coordinated actions among all individual sites. Second, the level of conservation of individual sites should be maintained to a relatively constant standard to ensure that no site is left in poor condition. This requires regular staff training and exchange among individual sites. Third, interaction between governmental sectors and the public is essential, as these sites often have a broad spectrum of stakeholders.

In addition to these impacts, each category has its own requirements. Cultural landscapes reflect interaction between humans and nature, and therefore the natural element of a heritage site should not be treated simply as setting, but as an integral part. A good example is the Ming Tombs site outside Beijing. It is the special feng shui of this particular area that prompted the Ming emperors to choose it as the royal burial place to prolong the dynasty. Daminglu—The Law of the Great Ming Empire—was issued to protect the feng shui of the royal tombs accordingly. Such feng

shui is an integral part of the site and deserves the same level of protection as the tombs. Some cultural landscapes are the product of intangible heritage, and their conservation is dependent on sustaining it. The beautiful landscape of Honghe Hani Rice Terraces is the product of local farming. As long as this way of farming is maintained, the landscape will be there. As for cultural routes, they reflect not just an exchange of goods, but, more importantly, interaction among cultures. The key is to conserve the physical remains while telling the story of cultural exchange along the route. And heritage canals typically demonstrate historical technological and engineering achievements, as well as cultural exchanges.

LU The revised China Principles are based on the practice of Chinese cultural heritage conservation, especially after 2000. The addition of new categories of cultural heritage is key to promoting the development of cultural heritage conservation in China and is considered a transition from "cultural relics" to "cultural heritage." The first China Principles were based on the challenges of the 1990s, focusing on built heritage and archaeological sites. They connected Chinese conservation to international practice. Since 2000 the national conservation budget has increased tremendously, and many important conservation projects have begun. Chinese practice after 2000 contributed to the China Principles revision: conservation and management master planning benefits the discussion of heritage value, authenticity, and integrity; built heritage conservation benefits the discussion of authenticity; conservation of archaeological sites benefits discussion of setting and interpretation; conservation of cultural landscape and vernacular heritage benefits discussion of integrity of immovable heritage and cultural tradition as well as the methodology of safeguarding living heritage; conservation of industrial heritage and modern architectural heritage benefits discussion of reuse; and conservation of architectural painting and wall painting benefits discussion of technology and material. The revised 2015 China Principles are a summary of current Chinese conservation practice and an important guide for conservation and management going forward.

KEY RESOURCES CONSERVATION IN CHINA



For links to the resources listed below, please visit http://bit.ly/keyresources_31_1

ONLINE RESOURCES, **ORGANIZATIONS & NETWORKS**

Beijing Cultural Heritage Protection Center (CHP) is an NGO devoted to urban historic districts, particularly in Beijing, and the role of communities in heritage protection.

The Dunhuang Academy website offers panoramas of the site, virtual cave tours, and images and descriptions of selected caves.

The Getty Conservation Institute. Project websites have information and publications about the projects on the China Principles, the Mogao Grottoes, and Shuxiang Temple, Chengde.

World Heritage Institute of Training and Research for the Asia and the Pacific Region (WHITR-AP) provides news items and a newsletter on World Heritage-related events, training courses, and workshops.

BOOKS, JOURNALS & CONFERENCE PROCEEDINGS

Art of Merit: Studies in Buddhist Art and its Conservation: Proceedings of the Buddhist Art Forum 2012 by David Park, Kuenga Wangmo, and Sharon Cather (2013), London: Archetype Publications.

"The Begetting of Charters: Genesis of the China Principles" by Neville Agnew, Martha Demas, Sharon Sullivan, and Kirsty Altenburg, in Historic Environment 18, no. 1 (September 2004), 40-45.

Chengde Shu xiang si ping gu bao gao = Assessment Report on Shuxiang Temple, Chengde by Chengde Cultural Heritage Bureau, Hebei Cultural Heritage Bureau, and Getty Conservation Institute, rev. ed., 2 vols. (2009), Los Angeles: Chengde Shi wen wu ju; Getty Conservation Institute.

"China's Architectural Heritage Conservation Movement" by Guangya Zhu, in Frontiers of **Architectural Research** 1, no. 1 (2012), 10–22.

"Choice of Materials for the Conservation of Wall Paintings on Earthen Supports in China" by Jun Zheng, in The Conservation of Decorated Surfaces on Earthen Architecture: Proceedings from the International Colloquium Organized by the Getty Conservation Institute and the National Park Service, Mesa Verde National Park, Colorado (September 22-25, **2004)**, edited by Leslie Rainer and Angelyn Bass Rivera (2006), Los Angeles: Getty Conservation Institute, 99-109.



The Conservation of Cave 85 at the Mogao Grottoes, Dunhuang, edited by Lori Wong and Neville Agnew (2013), Los Angeles: Getty Conservation Institute.

"Developing New Approaches to the Conservation of Qing Dynasty Painted Architectural Decoration at Shuxiang Temple, Chengde" by L. Wong, H. Li, C. Qing, and H. Yuan, in ICOM-CC 15th Triennial Conference Preprints, New Delhi, 22-26 September 2008, edited by J. Bridgland (2008), New Delhi: Allied Publishers Pvt. Ltd.

"Facing the Past in China: Contemporary Challenges of Architectural Conservation" = 面對中國的過去:當前建築修護的挑戰 by Martha Demas, Lori Wong, Neville Agnew, Linli Li, Dong Chen, and Qing Chen, in Contributions to the Hong Kong Congress: 22-26 September 2014: An Unbroken History: Conserving East Asian Works of Art and Heritage, edited by Austin Nevin, Joyce H. Townsend, Shayne Rivers, and Barry Knight, Studies in Conservation 59, Supplement 1 (2014), S32-S35.

Heritage Management, Tourism, and Governance in China: Managing the Past to Serve the Present by Robert J. Shepherd and Larry Yu, SpringerBriefs in Archaeological Heritage Management (2013), New York: Springer.

International Principles and Local Practice of Cultural Heritage Conservation: Conference Proceedings (Beijing, May 5th-6th, 2014) by Tsinghua University (2014), Beijing: National Heritage Center of Tsinghua University; ICOMOS China.

Law of the People's Republic of China on **Protection of Cultural Relics** by People's Republic of China, 1982; amended 1991, 2002, 2007.

Liang and Lin: Partners in Exploring China's Architectural Past by Wilma Fairbank (1994), Philadelphia: University of Pennsylvania Press.

"Planning for Conservation of China's Prehistoric Sites: The Liangzhu Site Case Study" by Tongbin Chen, in *Of the Past*, for the Future: Integrating Archaeology and Conservation, Proceedings of the Conservation Theme at the 5th World Archaeological Congress, Washington, D.C., 22-26 June 2003, Getty Conservation Institute Symposium Proceedings Series, edited by Neville Agnew and Janet Bridgland (2006), Los Angeles: Getty Conservation Institute, 286-90.

Principles for the Conservation of Heritage Sites in China = Zhongguo wen wu gu ji bao hu zhun ze (Revised 2015) by ICOMOS China, English translation edited by Neville Agnew and Martha Demas (2015), Beijing: Wenwu Press.

Report to APEC on the International Workshop: Advancing Sustainable Tourism at Cultural and Natural Heritage Sites (Mogao Caves World Heritage Site, China, 26-29 September 2009) by APEC Tourism Working Group (2010), Singapore: Asia-Pacific Economic Cooperation Secretariat.

Strategies for Sustainable Tourism at the Mogao Grottoes of Dunhuang, China by Martha Demas, Neville Agnew, and Jinshi Fan, SpringerBriefs in Archaeological Heritage Management (2014), New York: Springer.

Sustainable Tourism Management at World Heritage Sites: Enhancing Inter-agency and Stakeholder Coordination for Joint Action (International Conference, Huangshan, China, 24-27 March 2008) by World Tourism Organization (2009), Madrid: World Tourism Organization.

Tourism Law of the People's Republic of China by People's Republic of China, adopted at the 2nd session of the standing committee of the 12th National People's Congress on April 25, 2013.

"Valuing the Past in China: The Seminal Influence of Liang Sicheng on Heritage Conservation" by Guolong Lai, Martha Demas, and Neville Agnew, in *Orientations* 35, no. 2 (2004), 82-89.

For more information on issues related to conservation in China, search AATA Online at aata.getty.edu/home/



The November 2015 MEPPI workshop in Beirut. Photo: Tram Vo, GCI.

GCI News

Project Updates

MIDDLE EAST PHOTOGRAPH PRESERVATION INITIATIVE

The photographic legacy of the Middle East and North Africa is a unique record of the cultural and historical milestones that have shaped this region since the nineteenth century. To support preservation of this heritage, the Getty Conservation Institute, the Arab Image Foundation, the University of Delaware, and the Metropolitan Museum of Art developed the Middle East Photograph Preservation Initiative (MEPPI), a strategic effort to build the regional capacity of individuals and institutions to care for and manage photograph collections. Since 2011, MEPPI has offered a series of workshops, coupled with distance mentoring, for seventy-three participants from fifty-two institutions, representing

collections in Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia, Turkey, the United Arab Emirates, and Yemen. MEPPI is supported in part by the Getty Conservation Institute and the Andrew W. Mellon Foundation.

After concluding its first round of training in 2014, MEPPI launched a series of workshops for alumni who completed one of the MEPPI courses offered between 2011and 2014 and who remain active in photograph preservation. Building on the earlier courses, the two new workshops—on the environment and exhibition of photograph collections and on digitization will provide MEPPI alumni an opportunity for more in-depth learning and further development of practical skills.

The first environmental workshop was offered in November 2015 (Beirut), and the second will be offered in October 2016 (Istanbul). Topics covered in the 2015 workshop included environmental impacts on photographs, condition assessments, environmental monitoring and control options, selecting and creating enclosures, cold storage, preservation concerns of exhibition, lighting, and mold management.

Instruction was in the form of lectures, case studies, practical exercises, discussions, and visits to photograph collections.

The first two digitization workshops will be offered in May 2016 (Beirut). Topics include understanding quality issues of digital reproductions, quality control and image processing, choosing and evaluating equipment, and file and metadata management.

The long-term sustainability of MEPPI's efforts depends on wider recognition of the value of photograph collections and a commitment to their preservation from directors, policy and decision makers, scholars, and others with an interest in, or responsibility for, the region's photographic heritage. For this reason, MEPPI will organize a 2017 symposium to highlight the region's photograph collections and consider priorities for future preservation efforts at institutional and governmental levels. Attendees are expected to include directors of institutions participating in MEPPI; representatives of governmental entities, such as ministries of culture, education, and antiquities; and museum and library personnel, as well as MEPPI alumni.

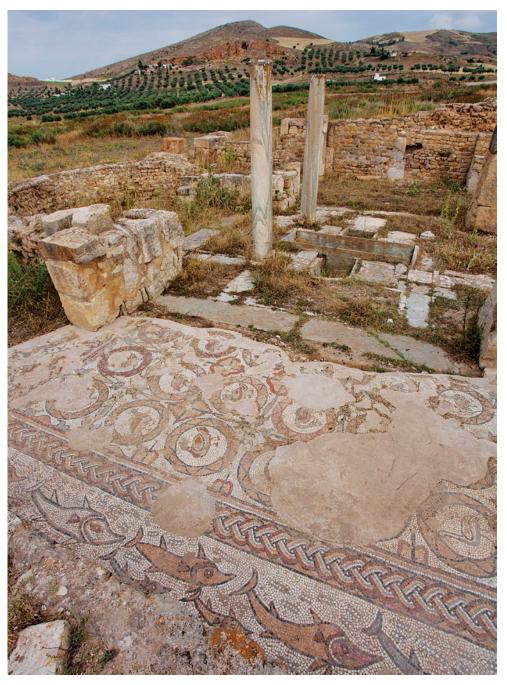
MOSAIKON

The MOSAIKON initiative recently convened its third Regional Advisory Meeting, held in Venice in January 2016. With funding from the Getty Foundation, representatives from Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Tunisia, and Turkey joined the MOSAIKON partners to discuss the state of the initiative, its achievements since the project began in 2008, and methods for ensuring the long-term sustainability of its outcomes. The results and recommendations of this meeting will guide MOSAIKON work over the next several years.

MOSAIKON is a strategic, regional initiative that aims to improve the conservation, presentation, and maintenance of archaeological mosaics in the southern and eastern Mediterranean region through capacity building, professional networks, model projects, and dissemination of information. It is a partnership of the GCI, the Getty Foundation, ICCM (International Committee for the Conservation of Mosaics), and ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property).

The Mediterranean region possesses an incredibly rich mosaic heritage, both in situ in archaeological contexts and in museums and storage. This mosaic heritage is at greater risk than ever because of neglect and lack of maintenance, scarcity of resources and adequately trained personnel, unenforced or ineffective policies and management, and, currently, civil unrest, looting, and intentional destruction. MOSAIKON has been instrumental in trying to address some of these issues, through a number of interrelated projects and activities led by the different partner institutions.

In addition to leading various training projects, the GCI has partnered with the Institut National du Patrimoine of Tunisia and World Monuments Fund to develop a model conservation project at the site of Bulla Regia in northwest Tunisia. In the framework of the MOSAIKON initiative, this project aims to demonstrate best practices in mosaic conservation, utilizing locally available materials and a team of Tunisian mosaic conservation technicians previously trained by the GCI. The GCI is also developing a long-term conservation plan and program for all of the site's mosaics, which will serve as a model for similar sites in the region. This project is being highlighted in the Getty Villa exhibition, Roman Mosaics Across the Empire, which opened in March 2016.



A mosaic in situ at the site of Bulla Regia in Tunisia. Photo: Scott S. Warren, for the GCI.

Recent Events

MODERN AND CONTEMPORARY **ART SYMPOSIA**

An important aspect of the GCI's Modern and Contemporary Art Research Initiative is engaging in discussion and dissemination within the profession and the public via conferences and symposia. To this end, the GCI organized three events in fall 2015.

In October the GCI partnered with the University Art Museum at California State

University, Long Beach (CSULB) and the Museum of Latin American Art in Long Beach to present "FAR-SITED: Creating and Conserving Art in Public Places," a three-day conference examining the creation and conservation of public art. Using the fiftieth anniversary of CSULB's historic 1965 California International Sculpture Symposium as the catalyst, the 2015 symposium explored the possibilities and the challenges of creating and presenting public art for the twenty-first century. The program included a keynote lecture by artist William Pope.L, followed by panel discussions dealing with site specificity, new technologies and

materials, conservation issues, and alternative practices. Recorded sessions from the symposium will be made available on the GCI's YouTube channel in May.

In November the GCI co-organized "Abstract Expressionism: Time, Intention, Conservation, and Meaning" at the Getty Center, in collaboration with the Clyfford Still Museum in Denver. This one-day symposium brought together conservators, conservation scientists, scholars, and others interested in Abstract Expressionism to discuss what should or should not be considered acceptable change for these artworks, in view of their makers' intent and meaning. Presentations were given on Willem de Kooning, Franz Kline, Joan Mitchell, Barnett Newman, Jackson Pollock, Mark Rothko, and Clyfford Still. Presentations from the symposium are available on Vimeo from the Clyfford Still Museum (https://vimeo.com/album/3773755).

Finally, also in November, the GCI partnered with Tate in London and the Getty Research Institute to organize "Media in Transition" at Tate Modern. This conference explored the conservation implications for collecting and conserving time-based media art, though many of the ideas explored also resonated for a broad group of contemporary artworks and for the practice of different disciplines. Following the format of the Getty's 2008 conference, "Object in Transition," this event explored—through papers, discussions,

demonstrations, and dialogues-how the field is responding to newer forms of artistic practice, many of which have their roots in the 1960s and 1970s. The conference also showcased emerging modes of collaboration among artists, conservators, art historians, technical experts, and curators, and it considered how these can help advance the field.

The conference included keynote speeches by artists Susan Hiller, Runa Islam, and Hito Steyeri, followed by a number of case studies involving in-depth and interdisciplinary discussions about specific works of art by Joseph Beuys, David Lamelas, Gustav Metzger, Bruce Nauman, Nam June Paik, Julia Scher, and Bill Viola. Videos from the conference session are available from Tate (http://bit.ly/media-transition).

MASTER CLASS ON MUSEUM LIGHTING

In February 2016 the Getty Conservation Institute, with the Lunder Conservation Center at the Smithsonian American Art Museum and the National Portrait Gallery in Washington, DC, organized a two-day class on recent developments in museum and gallery lighting. "Master Class on Museum Lighting: Options Beyond White LED" (offered in two backto-back sessions because of high demand) presented methodologies for the effective use and evaluation of the new generation of LED

lighting, including the accompanying control options for museum settings.

The classes brought together professionals from different backgrounds involved in exhibition lighting and lighting policies in museums and galleries, specifically those who face the challenges of integrating and evaluating LED lighting into their exhibition settings. Participants included lighting and exhibition designers, facility managers, conservators, and conservation scientists.

Opportunities and challenges from the introduction of color-tunable LED lighting systems and their utilization in museum exhibits were addressed, along with energy consumption issues of new LED lighting systems and the problems of balancing aesthetics with preservation. In some cases, these new lighting systems may provide a higher margin of safety to light-sensitive artifacts. But because the spectral distribution of light from color-tunable lamps can be manipulated for aesthetic reasons (with the possibility of enhancing faded colors in objects or selecting higher color temperatures), the potential damage factor has to be considered. Despite the current availability of technical and scientific tools for assessing potential light damage, there is some uncertainty in assessing risks of damage from lighting.

The master class provided a nuanced view of damage caused by light and a better understanding of the concerns of, and challenges faced by, different professionals. The class format encouraged an exchange of knowledge and ideas and promoted discussion of topics ranging from color perception and color preference to light damage to light-sensitive artifacts. A visit to the renovated Renwick Gallery gave participants the opportunity to experience novel lighting design and implementation. Systems issues with LEDs were discussed in a real setting. The participants raised the important topic of documenting lighting design as part of an exhibition, especially where the lighting has become a more integral part of an artwork.

The class offered a unique opportunity for participants to share experiences and strengthen their understanding of different aspects of museum lighting, from practical implementation and cost balance to aesthetics and managing the risk of damage caused by light.

Instructors:

Jim Druzik, senior scientist, GCI Naomi Miller, senior scientist, Pacific Northwest National Laboratory (PNNL), Portland



"FAR-SITED: Creating and Conserving Art in Public Places," a conference at California State University, Long Beach. Photo: Courtesy of University Art Museum, California State University, Long Beach.



Instructor Joe Padfield leading a discussion with the participants about a color preference survey. Photo: Foekje Boersma, GCI.

Joe Padfield, conservation scientist, National Gallery, London

Tess Perrin, lighting scientist, Advanced Lighting Team, PNNL

Scott Rosenfeld, lighting designer, Smithsonian American Art Museum and the Renwick Gallery in Washington, DC

ICONIC HOUSES NETWORK CONFERENCE

In February 2016 the 4th International Iconic Houses Conference, "A California State of Mind: The Modern House Museum in Southern California," was hosted by the GCI and the Getty Foundation at the Getty Center. The event was attended by more than 120 stewards and professionals involved in the conservation of many of the world's most important modern houses.

The three-day lecture and tour program offered a variety of perspectives on the current state of twentieth-century house museums in Southern California, with talks by distinguished architects, architectural historians, nonprofit organizations, owners, directors, conservation architects, and curators. There were tours of a number of iconic Los Angeles-area homes, including the Eames House, John Lautner's Sheats Goldstein residence, and the home of the conference's guest of honor Harry Gesner.

The GCI hosted two workshops for conference participants. The first, on conservation

management plans, discussed how to use this internationally recognized tool to provide a framework for the care and conservation of historic places based on an understanding of their significance. The second workshop focused on securing sustainable funding for small house museums—a top challenge for those responsible for their care.

For more information on the Iconic Houses Network, visit their website: iconichouses.org.

WORKSHOP TRANSCRIPTS AVAILABLE ONLINE

Summaries of two interdisciplinary workshops on the integration of conservation and archaeology are now available online from the Archaeological Institute of America (AIA; https://archaeological.org/sitepreservation/hca). Included are full transcripts of the panel presentations and discussions and summaries of the key points of both workshops.

"Integrating Conservation and Archaeology: Exploration of Best Practices" (2013) brought together conservators and archaeologists for a dialogue about the integration of conservation and field archaeology. Panelists shared their experiences about what constitutes responsible conservation, preservation, and stewardship of archaeological resources. The panel discussed movable and immovable cultural heritage, including terrestrial and maritime archaeological sites. The workshop

was sponsored by the AIA Conservation and Site Preservation Committee, the GCI, and the American Institute for Conservation of Historic and Artistic Works.

"Interdisciplinary Studies: Archaeology and Conservation" (2014) featured archaeologists and conservators heavily involved in educational efforts in their respective disciplines and discussed the subject of the cross education of both fields and the need for interdisciplinary studies. This workshop was sponsored by the AIA Conservation and Site Preservation Committee and the GCI.

Upcoming Events

CAVE TEMPLES OF DUNHUANG **RELATED PROGRAMS**

To complement the exhibition Cave Temples of Dunhuang: Buddhist Art on China's Silk Road, on view at the Getty Center May 7 through September 4, 2016, a variety of public programs will be presented targeting a broad audience, including the scholarly community, educators, and families.

A scholarly symposium, May 19–21, cohosted with the University of California, Los Angeles, will bring together more than twenty international scholars. They will explore the unique confluence of historical perspectives, spiritual content, artistic practice, and innovative approaches to conservation at the Mogao Grottoes site.

Extending the themes of the scholarly symposium to a larger audience, a number of public lectures will be presented. These lectures will provide new insights into the exhibition, with speakers discussing topics such as the world's first complete book bearing a date, the Diamond Sutra (June 5), concepts of karma and rebirth in China (June 26), life on the Silk Road (July 24), and the Getty's conservation efforts at Dunhuang (August 28).

A series of performances and conversations with artists will draw upon the many cultures that influenced the art in the Dunhuang cave temples and that are vividly illustrated in the wall paintings. Music from China, India, the Middle East, and Central Asia will bring the Silk Road to the Getty Center on May 20. Composer and conductor Tan Dun-inspired by Dunhuang and



Tribute Horse and Camel, ca. 900-1000, ink and pigments on paper, originally found in Cave 17 of the Mogao Grottoes. British Museum, 1919,0101,0.77 (Ch.00207).

the cave temple wall paintings—will discuss his creative process as a musician and composer on July 17. This event includes a musical performance inspired by Tan Dun's current research.

Opera and theater director Peter Sellars will be joined by Buddhist scholar Robert Thurman on August 10 for a conversation about Dunhuang and the Vimalakirti Sutra—an allegorical text of Buddhist teachings, scenes of which are well-represented in the Dunhuang cave temples. Both are sources of inspiration for Sellars's upcoming production.

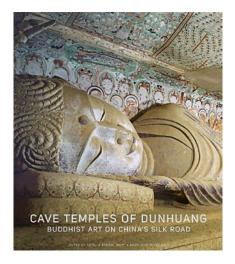
The performances will culminate with a screening of The Cave of the Silken Web on August 24. Newly preserved, this 1927 silent film by Dan Duyu is possibly the first film adaptation of one of the most enduring classics of Chinese literature, Journey to the West. The Cave of the Silken Web, once thought lost, was rediscovered several years ago in the National Library of Norway. This rare cinematic treasure will have its Los Angeles preservation premiere in an outdoor screening at the Getty Center, with live musical accompaniment.

Visit Getty 360 for information and tickets: www.getty.edu/360/

New Publications

Cave Temples of Dunhuang: Buddhist Art on China's Silk Road

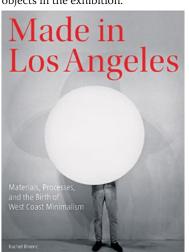
Edited by Neville Agnew, Marcia Reed, and Tevvy Ball



The Mogao Grottoes in northwestern China, located near the town of Dunhuang on the fabled Silk Road, constitute one of the world's most significant sites of Buddhist art. Preserved in some five hundred cave temples carved into rock cliffs at the edge of the Gobi Desert are a thousand years of exquisite wall paintings and sculpture. Founded by Buddhist monks in the late fourth century, Mogao grew into an artistic and spiritual center whose renown extended from the Chinese capital to the far western kingdoms of the Silk Road. Among its treasures are 45,000 square meters of murals, more than 2,000 statues, and over 40,000 medieval silk paintings and illustrated manuscripts.

This sumptuous catalogue accompanies an exhibition of the same name, which will run from May 7 through September 4, 2016, at the Getty

Center. Organized by the Getty Conservation Institute, Getty Research Institute, Dunhuang Academy, and Dunhuang Foundation, the exhibition celebrates a decades-long collaboration between the GCI and the Dunhuang Academy to conserve this UNESCO World Heritage Site. It presents, for the first time in North America, a collection of objects from the so-called Library Cave, including illustrated sutras, prayer books, and other exquisite treasures, as well as three full-scale, hand-painted replica caves. This volume includes essays by leading scholars, an illustrated portfolio on the replica caves, and comprehensive entries on all objects in the exhibition.



Made in Los Angeles: Materials, Processes, and the Birth of West Coast Minimalism By Rachel Rivenc

In the 1960s a group of Los Angeles artists fashioned a body of work that has come to be known as the "L.A. Look" or West Coast Minimalism. Its distinct aesthetic is characterized by clean lines, simple shapes, and pristine reflective or translucent surfaces, and often by the use of bright, seductive colors. While the role of materials and processes in the advent of these truly indigenous Los Angeles art forms has often been commented on, it has never been studied in depth—until now.

Made in Los Angeles focuses on four pioneers of West Coast Minimalism—Larry Bell, Robert Irwin, Craig Kauffman, and John McCracken—whose working methods, often borrowed from other industries, featured the use of synthetic paints and resins as well as industrial processes to create objects that are both painting and sculpture. Bell, for example, coated plate glass with films of material that alter the way the light is absorbed, reflected, and transmitted, while Kauffman employed a process usually reserved for commercial signs for his work. McCracken coated plywood with fiberglass and spray-painted it with countless layers of automotive paints, and Irwin spraypainted discs of hammered aluminum or vacuum-formed plastics. The detailed study of each artist's work is presented in the context of the emergence of modern art in Los Angeles, the burgeoning mid-twentieth-century gallery scene, and the light-infused L.A. cityscape.

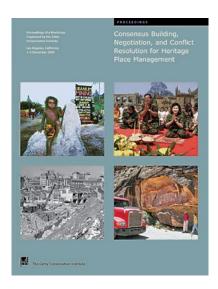
Initially undertaken as part of the Pacific Standard Time: Art in L.A. 1945–1980 initiative, this volume combines technical art history and scientific analysis to investigate conservation issues associated with the work of these artists, which often exemplify issues in the conservation of contemporary art in general.

The preceding two publications can be ordered at shop.getty.edu.

PROCEEDINGS PUBLISHED

Consensus Building, Negotiation, and Conflict Resolution for Heritage Place Management: Proceedings of a Workshop Organized by the Getty Conservation Institute, Los Angeles, California, 1–3 December 2009

Edited by David Myers, Stacie Nicole Smith,



and Gail Ostergren

In their efforts to manage and conserve heritage places, heritage practitioners are often required to engage with a multiplicity of stakeholders and their frequently conflicting interests, values, and identities, as well as address clashes arising from cultural differences. In December 2009 the Getty Conservation Institute organized, with the assistance of the Consensus Building Institute, a workshop for an invited group of practitioners to explore the application of consensus building, negotiation, and conflict resolution concepts and strategies to the management of heritage places.

These proceedings present nine papers from the workshop, including background papers concerning relevant challenges in heritage place conservation and management and on dispute resolution and consensus building concepts and strategies. Case studies from diverse geographic and cultural contexts are presented, examining how practitioners dealt with a range of challenges, such as developing legislation, collaborating with multiple stakeholders, dealing with places significant to indigenous communities, addressing development and tourism pressures, and working with sites of conscience.

Also included are recommendations made by workshop participants for the development of guidelines for heritage practitioners working with stakeholders, the inclusion of methods for dealing with stakeholders in heritage training and educational curricula, and the creation of related didactic materials.

This free publication can be found at http://bit.ly/Consensus_Building

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Conservation Perspectives, The GCI Newsletter is distributed free of charge twice a year to professionals in conservation and related fields and to members of the public concerned about conservation. Back issues of the newsletter, as well as additional information regarding the activities of the GCI, can be found in the Conservation section of the Getty's website,

The Getty Conservation Institute works to advance conservation practice in the visual arts, broadly interpreted to include objects, collections, architecture, and sites. It serves the conservation community through scientific research, education and training, model field projects, and the broad dissemination of the results of both its own work and the work of others in the field. In all its endeavors, the Getty Conservation Institute focuses on the creation and dissemination of knowledge that will benefit the professionals and organizations responsible for the conservation of the world's cultural heritage.

The GCI is a program of the J. Paul Getty Trust, a cultural and philanthropic institution dedicated to the presentation, conservation, and interpretation of the world's artistic legacy.







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A section of the Great Wall of China, an example of one of the country's massive cultural resources. Photo: Jakub Hałun. Licensed under the Creative Commons Attribution–Share Alike 3.0 Unported license.